

# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue I January 2015

ISSN: 2394-1758



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

# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## Contents

---

<b>Issues on Infant Mortality Rate (IMR) in India and Government Interventions</b> <b>Dr. N. Radhakrishnan</b>	<b>1-7</b>
<b>Cognitive Style and Personality Temperament on Mathematics Achievements</b> <b>V. Nithya vani</b>	<b>8-13</b>
<b>Stages of Life and Adult Development : (With Special Focus to Career Development)</b> <b>Dr. V. Neelamegam</b>	<b>14-17</b>
<b>A Study on Equity Healthcare Services to Primary Healthcare Center (PHCS) Rural Households in Salem District, Tamilnadu</b> <b>A. Vadivelu &amp; Dr. A. Sugirtha Rani</b>	<b>18-31</b>
<b>Healthcare Delivery System in India</b> <b>Anbalagan Sathanantham</b>	<b>32-34</b>

---

Published by



**SVM Publications**

45, T.A. Koil 5<sup>th</sup> Street, Velachery,  
Chennai – 600 042, Tamil Nadu  
Cell: 94440 77646

Email: [svmpublication@gmail.com](mailto:svmpublication@gmail.com)  
[www.academicresearchsupport.com](http://www.academicresearchsupport.com)



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

## Multidisciplinary Global Journal of Academic Research (MGJAR)

---

### Editorial Board

---

**Dr. V. Neelamegam**

Editor in Chief  
Assistant Professor, FS&H.,  
SRM University, Tamil Nadu , India.

**Dr. P. Arunachalam**

Professor  
Department of Applied Economics  
Cochin University of Science and Technology  
Kochi - 682 022, Kerala. India.

**Dr. José G. Vargas-Hernández**

University Center for Economic and  
Managerial Sciences,  
University of Guadalajara.  
Periférico Norte N° 799, Núcleo Universitario  
Los Belenes, C.P. 45100, Zapopan, Jalisco,  
México.

**Dr. Sonia Selwin**

Business Management Trainers,  
Commercial Studies Division,  
Bahrain Training Institute, Ministry of  
Education,  
Kingdom of Bahrain

**Dr. Sanjay N. Tupe**

Associate Professor & Head,  
Dept.of Banking and finance,  
B.Y.K. College of Commerce  
College Road, Nashik-422005, India.

**Dr. Pranam Dhar**

Associate Professor,  
Department of Commerce & Management,  
West Bengal State University. Barasat,  
West Bengal, Kolkata – 700126, India.

**Dr. B. Johnson**

Associate Professor  
Dept of Commerce and Management Studies  
University of Calicut  
Kerala State 673 635, India.

**Dr. S. R. Sheeja**

Assistant Professor of Economics  
School of Distance Education (SDE)  
University of Kerala  
Thiruvananthapuram -34, India.

**Dr.R.Ramachandran**

Asst. Professor  
Commerce DDE, Annamalai University  
Annamalai nagar 608 002  
Tamilnadu, India.

**Dr. D. Amutha**

Associate Professor (Economics)  
St.Mary's College (Autonomous),  
Thoothukudi, Tamilnadu, India



# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## ISSUES ON INFANT MORTALITY RATE (IMR) IN INDIA AND GOVERNMENT INTERVENTIONS

**Dr. N. Radhakrishnan**

Associate Professor and Head, Research Guide,  
PG and Research Department of Economics, Muthurangam Government Arts College  
(Autonomous), Vellore – 2, Tamil Nadu. **E-Mail:** radhanr2030@gmail.com

---

### Abstract

*Infant mortality is a leading public health problem in developing countries. Of the estimated 130 million infants born each year world-wide, 4 million die in the first 28 days of life. Three quarters of neo-natal deaths occur in the first week and more than one-quarter occur in the first 24 hours. In India the most common causes of neo-natal mortality (0-4 weeks) are low birth weight and pre-maturity, birth injury, sepsis. The post-neo-natal mortality causes are dominated by diarrhea and respiratory infections. Neo-natal health is dependent on health care services whereas post-neo-natal health is mainly dependent on environmental factors. A high Infant Mortality Rate (IMR) thus indicates unmet health needs and unfavourable environment factors. That is why UNICEF maintains that IMR is one of the most expressive indices of development concept. Childhood mortality is one of the important indicators of a country's general medical and public health conditions, and consequently, the country's level of socio-economic development. Its decline is therefore not only desirable but also indicative of an improvement in general living standards. Reduction in infant and child mortality is likely the most important of the millennium development goals, as children are the most important assets of a nation. The burden of infant mortality can be further reduced by improving reproductive and child health program, strengthening of referral system and health education. This article discusses the issues on Infant Mortality Rate (IMR) in India and government interventions.*

**Key Words:** Infant Mortality Rate (IMR), Neo-natal Mortality Rates (NMRs), Antenatal care.

---

## Introduction

India is home for 19 percent of world's children and has the largest number of children in the world. India has 414 million children and 26 million are born each year – more than in any other country. However, one out of every two children under three years of age is malnourished. Nearly 1.8 million infants die each year. Thirty four percent of the children the underweight. Many of these factors exert a negative impact on the health status of Indian women.

