

## The Determinants of Girls Elementary School Education in Karnataka: An Empirical Investigation

Namitha Jois K S

Research Scholar, DOS in Economics and Cooperation, University of Mysore, Manasagangotri, Mysore

### Article Info

Received: 19 August 2022

Revised: 20 October 2022

Accepted: 11 November 2022

Online: 24 December 2022

### To cite this paper:

Namitha Jois K S (2022).  
The Determinants of Girls  
Elementary School  
Education in Karnataka:  
An Empirical  
Investigation. *Review of  
Economics and Econometrics  
Studies*. 1(2), 109-121.

**Abstract:** Even though considerable progress has been made to facilitate girls' education, the overall structure still remains unfavorable to them. The present study tries to analyze and interpret the impact of socio-economic factors on girls' education in Karnataka. The study adopted descriptive method to explain the importance, need, advantage of girls' education and barriers in girls' education and policy initiatives. The study also adopted survey method to understand the mindset of people about girls' education and problems at ground level to promote girls education. An analysis made on growth of enrollment, drop out, teacher-pupil ratio, infrastructure facilities and retention rate related to girls' education. There is significant association between mindset of people and preference for girls' education. The study also used multiple regression models to measure the impacts of the socio economic indicators on girls schooling. The analysis further revealed that the preference for boys over girls also a major phenomenon in rural area which negatively impact on educating the girls child. The study concludes with the suggestion to remove the barriers of educating girl child.

## INTRODUCTION

Education is about exploring our skills and acquire knowledge. It also meant to mould the social behaviour of people. Stella van Patten Handerson define education that " Educators provides a way to think and act in a civilized manner. Education is a process of self formation and self determination ethically confirmed conscience". Education in the present day context is the most important means of individual improvement, self-discipline, increase in intellectual capacity, acquire opportunities for achieving goals and well-being of person. It help to improve human capital, productivity, and hence, compensation to labour, but it is equally important for enabling the process of acquisition, assimilation, and communication of information and knowledge. All together forms a wonderful personality which intended to help society and nation. Education promotes values and ethics in the life of people. The knowledge acquires through education not only helps the individual to build his/ her career but also make them an asset to the

country. Most importantly, we need to social, economic and political inclusion of most neglected people from the mainstream of the society who can contribute to the country with thier achievements. We just need to stop the orthodox mindset and barriers, if we did so, then can shine on their own.

Offering basic education for girls is one of the best way of giving them greater power, enabling them to make genuine choices over the kinds of lives they wish to lead. The Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination against Women establish it as a basic human right (UN General Assembly,1979) The woman who might have the chance of a healthier and happier life,equal status with men as well as life of thier choice. Through this they can achieve and give tremendous contribution which indirectly improves the country as well. An educated woman has the skills, information, and self-confidence to be a better person for society, mother for children and resource for the nation.

Every year, 23 million girls in India drop out of school after they begin menstruating due to a lack of sanitary napkin dispensers and overall hygiene awareness in schools.(Saptharshi Datta, 2018). Lack of awareness and unhygienic lifestyle creates moral degradation and lot of trouble which directly influence on girls dropout rates in school to avoid shame. RTE included adding toilets to schools to solve this problem, but it wasn't enough. Therefore, the Department of School Education and Literacy under the Ministry of HRD started program called Swachh Vidyalaya, which would add \$4,582.91 worth of toilets to schools (RTE, 2009). People's perception about girl child especially rural mindset push them to have early marriage and child. This is another reason they drop out of school. Hence the present study tries to look after the factor which determines girls schooling and also analyze the perspective of rural people related to girl's education.

### **OBJECTIVES OF THE STUDY**

The following are the main objectives of the study:

1. To analyze the growth of enrolment, dropout, teacher pupil ratio, infrastructure facilities and retention rate related to girls education in Karnataka.
2. To analyze the mindset of rural people about providing education to girls.
3. To study the challenges and opportunities of educated girls for in job market.

4. To analyze the problem of girls education in rural area.
5. To evaluate the present condition of rural people related to girls education.

