Journal of Biological Sciences and Medicine
Available online at www.jbscim.com

ISSN: 2455-5266

Research Article **Open Access**

Prevalence of infant mortality among children of the Todapur-Dasghara village, Delhi, India

Shobha Kumari, P R Mondal and Sonali Walia*

Department of Anthropology, University of Delhi, Delhi, India.

*Corresponding Author: drsonaliwalia@gmail.com

ARTICLE INFO

Article History:
Received
21 February 2018

Accepted
20 March 2018

Available online
31 March 2018

Key words:
Delhi; Demography; Illiteracy; Infant; Jat; Mortality; Yadav

ABSTRACT

Mortality means finally death and the condition of being susceptible to death. It is generally used to indicate the end of life or death. Infant mortality is defined as the death of children under the age of one year. Infant mortality rate is the death of children under the age of one year per 1000 live births. The death of children due to mortality may be used as a symbol of public health condition of those countries. As a result of these, children mortality effect also on the entire population disturbance. There are many factors that affect the child infant mortality like race and ethnicity, sanitation, culture, life style, education etc. The present study aimed to study the demographic profile of Todapur and Dasghara women and children in Delhi. The data were collected from Jat and Yadav dominated villages in different months of the year 2013-2014 from 900 households. The main focus of the interview was the ever-married women in the reproductive age group of 15 to 55 years and their children. The data was collected through interviews and observations. Data on reproductive history, vital events, family planning etc. was collected. The results revealed that 38.6% of people are original inhabitants of Todapur, 17.4% from Dasghara and the rest from Bihar state. The age at marriage is low that is 15 years. More than 5.3% of the women in the age group of 15 to 19 years have ever had a child. This is the cause of reproductive wastage. The crude death rate of the people of Todapur-Dasghara is 7.26 per 1000. The infant mortality rate is 26.6 per 1000 live births. This study looks into the reasons for infant mortality, which would help to control or further reduce infant mortality in future.

Introduction

Infant mortality is a symbol of child health and has an impact on the mother's fertility and affects birth rate. But even today, most of the study of mortality and fertility cannot be taken up separately to evaluate the important biochemical, molecular and genetic pathway for their explanation that can clarify all unsolved question and give future solution. Birth or death of a child in a family effects and influences the whole family structure on one hand and the whole society on the other hand. There is no aspect of human life which is not influenced by mortality today. The mortality in a society is of vital concern. It directly or indirectly affects fertility. In a society, where there is high mortality, the fertility also tends to go up. The women tend to give birth to more children, to make up for the loss that mortality would do. The fecund period of a woman, has two extremes that is menarche and menopause (Dabral et al 2004). In

demographic studies, the reproductive span that is the child bearing period of woman is usually taken to be between 15 to 49 years of age. Many factors including genetics, nutrition and social-economic conditions influence mortality. Genetics perhaps sets the boundaries, but environment dictates how one falls within the limits. Educational level, economic status, religious attitudes, health facilities available etc. are other factors affecting mortality. The present paper explores the infant mortalility rate among children of Todapur- Dasghara with respect to age. The crude mortality rate has also been discussed. It also looks into the causes of mortality.

Materials and Methods

The study was conducted in the villages of Todapur-Dasghara district, Delhi. Todapur is a Yadav village; the neighboring Dasghara is a Jat Basti. In the present study, a total of nine hundred (900) households were covered from at least two average-sized villages of different castes. A 10 per cent over sampling was done to overcome the response error i.e., a total of 1000 household were covered in the study. The main focus of the interview was the ever-married women in the reproductive age group of 15-55 years and their children. The primary source of information was the first-hand information collected during fieldwork. Both quantitative and qualitative data was collected through interviews and observation. A two-month pilot study was conducted in the selected villages with a view to establish rapport and identify key informants. At least 25 ever-married women in reproductive ages were interviewed and data about their children was collected in every selected village during this period for pre-testing and modifying the interview schedule. The pilot study was followed by intensive demographic fieldwork using exhaustive modified schedule. The schedule comprised relevant questions on reproductive history, vital events, family planning, ante-natal and postnatal care, child vaccination, disease profile, healthcare awareness, and available health amenities and so on. Data on dietary habits, social restrictions on pregnant mothers, feeding practices and beliefs and taboos pertaining to health and disease was also collected. The fieldwork was conducted in two phases taking into consideration the convenience and activities of the villagers in a calendar year. Twelve months were required for data collection. Secondary data was also collected by consulting village records, census data, information handbooks of the State government, etc. to cross-check and substantiate the primary data. The data was put to statistical analysis using SPSS. The study was ethically cleared by the ethical committee of department of Anthropology, University of Delhi. This study was approved and financially supported by Indian Council of Social Science Research.

