Census Survey for a Primary Health Care Programme

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Abstract

Objective: To describe the process of gathering information from a census survey as a preliminary step for supporting the working of a primary health care center. It also presents briefly the results of the survey and its broader implications on the health needs of the local population.

Methods: A questionnaire was used to obtain basic information regarding the ethnicity / area of origin, number of household members and their breakdown according to gender, age and marital status. The medical students of different batches were involved in the data collection process, as part of their Survey Methodology course of Community Health Sciences (CHS) in first year.

Results: Data was obtained from 2,033 houses, having a total population of 16,118 persons. Fifty three per cent of the population was under fifteen years, 42% were between 15-49 and 5% were over 50 years of age. The overall percentage of males was 52% and females 48%. Approximately 79 percent people were Pushto speaking.

Conclusion: Sikanderabad is a typical slum settlement, with an emigrant population being mostly of Pathan and Afghan refugees. The fertility rate in Sikanderabad is much higher than that of Karachi. This highlights the need for education and availability of family planning facilities. At the same time, due to the fact that there is a major portion of the population aged under five years, so facility for treating children must be appropriately provided. The Primary Health Care center established in Sikanderabad is based on the above information. The emphasis is on maternal and childcare, including antenatal and postnatal care; family planning and nutritional counseling (JPMA 54:192;2004).

Introduction

Pakistan has a population of 135 million people, as reported in the recent census survey.[1] At the time of the first census in 1951, the population of Pakistan was around 35 million.[2] With the present population growth rate of 2.7%[3], the health facilities provided by the public sector are inadequate to meet the health needs of the population. The private sector is therefore required to take on some responsibility in the provision of health care to both high and low income strata.

Ziauddin Medical University (ZMU), established in 1996 is a community oriented medical institute that places special emphasis on integration of research into the education and service components of this program. The Department of Community Health Sciences (CHS) is actively involved in the health care of the residents of a squatter settlement adjacent to ZMU. The goal of the program is the betterment of the health of local residents by producing doctors who can work effectively and efficiently at primary, secondary and tertiary levels of health care.

In order to accomplish this goal, ZMU has established a primary health care center (PHC) in the adjacent squatter settlement of Gulshan-e-Sikanderabad (GS), which has five blocks. The PHC center is situated in Block I and it takes about 10 minutes to walk to the center from ZMU. Since the goal is to make the community self-reliant, local people of the area were involved in the planning and setting up of the PHC center, as community participation is essential for sustainable health outcomes.[4] A local health committee and a welfare society look after the running of the PHC and the welfare of the residents. Technical support is provided by ZMU, in terms of medical staff.

It is important to determine the health care needs of the population, before setting up a PHC center.[5] Meetings and focus group discussions were held with the residents of the area to assess the needs. The felt need of the people was for water, proper sewerage followed by health. The next step was to collect information on the basic socio-demographic variables, such as age, sex, ethnicity, literacy, household income and contraceptive prevalence rates. Literacy and hence awareness have an impact on the health seeking behavior of the population.[3]

The aim of this paper is to describe the process of gathering information from a census survey as a preliminary step for supporting the working of a primary health care center. It also presents briefly the results of the survey and its broader implications on the health needs of the local population.

Methods

Gulshan-e-Sikanderabad is divided into five blocks, the number of houses in each block is given in table 1. The first step in conducting a census survey is to number the houses in a systematic manner. This ensures that no house is missed during the survey. This was done by the community coordinator with the help of volunteers. The

numbers were painted in red on the walls of the houses, at the entrance. The numbering was done in a standardized format e.g. 'GS-I / 001', the 'GS-I' signifies block 1 of Gulshan-e-Sikanderabad and the number after the slash shows the house number. This format differentiated the house numbering from other numbers written on the house by other government agencies such as national census survey and by utility companies. The community coordinator mapped out all the houses in the area with the house numbers clearly identified on the map. This map has proved to be very helpful in planning and execution of the census surveys as well as other field activities in the community.

A questionnaire was developed for collecting information from the community. The questionnaire was originally developed by the community-based organization and was pretested and modified by the Community Health Sciences (CHS) faculty. The questionnaire was one page long and required 5 to 10 minutes to complete. The basic information collected was regarding the ethnicity / area of origin, number of household members and their breakdown according to gender, age and marital status.