### **HYPOTHESES OF THE STUDY**

The following hypotheses were formulated for the study:

1. There is significant difference between girls' and boys' enrolment in primary schools of Karnataka.
2. There is significant association between mindset of the parents from rural area and on girls' education.
3. The socio-economic factors are positively influencing on girls enrolment.

### **METHODOLOGY OF THE STUDY**

The present study adopted descriptive method to explain the importance, need, and advantage of girl's education, barriers in girl's education and policy initiatives and to explain the present status of girls education in Karnataka as well as India. To analyze and interpret the impact of socio-economic factors on girls' education based on both primary and secondary data analytical study is used.

- A. **Data Collection:** Relevant data has been collected both from primary and secondary sources. To study the perspective of rural people and factor determining girl's education in study area, survey method was adopted. 50 households are selected randomly. The study area is Bhuvanakote village of Koppa Taluk, chikkamagaluru district, Karnataka State. The questionnaire is used as an instrument of data collection.

The Secondary data collected from Government reports, Journals, thesis and websites like state report cards, Educational departments both from central and state governments, periodical educational survey reports along with educational data from census documents, NSSO, NFHS, CSO for assessing women's educational status.

- B. **Data Analysis:** The study used tabulation and charts to analyze and interpret the data. Simple average method, exponential growth model, independent sample t-test, chi-square nonparametric test, and multiple regression models are used in the study. The view of the objective of the study independent variables considered for the study.

The variables considered for the purpose of analysis of data with respect to the responses given by the respondents were age, sex, the necessity of education, government policies, and difficulty in providing education, future perspective and overall mindset of rural people.

## **FINDINGS**

On the basis of both primary and secondary data analysis several findings are identified. In the following section, the study has discussed some important findings in two sub heading namely findings on secondary data and findings on primary data. They are as follows.

### **Major findings on secondary data:**

- Present scenario reveals girls are consist with 58.65 of the total population but the literacy rate of the girls is 65.5% whereas the boy's literacy rate is 82.15% in India. A lot of socio-economic factors like tradition, the income of parents, child marriage, the necessity for the job, etc., affecting in a decrease in girls' literacy.
- The study reveals the gender gap in the literacy differentials between men and women over the decades in the state reveals the narrowing of the gap from 20.0 to 14.7 percent. This is an indication of the improvement of the literacy status of women. However, this is an overall trend and hides several disparities.
- The literacy gap among women between urban and rural has widened from 18.0% points in 1951 to 22.0 percentage points in 2011. As a matter of fact, this gender gap is far wider than that of the overall male-female gap in the state, which is 14.7 lag behind the opposite sex in literacy attainments. The poor literacy level among rural women is also a reflection of the inefficiency of rural schools in addressing the issues of girls' education.
- The study depicts the Child sex ratio in Karnataka also decline from 960 to 943 during 1991-2011. Here again, the child sex ratio is lower in urban areas than in rural areas.
- Number of public schools in 2007-08 is 56,441 and it is increased to 62,002 in 2016-17. Over the 10 years, we can see only 5,561 schools we established in Karnataka. According to the exponential growth model average annual growth of a number of public schools in Karnataka 10%.
- Retention rate 75.5 in 2007-08 and it is 77.51 in 2016-17. We can easily observe that the retention rate is changing rigorously and it has had ups and downs over the years.

