

Population Review

Volume 52, Number 2, 2013

Type: Article pp. 49-69

Perceived Value of Children and Fertility Behavior: Evidence from Odisha, India

Author: Harihar Sahoo

Affiliation: Department of Development Studies, International Institute for Population Sciences

Corresponding author/address: Department of Development Studies, International Institute for Population Sciences, Govandi Station Road, Deonar, Mumbai-400088, India
e-mail: hariharsahoo@gmail.com

Abstract

Fertility has declined in Odisha (an Indian state on the east coast) in spite of its agrarian economy, high level of poverty and low levels of industrialization and urbanization. This suggests that the perceived economic value of children has changed, and children being considered as economic assets by poor households have changed. Using data obtained from a field investigation in one district of Odisha, this paper examines the value of children as perceived by poor/non-poor. Results show that the perceived short-term benefits from having children have fallen, and that the perception of child labor as being economically valuable is no longer common. High aspirations for children's education have led to a gradual rise in the costs of raising children. Respondents report "economic burden" as the most common reason for not wanting to have another child, reflecting the classical "quantity-quality" trade-off.

Keywords

Value of children, aspiration, cost, benefit, Odisha, India

Background and context

Demographic diversity in India poses a challenge to planners and policymakers. Different states are at different stages of the demographic transition. The factors responsible for demographic changes are not uniform across states. Fertility transition is one of the important components of the demographic transition. Fertility has declined throughout the country at varying levels and at different speeds, mainly due to the socio-economic and cultural heterogeneity. In general, striking variations exist among the states in terms of level of literacy, female education, nutritional standards, infant mortality, morbidity and employment, among others. Considerable variations in nuptiality patterns and fertility behavior are found across the states of India. There is the evidence that a fertility transition is in progress in India. Some states, such as Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Delhi, Himachal Pradesh, Punjab, Maharashtra and West Bengal, have reached replacement level fertility, and recent trends indicate that more states will reach replacement level fertility in the near future.

The fertility decline in Odisha, a socio-economically underdeveloped state of India, seems to be a paradox. There are various reasons for this. The Infant Mortality Rate (IMR) in Odisha is moderately high (69 in 2008), and the Crude Death Rate (CDR) at 9.0 is significantly higher than the national level (7.4), whereas the Crude Birth Rate (CBR) at 21.4 is slightly below the national average of 22.8 (India Registrar General 2009). The Sample Registration System (SRS) estimates of Total Fertility Rate (TFR) of 2.4 per woman in 2008 is only 14 per cent above the TFR of 2.1 that corresponds to replacement level in very low mortality populations. In fact, given that mortality in Odisha is not very low, a TFR of Odisha implies a Net Reproduction Rate (NRR) of 0.95, a shade below 1.0, and thus marginally below replacement fertility. The literacy rate in Odisha, at 63 per cent, is lower than the national average (64.8 per cent). About two-fifths of the population (39.9 per cent) lives below the poverty line, in contrast to 21.8 per cent at the national level (Government of India 2007). The economy is primarily agrarian; only 35 per cent of workers in Odisha are engaged in activities outside agriculture, and only 15 per cent of population of the state lives in urban areas. A substantial proportion, 22.1 per cent of the state's population, belongs to various tribes, identified as 'Scheduled Tribes' (ST). Under these circumstances the fertility decline in Odisha is viewed as an anomaly.

Given the low level of social development and poor economic setting, with a large proportion of population living below the poverty line, low level of industrialization and urbanization and moderately high rate of infant mortality, the TFR in Odisha is expected to be well over three as evidenced by the regression analysis for states in India, but the actual TFR of 2.4 indicates that fertility is much lower than what is predicted for the socio-economic conditions. Thus the fertility transition in Odisha is increasingly getting attention as it does not conform to the economic and social development argument. Economic and social development argument states that poor households tend to have large families (King 1987; Lipton 1994; Desai 1995). The remarkable fertility decline in Odisha suggests that the desired family size has reduced considerably and the motivations to have a large family are not strong. An important determinant that influences the desire to have children is the value (cost and benefits) of children as perceived by parents. In Odisha, the perceived value of children has changed, with increasing numbers of parents seeing children as more of a burden than an economic asset. The change in parents' perception regarding the value of children is likely to impact motivations for childbearing and therefore fertility outcomes (Hoffman and Hoffman 1973; Bulatao 1979; Kagitcibasi 1982a, 1982b; Fawcett 1983). This value is

likely to vary by birth order, gender of the child and parental characteristics, household income and other aspects of the socio-economic environment. The “value of children” is a broad concept, which can be conceptualized in different ways. Children are valued for both economic and non-economic reasons. In a rural agricultural patriarchal society where parents do not have any social security, sons are considered the only source of old-age help and social security. Thus old-age support is found as an important motivational factor for wanting more children (Sharma 2003). Earlier parents perceived more economic benefits from children working at an early age, whereas present-day parents perceive the value of children as a means of psychological contentment, rather than an economically beneficial one. There is a conscious emphasis on enhancing the quality of life of children in terms of health and education, among others (Vaithilingam and Verma 2002).