Results

A 38.6% of the people residing there are the original inhabitants of Todapur, 17.4 % are the original inhabitants of Dasghara. The rest of the population is the migratory population of Bihar (40%) state. Although, these people behave like original inhabitants, but actually, they have migrated from Bihar, since a very long time in search of work. The original Jat and Yadav population have better houses and living standards as compared to the migratory population of Bihar. Tap water, Sewage disposal facility and electricity are available in these two villages. A look at the general characteristics of the respondents reflects that all respondents are married. No woman is either divorced or separated. Analysis of the work status of the respondents shows that the original inhabitants almost cent percent are not working and are engaged in household activities that includes domestic work like preparation of cow dung cakes. Only a very small percentage of migratory population of Bihar are engaged in agarbatti making factories. These women are working in

very bad environmental conditions and with very low wages.

Among the people of Todapur –Dasghara, the infant mortality rate is 26.6 per thousand, it is not only lower than all Delhi population (32.0: SRS, 2003), but much lower than that, for all India (64.0: SRS, 2003). This is probably due to better standard of living, hygienic conditions, access to health facilities. According to various government schemes, pregnant women are getting various facilities, for up keeping of good health during pregnancy. They are vaccinated during pregnancy and the infants are vaccinated after birth, free of cost. The Polio drive run by the government has also benefitted the people in villages like Todapur-Dasghara. Although the women are uneducated, but they are still aware about the need for vaccination, nutritious food for pregnant women during and after pregnancy. This awareness has been spread by various programs run by the government. The Crude Death Rate is a rate of total registered death to the total population also in a specific year, multiplied by thousand

$$\mathrm{CDR} = \frac{\mathrm{B} \times \mathrm{K}}{\mathrm{P}}$$

Where CDR = Crude Death Rate

B= Total number of deaths registered during calendar year

P= Total Population at the middle of the year

K= Thousand

A look at the current mortality level indicates that crude death rate of people of Todapur –Dasghara is 7.26 deaths per 1000 individuals. It is higher than all Delhi Crude death rate for year 2002 [5.1: SRS 2003], but slightly lower than all India [8.1: SRS 2003]. The fertility rate declines in the next age group 35-39 years. Among Todapur-Dasghara women, early child bearing at the age of 15-19 years and child bearing at the age of 39 years and above is quite low. Evaluation of death rates by cause of death indicates that respiratory orders such as T.B., Pneumonia are the major cause of death among people of Todapur-Dasghara. Cause specific death rate due to respiratory disorders is 2.10 deaths per 1000 population.

In India, significant proportion of deaths occur during 0-4 years (32.7%) and old age (60 years and above, 35.5%: RGI 1995). Though during the last 50 years, IMR of India has come down by more than 50% but is still very high as compared with the developed countries of the world like USA, UK, Japan and France (Miller and Goldman 2011). As mentioned earlier, infant and child mortality is relatively higher in groups where fertility is higher. This supports the argument that increased mortality is response to high fertility. This supports the argument that increased mortality is response to high fertility (Chen et al. 1974; Chaudhary et al. 1976). There are some previous studies explore the relationship between fertility and age at marriage and determine the effect of age of marriage on the women health, life span of women, her child bearing capacity and fertility rate (Maudlin and Berelson 1978; Chaudhary 1984). However, there are also some previous studies that reveals a later stage at marriage reduces the rate of fertility (Agarwal 1967; Durch 1980; Yadav and Badari 1997).

The result of the study shows higher number of neonatal deaths during 25-29 age groups, but the reason is unknown (Table 1). It may be due to some socio- economic, demographic problem such as cleanness, toilets and sanitation practices during trimester of pregnancy and some severe unnoticed, uncared disease, whereas the neonatal death from other disease is very less like from Jaundice, pneumonia and respiratory disease. The outcomes show higher number of abortions during 35-39 age groups but the reason is unknown (Table 2). It may be due to some socio- economic, demographic problem such as cleanness, toilets and sanitation practices etc. and some severe unnoticed, uncared disease. The finding of the study shows mortality among children less than one year residing in the village Todapur-Dasghara (Table 3). The reasons for mortality are abortions, neonatal death due to unknown

reasons, jaundice, pneumonia, fever and respiratory disorders. 25-30% women of Todapur-Dasghara suffered from the consequences of infant mortality.

