

Impact of Health Expenditure and Government Policies on Sex Ratio of Haryana

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Abstract

A nation having good health inputs tends to be productive output results in uplifting of economic and societal development which in response improve the indicators of health standards and quality of life. The health of Indian women is basically related to their status in our patriarchic society. Contributions of women provided to their families are often unnoticed and instead they are viewed as economic burdens. Objective of this paper is to study about the pattern of public expenditure on health of women in Haryana and to determine if there is statistically significance correlation between public expenditure and sex ratio. The study is proposed to cover a period of seventeen years from 2000-01 to 2016-17. To analyze the impact of public expenditure in health on sex ratio, bivariate correlation analysis has been applied with time series analysis. It was found that there is significant correlation between public expenditure and sex ratio in Haryana. Although Haryana has made tremendous improvement in the fields of education, infrastructure and housing etc. but there is lot more to make effort to improve status of women in Haryana because it is not only health related but also related with social problem.

Keywords: Public Expenditure, Health Status, Social Problem, Sex Ratio, Females

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Introduction:

Health is major component of an economy. Physical capital and natural resources of any economy cannot be properly utilized and thus progress could neither be sustained nor be qualitative. A nation having good health inputs tends to be productive output results in uplifting of economic and

societal development which in response improve the indicators of health standards and quality of life. Investment for physical capital formation was regarded as basis for economic growth which trickles down by its own over time. (Solow,1956). But, new theories are emphasizing on the investment in human capital. Health and education are the basic areas for investment for people's betterment sustainable economic growth. On the other hand, health is influenced by economic growth and affluence. Across the globe, woman is important pillar of the family structure, as mainly responsible for child care, nutrition, and well-being of whole family. Instead of higher morbidity rate and mortality rate of male child than female counterpart they have short life span. Life expectancy of females being more than males due to biological advantage, overall sex ratio of females is always more than males. During their reproductive years, women face many health problems related to pregnancy and childbirth. Any compromise in women's health during this period of their lives has negative consequences for individual women, their families, communities, and the larger society. In case of health status of women, it has multi-dimensional nature and very difficult to measure precisely. But health status of women can be measured by examining their life expectancy at birth, fertility rate, and maternal mortality rate, crude birth rate of female, sex ratio and Morbidity rate. This study analyzes the pattern of public expenditure in health and its impact on the health status i.e. sex ratio of women in Haryana.

Existing Situation of women's health in India:

India, with a population of 1,21,01,93,422 is the world's second most populous country out of which female population is 58,64,69,174 and that of male is 62,37,24, 248(Census of India, 2011).It is one of the few countries where males sensitively greater than females and this difference have amplified over time. From a comprehensive viewpoint, Indian accounts for 19 % of all lives births and 27 % of all maternal deaths (Dasgupta, 2006).The most common problems with the women are scarcity of basic services such as food, water, fuel, fodder and health facilities. Poverty can cause delays in seeking suitable health amenities till a condition reaches its most life-threatening point (Sinha, 2006).Literacy and education also play a role in rural women's reduced health status (Johnston: 2003). The health of Indian women is basically related to their status in our patriarchic society. Contributions of women provided to their families are often unnoticed and instead they are viewed as economic burdens. Strong son preference is normal in Indian society, because they are expected to care for parents in their old age. The systematic unfairness against

females can be seen directly in the trend of one of the indicators i.e. sex ratios of India. Also male preference leads to termination of baby child by some women in their pregnancies if they know or suspect about carrying of a female. Also, this cause mistreatment of daughter, which is multiplied by high dowry costs for daughters. Further, low level of education and formal labor force participation becomes an identity of Indian women. They have little control over decision making because of patriarchal practice of society, hence they have to live under the control of first their fathers, their husbands, and finally under the control of their sons. All of these factors exert a negative impact on the health status of Indian women. (Victoria et.al.,1998). The girl child, disadvantaged from birth (or even before it) due to her sex, is systematically denied or has limited access to the often-paltry food resources within the household (Kamalapur S, et. al.,2013).

Objective: Objectives on which this paper converged are as follow: -

Research Objective 1: To study about the pattern of public expenditure on health of women in Haryana.

Research Objective 2: To determine if there is statistically significance correlation between public expenditure and sex ratio.

