

Chapter V

EXPECTATION FUNCTION

5.1 INTRODUCTION

The preceding chapter showed conclusively that in the twelve villages of the two blocks of the district of Koch-Bihar compared to male members females' expectation of life is relatively lower for all age cohorts. We look for a supplementary proof in this chapter. This is provided by simple regression functions with three separate regressors. We shall see in the following that while a regressor produces a significant effect on expectation of life, the effect on expectation of life of males is more marked than that on females. Thus discrimination against female is practiced on average by these households in respect of non-discriminatory protection of life. For this chapter the regressand is expectation of life at birth only.

5.2 DISTANCE FROM SUB-DIVISIONAL HOSPITAL

We comment in this section on the effect of distance from sub-divisional hospital.

Table 5.2.1

Simple Linear Regression

	Coefficients	T with d.f. =
	10	
EXBIRM	66.10	67.90
DISHOS	- 0.81	- 9.66
EXBIRM	=	Expectation of life at birth of males
DISHOS	=	Distance from sub-subdivisional hospital

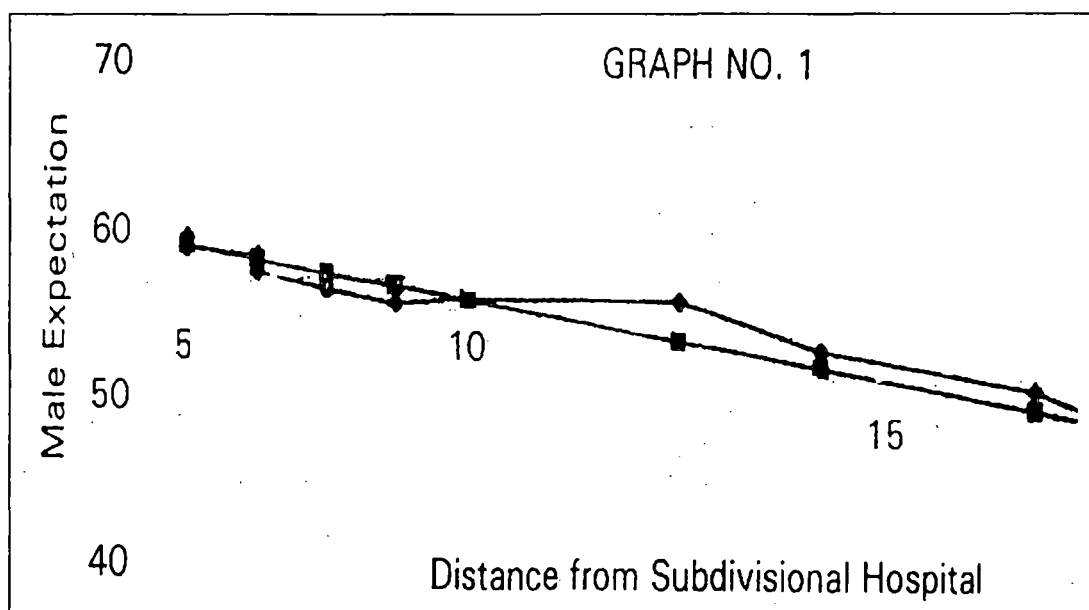
Table 5.2.2

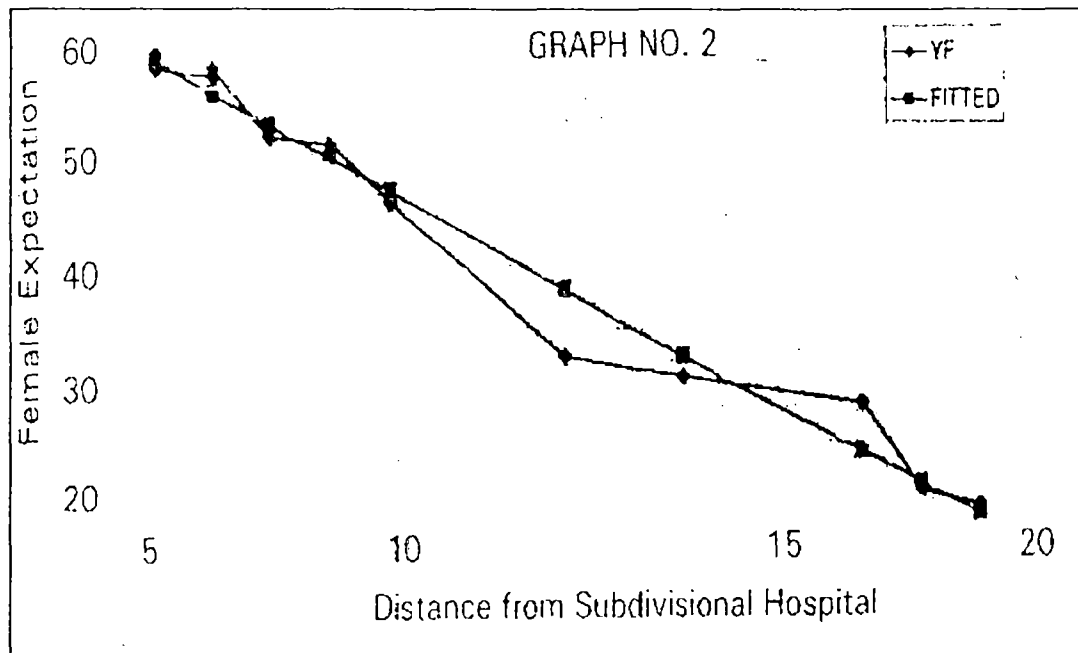
Simple Linear Regression

	Coefficients	T with d.f. = 10
EXBIRF	72.73	47.76
DISHOS	- 2.47	- 18.90

EXBIRF = Expectation of life at birth of females

DISHOS = Distance from sub-divisional hospital





On face it appears that government hospitals are places of free medical treatment. But in effect medicines are often have to be supplied by families of patients. It is thus not impossible that families resort to loans in some cases. But it is not easy to collect figures about the medicines bought by the families for their wards. In the absence of such data we compare the observed and the fitted data for males and females. The observed data are obviously fitted by simple regression functions.

In respect of testing of significance of the simple regression functions we adopt such practice that if one coefficient is significant then the whole function is significant. Viewed thus all the simple regression functions presented for this and the subsequent two sections are significant.

The two graphs from tables 5.2.1 and 5.2.2 show that distance from sub divisional hospital bear adversely more on female expectation of life at birth

than the male one. In other words, the greater the distance from the sub-subdivisional hospital the lower the female expectation of life at birth than the male expectation. Even though distance from hospital has effect on the life expectation of both genders, the observed values show in the graphs that hospital facilities are relatively less open to females than to males. The relevant graphs are graph no. 1 and graph no. 2.