Thus the values attached to children are linked to different roles they perform in the family, such as economic and practical help, old-age support and psychological pleasure. Costs depend on educational aspirations of children, parental time in childbearing and rearing, among others. The main objective of this paper is to assess the perceived values and disvalues of children. Accordingly, aspects like parents’ feelings about children, functions served by children, etc., have been examined.

Data and methods

Data for the study were drawn from a field survey, which collected information on values attached to children and expectations on different roles they perform. This was also complemented by Focus Group Discussions (FGDs). One district in Odisha was selected for the investigation. In order to select a district close to the level of development of the state, a composite index was constructed on the basis of four key variables: infant mortality rate, female literacy, level of urbanization and per cent of workers outside agriculture. These indicators were obtained for each of the 30 districts for 2001, or a year close to it, and normalized on the scale (0, 1). The average of these normalized values yielded the composite index. The district with rank 16, that is, low fertility and middle level of development on the basis of this index, was Nayagarh, which was selected for the study. The investigation focused on rural areas for two reasons: 1) Odisha is predominantly rural (85 per cent of the population resides in rural areas) and 2) social scientists and policymakers want to know the reasons that underpin declines in fertility in rural areas.

The primary survey included a sample size of 500, a target that was established due to resource and time constraints. For this purpose, in the first stage, 10 villages were selected systematically by level of literacy and with probability proportional to size. In the next stage, selection of 50 currently married men of age 18-54 was made from each selected village. As the poverty-fertility linkage has been one of the principal issues to be investigated in the study, it was decided to cover samples of poor and non-poor so as to facilitate comparisons and address the research question. To this end, information about the household economic conditions, especially land holding and principal activity of the households in the selected villages, was obtained with a view to select approximately half of the representative sample from poor and the remaining half from non-poor families. Large villages were segmented into units of approximately equal size, usually about 100 to 200 households. From all the segments in each large village one segment was selected randomly. House listing and the collection of household economic information was then done only in the one selected segments. Finally, a systematic sampling technique was adopted to select the appropriate eligible male (currently married and in the 18-54 age group)

members of the household for interview from each village stratum. Two reasons dictate the choice of males as respondents. First, the researcher would find it easier to interview males than females, and second, males (or husbands) play a major role in decision making on fertility regulation (Muller 1972; Mohamad *et al.* 1988). Of the proposed sample of 500, 433 individual interviews were completed, leading to the response rate 86.6 per cent.

Four villages were selected for the FGDs, each at different levels of development. Currently married men of age 18-54 formed the participants of the FGDs. They were classified into two groups: less than 35 years, and 35 years or older. Two caste groups were recognized for the present purpose: Scheduled Classes (SCs) and the rest. Two other occupational classes were recognized for the present purpose: laborers who are engaged mainly in agriculture and unskilled activities, and those who are engaged in non-agricultural activities. Therefore, eight possible homogeneous groups were chosen for the FGDs.

Both bivariate and multivariate analyses were used in the study. Bivariate analysis in the form of cross-tabulation and multivariate analysis in the form of logistic regression were also carried out.

Results and discussion

Economic values and disvalues of children

Generally, children are valued for both economic and non-economic reasons. Economic theories of fertility suggest that, in many societies, people want children because they expect that children will contribute to the family economically (King 1987; Lipton 1994; Desai 1995). Reported perceived advantages of having children include, help with farm and household chores, contribution to family income, and support to elderly parents. This section discusses the various economic values and disvalues of children.

Economic help from children (child labor)

Children are often valued for their short-term economic benefits, specifically benefits associated with child labor. In order to study the labor value of children, all respondents with at least one son and at least one daughter less than 18 years of age were asked whether their children worked for wages or were engaged in some other economic activity, whether their children helped them with household chores, and whether their children contributed to the household income by engaging in several activities. Results (table 1) show that a negligible proportion of respondents stated that their children work and are economically helpful (10 per cent for sons and 4 per cent for daughter). As expected, children in poor households are perceived to be more economically helpful than children in non-poor households, but the gap is not wide. Clearly short-term benefits from children have fallen and the issue of child labor being economically valuable is no longer very common in Odisha. This is most likely due to the fact that children have begun spending longer periods in school. As a result, their economic contributions to the family have become negligible. Even the perceived economic benefit of children not in school has decreased; probably due to the fact that the chances of them to obtain paid work outside of the home has declined. Opportunities for child labor have shrunk due to enforcement of minimum wage and child labour laws. As the perceived value of children as employable economic assets has declined, a strong motivation for high fertility, as was argued in the past, no longer operates.