Poor health has repercussions not only for women but also for their families. Women in poor health are more likely to give birth to low-weight infants. They are also less likely to be able to provide food and adequate care for their children. While women in India face many serious health concerns, this profile focuses on only five key issues: (1) reproductive health (2) violence against women (3) nutritional status (4) Inequality in the treatment of girls and boys and (5) HIV/AIDS. Because of the wide variation in cultures, religions, and levels of development, health also varies greatly from state to state.

Infant mortality is a leading public health problem in developing countries. Of the estimated 130 million infants born each year world-wide, 4 million die in the first 28 days of life. Three quarters of neo-natal deaths occur in the first week and more than one-quarter occur in the first 24 hours. In India the most common causes of neo-natal mortality (0-4 weeks) are low birth weight and pre-maturity, birth injury, sepsis. The post-neo-natal mortality causes are dominated by diarrhea and respiratory infections.

Neo-natal health is dependent on health care services whereas post-neo-natal health is mainly dependent on environmental factors. A high Infant Mortality Rate (IMR) thus indicates unmet

health needs and unfavourable environment factors. That is why UNICEF maintains that IMR is one of the most expressive indices of development concept.

Infant mortality showed an appreciable decline during the 1980s and the early part of the 1990s. Thereafter, its pace of decline has slackened considerably. Earlier declines in the infant mortality rate (IMR) have been largely due to reduction in post-neo-natal mortality, with neo-natal mortality rates (NMRs) not contributing as substantially. As a result, currently almost two-thirds of the IMR is being contributed by the NMR. Consequently, the focus of child health shifted to neo-natal health. This was rightly so, but should not be at the cost of health interventions for children in the age group of 1 month to 5 years. We review the current proportion of child mortality between birth and 5 years in India. The mortality rate in the age group of 0-28 days is about 35/1000 live-births, 1-12 months about 30/1000 live-births and 1-5 years about 26/1000 live-births. Thus, the ratio of neo-natal death rate to 1-5 years death rate is about 1.3. In contrast, in developed countries, the ratio is over 10. Thus, while efforts are under way to reduce neo-natal mortality in India, it is equally important that the risk of mortality of a child who survives the neo-natal period decreases substantially; else there will only be a shift in the burden of death from an early period of infancy to a later part of early childhood.

## Infant Mortality Rate

Infant Mortality Rate (IMR) is the number of deaths of children less than one year of age per 1000 live births. The rate for a given region is the number of children dying under one year of age, divided by the number of live births during the year, multiplies by 1,000.

## Types of Infant Mortality

- a. Neonatal mortality is newborn death occurring within 28 days post-partum. Neo-natal death is often attributed to inadequate access to basic medical care, during pregnancy and after delivery. This accounts for 40 - 60 percent of infant mortality in developing countries.
- b. Post-neo-natal mortality is the death of children aged 29 days to one year. The major contributors to post-neo-natal death are malnutrition, infectious disease and problems with the home environment. Pre-natal mortality is late fetal death (22 weeks gestation to birth), or death of a newborn up to one week post-partum.

## Health Status of Children's under – Five

Trends in per-natal and infant mortality show a slow but steady decline in infant mortality rates (IMR), less for neo-natal mortality (NMR) and almost no change for rate of stillbirths. Each year 27 million infants are born in India. Around 10 percent of them do not survive to 5 years of age. In absolute figures, India contributes to 25 percent of the over 10 million under-five deaths occurring world-wide every year. Nearly half of the under-five deaths occur in neo-natal period.

Over the decades there has been a declining trend in infant mortality rate, neonatal mortality rate and stillbirth rate. However, the decline for NMR shows signs of slowing and stagnating only 15 percent decline in NMR during the 1990s, compared to 25 percent decline during 1980s. This decline has become even less during 1995-2000, a meager 4 points (48 to 44 per 1000 live births respectively).

Malnutrition among children is rampant. One in every three of the world's malnourished children lives here and about 50 percent of all childhood deaths in India are attributable to malnutrition. The proportion of low birth weight babies remain high at one third of all births. The promotion of early and exclusive breast feeding is a well-recognized strategy for child survival. It is estimated that in India 28 percent of mothers initiate breast feeding within one hour of delivery and only 39.7 percent practice exclusive breast feeding till 6 months. Enhancing early initiation of breast feedings and intensify nutrition is highlighted in Tenth five year plan. The negative effects of malnutrition among women are compounded by heavy work demands, by poverty, by childbearing and rearing, and by special nutritional needs of women, resulting in increased susceptibility to illness and consequent higher mortality.

While malnutrition in India is prevalent among all segments of the population, poor nutrition among women begins in infancy and continues throughout their lifetime. Women and girls are typically the last to eat in a family; thus, if there is not enough food they are the ones to suffer most. According to the NFHS, Indian children have among the highest proportions of malnourishment in the World. More than half (53 percent) of all girls and boys under 4 years of age are malnourished, and a similar proportion (52 percent) are stunted i.e., too short for their age. Other studies show that many women never achieve full physical development. This incomplete physical development poses a considerable risk for women by increasing the danger of obstructed deliveries.

In the vast majority of countries world-wide, male have higher mortality in infancy than female. Higher female rates are therefore considered likely to signal discrimination against girls. Only 7 of the

15 major States in India have higher male infant mortality. In the remaining States, equal or higher female rates suggest that girls suffer greater neglect.

