



Impact of socio-economic factors on health of children: A micro-level study from district Udhampur, J&K

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Abstract

Socio-economic factors are known to be the major factors that influence children's health related quality of life. These factors not only include the income but also the occupational status, educational attainment, social status and social class. This paper is an attempt to study the impact of socio-economic factors on the health of children between the age group of 3-5 years. It also determines the degree of accessibility of children to basic services and needs such as health, education, shelter, food, sanitation, water and to identify the immunization status of children between the age group of 3-5 years. The study has been carried out in ward no. 1 of Udhampur district of Jammu and Kashmir. A total sample of 50 households has been taken using purposive sampling to analyze the major objectives. In this study, the respondent is a mother who is taking care of her child between the age group of 3 to 5 years. Various socio-economic factors like mother's age, type of family, religion, caste, type of ration card, occupation, and mother's education form the basis of the study. It has been found that majority of the respondents, that is, 59.2%, let their children defecates in water-sealed toilet which means that the sanitation condition of this ward is better to some extent. Most of the households in this area have been found following better hygienic practices, which further create a positive impact on the health status of the children. All children have been found vaccinated.

Keywords: immunization, socio-economic factors, malnutrition, hygienic practices and sanitation

Introduction

It is widely known that a healthy nation is a wealthy nation. Children are the future of every nation. Future of the nation depends upon the health of the children. Health is an important contributor of people's ability to produce and to accumulate skill and knowledge, which further contribute to improvement in the economic growth and development of nation.

All children have the right to optimal nutrition to survive, grow and develop. Well-nourished children have good health, more resistant to disease, more attentive and perform better. Nearly, half of deaths of children under-five years age are result of undernutrition, putting them at immediate risk. In 2019, an estimated 144 million children under-five year old were stunted, 47 million were suffered from wasting (United Nations Children's Fund, World Health Organization, The World Bank, UNICEF-WHO-World Bank Joint Child Malnutrition Estimates, 2019). Malnutrition simply implies the imbalance of energy and nutrients in physical status of children (WHO 2018).

Health is a multi-dimensional concept, WHO (1948) defines health as a "state of physical, mental and social well-being and not merely absence of diseases or infirmity." The entire life of child is determined in large phase by the food and the nutrition given to him/her during its initial phase of life (0-5 years). Both infant and child mortality are the important indicators of socio-economic development. Every day around 15,000 children die before celebrating their fifth birthday, mostly from diseases that are preventable and curable (Roser, Ritchie & Dadonite, 2019). In 2013, around 2.8 million newborn children died within 28 days of birth (the neonatal period), accounting for 44% of global under-5 deaths. Globally, under five mortality has been roughly

halved since 1990. The world is reducing under-five mortality faster than at any time in the past two decades (UNICEF, Committing to Child Survival: A Promise Renewed Progress Report 2014, New York).

Socio-economic factors play a very important role in the growth and development of children. They not only comprise of just family income but also includes the educational status, occupation of parents, social class and various other factors. They also involve attributes associated with the quality of life as well as the other privileges and opportunities afforded and available to people and children within the society. Low socio-economic status such as lower education, poverty and poor health, ultimately affect our society as a whole. Smith (1998) [25] conducted a research work on the association between the socio-economic status (SES) and the variety of health outcomes over time. Research indicates a strong relationship between the level of household income and the self-reported health status. Fedrow and Sahn (2005) [11] examine the determinants of child health. He shows how the individual, household and community characteristics affect the children's health as measured by height, mother's education, father's employment status at large. Evidences also indicates that many environmental as well as social factors, such as poor nutrition, lack of food and poor access to health care have found to be connected with low socioeconomic background, e.g. low income and education. Thus, the papers focused on highlighting the major impacts of socio-economic factors on the health of children.

