I J R B A T, Vol. VI (Special Issue 1), January 2018 : 19- 26 ISSN 2347 – 517X

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY

www.vmsindia.org

SOCIO-ECONOMIC STATUS OF CHILDREN SUFFERING FROM SICKLE CELL ANEMIA

Saroj Zanjhal[1] **& Kalpana Jadhav**[2]

[1]Associate Professor, Dept of Home Economics, FES Girl's College, Chandrapur
[2]Professor & Head, Dept of Home Science, RTM Nagpur University, Nagpur

ABSTRACT

Taking into, consideration huge population size, more than 50% of the world's Sickle Cell Anemia cases are prevalent in India. Sickle Cell Anemia patients belong to various religions, communities and castes. This disorder is mostly confined to economically and socially backward communities known as scheduled caste (SC), Scheduled Tribe (ST) and Other Backward Communities (OBC) groups. Recognizing the interconnection between the socioeconomic factors and their influences on the human development has resulted in efforts to more fully integrate human management concepts into decision making. The socio-economic profile of the sickle cell affected study participants has been determined and is presented in this research paper. For the said purpose, the research scholar had to find out sickle cell anemia unit in Govt. Hospital, Chandrapur, so as to investigate the probable cases with the help of physician and she had to visit frequently several Primary Health Centres situated in the study region. The research study conducted in the limited region of the Chandrapur distict, Maharashtra, revealed that Sickle Cell Anemia is more prevalent among the SC community and that most of the sufferers are moderately educated, belonging to joint families having low monthly income.

Keywords: communities and castes, Schedule Tribes, Nomadic Tribes Buddhist [SC's] community

---

INTRODUCTION

In India, "Sickle Cell Anemia" was first discovered by Lahmann and Cutbush about 50 years ago among the tribals of Nilgiri Hills of Southern India. Taking into, consideration huge population size, more than 50% of the world's Sickle Cell Anemia cases are prevalent in India. Sickle Cell Anemia genes have been found in 14 states and 1 union territory, where the disease has crossed the "danger mark". The patients belong to various religions, communities and castes. This disorder is mostly confined to economically and socially backward communities known as scheduled caste (SC), Scheduled

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

Tribe (ST) and Other Backward Communities (OBC) groups. It is rare in other communities. The disease is quite significant in the Vidarbha region of the state of Maharashtra. Schedule Tribes, and Nomadic Tribes account to about 40% while Buddhist [SC's] community accounts to about 28% of the sufferers.

In order to carry out research survey, the research scholar had to find out sickle cell anemia unit in Govt. Hospital, Chandrapur, so as to investigate the probable cases with the help of physician, and hematologist, and she had to visit frequently several Primary Health Centers situated in the study region, the objective being to find out whether Sickle Cell Anemia is more prevalent in specific castes, whether the economic status of Sickle Cell Anemia affected pregnant women is very low and whether the percentage of such women as simple housewives is very high.

METHODOLOGY

In the present study, a quantitative method was used, & careful collection of facts was undertaken by the researcher to ensure the validity of the facts.The study region being Chandrapur District in the Nagpur Division of the Indian state of Maharashtra, occupying an area of 11,443 km² which constitutes 3.72 percent of the total area of the state. A total of 2042 individuals were screened for determining the prevalence of sickle cell anemia. The details of these samples were obtained from the primary health centers present in different Talukas of the Chandrapur district.

Selection of Samples

In order to determine the socio economic status of sickle cell anemia in children in Chandrapur district, standard methods were employed to generate data. A total sample size of 250 was considered as an appropriate sample size for the present study. The selection of sample was carried out randomly.

Data Collection

The primary data collection involved preparation of research instrument (interview schedule). Prior to actual data collection, a

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

series of survey question draft were prepared. The SCD screening process involved collection of blood samples. General information was collected using structured interview schedule and the parameters included socioeconomic Information, viz;

- Caste & Category,
- Economic Status of the family
- Monthly Income of Family,
- Occupation of family members.

