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Responses on Desired and Expected Number of Children as Indicators of Family Planning Acceptance

1. Introduction

THIS study is intended to identify the target couples who are ready to accept the idea of family planning if proper assistance in that regard is readily available. It is based on the responses on the additional expected and the additional desired number of children. A number of studies (Freedman *et al*, 1960, 1965; Judith Blake, 1966) have attempted to stress the importance of expected family size as a factor capable of predicting the fertility behaviour. The opinion about the expected number of children is a function of many factors like the respondent's reproductive experience, the socio-economic and cultural backgrounds, the present family set up etc. When the questions on additional expected are being answered, the problem of predicting fertility is shifted to the respondent. But in the case of younger couples, they cannot or may not be in a position to predict the expected number of children. However, they can provide a probable answer about the number of children or additional number of children that they desire to have.

This suggests that these variables, namely the additional expected and the additional desired number of children coupled together may provide a better dimension to identify the right couples who are to be approached for acceptance of family planning.

There is every likelihood that the couples may be forced to adopt

family planning if there is a positive gap between their additional expected and the additional desired number of children. Intensity of acceptance may increase markedly with the increasing gap in these two variables. When the additional desired is less than the additional expected and suitable family planning education is not provided in time, they are bound to have undesired or unwanted births. It has been asserted (Freedman *et al.*, 1969) that the acceptance rates increased markedly "among couples who had alive all the children they wanted or more; the more children that were still wanted, the lower the acceptance rate".

An attempt is made in this study to test the hypothesis that the more the difference between the additional expected and the additional desired number of children, more favourable will be the respondents' attitude towards family planning practices and the communication between the husband and wife on matters relating to family planning.

2. Source of Data

The Family Planning Communication Action Research Centre, University of Kerala had carried out an intensive Family Planning Education Programme in areas adjoining Trivandrum city, capital of Kerala, during 1962-1965. In order to assess the work done 'Evaluation Studies' were conducted separately on husbands and wives during the last quarter of 1965. The data for the present study have been taken from these evaluation studies.

The field work for the study was carried out in two stages. First, a random sample of 1785 married women living with their husbands and within the age 15 to 44 at the time of the survey were interviewed. The interviews were carried out by trained lady investigators with the aid of an extensive and elaborate structured questionnaire, covering various aspects of family growth, fertility behaviour including the number of children born, desires, ideals and expectations concerning the number of children, attitude towards family planning etc. The second stage was confined to only about half of this sample. After a lapse of about four weeks the husbands of the respondent wives were interviewed by trained male investigators. There were 839 couples where both husband and wife were interviewed. The present study is based on the opinion of these 839 couples. But only in 626 cases, the information regarding the additional number of children expected and desired have been reported.

In 131 cases out of the remaining 213 couples, either the husband or the wife had undergone sterilisation operation.

Though opinions regarding the expected and desired number of children have been collected from both husbands and wives separately, it was found that the husbands' responses regarding the expected family size were less stable (Freedom *et al.*, 1960) compared to that of wives. In view of this, the responses of the wives alone were taken as the main variables of the study.

3. Scoring of the Dependent Variable

The dependent variable chosen for this study is the algebraic difference between the number of additional children expected and the number of additional children desired by the wife. All wives were asked questions concerning the above two aspects and the actual numbers reported have been taken as the score for each of the two aspects. The algebraic difference of these two scores is taken as the score for the dependent variable.

4. Expected and Preferred Family Size

The mean number of children additionally expected and additionally desired by wives are 2.09 and 0.52 respectively and the average number of living children per couple is 3.60 as may be seen from Table 1.

The expected family size given by wives in different age groups is more or less stable compared to those given by husbands (Table 1). The preferred family size is obtained by adding the number of living children to the additional number of children desired. It is dear from Table 1 that the average preferred family size increases with increase in the age of wives and falls within 2-4 upto the age of 34. This may be due to

TABLE 1-MEAN EXPECTED AND PREFERRED FAMILY SIZE ACCORDING TO RESPONDENT'S AGE

<i>Respondent</i>	<i>Age of respondent (years)</i>	<i>Sample size</i>	<i>No. of living children</i>	<i>Add. desired</i>	<i>Add. expected</i>	<i>Preferred family size</i>	<i>Expected family size</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	15-19	27	0.92	1.70	4.89	2.62	5.81
Wife	20-24	118	1.80	1.15	3.28	2.95	5.08
	25-29	156	2.88	0.57	2.72	3.45	5.60