Review of Literature

Socio economic status affects our society a lot. Socio-economic status (SES) is often measured as a combination

of education, income, and occupation. These factors play a very important role in influencing the quality of life in every stage of life for children, youths and elderly. Good health is result of what people desire and their wealth or income which enables them to get much of it. Shehzad (2006) [22] found that child health state both temporary and transitory is affected by the various factors such as parental education, socio-economic condition and health care variables and as such Cameron and Williams (2009) [21] examines that the general health status of children of poor families in developing countries is compromised by their family circumstances. Garrett (1994) [12] found that families with more human and financial resources and competent mother is likely to provide a higher quality home environment to children. Low SES such as poverty, lower education and poor health eventually affect our society as a whole. For example, parents with low education, unemployment, and low income have been associated with poor child health status and an increased widespread of chronic diseases and psychosomatic symptoms (related to mind and body). Kover (1982) [17] found that Poor children had more contacts with Physician per year as children's in families with higher income. Low income adversely affects their health and its impact does not differ by age. Living in the poorer household has a negative effect on child health and it further negatively effects the children's academic achievements. Low socio-economic status and exposure to hardship are closely associated to low educational success (Sheridan and McLaughlin, 2016) [23]. These factors are also closely associated with behavior and health (Shonkoff & Garner, 2012) [24]. Children belongs to low socio-economic status families are often seen with significantly less linguistic knowledge (Purcell-Gates, McIntyre, & Freppon, 1995) and enter high school with average literacy skills as compare to the high-income families students (Reardon, Valentino, & Shores, 2013) [21]. Further, children of low family income are more likely to be absent from school in their whole educational experiences (Zhang, 2003) [28], further cumulative the learning gap between them and their better-off peers.

Socio-economic inequalities in health are the global problems, not only among the adult population but also among children. The link of low socioeconomic characteristics and poor health is quite not simple. Kamniya (2011) found that educational attainment of mother didn't exert any positive impact on childhood nutrition. On the other hand, both primary and secondary schooling of father is positively co-related with children's height and weight for age. The proportion of children per community whose mother received antenatal care from skilled personnel during last pregnancy exhibited negative impact on weight for age.

Cutler and Money (2008) asserted that socio-economic status consists of not only one but many dimensions which relates to health in diverse ways. He highlights that the socio-economic advantages which cause good health varies both across dimensions –education, financial resources, health, rank, race and ethnicity and across the phases of life cycle. He also highlighted that the socio-economic status and health are strongly related in both industrial and developing countries. Improving child health may lead to socio-economic outcomes which further leads to improvement in human capital accumulation. In addition,

the presence of multiple parental socioeconomic risk factors may have a cumulative effect on children's poor health.

Child Health Scenario in India

A child born in a developing country is over 13 times more likely to die within the first 5 years of life than developed countries (Global health by Kevin McCracken, millennium development report). Child mortality has been declining worldwide as a result of socio-economic development and implementation of child survival interventions. In case of low-income countries, pneumonia is the leading cause of death among children whereas in case of developed countries, heart disease is the leading cause of death among children.

According to Government of India (2011), 'every sixth death in the country still pertains to that of an Infant.' In case of under-five mortality rate, Kerala is at lowest level with 15 deaths of infants per 1,000 live births whereas Goa is at second lowest level after Kerala. In case of Jammu and Kashmir, the ratio is 48. In case of nutritional status, almost half of the children under-five are stunted (48%) and 43% are under-weight. Under nutrition is substantially higher in rural areas than in urban areas. Anemia is found to be very common in children. 70% children of under-five age group are found to be Anemic. India was one of the first countries in the world to initiate an official policy and programmers for family planning.

In case of health finance in India, according to National Health Policy, public health investment over the years has been comparatively low, and as a percentage of GDP, has declined from 1.35 (1990) to 0.9% (1999). In 2013, India's expenditure on health is 4% of the total Govt. expenditure.