Table 1: Percentage of respondents who reported their son's and daughter's (below 18 years of age) work status by economic category of the household

Work status	Son			Daughter		
	Poor	Non-Poor	Total	Poor	Non-Poor	Total
Non-Economic activities	17.6	15.1	16.5	43.8	32.0	38.7
Economic Activities	12.9	7.2	10.4	4.6	3.0	3.9
Work on own farm	1.2	0.0	0.6	0.0	0.0	0.0
Work on others' farm	2.9	2.9	2.9	2.3	0.0	1.3
Skilled manual work	8.2	2.2	5.5	1.5	1.0	1.3
Other	0.6	2.2	1.3	0.8	2.0	1.3
Work	21.8	16.5	19.4	43.8	32.0	38.7
Do not work	78.2	83.5	80.6	56.2	68.0	61.3
No. of respondents	170	139	309	130	100	230

Source: Computed from the data obtained from field survey

Economic and practical help from children

Many studies in recent years have found that people value sons and daughters differently because they perform different functions. Sometimes children are valued for their contribution to farm and other household related activities; sometimes children are valued for old age support. To study the type of economic or practical help, respondents were asked whether they expected their son or daughter to help them with household work, farm/business, augmenting family income, support and care in old age, and social and moral support. The results show that more than two-thirds of respondents expect contribution to family income from their son (table 2). As expected, such an expectation is more prevalent among the poor, but the gap between poor and non-poor respondents is not wide. On the other hand, on social

Table 2: Percentage of respondents who expect different kinds of economic and practical help from their son and daughter by economic category of the household

Type of economic and practical help	Son			Daughter		
	Poor	Non-Poor	Total	Poor	Non-Poor	Total
Household work	3.8	3.0	3.4	0.6	0.6	0.6
Farm/Business	4.3	4.5	4.4	1.8	1.3	1.5
Contribute in family income	73.1	64.8	69.0	8.8	10.2	9.5
Old age support	55.8	51.3	53.6	11.7	9.6	10.7
Social/moral support	6.7	14.1	10.3	8.2	8.9	8.5
Others	0.0	0.5	0.2	0.0	0.0	0.0
All	81.3	73.9	77.6	22.2	22.9	22.6
Number of respondents	208	199	407	171	157	328

Source: Computed from the data obtained from field survey

Note: Percentages add up to more than 100 because of multiple responses.

support, the expectations of the non-poor are marginally greater than those of the poor. In contrast to the high expectation from sons, only ten per cent of respondents expect any financial contribution to the

family from daughters. It may be because daughters generally do unpaid work and join their husband's family after marriage. Children, especially sons, are expected to provide old-age support to their parents. On this point, the data show that about 54 per cent of respondents expect old age support from their sons, and only about 11 per cent from their daughters. The poor and non-poor report nearly identical expectations with regard to this issue.

More than 75 per cent of respondents expect some kind of economic or practical help from their son, while only 23 per cent have similar expectations from their daughter (table 3). One explanation for the difference may be that daughters leave their parent's house and join their husband's family after marriage. Expectations of economic or practical help from children are shown to be relatively high for the OBC/other caste group, the less educated, those who are not exposed to mass media, and those who are engaged in agricultural activities. The expectations of the poor from sons are only marginally higher than those of the non-poor.

Table 3: Percent of respondents who expect practical or economic help from their children by background characteristics

Background Characteristics	Son	Daughter
	Percent(n)	Percent(n)
Caste		
SC/ST	62.5(104)	22.7(88)
OBC/Others	82.8(303)	22.5(240)
Education of respondents		
No education & Primary	83.9(248)	23.4(201)
Secondary & higher	67.9(159)	21.3(127)
Exposure to mass media		
Not exposed	95.1(161)	22.9(48)
Exposed	74.6(346)	22.5(280)
Respondent's Occupation		
Agricultural	81.6(196)	21.7(161)
Non-agricultural	73.9(211)	23.4(167)
Economic category		
Poor	81.3(208)	22.2(171)
Non-Poor	73.9(199)	22.9(157)
Migration		
Return Migrant	89.5(38)	29.0(31)
Non-Migrant	76.4(369)	21.9(297)
Type of family		
Nuclear	77.5(275)	22.4(228)
Joint	78.0(132)	23.0(100)
All	77.6(407)	22.6(328)

Source: Computed from the data obtained from field survey

Note: n: Number of respondents in the category

Controlling the effect of other variables, it is found that respondents belonging to the OBC or other caste significantly expect more economic help from sons compared to the SC/ST group (table 4). Respondents

belonging to higher educational level expect less economic or practical help from their son compared to less educated respondents. Again respondents who are exposed to any mass media are less likely to expect any economic or practical help from their son compared to those who are not exposed. Similarly, expectations from sons are likely to be greater among poor respondents than their non-poor counterparts. Expectations from daughters are low and do not seem to differ by socio-economic background.

Table 4: Odds ratio showing the effect of background variables on expectance of economic and practical help from children (results of logistic regression analysis)

Background Variables	Son	Daughter
Caste		
SC/ST®		
OBC/Others	2.958***	0.942
Education of respondents		
No education & Primary®		
Secondary & higher	0.483***	0.823
Exposure to mass media		
Not exposed®		
Exposed	0.251**	1.017
Respondent's Occupation		
Agricultural®		
Non-agricultural	1.134	1.133
Economic category of the household		
Poor®		
Non-Poor	0.623*	1.046
Migration		
Return Migrant®		
Non-Migrant	0.520	0.682
Type of family		
Nuclear®		
Joint	1.172	1.055
Constant	16.800***	0.411
Number of Cases	407	328
-2 log likelihood	388.730	348.924
Pseudo R ² (Nagelkerke)	0.156	0.006