- Dropout rate is 3.4% in 2007-08 and 1.39 % in 2016-17. The highest recorded dropout rate in the decade is 7.51 in 2012-13 and after 2013-14 it is in decreasing trend. The exponential growth model shows the average annual increase in the dropout rate of public schools in Karnataka is negative i.e. -9.6% and it is statistically significant.
- Number of boys enrolled in primary schools is 23,26,097 in 2007-08 and 28,21,256 in 2016-17. Girls enrolled in primary schools were 21,84,707 in 2007-08 and 26,23,090 in 2016-17. The exponential growth model shows the average annual increase in total enrolment in primary schools in Karnataka is 0.9% for both boys and girls.
- The average annual increase in female teachers in primary schools in Karnataka is 2.8%. The number of female teachers also impacts the enrolment of girls in school. As the number of female teachers increases, it will surely impact on girl's enrolment and it is also increasing because parents likely to send their girl child to the school where there is female teacher are present. According to the exponential growth model used in the study reveals an average annual increase in the percentage of female teachers in Karnataka is 1.4%.
- In the year 2007-08 male literacy rate is 76.1, the female literacy rate is 56.9 and the overall literacy rate is 66.6. In the year 2016-17 the literacy rate increased to 82.9 in male literacy, 68.1 in female literacy, and 75.6 in overall literacy. It is shown that the male literacy rate is high compared to female literacy all the years. According to the exponential growth model, the average annual increase in male literacy rate in Karnataka is 1.2% and female is 2.6%.
- The study describes there are only slight changes in the percentage of girl's enrolment over the years and there is not much difference.
- From the study we found that in 2007-08 the percentage of schools with toilets in public schools of Karnataka is 70.4 and it is 97.1 percent in 2016-17. Here we can see achievement in an increase in the number of toilets over the decades. According to the exponential growth model use here given results, there is the average annual increase in the percentage of girl's toilets in Karnataka is 8.7%.

### **Major findings related to primary data**

- From the analysis can observe the majority of 70 percent of the respondents belong to the age group of 36-50 and above 50 in the study area. Majority of the respondents are females in the study area.
- Analysis revealed that the majority of 62 percent of the respondents completed either secondary or college education in the study area.

- We observed 54 percent of the respondents are agriculturist or daily wage workers in the study area.
- Analysis shows the majority of 84% of the family have only 1 or two male members in the family of respondents and majority of 88% of families have only 1 or two female members in the family of respondents in the study area.
- Analysis shows the majority of 76% of families have only 1 or two children in the family of respondents in the study area.
- 70 percent of the respondents are receiving below Rs.25000 income per annum. 78 percent of the respondents own below 3 acres of land. 66 percent of the respondents are spending their income in between 6000 to 20,000 per month.
- It is found from the analysis that nearly 40 percent of the respondents spend 25 -30 percent of their expenditure on education and only a few people spend more than that in the study area. If they spend more on education means they encourage education more naturally.
- Here we can observe that majority of 56 percent of the respondents are saves below Rs.10000 from their income.
- It is found from the above analysis that the majority of 74 percent of the respondents completed only school level or illiterate in the study area.
- The study shows 80 percent of the people have fixed assets like both houses and land in the study area.
- It is found from the analysis that majority of 68 percent of children going to school in the study area but we cannot neglect 32 percent are not attending schools regularly because it is not a small number.
- It is found from the analysis that nearly 40% of the schools are located between 3-4 km in the study area. If the proximity of school increases it is difficult for the child to go to school so the dropout rate increases and it is truer in the case of a girl child because of concern for safety and security.
- 52 percent of the respondents having either cattle rearing or poultry as livestock assets.
- Analysis shows the majority of 64 percent of children getting midday meals facility in the schools.
- It is found from the above table that majority of 76 percent of schools in the study are with toilet facility, but 38 percent schools do not have proper toilet facility also impact on the status of girl's education. Even though schools have toilet buildings, if it doesn't maintain properly it

is of no use. 84 percent of schools in the study are drinking water facilities.

- The analysis shows the majority of 62 percent of respondents have aware of the educational program in the study area. The study explores 58 percent of the respondents aware of either free cycle or all the programs related to education by the government in the study area.
- 60 percent of respondents have SHG membership, out of that 68 percent of respondents does not use the loan amount for education purpose in the study area.
- It is found from the analysis that the majority of 62 percent of respondents have agreed to provide education to their girl child.
- It is found from the above table that the majority of 56 percent of respondents who are members of SDMC not attending a timely meetings in the study area.
- It is pathetic to mention 64 percent of the schools do not have sufficient teachers. The analysis describes only 6 percent of the schools are with efficient teachers, it will lead to having less in education system among the parents because along with teacher pupil ration efficiency also matters a lot.
- 60 percent of the respondents don't have any problem providing education to their children. The study explains that the majority of 18 respondents out of 30 respondents have the problem of proximity to school, financial problems or preference to boys.