Methodology:

- **Sources of data collection:** This study use secondary to fulfill aims of the paper. The study has been design to reveal the status of the women of Haryana affected by public expenditure of Haryana government. The study is proposed to cover a period of seventeen years from 2000-01 to 2016-17. Secondary data are collected through books, newspaper, journals, and reports from governmental or non-governmental organization. Data are gathered from reliable sources like various versions of Economic Survey of Haryana, Statistical Abstract of Haryana, NITI Aayog, NFHS-I &II etc. While collecting data, authenticity of the sources is taken into consideration to increase validity of research.
- **Method of data analysis:** To analyze the impact of public expenditure in health on sex ratio, bivariate correlation analysis has been applied with time series analysis. Time period of 2000-17 has been taken for data analysis. Finding from the data analysis were arranged

and discussed in order to reveal the results to answer the research question for this paper. SPSS Software is used to perform statistical analysis.

- **Time period and Scope of the study:-**The study will further design to reveal the status of the women of Haryana affected by public expenditure of Haryana government by covering a period of seventeen years from 2000-01 to 2016-17, as this period will not only sufficient to explore but also expose the effect of public expenditure on women health during three planning period.

Literature Review:

This paper is exploring about effect of public expenditure on women population of the state of Haryana by considering sex ratio as variable. This review of literature restricted itself to research published after 2000, with an emphasis on published article in peer reviewed journals. By reviewing literature Most of research stress on gender specific public expenditure which further leads to increase output and productivity and results in economic development. Some emphasized that investment in women's health speed up the demographic transition and economic take off. Encouraging female health helps to attain other required aims apart from economic development. **(Bloom, et.al., 2015)**. Much of the literature has focused on health care utilization and spending by women. **Taylor, A. K., et.al.** Focused on USA, and examined difference in women health care exploitation expenditure by socio-demographic features like health conditions, income and employment. **Saikia, N., et.al. (2016)** has documented disparity in rate of use of health care services between men and women. By using panel data based on IHDS and calculate morbidity prevalence rate and mean HCE. Evidence regarding the relationship between government expenditure on women health and electoral quota has been somewhat mixed **(Loren dent, 2017)** and try to express negative correlation between presence of quotas and expenditure on health and education.

Pattern of public expenditure:

Public expenditure on women health is an important instrument because the level of health status a citizen reflects the level of augmentation of the country. Health and education are the basic areas for investment for people's betterment sustainable economic growth. On the other hand, health is influenced by economic growth and affluence. Although Haryana has made tremendous

improvement in the fields of education, infrastructure and housing etc. but there is lot more to make effort to improve status of women in Haryana because it is not only health related but also related with social problem. Public expenditure on health is one of the components of expenditure of state or central government on social services which are considered as development expenditure. Thus, expenditure on health is directly related to development of an economy. In any developing and emerging economy Social Sector plays a significant role. To examine pattern of public expenditure, budgetary expenditure of Haryana government on health must be taken under consideration. The State's Plan Strategy has always been growth with social justice and welfare and accordingly the highest priority has been accorded to the Social Services Sector. It is evident (table 1) that the public spending of India stagnated, while Haryana stepped up its spending and it increases from 3.3 in 2000-01 to 4.3 in 2017. As analyzed from table, India's spending on health increased just 0.2% during the period of 2000-17.

Table 1: Expenditure of Medical and Public Health and Family Welfare- as Ratio to Aggregate Expenditure* (2000-2017):

Period	India (in % to GDP)	Haryana (in %)
2000-01	0.7	3.3
2001-02	0.7	3.0
2002-03	0.7	3.3
2003-04	0.6	2.4
2004-05	0.6	2.7
2005-06	0.6	3.1
2006-07	0.6	2.5
2007-08	0.6	2.6
2008-09	0.6	2.9
2009-10	0.7	3.4
2010-11	0.6	3.2

2011-12	0.6	3.1
2012-13	0.7	3.4
2013-14	0.7	3.6
2014-15	0.8	4.0
2015-16	0.9	3.3
2016-17	0.9	4.3

Source: Budget documents of the state government, RBI publications 2021.

*It includes revenue expenditure and capital outlay.