Table 1. Census survey of houses.

Block	No. of houses	No. of students	(Batch)	House/ students	Month/Year
1	893	52	(I)	16-18	September 1997
2	433	65	(II)	6-7	November 1997
3	260	61	(III)	4-5	August 1998
5	207	61	(III)	3-4	September 1998
4	730	61	(IV)	11-12	August 1999

Pathan, therefore the students were organized in pairs of 1 male and 1 female to overcome the socio-cultural constraints. The language barrier was overcome, where needed, through the help of local volunteers from the area.

Results

There were a total of 2,736 households in Gulshan-e-Sikanderabad. Of these 2,352 were residential and data was obtained from 2,033 (86%) of these houses (Figure 1).

Table 2. Blockwise age distribution in Sikanderabad (population = 16,118).

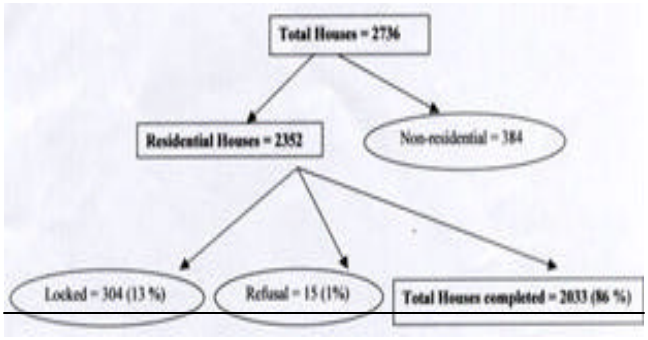
Age	Block I		Block II		Block III		Block IV		Block V		Total	
in years	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
< 1	285	(4.6)	94	(3.5)	51	(4)	261	(5.3)	49	(4.6)	740	(4.6)
>1-5	1,137	(18.3)	469	(17.6)	211	(16.1)	1,006	(20.6)	188	(17.6)	3,011	(18.7)
>5-15	1,980	(32)	820	(30.7)	384	(29.3)	1,350	(27.7)	316	(29.8)	4,850	(30.1)
>15-49	2,482	(40)	1,146	(43)	604	(46.2)	2,112	(43.3)	445	(42)	6,789	(42.1)
>50	316	(5.1)	139	(5.2)	56	(4.3)	154	(3.1)	63	(6)	728	(4.5)
Total	6,200	(38.5%)	2,668	(16.6%)	1,306	(8.1%)	4,883	(30.3%)	1,061	(6.6%)	16,118	(100%)

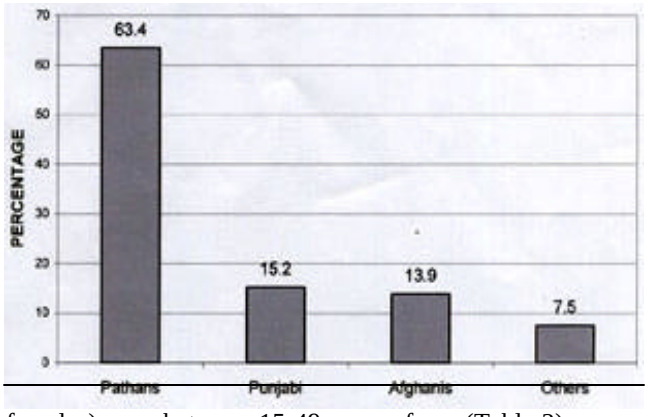
The medical students of different batches were involved in the data collection process, as part of their Survey Methodology course of CHS in first year.[6] The students were first given training for the process of interviewing and interacting with the community. They practiced their interviewing skills for the questionnaire through role-plays in class.

The five blocks were covered by different batches of students (Table 1). Each class was divided into six groups comprising of 8 to 12 students. Each group was supervised by a faculty member from the CHS department and was required to complete 40 to 50 houses in a day (five houses per student per day). The population is predominantly

The total population of the surveyed houses was 16,118, with an average household size of 8.2 persons. The distribution of the population in the five blocks is presented in Table 2.