The present research problem is to study the socio-economic background of household and health status of the children (between of age 3-5 years). The aim of this study is to describe the health status of children aged between 3-5 years, and socioeconomic factors associated with health. The socioeconomic factors include parental education level, household net income, religion and working status etc. The health of children is affected by many socio-economic factors including education, employment, income, poverty, environment, culture etc. This is because the socio-economic determinants strongly interact to influence health and, in general, an improvement in any of these can produce an improvement in both health behaviors' and outcomes among children's.

Objectives of the study

- To know the influence of socio-economic factors on the health status of the children between the age group of 3-5 years.
- To determine the degree of accessibility of children to basic services and needs such as health, education, shelter, food, sanitation, water and security.
- To identify the immunization status of children between the age group of 3-5 years.

Methodology

The detail of methodology followed is as follow:

- **Selection of the study area:** The present area under the study is Ward number 1 of the Udampur town. In order to conduct this type of research work there is a lack of data from secondary sources. As such there was no alternative, the present research study has been done

exclusively on the basis of primary data. According to the census 2011, the Ward No. 1 has estimated 571 households and the total population of 3623 out of which 2447 are males and 1176 are females. About 2204 out of 2447 males are literate which means the male literacy rate of this area is about 67.54 percent. On the other hand, 933 out of 1176 females are literate which means the literacy rate of female is about 79.33 percent.

- **Sample Design and sample size:** Purposive and multi stage sampling technique has been followed to select the desired sample for the survey. The present study is based on the primary data collected from sample

household of the Ward no 1. A total of 50 households were chosen by purposive sampling method for the survey. In these 50 households, the respondent is the mother of children aged between 3-5 years.

- **Data Collection:** The field survey was conducted with the help of well-structured and pretested questionnaire. The respondents were made aware of the purpose of the interview and every care was taken to draw out accurate information from them. The questions were asked in their local language in order to ease them to answer the questions.

Data Analysis and its interpretation

Table 1: Distribution of 50 Sample household characteristics of Ward no.1 of Udhampur town.

Background characteristics		No	%
Type of family	Nuclear	12	24.0
	Joint	38	76.0
	Total	50	100.0
Religion	Hindu	42	84.0
	Sikh	1	2.0
	Muslim	7	14.0
	Total	50	100.0
Caste	SC	3	6.0
	ST	1	2.0
	OBC	13	26.0
	General	33	66.0
	Total	50	100.0
Type of Ration Card	APL	42	84.0
	BPL	6	12.0
	None	2	4.0
	Total	50	100.0

Source: Field Survey

Table-1 shows the distribution of 50 households in ward no.1 of Udhampur town by household characteristics such as type of family, religion, caste and ration card. The above table shows that 76% of the families are joint in nature while remaining 24% belong to nuclear families. From the above table, it is clear that Hinduism is the dominant religion here (84% belong to Hinduism) and among them

most of the population belongs to the General category (66%). As far as the type of ration cards are concerned, the table reveals that majority of the households of this ward irrespective of caste, religion, and type of houses in which they live are above the poverty line since they possess APL ration card.

Table 2: Distribution of Sample households by consumption of Safe Drinking Water by their Children

Background characteristics	Total		Safe water for child				
	1	2	Yes		No		
	No	%	No	%	No	%	
Mothers Education	Illiterate	3	100.0	1	33.3	2	66.7
	Middle	14	100.0	11	78.6	3	21.4
	Matric	24	100.0	16	66.7	8	33.3
	Graduation	6	100.0	5	83.3	1	16.7
	PG Professional Degree and above	3	100.0	3	100.0		
Total	50	100.0	36	72.0	14	28.0	

Source: Field survey

Table 2. represents the distribution of sample households by consumption of safe drinking water by their children. As far as the safe drinking water is concerned, drinking water must be neat and clean because unsafe drinking water will result into number of various water-borne diseases like diarrhea, typhoid etc. The effect of the respondent’s education shows

that with an increase in the level of education the consumption of safe drinking water has also increased. Thus, the importance of education lies here. Thus, it can be concluded that the respondents of this area are much aware about the importance of the safe drinking water and the resulting health benefits to their children.