RESULTS

The socio-economic profile of the sickle cell affected study participants was determined and is presented here under :

Age and gender wise distribution of children

Table 1 indicates distribution of Sickle Cell Anemia affected children with respect to their age group and gender. It was observed from the data that 54.1% (59) male Sickle Cell Anemia affected children and 57.4% (81) female Sickle Cell Anemia affected children belonged to age group 10 to 12 years. The percentage of Sickle Cell Anemia affected male and female children belonging to age group 7 to 9 years, it was 20.2% (22) and 14.2% (20) respectively, whereas 16.5% (18) Sickle Cell Anemia affected male children and 11.3% (16) Sickle Cell Anemia affected female children belonged to age group 4 to 6 years. In addition to this the percentage of Sickle Cell Anemia affected male and female children belonging to age group 1 to 3 years was 9.2% (10) and 17% (24) respectively It was observed that majority of Sickle Cell Anemia affected male and female children participating in this study belonged to age group of 10 to 12 years.

The table 2 shows distribution of sickle cell anemia affected participants with respect to their caste. It is apparent from the data that 51.2% Sickle cell anemia affected patients belong to Boudha caste, whereas 12.8% sickle cell anemia affected patients belong to Teli caste. Furthermore, it is also evident from the information that 6.4% sickle cell anemia affected patients belong to Dhangar and Gond caste,

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

respectively. The percentage of Sickle cell anemia affected patients belonging to Kunbi, other castes, Mang, Padmashali, Kasar, Fulmali and Vani was 7.3%, 7.1%, 2.4%, 2%, 1.6%, 1.6% and 1.2%, respectively. *It is apparent from the information that significantly (P<0.05) high percentage of sickle cell anemia affected patients belonged to the Boudha caste.*

According to Kar (1991), the said disease is not only confined to tribal people, but also it is prevalent amongst the scheduled castes and some caste Hindus, too.

The Table 3 shows distribution of Sickle Cell Anemia affected patients with respect to the category they belong to. It is observed that 63.6% (159) Sickle Cell Anemia affected patients belong to schedule caste category, 27.2% (68) patients belong to the OBC category, 7.6% (19) patients belong to ST category. The percentage of Sickle Cell Anemia affected patients belonging to NT and SBC category is1.2% (3) and 0.4% (1), respectively. It has been revealed from data that significantly high percentage of Sickle Cell Anemia affected children belong to SC category. Hence, it is apparent that the number of *Sickle Cell Anemia affected participantsfrom the SC community is seen to be noticeably higher than the other communities for the study region.*

As per the Study conducted by Deshmukh & Garg in rural area of Wardha district, prevalence was maximum in Matang (15.8%) followed by Pardhan (10.6%) and Gowari (5.8%) communities whereas the prevalence amongst Boudha, Kunbi and Teli was found to be 4.6%, 2.7% and 2.6%, respectively.

Educational status of children

Table 4 provides information regarding the educational status of Sickle Cell Anemia affected children in study area (Chandrapur district). It was evident that 86% (215) Sickle Cell Anemia affected children in the study area were going to school, whereas 14% (35) students were not going to school which may primarily included majority of the

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

children belonging to age group 1 to 3 years. The study results revealed that significantly high percentage of Sickle Cell Anemia affected children in the study area were attending the school.

Therefore, it can be concluded from the study result that significantly high number of Sickle Cell Anemia affected children (excluding those below 3 yrs.) in the study area, are school going children.

Type of school

Table 5 provides information pertaining to the type of school where Sickle Cell Anemia affected children in the study area were learning. It was observed that 70.2% Sickle Cell Anemia affected children in the study area were learning in municipal school. 28.4% (61) Sickle Cell Anemia affected children were learning in granted private schools, whereas 1.4% (3) Sickle Cell Anemia affected children were learning in missionary schools. Maximum Sickle Cell Anemia affected children in the study area were learning in municipal school.

The data (Table 5) showed that noticeable numbers of Sickle Cell Anemia affected children of Chandrapur district are taking education at Municipal schools, while relatively less number of students are taking education from private granted school.