**Table - 1**  
**State-wise Infant Mortality Rate in India from 2009 to 2013**

Sl. No.	India / States / Union Territories	Infant Mortality Rate			
		2009	2010	2011	2013
<b>India</b>		<b>50</b>	<b>47</b>	<b>44</b>	<b>40</b>
<b>Bigger States</b>					
1	Andhra Pradesh	49	46	43	39
2	Assam	61	58	55	54
3	Bihar	52	48	44	42
4	Chhattisgarh	54	51	48	46
5	Delhi	33	30	28	24
6	Gujarat	48	44	41	36
7	Haryana	51	48	44	41
8	Jammu & Kashmir	45	43	41	37
9	Jharkhand	44	42	39	37
10	Karnataka	41	38	35	31
11	Kerala	12	13	12	12
12	Madhya Pradesh	67	62	59	54
13	Maharashtra	31	28	25	24
14	Odisha	65	61	57	51
15	Punjab	38	34	30	26
16	Rajasthan	59	55	52	47
17	Tamil Nadu	28	24	22	21
18	Uttar Pradesh	63	61	57	50
19	West Bengal	33	31	32	31
<b>Smaller States</b>					
1	Arunachal Pradesh	32	31	32	32
2	Goa	11	10	11	9
3	Himachal Pradesh	45	40	38	35
4	Manipur	16	14	11	10
5	Meghalaya	59	55	52	47
6	Mizoram	36	37	34	35
7	Nagaland	26	23	21	18
8	Sikkim	34	30	26	22
9	Tripura	31	27	29	26
10	Uttarakhand	41	38	36	32
<b>Union Territories</b>					
1	Andaman & Nicobar Islands	27	25	23	24
2	Chandigarh	25	22	20	21
3	Dadra & Nagar Haveli	37	38	35	31
4	Daman & Diu	24	23	22	20
5	Lakshadweep	25	25	24	24
6	Puducherry	22	22	19	17

**Source:** Sample Registration System Bulletin, Registrar General, India, Vol.49, No.1, September, 2014.

**Note:** Infant mortality rates for 2009, 2010, 2011 & 2013 in respect of smaller States and UTs are based upon the three year period 2007-09, 2008-10, 2009-2011 and 2011-13.

State-wise infant mortality rate in India is presented Table No.1. It reveals that states such as Assam (54), Madhya Pradesh (54), Odisha (51), Uttar Pradesh (50), Rajasthan (47) and Chattisgarh (46) have higher under-five mortality rate than the rest of India. On the other hand, some states like Kerala (21), Delhi (24), Maharashtra (24), Punjab (26), Tamil Nadu (21) and West Bengal (31) have lower the under-five mortality rate.

### **Causes for Infant Mortality Rate**

In developed countries, such as Japan and Sweden, the infant mortality rate is as low as 4-5. But in India infant mortality rate is high. More female babies die in the first year of life than male babies. Due to society's preference for male child, better care and nutrition is given to male offspring as compared to female. Fifty percentage of infants die in the neo-natal period of 1<sup>st</sup> to 6<sup>th</sup> weeks of life. Hence, this problem is closely linked to better ante-natal care, better delivery and post-delivery care, breast feeding and good nutrition of mother. Pre-mature delivery is a leading cause in infant mortality. Later on, malnutrition, poor sanitation leading to various infections, diarrhea, lack of protein and calories in diet resulting in poor resistance to infections, babies succumb to infections, another important cause. Mother's age at delivery, order of the child in family, family size, socio-economic condition, level of literacy of mother, are also important. Better primary health care to mother and child and stress on female literacy will go a long way to bring the IMR further down. Some causes of congenital

infant mortality are malformations, sudden infant death syndrome, maternal complications during pregnancy, and accidents and unintentional injuries. Environmental and social barriers prevent access to basic medical resources and thus contribute to an increasing infant mortality rate. Ninety-nine percent of infant deaths occur in developing countries, and eighty-six percent of these deaths are due to infections, pre-mature births, complications during delivery, and pre-natal asphyxia and birth injuries. Greatest percentage reduction of infant mortality occurs in countries that already have low rates of infant mortality. Common causes are preventable with low-cost measures. The determinants of low birth weight include socio-economic, psychological, behavioural and environmental factors.

As per World Health Organization (WHO) Statistics Report 2012, India stands 47<sup>th</sup> rank of infant mortality rate in the world. The causes of infant deaths in India during 2001-03 as given by the Registrar General of India, Ministry of Home Affairs, are pre-natal conditions (46 %), Respiratory infections (22 %), Diarrheal disease (10 %), other infectious and parasitic diseases (8 %) and Congenital anomalies (3.1 %). Factors contributing the above causes are home delivery by unskilled persons, lack of essential newborn care for asphyxia and hypothermia, poor child care practices, lack of early detection of sick newborn, inadequate and delayed referral mechanisms, inadequate infrastructure at health care facilities for specialized care of sick newborn etc.