Source: Computed from the data obtained from field survey

Note: *, **, *** shows 10%, 5% and 1% level of significant respectively. 1= Expect some economic or practical help, 0= Do not expect/uncertain. ®: Reference Category

Expectation of help from children

All respondents were asked about their expectation of long-term benefits from their children. The majority of respondents (58 per cent) expect that their children will contribute to the household when they start earning an income before marriage (table 5). About 31 per cent of respondents were unsure whether their children would contribute or not before marriage because of societal changes. Roughly 50 per cent of respondents expect that their children will contribute to household income after their children get married. About 44 per cent of respondents expect that their children will periodically give them some money regardless of whether they live with them, while 33 per cent of respondents are unsure about this and stated that it depends on the children. With response to the expectation of respondents to live with

their children after their children are married, it was found that 82 per cent want to live together with their children for the rest of their lives. This suggests that parental dependency on children has been and continues to be the norm in Odisha. The responses of the poor are nearly identical to those of the non-poor. Clearly, with regard to the expectation of help from children, the poor do not have expectations different from others.

Table 5: Percent distribution of respondents who reported their expectation of help from their children by economic category of the household

Nature of expected help	Poor respondents	Non-Poor respondents	All respondents
Children contribute household income before marriage			
Yes	58.6	58.2	58.4
No	9.1	12.2	10.6
Depends	32.3	29.6	30.9
Children contribute household income after marriage			
Yes	49.5	47.9	48.7
No	9.1	12.2	10.6
Depends	41.4	39.9	40.6
Children will give you money			
Regardless of whether they live with you	44.5	44.1	44.3
Only if they live with you	12.3	12.2	12.2
Not at all	8.2	9.9	9.0
Depends	35.0	33.8	34.4
Would like to stay with children after children get married			
Not at all	3.2	6.6	4.8
Only for a few years	6.4	4.7	5.5
Only in old age	6.8	7.0	6.9
Always with them	82.3	80.8	81.5
Others	1.4	0.9	1.2
Number of respondents	220	213	433

Source: Computed from the data obtained from field survey

Extent of old age support

Extent of old age support is an important dimension of the value of children. A large chunk of respondents (83 per cent) of respondents stated that they expect to rely on their children for financial support during their old age (table 6). In a country like India, where most of the population lives in rural areas with poor coverage of social security systems, children are the only source of social security, old age help and care. Parents' dependence on their children in their old age could be an obstacle in the way of further reducing the desired family size. Only 12 per cent of respondents mentioned dependence on some other sources, such as pension and government assistance. Only 9 per cent of respondents reported their savings as a source of old-age support, suggesting that a very negligible proportion of people realize the importance of savings for their old age. Many do not feel that they would actually be able to save for old age. Dependence on children in old age is higher among less educated respondents, those not exposed to mass media, respondents not engaged in agriculture and those who are poor compared to their respective counterparts (table 6). As expected, the dependence on savings of higher educated respondents, respondents who are engaged in non-agricultural activities and those who are non-poor is higher than

others, though the proportion is very negligible. Controlling the effects of other variables, higher educated and non-poor respondents are less likely to depend on their children compared to their respective counterparts (table 7).

Table 6: Percentage of respondents who rely a great deal on various means of financial support during their old age by background characteristics

Background Characteristics	Means of financial support in old age			
	Children	Savings	Income/Property	Pension/Other govt. support
Caste				
SC/ST	77.0	7.1	1.8	24.8
OBC/Others	85.3	9.4	4.7	7.5
Education of respondents				
No education & Primary	88.5	3.1	1.5	11.5
Secondary & higher	74.9	17.5	7.6	12.9
Exposure to mass media				
Not exposed	92.2	0.0	0.0	9.4
Exposed	81.6	10.3	4.6	12.5
Respondent's Occupation				
Agricultural	89.9	1.9	1.9	8.7
Non-agricultural	76.9	15.1	5.8	15.1
Economic category				
Poor	89.1	1.4	0.9	11.8
Non-Poor	77.0	16.4	7.0	12.2
Migration				
Return Migrant	87.8	7.3	0.0	14.6
Non-Migrant	82.7	8.9	4.3	11.7
Type of family				
Nuclear	84.8	5.4	2.0	13.2
Joint	79.6	16.1	8.0	9.5
All	83.1	8.8	3.9	12.0

Source: Computed from the data obtained from field survey

Note: Percentages in a row need not add to 100 because of multiple responses.

Duty of the son towards parents in old age is well emphasized in many moral books. Participants in FGDs appeared to agree with such statements, as revealed by the following sample of responses:

Responses from scheduled castes (SC), old persons and the non-poor: We will depend on our son during our old age. We have been taught like that. Now we are taking care of our parents, so they (children) are learning. So they will take care of us.

Responses from SC, young persons and the poor: We are expecting to depend on son but whether he will take our care or not, no one can predict this.

Responses from non-SC, old persons and the non-poor: We have hope on son but there is no certainty that son or daughter will ask in this changing society. If the son would have got good education, then he may enquire about us.

Responses from non-SC, young persons and the poor: I am expecting to depend on my son but there is no faith. Nowadays the society is changing. Looking at the changing society whether the children will ask or not, nobody can predict.