## **ANALYSIS AND DISCUSSION**

Hypothesis testing is one of the important processes in research analysis. It is used to judge the plausibility of a hypothesis by using available sample data. The test provides evidence concerning the plausibility of hypothesis to the given data. The present study also tries to test some of the important hypothesis related to the selected research problem.

### **Hypothesis- I**

$H_0$ : There is no significant difference between girls' and boys' enrolment in primary schools of Karnataka.

$H_1$ : There is significant difference between girls' and boys' enrolment in primary schools of Karnataka.

To test this hypothesis, the study has used some of the important variables like boys and girls enrolment in Karnataka during the year 2007-

08 to 2016-17. Here the study has made an attempt to test the differences between these two variables with the help of independent sample t –test for the data. The results of the test have given below.

**Table 1: T-Test to test the difference between girls and boys enrolment**

Group Statistics										
	Values	N	Mean	Std. Deviation	Std. Error Mean					
Enrolment	Boys	10	2753290.0000	152389.51414	48189.79562					
	girls	10	2573721.5000	139089.85468	43984.07402					
Independent Samples Test										
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Enrolment	Equal variances assumed	.021	.886	2.752	18	.013	179568.50000	65244.57962	42494.72468	316642.27532
	Equal variances not assumed			2.752	17.852	.013	179568.50000	65244.57962	42413.19601	316723.80399

According to the reported results there is a significant difference between boys and girls enrolment in primary schools of Karnataka. It has revealed in the first table that the mean value of boys enrolment is higher (2753290.0) when compared to the mean value of the girl's enrolment (2573721.5) which is also justified by the t-value of 2.752 and it is statistically significant at 5 percent level. Therefore the null hypothesis, i.e., there is no significant difference between girls' and boys' enrolment in primary schools of Karnataka is rejected.

### Hypothesis II

$H_0$ : There is no significant association between mindset of the parents from rural area and girl's education.

$H_1$ : There is significant association between mindset of the parents from rural area and girl's education.

To test this hypothesis, the study has used some of the important variables like parents agree to continue education and preference for their children's education. The main reason for considering the said variables to



test the above hypothesis is most of the cases parent's mindset is directly influences on girls schooling. Further the study has used Chi- square non parametric test to test the hypothesis with the help of primary data .The results of the test have given below.

### Chi-Square Test

#### Frequencies

**Table 2: Parents opinion about continuing girls education**

<i>Parents agree to continue education</i>			
	<i>Observed N</i>	<i>Expected N</i>	<i>Residual</i>
Yes	31	25.0	6.0
No	19	25.0	-6.0
Total	50		

**Table 3: Preference for education**

<i>Preference for education</i>			
	<i>Observed N</i>	<i>Expected N</i>	<i>Residual</i>
Boys	30	16.7	13.3
Girls	12	16.7	-4.7
Both	8	16.7	-8.7
Total	50		

**Table 4: Test Statistics**

	<i>Parents agree to continue education</i>	<i>Preference for education</i>
Chi-Square	2.880 <sup>a</sup>	16.480 <sup>b</sup>
Df	1	2
Asymp. Sig.	.090	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.0.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.7.

The results of chi-square test are reported in the above table. According to the above results, it revealed that there is a significant association between the mindset of people and preference for girl's education, parents agreed to continue education with the significant chi-square value (Parents agree to continue education- 2.880<sup>a</sup> and preference for education- 16.480<sup>b</sup>) which are also statistically significant at 1% and 10% level. It is very clear from the above analysis that the null hypothesis, i.e., there is no significant association between the parents mindset and girls schooling is rejected.

### Hypothesis III

$H_0$ : The socio-economic factors are not positively influencing on girls enrolment.

$H_1$ : The socio-economic factors are positively influencing on girls enrolment.

To test this hypothesis, the study has used both social and economic indicators like GSDP and girls' enrolment as economic indicators and Total Literacy rate and female literacy rate as social indicators. Further the study has used multiple regression models to measure the impact of the socio-economic indicators on girls' enrolment. The results of the model is reported in the below table.