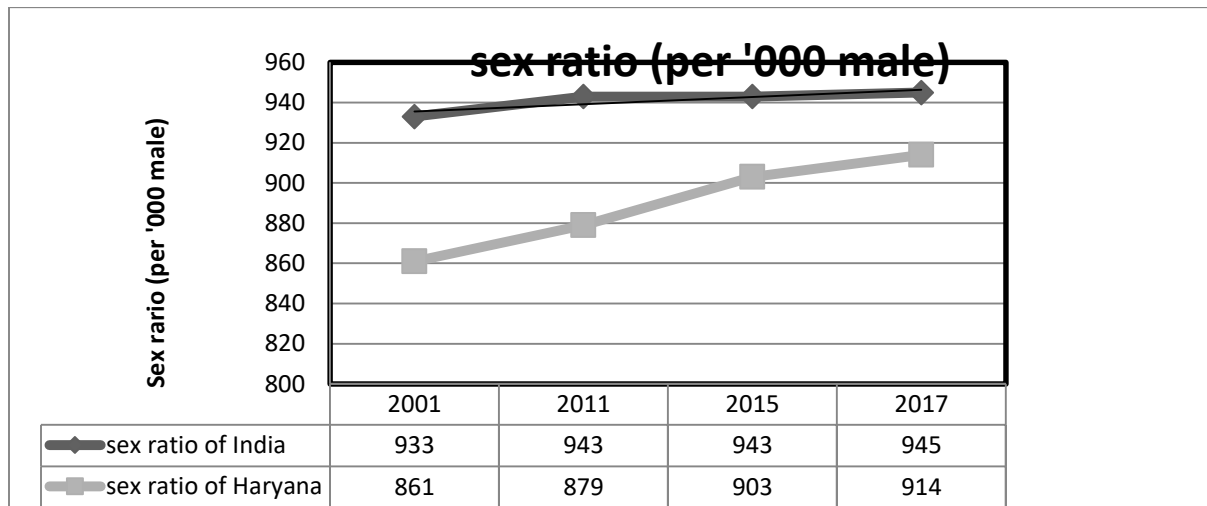
On the other hand, expenditure of Haryana government increased 10% during the same period. The financial management of Haryana government has been termed as one of the best in the country. 12th finance commission of India has also commended the performance of Haryana state in the areas of revenue growth, expenditure checking and reduction of deficit indicators. For overall development and empowerment of women and girls,

Haryana government has implemented various schemes. Health department of Haryana is always committed to provide quality health services to citizens of Haryana. It has made tremendous progress in augmentation of health and medical services.

Sex ratio:

Sex ratio is used to describe the number of females per 1000 males. It is valuable indicator that tells about the population of women of any economy and the ratio of women to men. If trend of sex ratio of India examine from the phase of the years of independence it seems to be follow constant trend, from last five decade, it started showing gradual sign of decrease. Though the sex ratio in India shows appreciable marks of enhancement from last ten years, there are still some states where sex ratio is very low, which is a cause of concern for government.

Figure 1: sex ratio of India and Haryana (2001-2017):



Source: Various issues of census of India, <https://www.census2011.co.in/sexratio.php>, Haryana.gov.in,

Sample registration system, 2020,

Figure 1 indicates that overall sex ratio has been increasing in India; by 2001, sex ratio was 933 and shows slow improvement in three five years planning and increased up to 945 in 2017. Also overall sex ratio in Haryana shows sign of significant improvement in sex ratio, overall sex ratio increased from 861 in 2000 to 914 in 2017. Although Haryana has made significant improvement in the field of education, infrastructure and housing etc. but it needs lot more efforts and stress to improve sex ratio in Haryana because this not only related with health but also with social problem.

Statistical interpretation of data:

As woman comprises almost 50% of total population of Haryana, it is very necessary to take some effective steps to improve the status of woman. Sex ratio as an indicator related with women shows improvement during 2000-17.

To examine pattern of public expenditure, budgetary expenditure of Haryana government on health must be taken under consideration. The State's Plan Strategy has always been growth with social justice and welfare and accordingly the highest priority has been accorded to the Social Services Sector. It is evident (figure 1) that the public spending of India stagnated, while Haryana stepped up its spending and it increases from 3.3 in 2000-01 to 4.3 in 2017. For overall development and empowerment of women and girls, Haryana government has implemented various schemes. Health

department of Haryana is always committed to provide quality health services to citizens of Haryana. It has made tremendous progress in augmentation of health and medical services.

This research is exploring about the relationship between total expenditure in health and its impact on women health. To examine the impact of public expenditure on health of women in Haryana, one of the health indicators have taken to reveal the health status of women i.e. Sex Ratio.

RQ: 2:- Whether there is positive correlation between sex ratio of Haryana and Public expenditure in health by Government of Haryana?

To answer this research question, following Hypotheses was set:-

For RQ: 1(a):-

- ❖ **H₀**:- Public expenditure health has no influence on the sex ratio in Haryana.
- ❖ **H₁**:- Public expenditure directly influences the sex ratio in Haryana.
- ❖ Initially, correlation between two variables must be identified. By using SPSS, it was found that there is highly correlation the assumption of linear relationship must be met.

Table 2: Public Expenditure in Health and Sex Ratio of Haryana (2000-17):

Years	Public expenditure on health (in % of total expenditure)*	Sex ratio (‘1000 male)
2000	3.0	861
2005	3.1	843
2010	3.2	879
2017	4.3	914

Source: Sample registration system (NITI Aayog) 2018

Source: Budget documents of the state government, RBI publications 2017.