### **Intervention**

One of the major goals of the Department of Family Welfare is to reduce maternal mortality and morbidity. Several new initiatives have been taken in this regard. The focus has undergone a paradigm shift from individualized vertical

interventions to a more holistic and integrated life-cycle approach, giving more focused attention to the reproductive health care and more recently to give greater emphasis to child health. Other changes and innovations being implemented to



improve maternal, newborn and child health include:

1. Training of MBBS doctors in anaesthetic skills for emergency obstetric care at FRUs.
2. Setting-up of blood storage centers at FRUs.
3. Development of guidelines for skilled attendance at birth for ANMs/LHVs and guidelines for normal pregnancy and management of obstetric complications, including authorizing ANMs/LHVs to be able to conduct a limited number of identified life-saving midwifery skills and practices.
4. Janani Suraksha Yojna (National Maternity Benefit Scheme) is envisaged as a package of services, geared at reducing maternal mortality, neo-natal mortality, female feticide and gender disparity.
5. In the new initiative, National Rural Health Mission, every village or large habitat will have a female Accredited Social health Activist (ASHA) chosen by and accountable to the Panchayat to act as the interface between the community and the public healthcare system.
6. Adaptation on IMCI to include newborn issues and development of the Integrated Management of Newborn and Childhood Illnesses (IMNCI). Under this new initiative separate tools guides and other resource have been developed and being used with field staff. The major features of the Indian adaptation are:
  - a. Focus on young infants, since a significant proportion on child mortality is centred in the first few months of life.
  - b. Including essential newborn care in the first week of life.
  - c. Ensuring harmonization between existing child health interventions and programmes like ICDS and NAMP implemented by agencies other than the Department of Family Welfare.
7. Prevention and treatment of Anaemia by supplementation with Iron and Folic Acid tablets during pregnancy and lactation.
8. Name based tracking of Pregnant Women to ensure complete antenatal, intranatal and postnatal care.
9. Operationalizing Community Health Centers as First Referral Units (FRUs) and Primary Health Centers for round the clock maternal care services.
10. Strengthening facility based newborn care: New born care centre (NBCC) are being set up at all health facilities where deliveries take place; Special New Born Care Units (SNCUs) and New Born Stabilization Units (NBSUs) are also bring set up at appropriate facilities for the care of sick newborn including preterm babies.

The above measures are important to reduce IMR in India. Not only these measures are necessary to reduce IMR, but also steps to be taken to achieve cent percent female adult literacy and to improve water, sanitation and housing facilities in rural as well as urban areas.

## Conclusion

Childhood mortality is one of the important indicators of a country's general medical and public health conditions, and consequently, the country's level of socio-economic development. Its decline is therefore not only desirable but also indicative of an improvement in general living standards. Reduction in infant and child mortality is likely the most important of the millennium development goals, as

children are the most important assets of a nation. The burden of infant mortality can be further reduced by improving reproductive and child health program, strengthening of referral system and health education.

### References

1. Dhandapani.C. (2014), Facets of Rural Health in India, Serials Publication, New Delhi.
2. Sample Registration System Bulletin, Office of the Registrar General, Ministry of Home Affairs, Government of India, Vol.49, No.1, September, 2014.
3. Gunasekaran.A. and Usha Rani. D.B., Nutritional Status of Children in Tamil Nadu, Southern Economist, December 15, 2010.
4. Siddarth Ramji, Newborn and Child Health in India: Problems and Interventions, NCMH Background Papers.
5. Victoria. A. Velkoff and Arjun Adlakha Women's Health in India, U.S. Statistics Administration, Bureau of the Census, December, 1998.

\*\*\*\*\*

## Call for Papers for an Print/ E-Journal

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



**Multidisciplinary Global Journal of Academic Research (MGJAR)**  
**(An International quarterly Print/ E-Journal with ISSN)**

Articles can be submitted through out the year

Nominal publication fee will be collected

**SVM Publications**

**(Cell : 94440 77646)**

**Email : vnmegam1973@rediffmail.com**



# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## COGNITIVE STYLE AND PERSONALITY TEMPERAMENT ON MATHEMATICS ACHIEVEMENTS

**V. Nithya vani**

**M.Sc., M.Ed., M.Phil.,**

---

### Abstract

*Every one has some preferred style in learning and thinking. That means a cognitive style varies from one to another. Researches indicate that it is possible to modify a person's preferred style of learning and thinking to best fit their demands of the cognitive tasks. Mathematics is the mainstay in today's systematic life without numerical and mathematical evidence one cannot decide many issues in our day-to-day life. Mathematics is the study of abstractions and their relationships in which the only technique of reasoning that may be used to confirm any relationship between one abstraction and another is deductive reasoning.*

**Key Words:** Education, Cognitive Style, Personality Temperament, Mathematics, Achievements

---

### Introduction

Education is a continuous process to develop all capacities of the child to influence the environment to fulfill his/her requirements. As we are entering the third millennium, it is the responsibility of the educationist and the members of the society to shape the younger generation to meet the challenges of living in a more technologically advanced scientific society. This development is natural and progressive. This is to be directed towards desirable goals, which are fixed by the society according to the individual and social needs. Education in most societies

has two principal roles: that of passing on knowledge from one generation to the next and that of equipping people with skills that enable them to analyze, diagnose and thus question. Often when the concept of education was discussed, the most commonly used phrases are cognitive development and learning. To achieve the supreme objective, that is to ensure a harmonic development of the child's personality, education should strike a balance between intellectual, cognitive, physical, social and emotional dimensions of development.