Table 1: Frequency of Neonatal Deaths due to Various Reasons.

	Neonatal Deaths						Total
Age Cohort	**No. of neonatal deaths due to unknown reasons**	**Neonatal death due to negligence**	**Neonatal death due to fever**	**Neonatal death due to jaundice**	**Neonatal due to pneumonia**	**Neonatal due to respiratory disease**	
15-19	9	0	0	0	0	0	9
20-24	151	2	1	0	2	0	156
25-29	203	5	0	1	0	1	210
30-34	166	0	0	2	1	0	169
35-39	146	2	1	0	0	0	149
40-44	78	1	0	0	0	0	79
45-49	60	0	0	0	0	0	60
50-56	65	2	0	0	0	1	68
Total	878	12	2	3	3	2	900

Table 2: Frequency of abortions due to various reasons.

	Frequency of abortions					Total
Age-Cohorts	**No abortion**	**Abortion due to unknown reasons**	**Abortion due to fetus not growing**	**Abortion due to fetus unequal growth**	**Abortion due to infection**	
15-19	9	0	0	0	0	9
20-24	147	9	0	0	0	156
25-29	196	10	2	1	1	210
30-34	158	9	1	0	1	169
35-39	137	12	0	0	0	149
40-44	71	6	2	0	0	79
45-49	60	0	0	0	0	60
50-56	60	7	0	0	1	68
Total	838	53	5	1	3	900

Table 3: Causes of mortality among children less than one year among children of Todapur-Dasghara, Delhi.

Causes of Mortality	**No. of Death**	**Cause specific death rate**
Abortions	62	6.88
Neonatal death due to unknown reasons	12	1.33
Respiratory diseases	22	2.44
Pneumonia	13	1.44
Fever	102	11.33
Jaundice	30	3.33
Total	241	26.7

Discussion

Mortality checks the unlimited growth of population and regulates the distribution of individuals in different age groups. It is a continuous force of attrition tending to reduce population but having its effects counteracted by the force of fertility. In effective reduction of mortality level, infant mortality has a key role to play (Dabral and Malik 2004). Infant mortality rate in Todapur –Dasghara would include mortality in children, less than one year, due to various reasons that is neo-natal death, abortion and cause specific death rate. Table 1 showed that, although the frequency of neo-natal deaths is less but is mostly concentrated among children, who are born to mothers, who are 25-29 years. The reasons being, that it is the prime child bearing age. Although, socio- economic factors, hygiene and availability of medical facilities have a major role to play. Table-2 showed that the frequency of abortions was higher in the mothers of age group 35-39 years. This is the age of delayed child bearing, which in itself is a cause of abortions. The other factors are physical and mental health and environmental factors. Table 3 showed that the major cause of cause specific death rate was fever, although other diseases like pneumonia, jaundice and respiratory diseases etc. also contributed to it. Fever actually indicates varied reasons like dengue, malaria, viral fever etc. This clearly indicates that unhygienic environmental conditions, dirty drinking water and unavailability of medical facilities would be prime factors affecting mortality. Another important factor to be considered is that, Todapur-Dasghara, located in the heart of Delhi, is predisposed to all medical facilities, but the concern is how these medical facilities are availed. The reasons for this could be narrow mindedness among uneducated women and financial factors also have a key role to play. 60% of the women are illiterate which has a major impact on all factors affecting mortality. The imperative of women cleanliness during pregnancy for delivery of child remains unclear and doubt. Poor sanitation practices can induce infection and promote mental, physical stress during pregnancy and may contribute to adverse pregnancy outcomes like miscarriage, still birth abortion, recurrent abortions, preterm birth and low birth baby (Padhi et al 2015). There are so many factors that are responsible for reduce the rate of fertility such as educational level, economic status, religious attitudes, women's work participation etc (RGI-fertility survey 1997; Bhasin 1990; Elamin and Bhuvan 1999; Pandey et al. 2000; Bhasin and Nag 2002a) in addition to conception control practices and attitudes (Bhuyan and Ahmed 1984).