Table 7: Odds ratio showing the effect of background variables on whether the respondents expect to rely a great deal on specified means of financial support during their old age (results of logistic regression analysis)

Background Variables	Children	Savings	Income/Property	Pension/Other govt. support
Caste				
SC/ST®				
OBC/Others	1.952**	1.071	1.882	0.226***
Education of respondents				
No education & Primary®				
Secondary & higher	0.574*	3.070**	2.889*	0.920*
Exposure to mass media				
Not exposed®				
Exposed	0.767	@	@	0.893
Respondent's Occupation				
Agricultural®				
Non-agricultural	0.606	3.860**	1.292	1.859
Economic category				
Poor®				
Non-Poor	0.500**	7.151***	4.343*	1.237
Migration				
Return Migrant®				
Non-Migrant	0.708	1.575	@	0.502
Type of family				
Nuclear®				
Joint	0.940	1.596	2.210	0.724
Constant	14.192***	0.002***	0.003***	0.504
Number of Cases	433	433	433	433
-2 log likelihood	362.791	197.861	122.402	290.482
Pseudo R ² (Nagelkerke)	0.112	0.287	0.168	0.118

Source: Computed from the data obtained from field survey

Note: *, **, *** shows 10%, 5% and 1% level of significant respectively. 1= Rely on a good deal, 0= Rely only a little/uncertain. ®: Reference Category. @ Variable is not taken because one of the categories has no case.

These statements show clearly that a son is more valued than a daughter for old-age support and care. But looking at the changing society, many are not sure whether their son will take care of them or not. Parents distribute sweets when a son is born, but their faith that a son will look after them later in life is no longer firm. Parents do not expect material support from daughters, but only love and affection. A large majority of parents do not have savings, so saving as a means of old-age support is very negligible. Some respondents expressed a desire to receive and depend on a government-run old-age pension, which is a small pension that is sometimes given to the destitute.

Perceptions about the changes of society

In Odisha, the attitude of children towards parents has changed, perhaps impacting parental perceptions on the value of children. In order to determine if this was happening, respondents were asked questions on parent-child relationships, which included questions on expenses, financial transfers and living arrangements. A large percentage of respondents stated that, nowadays, children are less willing to support parents (table 8). The poor and non-poor reported an identical response on in this matter.

Table 8: Percent distribution of respondents who reported different changes in situations that have taken place since their childhood, by economic category of the household

Situations	Poor respondents	Non-Poor respondents	All respondents
Children would live with their parents after they are married			
More willing	0.5	1.4	0.9
Just as willing	12.7	16.9	14.8
Less willing	86.8	81.7	84.3
Children would give part of their wages to parents when they start earning			
More willing	0.0	0.9	0.5
Just as willing	12.7	16.0	14.3
Less willing	87.3	83.1	85.2
Children would support parents at old age			
More willing	0.0	0.0	0.0
Just as willing	10.9	15.5	13.2
Less willing	89.1	84.5	86.8
Children would help chores around the house/on the family farm/family business			
More willing	0.0	0.5	0.2
Just as willing	8.6	8.0	8.3
Less willing	91.4	91.5	91.5
Number of respondents	220	213	433

Source: Computed from the data obtained from field survey

Number of children perceived as burden

For studying the cost of children two dimensions were explored in this study.. First, some data on educational aspirations of children (for both son and daughter separately) were collected and these are pertinent to the issue of cost. Second, the question attempts to relate the resources of the family to the costs of different numbers of children by asking whether one child (two, three etc.) would be fairly easy to raise economically, somewhat of a financial burden or a heavy financial burden. Table 9 indicates the percentage of respondents who reported the number of children as heavy financial burden by economic category of the household. Table 9 shows that very few respondents feel raising one child imposes a heavy financial burden. About 28 per cent of respondents feel that raising two children would impose a heavy burden on them. But, on this point, a large gap surfaces between poor (34 per cent) and non-poor (22 per cent) respondents. Most of the respondents (83 per cent) perceived three children as a heavy

financial burden on the family, and almost all (91 percent) perceived four children as a heavy financial burden on the family.

Table 9: Percentage of respondents who reported number of children as a heavy financial burden, by economic category of the household

No. of children	Poor respondents		Non-Poor respondents		All respondents	
	N	Percentage	N	Percentage	N	Percentage
1	220	0.0	213	0.5	433	0.2
2	220	33.6	212	21.7	432	27.8
3	146	82.9	166	82.5	312	82.7
4	25	96.0	29	86.2	54	90.7

Source: Computed from the data obtained from field survey

Table 10 reveals that SC/ST respondents, higher educated respondents, respondents who are exposed to

Table 10: Percentage of respondents who reported two, three and four children as a heavy financial burden on family, by background characteristics