**Table 5: Multiple Regression model**

Dependent Variable: GE				
Method: Least Squares				
Date: 09/14/21 Time: 14:00				
Sample: 2008 2017				
Included observations: 10				
<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
FL	0.063779	0.258562	1.246668	0.0134
GDP	0.127630	0.024408	5.229058	0.0020
TL	0.110670	0.312771	1.353835	0.0356
C	44.11445	6.095773	7.236892	0.0004
R-squared	0.945321	Mean dependent var		48.97000
Adjusted R-squared	0.917982	S.D. dependent var		0.442342
S.E. of regression	0.126681	Akaike info criterion		-1.005110
Sum squared resid	0.096289	Schwarz criterion		-0.884076
Log likelihood	9.025552	Hannan-Quinn criter.		-1.137885
F-statistic	34.57743	Durbin-Watson stat		1.451916
Prob (F-statistic)	0.000350			

The reported results reveal that the socio economic factors are significantly influencing on girls enrolment in Karnataka during the year from 2007-08 to 2016-17. The economic indicator i.e., GSDO (Gross State Domestic Product) is positively influencing on girls enrolment which is also statistically significant at 5% level with the t value of 5.22. It means that one percent increase in the level of GSDP which leads to increase girl's enrolment by 0.127%. Whereas total literacy also affected positively on girls enrolment which is statistically significant at 5% level with the t value of 1.35. It means that one percent increase in level of total literacy which leads

to increase in girl's enrolment by 0.110%. Similarly female literacy also significantly influencing on girls enrolment which is statistically significant at 5% level with t value of 1.24. It means that one percent increase in female literacy rate which leads to increase in girl's enrolment by 0.063%. The R Square of the model is 0.945 which means that 94% of the variations are explained by exploratory variables. Therefore the null hypothesis i.e., the socio-economic factors are not positively influencing on girls enrolment is rejected.

### **CONCLUSION**

Literacy for girls has become a big task both for society as well as the recipient girl. Literacy for girls is a important for developing/preserving human resources, they will definitely become national asset. As far the individual recipient girl, education equips her to enjoy the fruits of social, economic and political life. Despite massive support for girls education, it has become a challenge in India.

The socio-economic factors impacts a lot on girls' schooling. The perspective and mindset of the parents influences on girl's education. An increase in infrastructure facilities at school, the solution to proximity problem, security status, and educational facilities gives the motivation to increase enrolment of girls. The analysis further revealed that preference for boys over girls also a major phenomenon which negatively impacts on educating the girl child. A case study conducted in Bhuvanakote village revealed that there are a lot many problems faced by the respondents like proximity of a school, finance, early marriage, security aspects and preference for boys over girls are responsible for a decrease in girls schooling. There is a need for incentives and increase in infrastructure facilities and awareness which motivate the parents to send their girl child to school regularly.

It is crucial to note that the attitude of people towards girl's education will go a long way in explaining the extent to which the people want their nation to develop. Education is acts as a instrument for women empowerment. It changes their lifestyle, employment level, participation in public life, and also improve their status in society. Even though considerable progress has been made to facilitate girls' education, the overall structure still remains unfavourable to them.

Further, the problems associated with elementary education in rural areas are well known. Lack of interest of parents in educating children, village economy and financial status of rural people, preference for boys in providing education, a tradition followed, early marriage are some of the reasons at home responsible for the declining trends in enrolment girls in

schools. But there are some factors found in the school environment itself. Lack of basic requirements like adequate or proper sitting accommodation, absence of drinking water facility at school, girls toilets, lack of teachers especially female Teachers and lack modern teaching aids also add to the problem.

In response to that, the problem has to be tackled at the various levels: at the level of school administration, at the societal level, and under the Panchayat System. Some steps have already been taken to increase the intake of students and to check the problem of dropouts: arrangement of mid-day meals for school children, provision for scholarships, free books, book banks and free uniforms are some of such attractions for the children. However, something more than these attempts is still needed to improve the admission and retention rate of students especially girls at the elementary level. In this background, an attempt has been made to assess the impact of socio-economic factors on girls schooling in the study area.

