

## 4. SOCIAL AND BEHAVIOURAL STUDIES

### 4.1 Study of population growth and health status among Kamars: A primitive tribe in Raipur district of Chhattisgarh

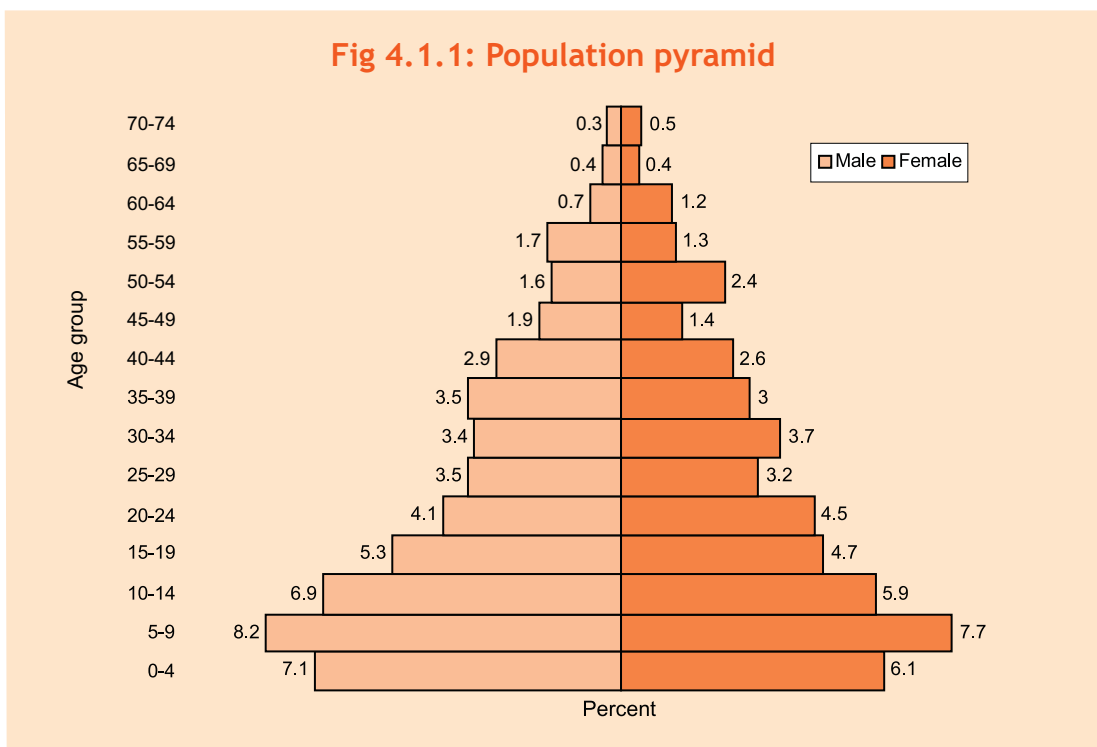
The study was carried out among Kamar tribe to know the vital statistics and health morbidity in Gariaband, Mainpur, Chhura and Nagari blocks. A cross sectional descriptive survey with probability proportion to size sampling method was applied. The total populations 4521 of 1026 households were surveyed in 48 villages. Average household size was 4.4 persons ranges 1-15 and sex ratio 1059 female per 1000 males estimated. Most of the population lived in nuclear family (71.8%). The age sex structure of the population is shown in Fig. 4.1.1. The children in age group 0-14 account for 41.8% of the total population. In contradiction to general sex ratio, males out number females by 2.6% in this age group. Dependency ratio is estimated to be 76.5 %.

Waterborne diseases including diarrhea and dysentery are prevalent in these tribal areas. It has been found that 6.9% of household use drinking water from stream/river. About 57.2% pregnant women had taken antenatal care and about 73.3% children were immunized. The population growth rate (natural growth) was 1.82% people per year. The crude birth rate and crude death rate were 30.1 and 11.1 respectively. It is further estimated that 2.8 children were ever born per woman and infant mortality rate is 98 per/1000 live birth.

About 76% of women were found to be illiterate. Most of the deliveries (97.7%) were made at home. Further 52.3% of the deliveries were assisted by untrained personnel. Eleven hundred one individuals were clinically examined to assess the health status. About 55% adult individuals were suffering with chronic energy deficiency as reflected by body mass index (Table 4.2.1). About 32.0% individuals were suffering with various clinical conditions and diseases. Acute respiratory infections 12.0%, arthritis 3.8%, fever 1.8%, bitots spot 5.1%, diarrhea 0.5%, leprosy 0.5%, pulmonary tuberculosis 0.4% etc. were found in the study population.



**Fig 4.1.1: Population pyramid**



**Table 4.1.1: Body mass index**

Gender	BMI Grade(\$18Year)			
	Grade-III	Grade-II	Grade-I	Normal
	<16	16.0-16.9	17.0-18.4	18.5
Male (306)	5.9	14.4	28.7	51.0
Female (260)	15	20	26.5	38.5
Total (566)	10.1	17.0	27.7	45.2



## 5. NEW INITIATIVES

The new initiatives include some approved projects which have been recently initiated or going to start soon.

### 5.1 Molecular epidemiology of community acquired Methicillin resistant *Staphylococcus aureus* strains from primitive tribes of Madhya Pradesh and Chattisgarh

The prevalence of *Staphylococcus aureus* and its antibiotic resistance remains unknown for tribal areas. The present study is designed with the objectives to estimate the prevalence of Community Acquired Methicillin Resistant *Staphylococcus aureus* (MRSA) from primitive tribes of Madhya Pradesh and Chattisgarh and also to carry out genotyping of these strains by various methods.