EVERY

5.3 NUMBER OF FAMILIES WITH ^{EVERY} ADULT WOMEN HAVING AT LEAST TWO YEARS OF SCHOOLING

Table 5.3.1

Simple Linear Regression

	Coefficients	T with d.f. = 10
EXBIRM	-29.83	9.78
FANOTS	.87	9.20

EXBIRM = Expectation of life at birth of males

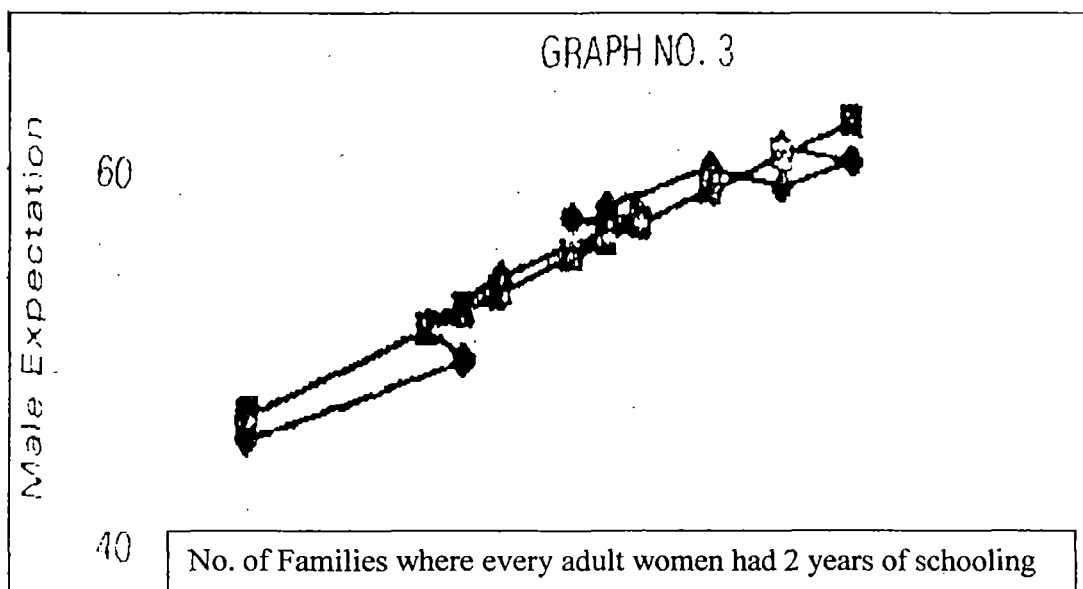
FANOTS = Number of families where every adult women had two years of schooling

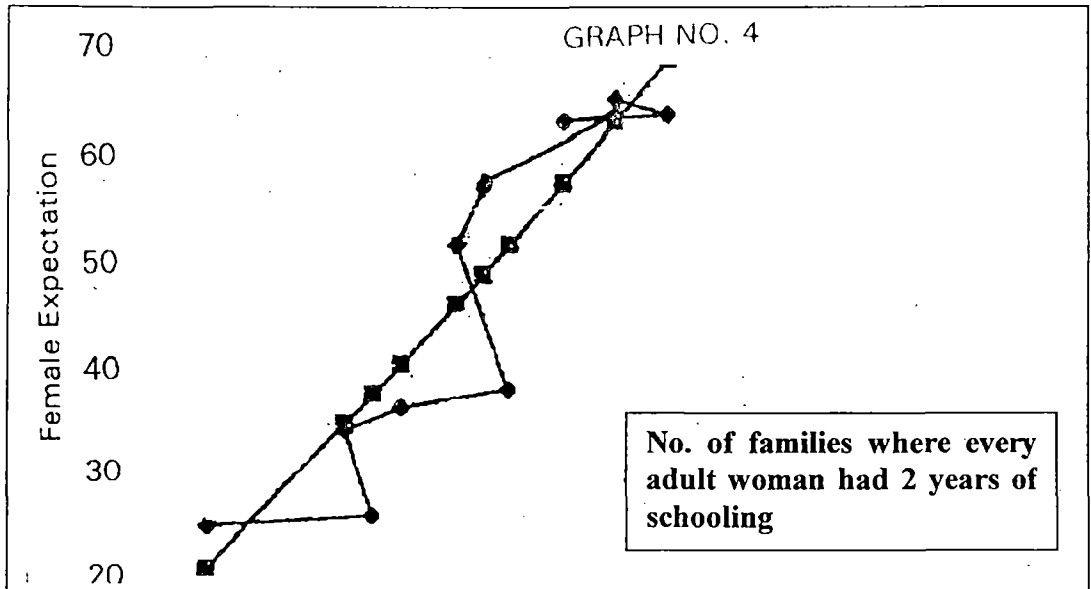
Table 5.3.2
Simple Linear Regression

	Coefficients	T with d.f. = 10
EXBIRF	- 29.78	- 2.29
FANOTS	2.41	5.96

EXBIRF = Expectation of life at birth of females

FANOTS = Number of families where every adult women had two years of schooling





We notice that education of adult women in the family is also a factor affecting the difference between the expectation of life of males and that of females. The regression function (expectation function) with number of families with ^{every} adult women having at least two years of schooling is significant both for males and females. This is clear from tables 5.3.1 and 5.3.2.