*It includes revenue expenditure and capital outlay

Figure 2: - Scatter plot of Sex Ratio against Public Health Expenditure on Health:

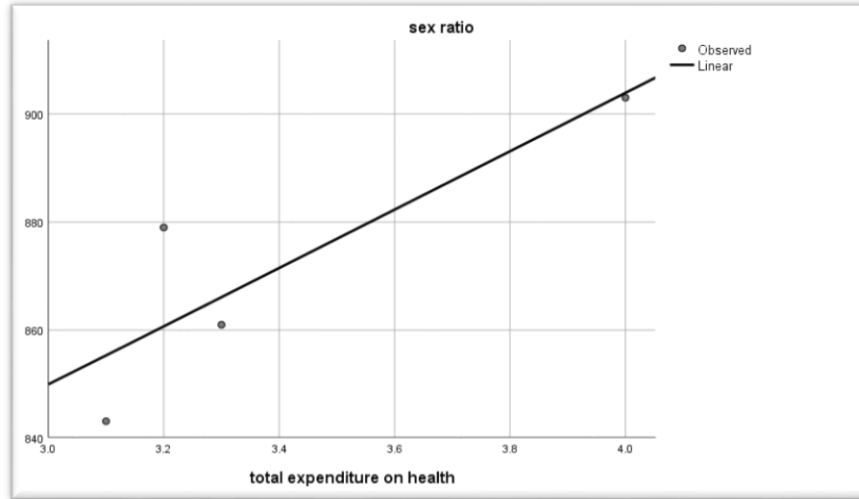


Figure shows that there is linear relationship exist between Total Health Expenditure and Sex Ratio, which found by creating scatter plot by using SPSS to plot dependent variable (SR) against independent variable (TEH). Scatter plot indicates good linear relationship. In this case, some but not all of the variation of sex ratio is explained PEX.

Figure 3: Pearson’s correlation coefficient:

Correlations			
		Total public health Expenditure	Sex Ratio
Total public health Expenditure	Pearson Correlation	1	.860
	Sig. (2-tailed)		.143
	N	4	4
Sex Ratio	Pearson Correlation	.860*	1
	Sig. (2-tailed)	.143	
	N	4	4

* Correlation is significant at the 0.05 level (2-tailed)

Correlation result shows that there is highly positive correlation between public health expenditure and Sex Ratio i.e. 0.860.

While interpreting variable processing summary most of the information in the model summary deals with the strength of the relationship between SR and the model

Figure 4: Model summary of Sex ratio (Linear)

Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
.860	.740	.610	16.016

*The independent variable is total expenditure on health.

'R' is the correlation coefficient between the two variables. In this case, the correlation between Total Expenditure on health & Sex Ratio is high at 0.860. R^2 indicates the amount of change the dependent variable that can be attributed to our independent variable. R^2 of 0.740 indicates that 74% of variance in dependent variable (Sex Ratio) can be explained by the Independent Variable i.e. Total Expenditure on Health.

The ANOVA Table, (Figure 5) indicates that the model can accurately explain variation in the sex ratio. Since the calculated value of F is 5.684 which is less than the table value of 0.140 at 5% level, the variation explained by the model is due to chance.

Figure 5:- ANOVA TABLE

ANOVA					
	Sum of Squares	d. f.	Mean Square	F	Sig.
Regression	1458.000	1	1458.000	5.684	.140
Residual	513.000	2	256.500		
Total	1971.000	3			

Note: The independent variable is total expenditure on health.

In conclusion we reject the null hypothesis of no influence of public expenditure on the sex ratio in Haryana.

Findings and suggestions:

Haryana's sex ratio has an unprecedented improvement while the 2001-15, census put Haryana's sex ratio at very bottom place out of 29 states of India. It was 861 in 2000 but increased up to 42 points in 2015 i.e. 903 females per 1000 males (SRS.2018). This reduction can be attributing to implementation and enacting of strong comprehensive legislations and .PNNDT act (1994). Although Haryana has made tremendous improvement in the fields of education, infrastructure and housing etc. but there is lot more to make effort to improve status of women in Haryana because it is not only health related but also related with social problem.

Government has adopted multidimensional approaches, policies and programmes to build a favorable environment to save and protect the girl child and uplift the status of women in Haryana. Under government of Haryana, NRHM and umbrella RCH programme have made many successful interventions following one some suggestion to give negative acceleration of sex ratio in Haryana as well as India:-

- By increasing focus on provision of education and access to basic needs.

- Authorities have to pay almost attention to serious and effective implementation of policies and programmes.
- By proving strict and intensive inspection and monitoring of ultrasound diagnostics facilities.to improve sex ratio.
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