The table 6 shows information pertaining to the monthly family income of sickle cell anemia affected participants. It is evident from the table that 58.4% sickle cell anemia affected participants' monthly family is Rs. 1000 to 5000, 26.8% participants' have monthly family income less than Rs. 1000. It has been also observed that 9.6% and 5.2% sickle cell anemia affected participants have monthly family income Rs. 5000 to 10000 and more than Rs. 10000, respectively. *It is apparent from the table that there is significantly high percentage of sickle cell anemia affected participants have monthly family income Rs. 1000 to 5000.*

Table 6 provides information regarding the family type of Sickle Cell Anemia affected children in

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

the study area i.e. Chandrapur District. It was observed that 71.2% (178) Sickle Cell Anemia affected children belonged to joint family type; whereas 28.8% (72) Sickle Cell Anemia affected children belonged to nuclear family type. High percentage of Sickle Cell Anemia affected children belonged to joint family type. Thus, on the basis of study results it can be stated that a significantly high percentage of Sickle Cell Anemia affected children of the study area live in the joint family set up.

CONCLUSIONS

From the findings of the study pertaining to the sickle Cell anemia in children in the limited region of the Chandrapur district, Maharashtra, it may be concluded that a high percentage of sickle cell anemia affected children belong to the Boudha caste thereby reflecting the number of Sickle Cell Anemia affected participants from the SC community is seen to be noticeably higher than the other communities. A high percentage of sickle cell anemia affected children in the study area belong to the joint family type and they belong to low income group.

Table 1: Age and gender wise distribution of Sickle Cell Anemia affected children

Age	**Male**	**Percent**	**Female**	**Percent**
1 to 3 years	10	9.2	24	17.0
4 to 6 years	18	16.5	16	11.3
7 to 9 years	22	20.2	20	14.2
10 to 12 years	59	54.1	81	57.4
Total	**109**	**100**	**141**	**100**

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

Table 2: Caste wise distribution of Sickle cell anemia affected participants

Caste	No. of patients	Percentage	Cumulative Percentage
Boudha	128	51.2	51.2
Dhangar	16	6.4	57.6
Fulmali	4	1.6	59.2
Gond	16	6.4	65.6
Kasar	4	1.6	67.2
Kunbi	18	7.3	74.5
Mang	6	2.4	76.9
Padmashali	5	2.0	78.9
Teli	32	12.8	91.7
Vani	3	1.2	92.9
Other	18	7.1	100.0
Total	**250**	**100.0**	

Table 3 :-Category wise distribution of Sickle Cell Anemia affected Children

Category	No. of patients	Percent
OBC	68	27.2
SBC	1	0.4
SC	159	63.6
NT	3	1.2
ST	19	7.6
Total	**250**	**100**

Table4: Educational status of Sickle Cell Anemia affected children

	No. of Children	Percent
School going	215	86
NonSchool going	35	14
Total	**250**	**100**

Table 5: Type of school where Sickle Cell Anemia affected children learnt

Schools	No. of Children	Percent	Cumulative percent
Municipal	151	70.2	70.2
Private (granted)	61	28.4	98.6
Missionary (Private)	3	1.4	100.0
Total	**215**	**100.0**	

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No.659/13(N)
www.vmsindia.org

Table 6 :Monthly income of sickle cell anemia affected children's family:

Monthly Income	**No. Of patients**	**Percentage**
Less Than Rs. 1000	67	26.8
Rs. 1000 to 5000	146	58.4
Rs. 5000 to 10000	24	9.6
More Than Rs. 10000	13	5.2
Total	**250**	**100**

Family Type

Table 6: Family type of Sickle Cell Anemia affected children

Type of Family	**No. of Children**	**Percent**
Joint	178	71.2
Nuclear	72	28.8
Total	**250**	**100.0**

REFERENCES

1. Deshmukh, P., Garg, B. S., Garg, N, Prajapati, N. C. and Bharambe, M. S. (2006), "Prevalence of sickle cell disorders in Rural Wardha", Indian journal of community medicine,31(1), 1-4
2. Kar, B.C. (1991), "Sickle cell disease in India", *J ASSOE Physicians India.*, 39(12), 954-960.