## Need and Significance of the Study

Students may have different preference with regard to when, where and how often to learn while many instructors are aware that different styles of learning exist, the application of this knowledge is often in consequential. The need of India, today is not conformity with the existing ideas but a different kind of thinking process, to make him to live in a world, which charges at much faster pace and with greater complexity. A kind of human being who comfortably enjoys change and be able to face any situation with confidence strength and courage, have to be the goal of our future educational system.

Both cognitive style and the temperament play a significant role in achievement in Mathematics. Hence the problem entitled "Mathematics Achievement in relation to Cognitive Style and Temperament among XI standard students in Chennai" would help the teachers and parents to motivate their children and to explore their cognitive style and their temperament level, which may promote better achievement in Mathematics. Moreover, it would definitely need for both the teachers and parents to help the students in carrier, counseling and guidance.

## Objectives of the Study

- To find out whether there is any relationship between Achievement in mathematics and Temperament types - sanguine, phlegmatic, melancholic, and choleric
- To find out whether there is any relationship between Achievement in mathematics and cognitive styles - systematic and investigative

- To study the predictive capability of Temperament types scores and Cognitive style scores on Mathematics achievement.

## Limitations

The present investigations has the following limitations

- Standardized test materials alone were used in this investigation.
- The sample is restricted to XI Standard students in Chennai district.
- The study covered only a few selected Corporation, Government, Govt. aided and Private schools.

## Methodology of Study

The sample for the study was selected randomly. Representative sample of 474 Students were selected from Corporation, Government, Aided and private schools from Chennai. A total number of 474 subjects differ on the basis of gender, School management type, Stream of study, Educational qualification of mother, Monthly income of the family, Community and Religion.

## Tools used for the Study

The following tools are used to collect data for the present study:

- Cognitive Style Inventory (CSI) by Dr. Praveen Kumar Jha(1985)
- Temperament scale an adopted version of the scale designed Dimension of Temperament Scale by Dr. N.K. Chadha and Ms. Sunanda Chandna by the

investigator to identify the temperament of the sample.

- Mathematics Achievement test prepared and standardized by Jeyanthi with the south Indian sample.
- Personal Data sheet prepared by the investigator to collect information on the selected personal variables.

## Review of related Literature

**Berends, I.E., and van Lieshout, Ernest C. D. M. (2009)** conducted a study on *The Effect of Illustrations on Arithmetic Problem-Solving Ability*. The sample for the study consisted of 130 students of which 67 were good performers and 63 were poor performers. The results indicate that ineffective illustrations can have a detrimental effect on performance on arithmetic problem solving ability. Principles from cognitive load theory used to explain the results indicate poor working memory ability also influences arithmetic problem solving ability.

**Yalla, T.S.R., and Ayodhya, P. (2010)** Compared the mathematical problem-solving skills of the male and female students when they were exposed to the conventional and Polya's method. The sample for the study consisted of 380 IX class students, drawn from five government schools, 192, were assigned to Conventional method and 188 to Polya's method. The study concluded that different pedagogical strategies equally affect both male and female students.

**Vijayalakshmi, G., and Lavanya, P. (2006)** conducted a study on *The relationship between stress and Mathematics Achievement among intermediate students*. The sample for the study consisted of 180 Intermediate students. The data were gathered with the help of stress inventory

developed by the researchers and marks obtained by the students in Mathematics in the semester 1 examination were considered for achievement. The major findings were: (1) The students whose mothers education was up to secondary level were feeling more stress (2) The students having well educated fathers are feeling more amount of stress

**Couzens, D., Haynes, M., and Cuskelly, M. (2012)** conducted a Longitudinal study on *The Individual and Environmental Characteristics Associated with Cognitive Development in Down syndrome*. The sample for the study consisted of 89 participants.

**Major Findings:** The temperament, maternal education, medical conditions and school experiences were associated with cognitive differences and middle childhood and target reductions in negative affect in relation to supporting cognitive development for individuals with Down syndrome.

**Davenport, E., Yap, M.B.H., Simmons, J.G., Sheeber, L.B., and Allen, N.B. (2011)** conducted a study on *The Maternal and Adolescent Temperament as Predictors of Maternal Affective Behavior towards their Adolescent*. The sample for the study consisted of 151 early adolescents (aged 11-13).

**Major Findings:** The temperamental dispositions, during years of early adolescents, may influence their ongoing socialization of emotion regulation skills, and thus their emotional well being.

## Hypotheses

Keeping in view the objectives stated above the following was formulated for the present study.

**H<sub>01</sub>:** There is no significant relationship between Achievement in mathematics and Temperament types - sanguine, phlegmatic, melancholic, and choleric

cognitive styles-systematic and investigative

**H<sub>03</sub>:** There is no predictive capability for Temperament types scores and Cognitive style scores on Mathematics achievement.

**H<sub>02</sub>:** There is no significant relationship between Achievement in mathematics and

**Criteria for classification of Data according to levels of Achievement in Mathematics.**

third quartile (Q3), Average achievers who scored between Q1 and Q3 and low Achievers – those who had scored less than the first quartile (Q1). Table 1.0 presents the criteria for classification of data according to levels of Achievement in Mathematics.