Background Characteristics	Two Children		Three Children		Four Children	
	N	Percentage	N	Percentage	N	Percentage
Caste						
SC/ST	113	46.9	60	90.0	6	100.0
OBC/Others	319	21.0	252	81.0	48	89.6
Education of respondents						
No education & Primary	261	24.5	197	82.7	34	88.2
Secondary & higher	171	32.7	115	82.6	20	95.0
Exposure to mass media						
Not exposed	64	10.9	57	80.7	11	81.8
Exposed	368	30.7	255	83.1	43	93.0
Respondent's Occupation						
Agricultural	208	26.9	152	78.3	33	90.9
Non-agricultural	224	28.6	160	86.9	21	90.5
Economic category of the household						
Poor	220	33.6	146	82.9	25	96.0
Non-Poor	212	21.7	166	82.5	29	86.2
Migration						
Return Migrant	40	20.0	32	84.4	5	80.0
Non-Migrant	392	28.6	280	82.5	49	91.8
Type of family						
Nuclear	295	28.8	210	80.0	42	90.5
Joint	137	25.5	102	88.2	12	91.7
All	432	27.8	312	82.7	54	90.7

Source: Computed from the data obtained from field survey

mass media and poor respondents perceive raising two children as a heavy financial burden. When all other variables are controlled, the result (see table 11) shows a similar pattern with caste, educational level of the respondents, exposure to mass media and economic category of the household. The perception of two children as a heavy financial burden is less prevalent among respondents belonging to OBC and other caste groups when compared to SCs/STs, and when all other variables are controlled. Respondents with secondary and higher level of education are 1.8 times more likely to feel that two children impose a heavy financial burden on the family than those who are illiterate or have only primary level of education. Further, when all other variables are controlled, respondents who are exposed to mass media are 3.4 times more likely to think that having two children imposes a heavy financial burden than

Table 11: Odds ratio showing the effect of background variables on whether the given number of children is felt as heavy financial burden (results of logistic regression analysis)

Background Variables	Two Children	Three Children
Caste		
SC/ST®		
OBC/Others	0.351***	0.488
Education of respondents		
No education & Primary®		
Secondary & higher	1.777**	0.727
Exposure to mass media		
Not exposed®		
Exposed	3.350***	0.998*
Respondent's Occupation		
Agricultural®		
Non-agricultural	0.871	1.843
Economic category of the household		
Poor®		
Non-Poor	0.492***	0.805
Migration		
Return Migrant®		
Non-Migrant	0.983	0.826
Type of family		
Nuclear®		
Joint	1.048	2.004*
Constant	0.317**	8.127***
Number of Cases	432	312
-2 log likelihood	464.025	276.482
Pseudo R ² (Nagelkerke)	0.147	0.058

Source: Computed from the data obtained from field survey

Note: *, **, *** shows 10%, 5% and 1% level of significant respectively. 1= heavy burden, 0= somewhat/fairly easy. ®: Reference Category.

those who are not exposed to mass media. Controlling the effect of other variables, the non-poor consider two children as less of a heavy financial burden than the poor, which suggests the existence of a pure income effect.

Educational aspirations

The aspirations of respondents regarding their children's (both son and daughter) education are very high compared to their own educational attainments (table 12). The desired educational level of both son's and daughter's education has increased substantially compared to the respondent's/wife's educational level and also their father's/mother's educational level. This shows that educational level/aspiration has gone up sharply over time. A strong desire for higher education of children suggests that the cost for bringing up children has increased in Odisha.

Table 12: Educational level of father-respondents-son and mother-respondent's wife-daughter

Educational level	Male			Female		
	Father (Actual)	Respondent (Actual)	Son (Aspired)	Mother (Actual)	Respondent's wife (Actual)	Daughter (Aspired)
No education	39.5	14.3	0.2	78.1	30.0	2.4
Primary	49.2	33.7	2.5	18.7	30.7	5.2
Middle	5.5	12.5	2.7	2.8	14.1	6.7
Secondary	5.1	29.3	26.5	0.5	20.1	40.5
Higher secondary	0.2	3.9	6.4	-	2.8	7.6
Graduation & above	0.5	6.2	38.8	-	2.3	25.6
As much as s/he desires	-	-	22.9	-	-	11.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
No of respondents	433	433	407	433	433	328

Source: Computed from the data obtained from field survey

Table 13 illustrates the educational aspirations for the respondents' children (both sons and daughters) by

Table 13: Percent distribution of respondent's aspiration for son's and daughter's education, by economic category of the household

Educational Aspirations	Son			Daughter		
	Poor	Non-Poor	Total	Poor	Non-Poor	Total
No education	0.0	0.5	0.2	4.1	0.6	2.4
Primary	3.8	1.0	2.5	6.4	3.8	5.2
Middle	3.4	2.0	2.7	9.9	3.2	6.7
Secondary	32.7	20.1	26.5	47.4	33.1	40.5
Higher Secondary	5.8	7.0	6.4	7.0	8.3	7.6
Graduation & above	32.7	45.2	38.8	15.8	36.3	25.6
As much as s/he desires	21.6	24.1	22.9	9.4	14.6	11.9

Source: Computed from the data obtained from field survey

economic category of the household. It is evident that the level of educational aspiration is lower among the poor than the non-poor; the gap is, however, not large between the groups, suggesting that the poor have similar aspirations towards their children's education as the non-poor.