Nasal swabs would be collected from healthy individuals of the primitive tribes of both the states. Standard microbiological techniques would be used to isolate and identify *S. aureus*. Antimicrobial susceptibility tests would be done to determine the susceptibility of *S. aureus* to various antibiotics. Genotyping of MRSA would be done by Multilocus sequence typing (MLST) and *Staphylococcus* protein A typing. The study would provide a baseline data for prevalence of *S. aureus* and MRSA in primitive tribes of these states.

A pilot study was done in Baigachak area of Madhya Pradesh. Nasal swabs were collected from the individuals of Baiga tribe. *Staphylococcus aureus* was isolated from 21 of the 35 swabs. Antimicrobial susceptibility testing was done by Kirby Bauer disc diffusion method using 4ug methicillin discs. Methicillin resistance was detected in 10 strains; however minimum inhibitory concentration is yet to be detected.

### 5.2 Integrated disease surveillance for non communicable diseases: Non communicable disease risk factors Surveillance

The study is to be launched nationally and initial training of trainers has been completed. This center will act as one of the regional centre. The assigned job is training, technical supervision, quality control and monitoring of the state of Madhya Pradesh and Maharashtra in the first phase.



A total of 5000 sampled households are to be covered. The survey work is likely to begin in September 2007. As a quality control measure 50% households are to be surveyed by the regional centre.

### **5.3 HIV positive individuals to understand their action taken for non-progression of HIV infection to live longer and healthy**

The study aims to understand the level of knowledge and awareness of people living with HIV to prolong their asymptomatic period. After understanding their knowledge, need based periodic counseling shall be given and thereafter impact of counseling will be assessed. It has been planned to study 50 HIV positive individuals screened either at RMRCT or NSCB Medical College, Jabalpur. Seven HIV positive individuals have been studied so far. Counseling would be given for 3 - 4 times with an interval of 3-5 weeks. Follow up counseling is being done at RMRCT.

### **5.4 The study of Prevalence of HIV and TB among the Jail inmates in Jabalpur**

The study aims at screening the jail inmate's for HIV and tuberculosis. Central jail of Jabalpur inhabits approximately 2600 - 2800 inmates at one time. A questionnaire was developed to assess the knowledge of inmates for HIV and tuberculosis. Questionnaires were filled by 1350 inmates. Analysis for the same is in progress. IEC is given to the inmates and those who volunteer for HIV testing are registered. Pre and Post test counseling would be provided as per NACO guidelines. Till now, 380 samples have been collected and the analysis is in progress.

### **5.5 Tobacco related disease in the tribal population of Kundam block, Jabalpur district**

Tobacco use is worldwide. The dried leaf of the plant *Nicotiana tobaccum* is used for smoking, chewing or snuff. Globally tobacco use accounts for a considerable proportion of mortality. Tobacco contains more than 4,000 chemicals and most of them are carcinogenic. Chewing or snuffing tobacco can lead to inflammation of oral cavity and oral cancer. Incidence of smoking related disease and concomitant rise in death rates have increased rapidly in many developing countries. Tobacco is responsible for significant amount of morbidity and mortality among middle age adults. As per WHO,



tobacco kills more people annually than AIDS, alcoholics, drug abuse and accidents. It is estimated that the figure is expected to rise to million deaths per year by 2030. Main objective of the study is to find the prevalence of tobacco addiction/use in Gond population in Kundam block of Jabalpur district.

Pre-testing and finalization of the questionnaire is in progress.

### 5.6 Prevalence of infertility in India

According to the estimates of World Health Organization, there are about 8 % of couples at global level experience some form of infertility problems during their reproductive lives. The consequences of infertility for women particularly in pronatalist culture can be devastating. A large number of such couples suffers from infertility largely from preventable conditions such as STI, parasitic infestations, unhygienic obstetric practices, unsafe abortions, exposure to potently toxic substances in the diet or environment and different socio-cultural practices. Community based data on prevalence of infertility has seen scarce in India and most such data is hospital based. The present study aims at understanding prevalence, risk factors, treatment seeking behaviour and psycho-social consequences. The data will be generated by canvassing a interview schedule among 2700 ever married women in the age group 15-44 years in rural and urban areas in each of the states under study. Selection of study area in state and finalization of the interview schedule is in progress.

### 5.7 Understanding tribal sexuality behaviour and vulnerability to RTI, STD, HIV/AIDS with special focus on adolescent group

Compared to other population groups, tribal communities by and large were more liberal to sex. Today, coupled with livelihood compulsion (poverty), of tribal expanded network of communication (road and rail links) and transport, industrialization and mining activities, temporary population migration to the work site all have contributed to tribal and non-tribal contacts, opportunities for indulgence in sex, sexual exploitation of tribal female workers, thereby increasing the chances of risk of STD and HIV/AIDS infections. Adolescents are quite vulnerable to such infections. In the present study attempts will be made to understand the knowledge, attitude, behaviour and practices about various reproductive and sexual matters among tribal adolescents in the context of emerging prevalence of these diseases. The study will be conducted among the Santhal



(Jharkhand), Munda (West Bengal), Orao (Orissa) and Gonds (Madhya Pradesh) by canvassing an interview schedule. The designing of survey schedules and completing other essential formalities are in progress.

### **5.8 Establishment of hospital based surveillance of Rotavirus diseases and strains**

RMRCT has been set as a new centre for the multicentric study entitled “Establishment of hospital based surveillance of Rotavirus diseases and strains”. The study involves ICMR headquarter and ICMR institutes namely National Institute of Virology, Pune and National Institute of Epidemiology, Chennai. Stool specimens are being collected from children (up to 5 years age) hospitalized at NSCB Medical College Hospital and Victoria Hospital, Jabalpur. So far, 96 samples have been collected. The samples are sent on regular basis to National Institute of Virology, Pune for its analysis.