The sample was classified into three categories based on their Achievement score in Mathematics. High achievers – those who had scored greater than the

**Table 1.0**

**Criteria for classification of sample according levels of Achievement in Mathematics**

Range	Level of Achievement in mathematics	Frequency
<Q1 (<7)	Low Achievement	194
Between Q1 and Q3 (7-12)	Average achievement	239
>Q3 (>12)	High Achievement	41

**Correlation Analysis**

**Table 2.0  
Correlation Analysis**

Mathematic Achievement		Systematic style	Investigative style	Sanguine temperament	Choleric temperament	Melanch-olic temperament	Phlegma-ic temperament
	Pearson Correlation	0.0166	-0.0803	-0.0025	0.0485	-0.0150	-0.0593
	Sig	0.72	0.08	0.96	0.29	0.74	0.20
	r <sup>2</sup>	0.0003	0.0064	0.0000	0.0024	0.0002	0.0035

These analyses reveal that Mathematic achievement is positively correlated with Systematic cognitive style, and Choleric temperament. Mathematic achievement is negatively correlated with Investigative cognitive style, and temperaments-Sanguine, Phlegmatic and Melancholic. The findings indicate the possibilities of identifying the students whose mathematics achievement is affected by their temperament and try to help them by giving necessary counseling.

Mathematic achievement is positively correlated with Systematic cognitive style, and Choleric temperament. Mathematic

achievement is negatively correlated with Investigative cognitive style, and temperaments Sanguine, Phlegmatic and Melancholic.

### Regression Analysis

Dependent variable = Mathematic Achievement (MA)

Independent variable = Systematic style (SS), Investigative style (IS), Sanguine temperament (SA), Choleric temperament (CH), Melancholic temperament (ME), Phlegmatic temperament

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.1128	0.0127	0.0000	11.3952
a	Predictors: (Constant), PLE, CHO, COG_I, COG_S, MEL, SAN			

The multiple correlation coefficients explain the correlation between the observed and the predicted values of 'Mathematic Achievement.' The R value 0.11 indicates that the correlation between observed and the predicted values of 'Mathematic Achievement' is positive and the degree of relationship is 0.11.

Predicting Mathematic Achievement (MA) given the values

Systematic = 78, Investigative = 77, Sanguine = 32, Choleric = 31, Melancholic = 32, and Phlegmatic = 31.

$$MA = 39.09 + 0.0348 \times 78 - 0.1044 \times 77 - 0.0124 \times 32 + 0.0634 \times 31 - 0.0030 \times 32 - 0.0812 \times 31$$

$$MA = 32.72 \text{ ie., } 33.$$

The coefficients of regression line suggests cognitive systematic and choleric temperament contribute positively to the mathematic achievement. It further suggests cognitive investigative style and the temperaments - Sanguine, Phlegmatic and Melancholic negatively influences mathematics achievement.

## Suggestions for further Study

- The same study may be attempted on a larger sample which includes samples from students from CBSE stream and ICSE stream also.
- The same study can be repeated as a comparative study with samples drawn from schools in rural and urban areas.
- The same study may be conducted among college and university level of Students.
- The same study could be replicated by selecting samples from differently able students and compare their status with that of normal samples.
- Utilization of stratified random sampling techniques may yield a better result so as to have equal proportion of all groups in the investigation.

## Conclusion

The purpose of the present investigation was to study Mathematical Achievement with Cognitive Style and Temperament of Students as related to selected variables. The study may be found to be useful in the field of education; the findings of this study may serve as a data base for the future research.

## References

- **Berends, I.E., and van Lieshout, Ernest C. D. M. (2009)** *The Effect of Illustrations on Arithmetic Problem-Solving Ability.* Learning and Instruction. 19(4), 345.
- **Couzens, D., Haynes, M., and Cuskelly, M. (2012)** *Longitudinal study on the Individual and Environmental Characteristics Associated with Cognitive Development in Down syndrome.* Journal of Applied Research International Disabilities. 25(5), 396.
- **Davenport, E., Yap, M.B.H., Simmons, J.G., Sheeber, L.B., and Allen, N.B. (2011)** *Maternal and Adolescent Temperament as Predictors of Maternal Affective Behavior towards their Adolescent.* Journal of Adolescence. 34(5), 829.
- **Vijayalakshmi, G., and Lavanya, P. (2006)** *Relationship between stress and Mathematics Achievement among intermediate students.*
- **Yalla, T.S.R., and Ayodhya, P. (2010)** *Compared the mathematical problem-solving skills of the male and female students when they were exposed to the conventional and Polya's method.* EduTracks, (9), 40.





# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## **STAGES OF LIFE AND ADULT DEVELOPMENT : (With Special Focus to Career Development)**

**Dr. V. Neelamegam**  
Assistant Professor, FS&H.,  
SRM University, Tamil Nadu

---

### **Abstract**

*A career is the pattern of work related experiences that span the course of a person's life. While the individual is ultimately responsible for his or her own career, which includes developing a clear understanding of self and the environment in order to establish career goals and plans. One way to characterize a person's life or career is by identifying common experiences, challenges or tasks, most people seem to go through as their life or career progresses. For example, Psychologists such as Freud and others have long argued that aspects of human nature such as personality, intelligence and morality all develop in a predictable, common sequence closely tied to a person's age. From a practical perspective, a stage view helps both the individual and the organization to predict likely crises and challenges and therefore plan ways to restore or minimize them. For example if most of the youths desire a sufficient level of challenge in their initial jobs, than these individuals can be assisted in Understanding the nature of the problem and organizations can ensure that initial assignments are challenging enough to overcome this problem. This paper tries to explain the stages of Adult Development with special focus to career development*