Table 3: Distribution of Sample households by method used for purification of Drinking Water for their Children

Background characteristics		Total		Mode of filtration							
				Electronic Filter		Boiling		Sieving		Any other	
		No	%	No	%	No	%	No	%	No	%
Mother's age	0-19	2	100.0			1	50.0	1	50.0		
	20-29	15	100.0	1	6.7	5	33.3	3	20.0	6	40.0
	30-39	19	100.0	1	5.3	6	31.6			12	63.2
Mother's Education	Illiterate	1	100.0							1	100
	Middle	11	100.0			3	27.3	2	18.2	6	54.5
	Matric	16	100.0			6	37.5	2	12.5	8	50.0
	Graduation	5	100.0	2	40.0	1	20.0			2	40.0
	PG Professional Degree and above	3	100.0			2	66.7			1	33.3
	Total	36	100.0	2	5.6	12	33.3	4	11.1	18	50.0

Source: Field Surveys

Table-3 illustrates the distribution of sample households by method used for purification of drinking water for their children. Water purification is the transition of dirty harmful (Contaminated) water into clean safe water. In the area under study, as far as purification of drinking water is concerned the households use methods like electronic filtration, boiling, sieving, chlorination of water etc. The above table shows that majority of population in this area uses any other mode of filtration i.e. 50% followed by 33.3% using method of boiling for purification of drinking

water for their children. It means that majority of the people in the area to some extent aware about the benefits of safe drinking water and its impact on the health status of their children. Based on mother's education, majority of the respondents use any other techniques of filtration for purification of water. Majority of respondents who are middle and matric passed use any other method of filtration followed by respondent who uses boiling as method of filtration.

Table 4: Distribution of Sample households by usual place of defecation of children

Background characteristics		Total		Place of defecation									
				Water sealed toilet		Open drain		Courtyard		Pit		Any other	
		No	%	No	%	No	%	No	%	No	%	No	%
Mother's Education	Illiterate	3	100	1	33.3			1	33.3	1	33.3		
	Middle	14	100	3	21.4			7	50.0			4	28.6
	Matric	23	100	17	73.9	1	4.3	4	17.4			1	4.3
	Graduation	6	100	5	83.3							1	16.7
	PG Professional Degree and above	3	100	3	100								
Employment status of mother	Employed	8	100	4	50.0			2	25.0			2	25.0
	Not employed	41	100	25	61.0	1	2.4	10	24.4	1	2.4	4	9.8
Type of family	Nuclear	12	100	6	50.0			6	50.0				
	Joint	37	100	24	64.9	1	2.7	6	16.2	1	2.7	5	13.5
	Total	49	100	29	59.2	1	2.0	12	24.5	1	2.0	6	12.2

Source: Field survey

Table-4 shows the distribution of sample households by usual place of defecation of children. As far as the usual place of defecation is concerned, sanitation is a cornerstone of public health. Improved sanitation contributes to better children health and prevents the transfer of bacteria, viruses and parasites found in human excreta which otherwise leads to major diseases like cholera etc. It has been cleared from the above table that majority of the mothers let their children defecates in water-sealed toilet i.e. 59.2% which means that the sanitation condition of this ward is better to some extent. And obviously, it has a positive impact on the health Status of their children. As far as education of mothers is concerned, majority of mothers who are matriculate and above have water-sealed toilet facilities for defecation of their children. While, those who are illiterate or middle pass, their children defecate in the courtyard. Again, in case of employment status, majority of the mothers let their children defecate in water-sealed toilet and the remaining let them to defecate in courtyard. Irrespective of various socio economic factors such as type of family, religion, caste and type of ration card are concerned, majority of the mothers let their child defecate in water-

sealed toilet and the remaining let them defecate them in courtyard.