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	30-34	117	4.06	0.24	1.90	4.30	5.96
	35-39	131	5.04	0.12	0.98	5.16	6.02
	40-44	77	5.37	0.08	0.26	5.45	5.63
	<i>All ages</i>	626	3.60	0.52	2.09	4.12	5.69
Husband	20-24	10	0.70	2.00	4.50	2.70	5.20
	25-29	76	1.55	1.36	2.43	2.91	3.98
	30-34	103	2.41	0.84	1.90	3.25	4.31
	35-39	114	3.27	0.60	1.54	3.87	4.81
	40-44	85	4.40	0.22	0.73	4.64	5.13
	45-49	89	4.70	0.19	0.40	4.89	5.10
	50-54	43	5.21	0.16	0.37	5.37	5.58
	55-60	13	6.00	0.00	0.00	6.00	6.00
	<i>All ages</i>	533	3.45	0.60	1.34	4.05	4.79

the fact that women in the advancing ages have had children above this range and stating a number fewer than this as the preferred number would be rather embarrassing for them.

The difference between the expected and preferred family size also shows a similar pattern. For the younger wives the expected family size is much larger than the preferred family size compared to the difference in these for the older wives. In fact, the difference between the expected and preferred family size becomes very small in the case of older wives. But then, the additional expected is also very small, as already indicated. These make it clear that the younger wives are more in need of family limitation techniques and they will be willing to accept such techniques. This is certainly a good sign as the impact of family planning techniques on tackling the burden of population growth will be more when younger couples (than older couples) become the acceptors.

5. The Meaningfulness of the Dependent Variable

The meaningfulness of the dependent variable ($E-D$)* is examined by means of its inter-relationship with the demographic variables namely

*The difference between the additional expected E and the additional desired number of children, D.

the age of wife, duration of married life, and the number of living children, Separate analysis is carried out for each of the group '0', '1' and '2+' additional number of children desired.

From the bivariate distribution of (*E-D*) and additional number of children desired for each of the group '0', '1' and '2+' (Table 2) it is seen that the correlation coefficient between (*E-D*) and the age of wife are negative and significant. The correlation coefficients are -0.48 , -0.29 and -0.26 respectively. However, these coefficients are not found to be homogeneous (Rao, C. R., 1952); the χ^2 value being 7.893 for two degrees of freedom, but they are meaningful by virtue of their direction and by the decreasing tendency with respect to the increase in the desired number.

About 47 per cent of the wives in the sample who do not desire any additional children are above 35 years of age ; about 45 per cent are between 25 and 35 and those below 24 years are less than 8 per cent (Table 2). The high negative correlation can be substantiated by these percentage differences. The additional expected births for the older wives decrease with their ages. This is understandable as the older wives are nearing the close of their reproductive period.

TABLE 2-WIVES IN THE DIFFERENT AGE GROUPS ACCORDING TO FOR THE ADDITIONAL DESIRED GROUP '0', '1' AND '2+'

<i>Additional desired</i>	(<i>E-D</i>)	15-19	20-24	25-29	30-34	35-39	40-44	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0			2	18	26	57	61	164
	1		9	20	18	28	7	82
	2		4	11	26	16	3	60
0	3		5	13	11	8		37
	4		3	8	2	6		19
	5		3	8	4	2		17
	6		1	5	3			9
	7+	1	2	6	2			11
	Total	1	29	89	92	117	71	399
		(0.3)	(7.3)	(22.3)	(23.1)	(29.3)	(17.7)	(100.0)*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(*)	(9)
1	0	2	20	15	8	6	5	56
	1	4	6	13	8	5	1	37
	2		2	11	2			15
	3		16	2	2	1		21
	4	4	2	4	2			12
	5+	1	5	4				10
	Total	11	51	49	22	12	6	151
		(7.3)	(33.7)	(32.5)	(14.6)	(7.9)	(4.0)	(100.0)*
2+	0	5	17	9	2	2		35
	1		4	1				5
	2		7	4				11
	3	3	3	2				8
	4	5	3	1	1			10
	5+	2	4	1				7
	Total	15	38	18	3	2		76
		(19.7)	(50.0)	(23.8)	(3.9)	(2.6)		(100.0)*
	All	27	118	156	117	131	77	626
		(4.3)	(18.8)	(24.9)	(18.7)	(20.9)	(12.4)	(100.0)*

*Numbers in the bracket indicate percentages.