As in the case of the preceding regression commented upon in the preceding section, with the reduction in the amount of regressor there is a relatively heavy reduction in the expectation function for females than for males.

We shall see in the next section for both number of poorer families as well as for number of families with less schooled adult women there is more or less uniform effect. This is that in families which are relatively richer as well as in families with less schooled adult women there is hardly any difference between expectation of life at birth of males and that of females. This can be seen from a meticulous viewing of graphs of this section and

respective graphs for the following section. The relevant graphs of this section are graph no. 3 and graph no. 4.

5.3 NUMBER OF FAMILIES WITH PER CAPITA ANNUAL INCOME BELOW RS. 3600

Table 5.4.1

Simple Linear Regression

	Coefficients	T with d.f. = 10
EXBIRM	78.84	30.20
FANOB	-.89	-8.27

EXBIRM = Expectation of life at birth of males

FANOB = Number of families with per capita income below Rs. 3600.

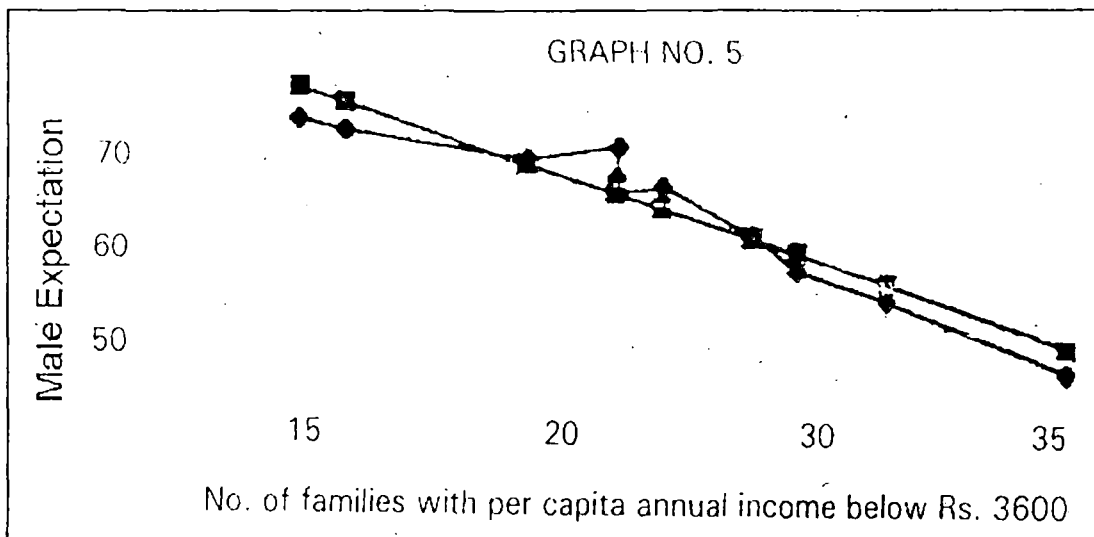
Table 5.4.2

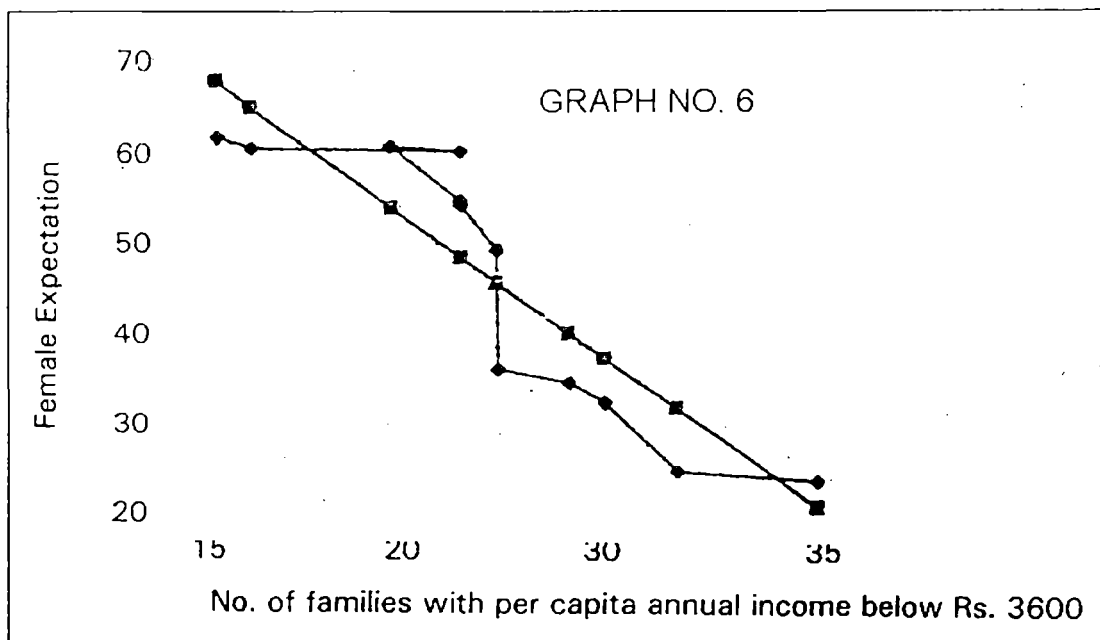
Simple Linear Regression

	Coefficients = 10	T with d.f.
EXBIRF	106.15	10.61
FANOB	-2.49	-6.04

EXBIRF = Expectation of life at birth of females

FANOB = Number of families with per capita annual income below Rs. 3600.





The third regressor for which the simple regression function (expectation function) is significant is the number of families having per capita annual income below Rs. 3600. There is no doubt that expectation of life for males and females separately rises with the rise in the per capita income of the family. Tables 5.4.1 and 5.4.2 show that the functions are significant.

But from the observed values depicted in the graphs from 5.4.1 and 5.4.2 we observe the pitiful phenomenon that poverty reduces the expectation of females, relatively more heavily than that of males. While in poorer families women have very low expectation of life, viz., from less than fifty to twenty seven, men's expectation almost never falls below fifty. Women, therefore, have relatively less chance for survival than men in relatively poorer families. The graphs for this section are numbered graph no. 5 and graph no.6.

5.5 CONCLUSION OF THE CHAPTER

Of the three regressors, all the three are directly or indirectly connected with poverty. Apparently, distance from sub-subdivisional hospital has no