Table 5: Distribution of Sample Household by Hygiene practices of Children

Hygiene practices	Responses	No	%
Bath with Soap daily	Yes	46	92.0
	No	4	8.0
Use Talcum powder daily	Yes	47	94.0
	No	3	6.0
Brush Teeth daily	Yes	50	100.0
Use mosquito net/mat	Yes	41	82.0
	No	9	18.0
Play in hygienic conditions	Yes	20	40.0
	No	30	60.0
Wash hands before meals	Yes	49	98.0
	No	1	2.0
Wash hands after toilet	Yes	50	100.0
	Total	50	100.0

Sources: Field survey

Table-5 indicates the distribution of households by hygiene practices of children. Hygiene refers to conditions and

practices that help to maintain health and prevent the spread of diseases especially through cleanliness. Children need to be taught the importance of hygiene early on so that it becomes a habit. Good hygiene is the best way to avoid the spread of infection and disorders among children. The above table shows that almost all the households in this area follows better hygienic practices which further creates a positive impact on the health status of the children. In the table, majority of mothers give their children bath with soap daily i.e. 94%.

It shows that mothers are aware about the use of soap daily which protects their children from various diseases. Further, the table shows that majority of mothers use talcum powder daily for their children who protect children from skin allergies and rashes.

The table also illustrates that almost all the children brush their teeth daily. Most of the mothers provide their children mosquito net/mats to protect them from mosquitoes. As far as the playing in hygienic condition is concerned, mostly the respondents have the view that their children do not play in better hygienic conditions (60%), while remaining (40%) have view that their children play in better hygienic conditions. In addition to these, almost all children wash their hands before the meal in order to get rid of dirt and germs that could make them sick. The table also illustrates that almost all the children also wash their hands after toilet. Thus from the above table, it is clear that most of the mothers in the area are aware about the importance of hygiene and better hygienic practices are followed by almost all the children in the area.

Table 6: Distribution of Sample Household Children by Immunization

		No	%
BCG	Yes	50	100.0
DPT	Yes	50	100.0
Polio	Yes	50	100.0
Measles	Yes	50	100.0
Hepatitis	Yes	50	100.0
Vitamin A	Yes	50	100.0
Deworming	Yes	12	24.0
	No	38	76.0
	Total	50	100.0

Source: Field survey

Table-6 shows the distribution of household children by immunization. Immunization is the single most important way by which parents can protect their children from serious diseases. The table shows that almost all the children are vaccinated. It shows that respondent in this area are aware about the benefits of immunization and their health effects on their children. The table illustrates that almost all children have vaccinated by major vaccine as BCG, DPT, vaccine against polio, vaccine against measles, vaccine against hepatitis, injection of vitamin-A. However, in case of deworming, a few of them (24%) are vaccinated while remaining (76%) are not provided any vaccine against the deworming. Thus, from the above table, it is clear that almost all the children are given immunization in order to protect themselves from the harmful diseases.

Table 7: Distribution of Children born with less birth weight

Background characteristics	Total		Yes		No		Can't say		
	No	%	No	%	No	%	No	%	
Mothers age	20-29	21	100.0	6	28.6	13	61.9	2	9.5
	30-39	27	100.0	5	18.5	22	81.5		
	40-50	2	100.0			2	100.0		
Mothers Education	Illiterate	1	100.0			1	100.0		
	Middle	5	100.0			5	100.0		
	Matric	25	100.0	5	20.0	19	76.0	1	4.0
	Graduation	6	100.0	2	33.3	4	66.7		
	PG Professional Degree and above	13	100.0	4	30.	8	61.5	1	7.7
Employment status of mother	Employed	16	100.0	3	18.8	12	75.0	1	6.3
	Not employed	34	100.0	8	23.5	25	73.5	1	2.9
APL BPL	APL	47	100.0	11	23.4	34	72.3	2	4.3
	BPL	2	100.0			2	100.0		
	None	1	100.0			1	100.0		
	Total	50	100.0	11	22.0	37	74.0	2	4.0

Sources: Field survey

Table-7 shows the distribution of children born with less birth weight. Doctors may describe the babies born with weight much less than 2.5kg as a very or extremely low birth weight. This can happen to babies who are born prematurely. Infants born with low weight face a number of serious health risks. The table shows that majority of the

respondents have children who are born with normal birth weight and only a few (22%) of the total children in the area are born with less birth weight. Thus, it can be expected that most of the children in the area are born with normal birth weight, which may have a positive impact on their health status.