### *References*

- All India Survey Report in Higher Education (AISHE) 2014-15, *Department of Higher Education, MHRD, Government of India, New Delhi.*
- Anne Shirley, February 26, 2016, Girls education, development and social change: seeing strengthening and linking, Global Fund for women.
- Annual Status of education Report (ASER), 2014, Pratham, New Delhi.
- Basu Aparna and Bharathi Ray, 2003, women's struggle: A History of the All India Women Conference, 1927-2002, 2<sup>nd</sup> edition, Manohar, New Delhi.
- Census data, 2011, Government of India, Ministry of Home affairs, Office of Registrar General and Census Commission, India.
- Chaterjee Patralekha, 2005, The changing face of volunteering in India: The History of NGOs in India.
- DISE Report, 2015-16, Elementary Education in India: Progress towards UEE, NUEPA, New Delhi.
- Devi A shubangini, October 10, 2014, a Study on women education in India, *International Journal of Science, Technology and Humanities*, pp.105-110.
- Eligebeth Lucy J, 2002, The treatment of the girl child in post independence India wouling in English: A psycho-social perspective, Department of English, Manon Maniam Sundaranar University, Tiruvenelveli, India.
- Elementary Education in India: State Report Cards, 2007-08 to 2016-17, National University of Educational Planning and Administration, New Delhi.
- Hickey M G and Stratton M, 2007, Schooling in India: Effect of Gender and Caste, Scholarly Partnership with Small Enterprise Development Unit (SEDU), Seattle WA, Vol. 2(1), pp-59-85.

- Khatoun and Uzma, 2011, Education and Empowerment of Women in India, Department of Sociology and Social Work, Aligar Muslim University, India.
- Khan W. H, 2004, Barriers to Girls Education: An Essay, Indira Gandhi National Open University (IGNOU), New Delhi.
- Kristyn Schrader, March 8, 2021, King Communication Lead, Education.
- Kumar J and Sangeeta, 2013, Status of Women Education in India. Education Confab, Vol. 2(24); pp.165-176.
- Latha P S, 2014, Women Literacy and Development, Global Journal for Research Analysis, Vol. 3; pp 1-3.
- Nanda P, Das P and et.al, 2013, Addressing Comprehensive Need of Adolescent Girl in India: A Potential for creating Livelihoods, International research for Women, New Delhi.
- Sanjukha Sahoo, July 30, 2016, Girls Education in India: Status and Challenges, International Journal of Research in Economics and social science, Vol.6, Issue.7, pp.130-141.
- Sharma Shalini, 2005, Development support Organizations: A study in Karnataka, PhD thesis submitted to CDS Mysore University, Karnataka.
- Uterhalter Elina and et.al, June 26,2014, Girls Education and Gender Equality, Department of International Development, UNESCO.
- Worah H, 2014, Best Practice by the States for Girl child Education: The Prosperity and Welfare in India, pp.1-50.
- World Bank Report, 2008, Girls' Education in the 21<sup>st</sup> Century, Human Development Report, pp.23-305.

Internet sources

[simple.m.wikipedia.org](http://simple.m.wikipedia.org)

<https://doi.org/10.1177/14782/033156255904>.

[unicef.org](http://unicef.org).

<http://euroasiapub.org/current.php?title=/JRESS>

<http://www.yourarticlelibrary.com/essay/women-education-in-rural-india-meaning-need-and-barrier/34972>.

<http://m.timesofindia.com.cdn.ampproject.org/v/s/m.timesofindia.com>

<http://www.cry.org/blog/important-of-girl-child-education-in-india/>

[www.svmcugi.com](http://www.svmcugi.com)

[kschrader@worldbank.org](mailto:kschrader@worldbank.org)

<https://www.censusindia.in/2011-common/census-2011.html/>.

<http://indiatgether.org/barriers-education>.

<http://www.yourarticlelibrary.com>

<http://www.worldvolunteerweb.org/news-views/viewopnits/doc/thechangingfaceofhtml>.

[www.census2011.co.in](http://www.census2011.co.in)

[swachhindia.ndtv.com](http://swachhindia.ndtv.com)