About 39 per cent of the respondents expect their son's educational level either up to graduation or above level while only 26 per cent of the respondents expect their daughter's educational level up to graduation and above level. In all cases, aspiration towards the education of a daughter is lower than for a son. As expected, the aspiration level is higher among respondents belonging OBC/Other caste, higher educational level, those who have been exposed to mass media, those engaged in non-agricultural activities and those who are non-poor. Even after controlling the effect of all other variables, results show a similar pattern except that the economic category of the household does not show a statistically

Table 14: Percentage of respondents who expect that their children would attend graduation and above level of education by background characteristics and who think providing education would be a very heavy financial burden

Background Characteristics	Graduation and above level of education				Percent who think providing education would be a very heavy financial burden
	Son		Daughter		
	N	Percent	N	Percent	
Caste					
SC/ST	104	32.7	88	18.2	38.9
OBC/Others	303	40.9	240	28.3	25.3
Education of respondents					
No education & Primary	248	27.4	201	14.4	39.3
Secondary & higher	159	56.6	127	43.3	12.9
Exposure to mass media					
Not exposed	61	16.4	48	12.5	46.9
Exposed	346	42.8	280	27.9	25.7
Respondent's Occupation					
Agricultural	196	26.0	161	16.1	39.9
Non-agricultural	211	50.7	167	34.7	18.7
Economic category					
Poor	208	32.7	171	15.8	46.8
Non-Poor	199	45.2	157	36.3	10.3
Migration					
Return Migrant	38	31.6	31	29.0	34.1
Non-Migrant	369	39.6	297	25.3	28.3
Type of family					
Nuclear	275	32.7	228	17.5	34.5
Joint	132	51.5	100	44.0	16.8
All	407	38.8	328	25.6	28.9

Source: Computed from the data obtained from field survey

significant net effect (table 15). The gross differential shows that the non-poor's aspiration towards son's and daughter's education up to graduation and above level is much higher compared to the poor. But, when all other variables are controlled, such large variations are completely absent and not significant.

Table 15: Odds ratio showing the effect of background variables on the educational aspiration of son and daughter to graduation and above level and on those who think providing education will be a very heavy burden (results of logistic regression analysis)

Background Variables	Graduation & above		Education would be a very heavy financial burden
	Son	Daughter	
Caste			
SC/ST®			
OBC/Others	1.689**	1.539	0.601*
Education of respondents			
No education & Primary®			
Secondary & higher	2.396***	2.865***	0.406***
Exposure to mass media			
Not exposed®			
Exposed	2.293**	1.550	0.623
Respondent's Occupation			
Agricultural®			
Non-agricultural	2.025***	1.469	0.713
Economic category			
Poor®			
Non-Poor	0.876	1.614	0.194***
Migration			
Return Migrant®			
Non-Migrant	1.520	0.852	0.534
Type of family			
Nuclear®			
Joint	1.549*	2.428***	0.694
Constant	0.061***	0.053***	4.808***
Number of Cases	407	328	433
-2 log likelihood	483.511	316.845	417.690
Pseudo R ² (Nagelkerke)	0.187	0.232	0.302

Source: Computed from the data obtained from field survey

Note: *, **, *** shows 10%, 5% and 1% level of significant respectively. Graduation and above: 1= Graduation and above level, 0= others; Feeling of very heavy financial burden on children's education: 1= heavy burden, 0= somewhat/fairly easy. ®: Reference Category.

About three in every ten respondents think that providing education would be a very heavy financial burden. This thinking of financial burden is higher among SC/ST, the less educated, those who are not exposed to mass media, those who are engaged in agricultural activities and those who are poor. When all other variables are controlled, the educational level of the respondents and economic category of the household shows a highly statistically significant result on the feeling of financial burden. Those who are

highly educated and non-poor are less likely to feel that providing education is a very heavy financial burden than their respective counterparts. Nearly half of all poor respondents (46.8 per cent) feel that providing education to their children would be a very heavy financial burden. Even after controlling for the effect of all other variables, economic category of the household shows a similar pattern. This suggests that poor feel a heavy financial burden because they are poor and are often unable to finance their children's education.

The FGDs revealed that there is high aspiration for children's education (both son and daughter). Parents feel that it is their duty to make their children good human beings. Everybody wants their children to be educated. However, it seems that there is an increased awareness about the value of education. People are aware that if the daughter does not receive any education, they will face difficulty in arranging her marriage. Nowadays even illiterate grooms ask about the level of education of a potential bride. People who support the education of girls tend to think of education as a means to an end: allowing girls to "stand on their own." Even though parents are keen to support the education of both sons and daughters, they tend to have greater aspirations for the education of sons. Parents believe that education will lead to a better life for both girls and boys. Further, parents think that education is necessary to obtain gainful employment. Many parents revealed that their current problems are related to illiteracy or a very low level of education, and they stated that they did not want the same thing to happen to their children. On this point, representative samples of responses follow:

Responses from non-SC, young persons and the non-poor: I am not able to give education to my children because of poverty, otherwise I have desire to give them a good education, but for this I have to spend money. Even if they will not get job, whatever they will do, they will do better. If they would have qualification, then somewhere they will be engaged. I have become blind without education, so I wish that my children obtain an education and know about the society.

Responses from SC, old persons and the poor: If they will get an education and do not get any job, still, whatever they will do, they will do better. So we want to give them an education. A man can not do anything without an education. Otherwise they will become blind like us.