Table 8: Distribution of women by their perception about the health of child

Background characteristics		Total		Very Good		Good		Satisfactory		Bad	
		No	%	No	%	No	%	No	%	No	%
Mothers age	20-29	21	100.0			15	71.4	4	19.0	2	9.5
	30-39	27	100.0	1	3.7	19	70.4	6	22.2	1	3.7
	40-50	2	100.0			1	50.0			1	50.0
Mothers Education	Illiterate	1	100.0							1	100.0
	Middle	5	100.0			5	100.0				
	Matric	25	100.0			18	72.0	5	20.0	2	8.0
	Graduation	6	100.0			5	83.3	1	16.7		
	PG Professional Degree and above	13	100.0	1	7.7	7	53.8	4	30.8	1	7.7
Employment status of mother	Employed	16	100.0	1	6.3	13	81.3	2	12.5		
	Not employed	34	100.0			22	64.7	8	23.5	4	11.8
Type of family	Nuclear	22	100.0			17	77.3	4	18.2	1	4.5
	Joint	28	100.0	1	3.6	18	64.3	6	21.4	3	10.7
APL BPL	APL	47	100.0	1	2.1	34	72.3	10	21.3	2	4.3
	BPL	2	100.0							2	100.0
	None	1	100.0			1	100.0				
	Total	50	100.0	1	2.0	35	70.0	10	20.0	4	8.0

Sources: Field survey

Table-8 shows the distribution of women by their perception about the health of child. Child's health includes physical, mental and social well-being. The above table shows that mothers from different age groups have perception that their children have good health status while a few asserts that their children possess satisfactory health status. It can be seen from the table that majority of illiterates and educated mothers have perception of good usual health of their children. Thus, it can be concluded that almost all mothers have good perception about the health of their children in the area under study.

Major findings of the study

- With respect to various socio-economic factors such as; respondent's age, respondent's education, type of family, religion, caste, type of ration card and occupation are concerned, almost in all the cases majority of the children possess good health status.
- Factors like education; employment status shows a positive relationship with the health status of the child.
- Sanitation condition of the area under study is better to some extent.
- Three-fourth of the respondents in the ward is aware about the purification of drinking water for their children.
- Almost all the children in the ward are fully immunized which shows that the mothers in the ward are fully aware about the benefits of the immunization.

Conclusion

This research study has been conducted in the Ward no. 1 of Udhampur town of Jammu and Kashmir. The study has been carried out to analyze the relationship between the socio-economic background of households and health status of children. The study is based on the primary data and the sample size is large enough, as 50 household samples have been taken for the present work. The analysis based on this large sample can be easily generalized to the whole population.

Policy implications

- Support and provide employment opportunities for mothers to enhance child health status.
- Introduce nutritional intervention programmes targeted at younger children.
- Support research into methodological improvements in assessment of socioeconomic indicators to enhance validity and reliability of information for policy formulation.
- Awareness regarding the nutritional diet of their children should be given to the people.

