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# Observation of Mentally Retraded Cases with Speical Reference to Consanguinity

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## *Abstract*

A survey was carried out in rural areas 60 km. from Bangalore. The detailsabout family history obtained from the available 10,047 subjects led to the detection of 135 mentally retarded cases. The help received by Anganwadi workders in early detection and early intervention of these cases was a gratifying experience. The possibility of consanguinity is increasing the risk of genetic defects is raised based on this rural survey.

Key words -

**Mental retardation,**
**Rural survey,**
**Consanguinity,**
**Anganawadi workers,**
**Early detection,**
**Early intervention**

It is well known that a major portion of our population live in rural areas. It is estimated that 70-80 percent of population are in rural areas. In an earlier survey carried out at this center [1], [2], [3] it was noted that the prevalence of mentally retarded cases was the same in the rural areas as in any other areas and the consanguinity among parents of the mentally retraded was also the same. Earlier studies from different parts of South India have established that there is a greater prevalence of consaguineous marriages among the population unlike in North India [4]. Abramowicz and Richardson [5] proposed two methods for carrying out a survery to detect severe mentally retarded cases in a general population. These are

(i) to persoanlly investigate all cases in the population. This method, however is time consuming and has several short falls and

(ii) to examine the cases which are diagnosed or detected earlier by the community workers. This method is quicker and more rewarding.

Both the methods however, are not directly applicable for carrying out suverys in our country. Hence the present study has involved the available infrastructure in rural areas and organised this survey programme with the specific aim of utilizing the services of Anganwadi workers for detection and if possible instituting management measures for the cases so detected.

## Material and Methods

The survey was carried out in two rural areas viz., Chikkaballapura and Kanakapura situated about 60 km. away from Bangalore. At Chikkaballapura which was the headquarters, 22 Anganwadi workers from 20 villages, were given training in detection of the mentally retarded (MR) and institute some intervention measures. Subsequently, these workers were able to identify 52 MR cases, whcih we subsequently followed up. At Kanakapura 20 Anganawadi workers were trained. Out of this, 5 were specifically asked to carry out a door to door survey in their respective villages by using screening instruments designed earlier [2].

In all these cases, the diagnoisis was confirmed by specialists and details regarding genetic history were obtained personally. Besides clinical examination detailed psychgological and biochemical tests were also carried out.

## Observation and Discussion

From both the rural parts, there was available a total population of 10,047 in which detailed survey was carried out. The data obtained relating to the age and sex of the population surveyed is indicated in Table 1.

***Table 1 - Age and sex of the population surveyed***

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Out of 1974 couples examined, a history of close knit marriages was seen in 542. The details of the same are indicated in Table 2.

The Anganawadi workers were able to identify the MR children even below the age of 4 years. The identification was on the basis of the delayed milestones of development and presence of associated congenital anomalies.

***Table 2 - Age range of general population (GP) & MR children in age group***

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Male=68.1%
Female=3.9%

From Table 2, it could be noted that there was 30.2% consangunity. Of these 542, who were married to close relatives 63 had MR children, as compared to 47 with MR children in families where there was

no history of parental consanguinity. The details of psychological assessment are given in Table 3.

***Table 3 - Results of psychological testing***

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It could be noted that the prevalence of MR cases was greater in families where was close knit marriages. When an examination was made of a total number of MR children in several families with parental consanguinity, it was noted that the prevelance rate was higher in general population.

A detailed clinical examination revealed that the folowing aetiological factors were present: Pre-peri-post-natal; Complications- 20.7%; Choromosomal anomalies-3.7%; Metabolic defects-2.2%; Rare syndrome-18.5%; Unknown aetiology 54.8 %.

It is interesting to note that the Anganawadi workers were able to find out the asociated handicaps in 135 children which is indicated in Table 4.

***Table 4 - Other anomalies noted among the MR Subjects***

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The present studies in 10,047 subjects from rural areas led to the detection of 135 MR cases. Out of this, 63 had parental consanguinity. Sanghvi et al [4] and Dronamraju & Khan [6] reported that 30% of the population were consanguineous related. Our studies have also suported the same finding. The possibility of having higher risk for detecting MR in the population specially in a consanguineous family is a matter which needs to be examined in general population surveys. The data obtained indicaste that this survey would be useful for planning future surveys for the MR and also offering genetic counselling to the patients. Freire-Maria [7] reports that there is a an association between inbreeding and prevalence of MR in the population survey carried out in Brazil, Japan, India and Israel while it is low in USA.

This study has revealed that it is possible to carry out surveys with the help of Anganwadi workers. This would help in the organization of programmes for detection and more important for early intervention of MR cases.

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