**Key Words:** Stages of Life, Adult, Human Development

---

### **Introduction**

One way to characterize a person's life or career is by identifying common experiences, challenges or tasks, most people seem to go through as their life or career progresses.<sup>1</sup> For example, Psychologists such as Freud and others

have long argued that aspects of human nature such as personality, intelligence and morality all develop in a predictable, common sequence closely tied to a person's age.<sup>2</sup>

One way to characterize a person's life or career is by identifying common experiences, challenges or tasks, most people seem to go through as their life or career progresses.<sup>1</sup> For example, Psychologists such as Freud and others have long argued that aspects of human nature such as personality, intelligence and morality all develop in a predictable, common sequence closely tied to a person's age.<sup>2</sup>

The research by Erikson<sup>3</sup> suggests that adult life follows a series of common stages. Work done by Super<sup>4</sup>, develop in stages. Visualizing career development as unfolding in stages permits us to difficulties why some experiences occur (e.g. difficulties in adjusting to one's first position or experiencing Mid career problems) and why they are so common. From a practical perspective, a stage view helps both the individual and the organization to predict likely crises and challenges and therefore plan ways to restore or minimize them. For example if most of the youths desire a sufficient level of challenge in their initial jobs, than these individuals can be assisted in Understanding the nature of the problem and organizations can ensure that initial assignments are challenging enough to overcome this problem.

It is also true that stage views of Development have their limitations. First, they describe what happens to the typical individual of course, all individuals are unique and will not have the same experiences. For example Many people experience a period of self – questioning and re-evaluation at mid career, but not all people do. Levinson et al. Found that 80 percent of the men they interviewed experienced such as crisis, but a sizable minority (20%) did not.

## Stages of Adult Development

A persons's career is one part of life, influenced by (and influencing) Major life events. Therefore, it is useful to briefly examine the stage Models of Adult development. Theorists Erikson has offered stage model of adult development that provide a meaningful basis for understanding career development.

### (a) Erikson's Model of Adult Development

Erikson proposed that people progress through eight stages during the course of their life. These stages focus on both psychological and social issues, are depicted in the table.

In each stage of development, the person is faced with a challenge that he or she must resolve in order to develop.

### Erikson's Stages of Human Development

Stages of Development (issue)	Age Range (years)
1. Basic trust versus Mistrust.	Infancy
2. Autonomy versus shame and doubt	1 - 3
3. Initiative versus guilt.	4 - 5
4. Industry versus inferiority.	6 – 11
5. Identity Versus role confusion	Puberty and adolescence
6. Intimacy versus isolation	Young adulthood
7. Generativity versus stagnation	Middle adulthood
8. Ego integrity versus despair	Maturity

For example, the fifth stage, which occurs during adolescence, is defined by a conflict between identity and role confusion. If individuals successfully resolve this issue, they will enter adulthood with a clear sense of who they are in relation to others in the world. If they do not successfully resolve this issue, they will enter adulthood with confusion over who they are and what their role in the world is to be. It is the positive and negative experiences in each stage that determine its outcome.

In the last three stages of Erikson's Model focus on the issues facing adult development. As a young adult, one is faced with the challenge of developing meaningful relationships with others, which is called Intimacy. If the individual successfully resolves this stage, he or she will be able to make a commitment to other individuals and groups; otherwise individual is likely to experience feelings of isolation.

In middle adulthood, the challenge is to develop the capacity to focus on the generations that will follow, which Erickson calls generativity. This can take the form of becoming more involved in the lives of one's children social issues affecting future generations, or in serving as a mentor for younger than colleagues. Erikson argues that failure to resolve this stage will lead to feeling of stagnation, in that one has made no contribution to the world that will last after he or she is gone.

Finally, in maturity, the individual is faced with developing ego integrity, which involves developing an understanding and acceptance of the choices one has made in life. Successful development of ego integrity permits one to be at peace with one's life as one faces death. Failure at this stage can lead to despair over the meaninglessness of one's existence.

His view of adult development identifies some of the issues (ego, integrity,

generativity, and intimacy) that can affect the career choices that employees make.

Organization can serve as places where individuals can successfully resolve some of these challenges for example, participating in mentoring programs serves the needs of young adults to develop meaningful relationships, as well as the needs of middle-aged adults to find a way to "give something back" to members of future generations.

## Career Development

A career is the pattern of work related experiences that span the course of a person's life. While the individual is ultimately responsible for his or her own career, which includes developing a clear understanding of self and the environment in order to establish career goals and plans, the organization can help the individual by providing information, opportunities, and other assistance.

Greenhaus<sup>6</sup> describes the process of career management from the individual's perspective as one in which the individual.

- (1) Explores the environment
- (2) Develops a clear sense of Environment and self awareness.
- (3) Sets career goals
- (4) Develops a strategy to reach the goal
- (5) Implements the strategy
- (6) Makes progress toward. The goal
- (7) Obtains feedback on progress from work and non-work sources
- (8) Appraises his or her career

Using this process can enable an individual to achieve career satisfaction and greater life happiness.