Responses from SC, young persons and the poor: I want to give education to my children. If they obtain some education they will be able to earn by engaging in some warehouse or some shop. Otherwise they will be blind like me as I am blind without any education. I am doing business by selling fresh and dry fish. Sometime I am giving Rs. (Indian rupee) 10 to the customers in place of Rs. 5. If I would have obtained some education, I would have been able to calculate properly.

Responses from non-SC, young persons and the poor: If they will get education, they will be able to speak like an educated person. They will be able to go to court and *kacheri* (office); they will be able to draw a loan from the bank. If they will not get any job, still, whatever they will do, they will do better off.

The above statements suggest that parents are keen to provide education to their children even though they are aware that there may not be a job after getting a high degree. Parents feel that they are facing many problems because of not getting an education, so they do not want the same to happen to their children. They feel that sending their children to school is now very expensive. Many complain about the quality of teaching in the government run school and report that teachers are not teaching properly, the government is not providing books to the students on time, and there are too many children in each class and too few teachers. As a result, they are not satisfied with the quality of teaching given in school. As an alternative, parents feel that private tuition is must for a child. Many of those who send their children for private tuition feel the burden of fees for a tutor. At present, children are demanding bicycles to go the school, which represents an additional financial burden on parents. Many parents are aware of the existence of private schools near where they reside, are confident that their education programs are better than government-run schools, and want to send their children to them. As the capitation fee for admission, monthly fee and expense on the uniform is high in private schools, many parents (especially the poor) are unable to send their children to such schools. The following responses reveal this sentiment:

Responses from SC, young persons and the poor: Nowadays it is very expensive to give an education to a child. There is no education without tuition. Teaching in the school is not good. From where will I get money to send them for tuition? Beside tuition, there are also other expenses, such as for pens, books and paper. It becomes very difficult to provide all these things.

Responses from non-SC, old persons and the non-poor: We are not able to give them a proper education because of financial issues. We are only thinking of food. We are not able to get good food and decent clothing. How can we give them an education and pay for tuition?

Responses from SC, young persons and the poor: Nowadays one has to spend a lot on education. One has to give Rs. 50, even to purchase a book. Besides, one has to spend a lot on clothes, tuition, etc. And to go to school one has to purchase a bicycle. So, for all of these things, one has to spend a lot. We do not have the money for all of these things.

Responses from non-SC, old persons and the non-poor: We want to give them an education, but it is very expensive. If we send our children to a good school, we will have to spend Rs. 200 to Rs. 300 per month. I do not have property for sale, so I am not able to give them a proper education. There is no proper teaching in the school. From where will I get the money for tuition?

The above paraphrased statements show that parents see education as a costly burden, even though they understand that it is necessary and want their children to be educated. Parents have high aspirations for the education of their sons and daughters but do not have enough resources to fulfill those aspirations.

Conclusions

Given the low level of social development and poor economic setting in Odisha, the TFR of 2.4 indicates that fertility is much lower than what is predicted for the socio-economic conditions. The remarkable fertility decline in Odisha suggests that the desired family size has reduced considerably and the motivations to have a large family are not strong. An important determinant of family-size desire is the value of children as perceived by parents. The value-of-children model claimed that with economic development the value of children decreases and their cost increases, resulting in reduced fertility (Aycicegi-Dinn and Hagitcibasi 2010). In Odisha, however, fertility has declined in the absence of an apparent economic advance. Decisions about family building (whether, when and how many children to produce) are strongly influenced by the perceived advantages and disadvantages involved. People in Odisha have come to the realization that children are increasingly costly, while the benefits from them have not kept pace with the higher costs. The decrease in the expected short-term benefits from children has reduced the perceived economic advantage of having many children. Sons are perceived to have a “higher value” than daughters due to their contribution to family income and old age support, while girls have a higher value in terms of their social and moral support. In a rural agricultural society where parents do not have any social security, children, especially sons, are considered the only source of old-age help and support. Thus, sons are strongly desired over daughters. The desire for sons (and daughters) is limited. Most of the respondents (83 per cent) perceived three children as a heavy financial burden on the family.

The gradual rise in the cost of raising children is, in part, the result of high aspirations for children’s education. The level of education that is thought to be necessary for economic survival has sharply increased among all segments of the population. Thus, the high levels of educational aspirations in Odisha have created an environment that is conducive to a decline in fertility. People realize that education is a path to get a good job, to make their child economically independent and to raise family income. A clear upward shift in educational level has taken place over the past few generations. Parents are strongly perceived that, children of higher quality are not merely desirable but even necessary for upward social and economic mobility; this is true both for the poor and the non-poor. Rich and poor parents desire higher quality children and spend more money on each child’s education, food, clothes and medical care. The increased cost of raising each child has led to a reduction in the perceived number of children parents wish to have, reflecting the classical quantity-quality trade-off. As most of the families in Odisha did not have the necessary income to meet the increased cost, they realized that having a small family is the best solution.

Acknowledgement

The paper is a part of author’s doctoral thesis. The author is highly indebted to Professor P.M. Kulkarni, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, India for his invaluable suggestions, comments and guidance.

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