TABLE 3—MEAN, STANDARD DEVIATION AND CORRELATION COEFFICIENT WITH (E-D) OF DEMOGRAPHIC CHARACTERISTICS ACCORDING TO THE ADDITIONAL NUMBER OF CHILDREN DESIRED

Additional desired number of children		0	1	2+
(1)	(2)	(3)	(4)	(5)
Characteristics	Sample size	399	151	76
E-D	Mean S.D.	1.54190	1.58176	1.71191

(1)	(2)	(3)	(4)	(5)
Age of wife	Mean	33.35	26.70	23.00
	S.D.	6.02	6.00	4.43
	Correlation Coeff. with (E-D)	-0.48*	-0.29*	-0.26*
Duration of Married life	Mean	14.92	8.50	4.08
	S.D.	6.50	5.56	3.08
	Correlation Coefficient with (E-D)	-0.44*	-0.28*	-0.19
Number of living children	Mean	4.40	2.64	1.08
	S.D.	2.08	1.73	0.76
	Correlation Coefficient with (E-D)	-0.21*	+0.01	+0.12

*Significant at the 5 per cent level.

Among those who desire additionally one child or more, there is a higher percentage of younger wives. These are the wives who may expect a larger number of children in view of the long married life ahead of them than the older wives. In the sample of 151 who desire to have just one more child, about 74 per cent are in the age group of 15-29. Only about 7 per cent wives of '2+' group belong to the age group 30-44. Thus it is clear that the wives who desire more children are young and are in the early stages of their married life.

The next dimension considered is the duration of marriage. The correlation coefficients of duration of marriage with (E-D) are -0.44, -0.28 and -0.19 respectively for the '0', '1' and '2+' additional desired number of groups. The trend of the correlation coefficients is the same as that for age of wife. Age is closely related to duration of marriage and hence it is not surprising to find that duration of marriage shows the same trend as shown by age. As in the case of age, longer the duration of married life, fewer will be the additional number of children desired. The average marital durations are found to be 14.92, 8.50 and 4.08 years for the additional desired group of '0', '1' and '2+' respectively (Table 4).

TABLE 4—WIVES ACCORDING TO DURATION OF MARRIAGE AND (E-D) FOR THE ADDITIONAL DESIRED GROUPS '0','1' AND '2+'

	<i>Additional desired (E-D)</i>	<i>Duration of marriage</i>									<i>Total</i>
		<i>0—2</i>	<i>3—5</i>	<i>6-8</i>	<i>9-11</i>	<i>12—14</i>	<i>15-17</i>	<i>18—20</i>	<i>21—23</i>	<i>>24</i>	
0	0		3	6	11	22	24	34	32	32	164
	1		11	9	8	14	13	13	12	2	82
	2	1		12	8	14	11	8	6		60
	3	2	3	8	9	5	4	3	2	1	37
	4			7	4	3	3	1	1		19
	5		3	4	1	6	2	1			17
	6		2	3	3		1				9
	7+		5	2	1	3					11
	Total	3	27	51	45	67	58	60	53	35	399
	(0.8)		(6.8)	(12.8)	(11.2)	(16.8)	(14.5)	(15.0)	(13.3)	(8.8)	(100.0)*
1	0	3	16	10	7	10	2	4	2	2	56
	1	3	8	9	5	4	3	4		1	37
	2		2	5	6	1	1				15
	3	5	5	6	3			2			21
	4	2	4	2	3	1					12
	5+	1	5	3	1						10
	Total	14	40	35	25	16	6	10	2	3	151
	(9.3)		(26.5)	(23.2)	(16.5)	(10.6)	(4.0)	(6.6)	(1.3)	(2.0)	(100.0)*
2+	0	10	13	5	5	1			1		35
	1	4		1							5
	2	3	6		1	1					11
	3	4	4								8
	4	4	4	2							10
	5+	3	2	2							7
	Total	28	29	10	6	2			1		76
	(36.8)		(38.2)	(13.2)	(7.9)	(2.6)			(1.3)		(100.0)*
All groups	45	96	96	76	85	64	70	56	38	626	
	(7.2)	(15.3)	(15.3)	(12.1)	(13.7)	(10.2)	(11.2)	(8.9)	(6.1)	(100.0)*	

*Numbers in the bracket indicate percentages.