References

- Biswas Soma Chowdhury, Darda Abu, Alam Fasiul. "Factors Affecting Childhood Immunization in Bangladesh" The Pakistan Development Review,2001:40(1):57-70.
- Cameron Lisa, Williams Jenny. "Is the Relationship between Socioeconomic Status and Health Stronger for Older Children in Developing Countries?" Population Association of America,2009:46(2):303-324.
- Can TH Vu, Mujaharine. "Neighborhood effect of hospitalization in early childhood" Can J Public Health, 2010:101(2):119-23.
- Case A, Lubotsky D, Paxson C. "Economic Status and Health in childhood: the origin of the gradient" The American Economic Review,1997:92(5):1308-1334.
- Cheadle A, Pearson D, Wagner E. "Relationship between socioeconomic status, Health status, and lifestyle practices of American Indian" Public Health Report,1994:109(3):405-413.
- Cohen S, Devert DJ, Chen E, Matthews KA. "childhood socioeconomic status and adult health" Annals of the New York academy of science, 2009. ISSN: 0077-8928.
- Contoyannis and Dooley. "Role of child health and economic status in educational, health and labour market outcomes in the adulthood" The Canadian Journal of Economics / Revue canadienne d'Economique, 2010:43(1):323-346.

8. Cutler DM, Munney AL. "Socio-economic status and health-its dimension and mechanism" Oxford Handbook of Health Economics, 2008.
9. Currie J, Goodman J. "parental socio-economic status (SES), child health and human capital"
10. Dutton DB. (1985) "Socioeconomic status and Children's Health" *Medical Care*,2007;23(2):142-156.
11. Fedrow L, Sahn DE. "Socioeconomic Determinants of Children's Health in Russia; A longitudinal study" *Economic Development and Cultural Changes*,2005;53(2):479-500.
12. Garrett P. "structure model for the development status of young children" *Journal of Marriage and Family*, 1994, 56(1).
13. Graham Hilary. "patterns and determinants of socio-economic inequalities in health in UK" *Milbank Memorial Fund*. 2004;82(1):101-124.
14. Hughes CD, Ng S. "Reducing Health Disparities among Children" *The Future of Children, Health Insurance for Children* (Spring,2003;13(1):52-16.
15. House JS, Kessler RC, Herzog AR. "Age, Socioeconomic status and Health" *the Milbank Quarterly*,1990;68(3):383-411
16. Kamiya Yusuke. "Socio-economic determinants of nutritional status in health of children in Lao PDR" *Journal of Health, Population and Nutrition*,2011;29(4):339-348.
17. Kover. "Health status of U.S children and the use of medical care" *National Center for Health Statistics, Series*,1982;10:196.
18. Max Roser, Hannah Ritchie, Bernadeta Dadonaite, (2013) "Child and Infant Mortality". Published online at Our World In Data. Org: <http://ourworldindata.org/child-mortality> [Online Resource, 2013.
19. Overpeck MD, Moss AJ, Hoffman HJ, Hendershot GE. "A comparison of the childhood health status of Normal Birth Weight and Low Birth Weight Infants" *public health report*,1989;104(1):58-70.
20. Purcell-Gates V, McIntyre E, Freppo PA. "Learning written storybook language in school: A comparison of low-SES children in skills-based and whole language classrooms". *American Educational Research Journal*,1995;32:659-685.
21. Reardon SF, Valentino RA, Shores KA. Patterns of literacy among U.S. students. *The Future of Children*,2013;23(2):17-37.
22. Shafaqat Shehzad. "determinants of the child health in Pakistan" *Social Indicators Research*,2006;78(3):531-556
23. Sheridan MA, McLaughlin KA. "Neurological models of the impact of adversity on education". *Current Opinion in Behavioral Sciences*,2016;10:108-113.
24. Shonkoff JP, Garner AS. "The lifelong effects of childhood adversity and toxic stress". *American Academy of Pediatrics*,2012;129:e232-e246. doi:10.1542/peds.2011-2663.
25. Smith JP. "Socioeconomic Status and Health" *The American Economic Review*,1998;88:2:192-196
26. UNICEF, "The state of the world's children. children, food and nutrition: growing well in a changing world" UNICEF, New York, NY, 2019.
27. World Health Organization. *World Health Statistics. Monitoring Health for sustainable Development Goals (SDGs)*, World Health Organization.
28. Zhang M. Links between school absenteeism and child poverty. *Pastoral Care in Education*,2003;21:10-17. doi:10.1111/1468-0122.00249