connection with poverty. But often the families of the patients have to buy medicines not available in the hospital. So families with some means have an advantage over poorer families. But the proximity is an advantage that is independent of means. Our first regressor is distance from sub-subdivisional hospital. In families which are located within 5 or 7 kilometres we do not notice much difference in the expectation of life at birth of males from that of females. Proximity of the sub-subdivisional hospital perhaps give the families an advantage in getting better medical services from the hospital. We can never say that the families who live near a sub-subdivisional hospital are relatively richer. So we perhaps build up a hypothesis if all the households under our study had flawless free medical services at the hospitals some of the differences noticed in the expectation of life of birth between males and females would not have existed.

Our second regressor, namely, the number of families where every adult woman had benefit of 2 years of school, is in our opinion, dependent upon the means of the family in question. So this regressor also is dependent on the absence of poverty and is, therefore, connected with poverty. We have already noticed from the respective graphs that when the number of families where every adult woman had the benefit of two years of school is about forty there is hardly any difference in the expectation of life at births between the males and females. Since the high number of such families is possible only when such families have some means and are not that poor, this phenomenon is tantamount to the situation that in relatively richer families differences in the expectation of life at birth between males and females need not exist.

Our third regressor is direct measurement of poverty. We have noticed in the relevant graphs that where the number of families with per capita annual income below Rs. 3600 is very low there is hardly any difference in the expectation of life at birth between males and females. So we have a good

proof that the poverty is the big cause of the difference in the expectation of life at birth of males and females in poorer societies.

All in all, with complete free medical services at doorsteps and/or with complete reduction of present level of poverty, absolute or relative, this difference in expectation of life at birth between males and females would may disappear substantially. As long as relative poverty does not vanish, women may not receive as much nutritional care as male members.