There is great variation in the number of additional children expected when considered according to the number of living children. Among the wives who desire no more child, more than 50 per cent have 2-4 living children and nearly 44 per cent of them have 5 or more living children (Table 5). When the number of living children increases, naturally the additional expected tends to be less and this explains the negative relationship between the additional expected and the number of living children in the zero desire group. The correlation coefficient for zero additional desired group is -0.21 and the mean number of living children for the group is 4.40.

TABLE 5-WIVES ACCORDING TO THE NUMBER OF LIVING CHILDREN BY THE VARIABLE (*E-D*) FOR THE ADDITIONAL DESIRED GROUP '0','1' AND '2+'

Addi- tional desired	Number of living children											Total
	(<i>E-D</i>)	0	1	2	3	4	5	6	7	8	9+	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
0	0	1	12	16	24	29	24	24	19	5	10	164
	1		2	17	11	10	13	11	11	5	2	82
	2			8	11	15	12	6	2	4	2	60
	3			8	10	9	3	2	3	1	1	37
	4			5	5	6		1	1	1		19
	5			3	5	2	5	2				17
	6			2	2	3	1	1				9
7+		1	3	3	2	2					11	
	Total	1	15	62	71	76	60	47	36	16	15	399
		(0.3)	(3.8)	(15.5)	(17.8)	(19.0)	(15.0)	(11.8)	(9.0)	(4.0)	(3.8)	(100.0)*
1	0		17	20	6	1	7	3		1	1	56
	1		10	9	7	3	4	2			2	37
	2		2	5	3	5						15
	3		10	4	4	1	1	1				21
	4		3	4	3	1	1					20
	5+		2	5	2		1					11
	Total		44	47	25	11	14	6		1	3	151
			(29.1)	(31.1)	(16.5)	(7.3)	(9.3)	(4.0)		(0.7)	(2.0)	(100.0)*

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	0	9	14	10	2							35
	1	3	2									5
	2	1	7	2	1							11
2+	3	1	7									8
	4	1	7	1	1							10
	5+		7									7
	Total	15	44	13	4							76
		(19.7)	(57.9)	(17.1)	(5.3)							(100.0)*
All groups		16	103	122	100	87	74	53	36	17	18	626
		(2.5)	(16.4)	(19.5)	(16.0)	(13.9)	(11.8)	(8.5)	(5.8)	(2.7)	(2.9)	(100.0)

*Numbers in the bracket indicate percentages.

In the case of wives who desire one additional child, about 77 per cent have 1 to 3 living children and for that group the correlation coefficient is almost zero. The mean number of living children is found to be 2.64. This means that for mothers with 3 living children on the average and desiring to have one more additional child, the variable (*E-D*) is not correlated with the actual number of living children. For the couples who desire to have 2 or more additional children the mean number of living children is 1.08 and the correlation coefficient is 0.12 in the positive direction. But the correlation coefficient is not significant. It needs hardly any special explanation for these relationships since the wives who desire to have two or more children belong to the lower age groups and over 77 per cent of them are having almost one child. The trend of the correlation coefficients in the additional desired '0', '1' and '2+' groups is the same.

6. Husband-wife Communication and Family Planning Practice

The above analysis indicates the variable (*E-D*) is sensitive to the changes in demographic characteristics like age of wife, duration of married life and the number of living children. We now proceed to examine how far the variable (*E-D*) could be useful in arriving at policy decisions regarding family planning and to what extent the variable influences the husband-wife communication on matters relating to family planning.

Regression analysis has been adopted to study the inter-relationship of the variable (*E-D*) with each of the other variables taken for the study, namely (i) husband-wife communication relating to family planning matters and (ii) contraceptive practices. The proportion of the wives' responses according to these variables controlling additional desired number of children is ascertained and linear regression equations are fitted for this proportion (*E-D*).

In the regression analysis, the proportion of couples who have had discussion about family planning in the additional number '0' and '1' groups are considered separately. The equations found are :

(i) for '0' additional desired group :

$$y = 0.067x + 0.470, \text{ and}$$

(ii) for V additional desired group :

$$y = 0.015x + 0.523,$$

where

x is the variable (*E-D*)

y is the proportion of those who have had discussion about family planning.

The regression coefficients in both the equations are found to be significant. The equality of the two regression equations has been tested by Chow's test (Chow Gregory, 1960) and the test reveals that the groups have distinct linear regression. But there is a common feature for the two, namely that the proportion of those who 'had communication' increases with increase in (*E-D*). This may be an indication of the fact that increase in gap between the additional expected and additional desired makes the couples to think seriously about the matter, thereby resulting in more communication between them on family planning matters.