Conclusion

It also concluded that in general, the egos in the present are currently married, less educated and engaged in household activities. IMR is lower among these people, but overall mortality (CDR) is slightly higher than all Delhi population with fever due to various reasons, being the primary cause of death. It may also have concluded that among Todapur-Dasghara, woman's age has most significant effect on fertility as well as use of birth control methods. Higher fertility is associated with older women. It is expected that if infant mortality is lowered than it may automatically lead to fertility reduction. Conversely, infant mortality increases as the women grow older. Acceptance and use of family planning methods among older women is lower, perhaps during their active reproductive period they were less aware and less receptive for family planning. The likelihood for usage of birth control methods declines with the decrease in surviving children, however, it further declines if the women have higher desire for sons. Fertility, infant mortality and use of birth control methods, thus, influence each other. Higher fertility is a biological and behavioral response to higher mortality. If there is a mortality decline it will be eventually followed by a fertility decline. Higher infant mortality tends to increase fertility as women try to replace their lost children; in order

to achieve desired family size. Once the desired number of children and gender composition are achieved, only then women intend to use family planning methods. Lower infant mortality together with higher fertility is a favorable motivating factor in the acceptance of fertility control measures by the couple. Couples don't control child birth, until they are convinced that their infants would not die, though other bio-social variables also influence their reproductive behavior. The present study has been able to demarcate to some extent, most important factors influencing fertility. Thus, the study could be helpful in dealing with these population variables that shape the demographic profile.

Conflict of interest

The authors declare that they have no conflicts of interest in this study.

Acknowledgements

The authors are grateful to the subjects who participated in the study. A sincere thanks to Indian Council of Social Science Research for financially supporting the study. Thanks to Bhavya Walia for data entry.

References

Aggarwal SN (1967) Effect of the rise in female age at marriage on birth rate in India: In: Proceedings of the World Population Conference, Belgrade.

Bhasin MK, Nag S (2002a) A demographic profile of Jammu and Kashmir: Population Structure. J Human Ecol 13:1-55

Bhasin V (1990) Habitat, Habitation and Health in the Himalayas. Kamla-Raj Enterprises, Delhi.

Bhuyan KC, Ahmed MU (1984) Fertility and family planning practices [n rural Bangladesh. The J Family Welfare 30(3):57-70

Chen LS, Ahmed MG, Mosley WH (1974) A Prospective study of birth interval dynamics in rural Bangladesh. Populat Studies 28(2):277-279

Choudhury RH (1984) The influence of female education, labor force participation, and age at marriage on fertility behavior in Bangladesh. Social Biol 31:59-73

Choudhury RH, Khan AR, Chen LS (1976) The effect of child mortality experience on subsequent fertility: Pakistan and Bangladesh. Populat Studies 30(2):249-262

Dabral S, Malik SL (2004) Demography study of Gujjars of Delhi: Population structure and socio-cultural profile. J Human Ecol 16(1):17-24

Durch JA (1980) Nuptiality Patterns in Developing Countries. Implications of Fertility. Population Reference Bureau, Washington.

Elamin, Bhuyan KC (1999) Differential fertility in north eastern Libya. The J Family Welfare 45(1):12-22

Miller NZ, Goldman GS (2011) Infant mortality rates regressed against number of vaccine doses routinely given:Is there a biochemical or synergetic toxicity. Human Exp Toxicol 30(9):1420-1428

Montagu A (1963) Human Heredity. The New American Library of World Literature, New York.

Padhi BK, Baker KK, Dutta A, Cumming O, Freeman MC, Satpathy R, Panigrahi P (2015) Risk of Adverse Pregnancy Outcomes among Women Practicing Poor Sanitation in Rural India: A Population-Based Prospective Cohort Study. PLoS Med 12 (7): e1001851

Pandey PL, Jain DC, Pandey GD, Choubey R, Tiwari RS (2000) Some aspects of social factors affecting fertility behavior of Gond Women. Man in India 80(3 and 4): 251-258

RGI: Survey of Causes of Death (Rural) India, Annual Report (1995): Office of Registrar General of India, New Delhi

RGI: Survey of Causes of Death (Rural) India, Annual Report (1997): Office of Registrar General of India, New Delhi

Yadav SS, Badari, VS (1997) Age at effective marriage and fertility: An analysis of data for North Kanara. The J Family Welfare 43(3):61-66