Of the total population, more than half (53.4%) was under fifteen years of age, whereas only 4.5% of the population was over 50 years. Twenty-three per cent of the children were up to 5 years of age and there were a total of 4.6% children up to one year of age, 19% were between 1-5 year age bracket, and 30.1%were in the >5-15 year category. These numbers imply that in every five houses there are 9 children up to the age of 5 years and of these nine children, two are infants. Forty two percent (both males and





females) were between 15-49 years of age (Table 2).

The population comprises of 52% males and 48% females. The male/female ratio was similar in all the five blocks. Approximately 79% people were Pushto speaking, most (63%) of whom belonged to NWFP (Figure 2). Almost all the people (99.7%) were Muslim.

Discussion

Census surveys and information on baseline health and demographic indicators of an area are preliminary to setting up a PHC center. This information forms the basis for the provision of appropriate health care services with respect to the local community's needs. These basic surveys provide estimates of the population by age, sex, education levels, household income and contraceptive prevalence rate, as well as morbidity and mortality rates. Statistical data thus collected provide basis the for resource allocation for health services and other sectors.

During the 1998 census, the population of Pakistan was estimated as 135 million.[1] Male to female ratio was 110:100. The under five-year population of Pakistan was 14.5% and under 15 years was 43%. Population aged between 15-49 years comprised 43% (males 21%, females 21.4%) while 14% of population was above 50 years. In the province of Sindh, population in rural and urban areas was 51% and 49% respectively as compared to Pakistan's rural and urban population of 67% and 33%.[1] People migrate from less developed areas to a developed one are for attainment of better economic or educational status. Sikanderabad is a typical settlement, with the in-migrated population being mostly of Pathan and Afghan refugees.

The census of Sikanderabad indicates that the under 1-year population comprises of 4.6% and upto 5 year constitutes 23.3% of the total population. Whereas in Karachi the under one population is 2.1% and under 5 years is 12.2%.[1] This suggests that the fertility rate in Sikanderabad is much higher than that of Karachi. These results highlight the need for education and availability of family planning facilities for the population of Sikanderabad. At the same time, due to the fact that there is a major portion of the population aged under five years, facility for treating children must be appropriately provided.

The percentage of population aged 5-15, >15-49 and above 50 years in Karachi, is 30%, 43% and 9% respectively.[1] The distribution in Sikanderabad is 30%, 42% and 4.5%, respectively. While there are a greater number of births in Sikanderabad (high fertility rate), the distribution in the adolescent and adult years tapers and closely resembles that of Karachi. The provision of maternal and child health care facilities need to be addressed in the area. In the older age group, the number of surviving people is less than that of Karachi, suggesting that the average life span of people in Sikanderabad is less than that of Karachi. One of the possible reasons for this is that the health care facilities are very poor in Sikanderabad, as in other slum areas. Other possible reasons need to be evaluated. Due to the difference in the population distribution in the various districts of Sindh, as well as within the different areas of Karachi, the infrastructure for health, education and civic amenities has to be tailored according to local needs of the area.

The 'Gender culture' also plays a pivotal role in health seeking behavior.[6] Due to the strict observance of parda by the females of Sikanderabad, they are unable to seek health care and educational facilities according to their needs. This needs to be studied further the perceptions of conception, pregnancy and birth among the people of the area are more primitive than that of the population of Karachi. This is also due to the fact that the main population of Sikanderabad is made up of Pathans - a cultural group where the practice of modern methods of contraception is likely to be less and is generally considered to be inappropriate.[7]

The PHC center established in Sikanderabad is based on the above information. The emphasis is on maternal and childcare, including antenatal and postnatal care, family planning and nutritional counseling to raise awareness of the needs of mother and child. There is also a family physician who looks after the general day to day problems, specially the care for the geriatric population of

the area. Provision of female doctors, which includes consultant gynaecologist, provides antenatal and postnatal services along with gynecological care. A paediatrician at the PHC center provides specialist services referrals backup two days per week. It recommended that population based surveys should be conducted before establishing health services in any area in order to identify the health needs of the population.

Acknowledgements

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