In the case of '2+' additional desired group, the relationship is not so crystalised as in the previous cases. This is quite natural as these couples have no definite clear-cut opinion about the family size expected. However, the direction of a possible relationship in this case also is the same though regression coefficient is not significant.

TABLE 6—HUSBAND-WIFE COMMUNICATION ACCORDING TO (E-D) AND ADDITIONAL NUMBER OF CHILDREN DESIRED

<i>Additional desired</i>	<i>(E-D)</i>	<i>Communication</i>		
		<i>Had</i>	<i>Never</i>	<i>Total</i>
0	0	77	85	162
	1	50	32	82
	2	32	28	60
	3	23	14	37
	4	13	6	19
	5+	33	4	37
	Total	228	169	397*
1	0	30	26	56
	1	20	16	36
	2	8	7	15
	3	12	9	21
	4	7	5	12
	5+	7	3	10
	Total	84	66	150**
2+	0	14	20	34
	1	—	5	5
	2	6	5	11
	3	3	5	8
	4	5	5	10
	5+	4	3	7
Total	32	43	75***	
All groups		344	278	622

* In 2 cases data not available

** In 1 case data not available

*** In 1 case data not available

The relationship between the variable (*E-D*) and the proportion of those who have had ever used or practised at least one family planning

method irrespective of the present use status, has been examined separately for the cases of zero and one additional desired child.

The regression equations are

(i) for '0' additional desired

$$y = 0.047 x + 0.156$$

TABLE 7—CONTRACEPTIVE PRACTICES ACCORDING TO (E-D) AND ADDITIONAL NUMBER OF CHILDREN DESIRED

<i>Additional desired</i>	<i>E-D</i>	<i>Contraceptive Practice</i>		
		<i>Never used</i>	<i>Now attempt one method***</i>	<i>Ib/a/</i>
0	0	134	29	163
	1	60	22	82
	2	46	14	60
	3	26	11	37
	4	13	6	19
	5+	23	14	37
	Total	302	96	398*
1	0	46	9	55
	1	29	7	36
	2	12	3	15
	3	13	4	17
	4+	11	5	16
	Total	111	28	139**
2+	0	31	4	35
	1	5	—	5
	2	9	2	11
	3	8	—	8
	4+	16	1	17
	Total	69	7	76
All groups	482	131	613	

* Data on contraceptive practices was not reported in one case

** Data on contraceptive practices was not reported in 12 cases.

*** It includes all who have practised family planning method (at least one) irrespective of the present use status.

TABLE 8—ATTITUDE OF WIVES TOWARDS FAMILY PLANNING ACCORDING TO (E-D) FOR DIFFERENT VALUES OF ADDITIONAL NUMBER OF CHILDREN DESIRED

<i>Additional desired</i>	<i>E-D</i>	<i>Not favourable</i>	<i>Favourable</i>	<i>Total</i>
0	0	13	149	162
	1	5	76	81
	2	6	51	57
	3	5	32	37
	4	1	18	19
	5	2	15	17
	6+	1	19	20
	Total	33	360	393*
1	0	2	51	53
	1	2	35	37
	2	—	14	14
	3	—	20	20
	4	1	11	12
	5+	—	10	10
	Total	5	141	146**
2+	0	1	32	33
	1	—	5	5
	2	1	10	11
	3	1	7	8
	4	—	10	10
	5+	—	7	7
	Total	3	71	74***
	All	41	572	613

* 6 cases of non-response

** 5 cases of non-response

*** 2 cases of non-response

(ii) for '1' additional desired

$$y = 0.036x + 0.148$$

where x is the variable ($E-D$) and

y is the proportion of those who have had practised at least "one method of family planning."

The regression coefficients are statistically significant. The relationship exhibited by family planning practice is very similar to that exhibited by husband-wife communication, practice increasing with the value of $E-D$. Attitude of wife towards family planning had also been considered, but as almost all responses were favourably disposed to the idea of family planning it will not be of much use as an explanatory variable for this study.

Conclusion

Intuitively, the need for the adoption of family planning methods arises when one expects that he/she will have more additional children than desired in the absence of family limitation practices. This paper attempts to examine how far this intuitive idea is justified in the light of available data. It has been possible to establish that the excess of additional expected over additional desired number of children is a clear indicator of the need and readiness for family planning and the extent of communication between the husband and wife on family planning matters. The identification of the magnitude of this dimension pinpoints the couples to be immediately approached for the adoption of family planning techniques, if they have not already adopted such measure.

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