## References

1. Desimone, Randy. L., Werner, Jonm., Harris, David M., (2002) Human Resource Development, P.459, Thomson Asia Pvt. Ltd., Singapore.
2. Freud, S. (1959). Collected papers. New York; Basic Books
3. Erickson, E.H. (1963) Childhood and Society (2<sup>nd</sup> ed.) New York ; W.W. Norton and company.
4. Super, D.E. (1980). A life – span, life –space approach of career development, Journal of Vocational Behaviour, PP 282-298.
5. Erikson (1963), Supra note 3.
6. Green haus, J.H., Callanan G.A., & Godshalk, V.M. (2000) career management (3<sup>rd</sup> ed.) fort worth, TX ; Harcourt college publishers.

## Call for Papers for an Edited Volumes

- Title of the books:**                      **(1) Emerging Markets**  
**(with ISBN)**                                **(2) Entrepreneurial Perspectives**

The paper writers can follow the general guidelines as specified for the articles in standard journals. A paper has a cover page covering Title of the paper, name, address, email ID, contact Number and Abstract. At the end of the paper references must to be mentioned. Articles may be sent to the given email ID. Nominal publication fee will be collected

### Emerging Markets Sub Themes

1. Digital marketing and social media
2. Redefining the value for customers
3. Branding in emerging economies
4. Marketing to Rural Customers
5. Social Enterprise & Healthcare
6. Consumer Behavior in Emerging Markets
7. Distribution and Retailing in Markets
8. Product Management in Marketing
9. Pricing and Value in Emerging Markets
10. Marketing Strategies

### Entrepreneurial Perspectives

1. Entrepreneurial Perspectives
2. Creativity and Innovation
3. Entrepreneurial Environment
4. Business Ideas
5. Enterprise Challenges
6. Social Entrepreneurship
7. Entrepreneurial Leadership
8. Entrepreneurial Opportunities
9. Inclusive Development
10. Sustainable Growth

**Email : [vnmegam1973@rediffmail.com](mailto:vnmegam1973@rediffmail.com)**



# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## **A STUDY ON EQUITY HEALTHCARE SERVICES TO PRIMARY HEALTHCARE CENTER (PHCS) RURAL HOUSEHOLDS IN SALEM DISTRICT, TAMILNADU**

**A.Vadivelu**

Ph.D., Research Scholar, Department of  
Economics, Periyar University, Salem -11  
Tamil Nadu.

**Dr. A. Sugirtha Rani**

Assistant Professor, Department of Economics,  
Periyar University, Salem -11 Tamil Nadu

### **Abstract**

*To provide accessible, affordable and accountable quality health services even to the poorest households in the remotest rural regions. Access to quality health care is a basic human right and should be viewed as a fundamental right of every citizen. Equity is therefore concerned with creating equal opportunities for health, and with bringing health differentials down to the lowest level possible. Specifically in relation to health care whitehead states that equity is defined as: equal access to available care for equal need, equal utilisation for equal need and equal quality of care for all. A healthy nation is a prerequisite for social and economic development. More economic growth measured in gross financial terms, as is evident, does not ensure that. **Objectives:** To study the socio-economic background of sample respondents; to study equity healthcare services in to the health seekers (PHCs). **Methodology:** The researcher selected the study area in Salem District. There are 75 PHCs available in Salem District. The district has been divided into 4 categories based on the geographical zones viz., North, South, East and West. From each zone, minimum 3 PHCs were identified which has high, medium and low level of treatments (deliveries, inpatients, and outpatients) has been taken place. About 9 PHCs were selected from each zone. Around 720 sample respondents were selected by using simple random sampling method. The researcher analysed the received information by using the simple statistical and econometric tools like percentage distribution, scaling technique and chi-square test analysis. **Conclusion:** From the analysis, it is concluded that PHCs increase the utilisation of health centres by the general public. Moreover poor coverage and services rendered by PHCs should be monitored and scanned by authorities in order to improve the*

---

---

*services and performance to achieve the Millennium Development Goals (MDGs). The solutions to be made, with regard to the public health system accountable, affordable and accessible by improved management of resources and community action.*

**Key Words:** Healthcare services, Primary healthcare centres, Community health centres, Service delivery, Equity of health,

---

## Introduction

Health is defined by World Health Organisation (WHO) as, "a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity." Health care is the diagnosis, treatment and prevention of disease, illness, injury, and other physical and mental impairments in humans. Health care services mean the furnishing of medicine, medical or surgical treatment, nursing, hospital service, dental service, optometrical service, complementary health services or any or all of the enumerated services or any other necessary services like character, whether or not contingent upon sickness or personal injury, as well as the furnishing to any person of any and all other services and goods for the purpose of preventing, alleviating, curing or healing human illness, physical disability or injury. Quality should be measured in structure, process, and outcome. Structural studies look at such measures as the nurse-to-patient ratio, the educational level of the nurses, the degree of specialized education of doctors, whether the hospital has a quality officer or an intensive care specialist, etc.

## The Problem Setting

Health sector policies in India have tended to stress on reducing population growth. Stabilizing growth of population is a matter of importance

for a large country like India, as there are links between overall health status of population and population growth rate.

According to the Rural Health Statistics of the Ministry of Health and Family Welfare (MoH&FW), 50 per cent of sub centres, 24 per cent of PHCs and 16 per cent of CHCs function out of rented or temporary premises. Availability of skilled personnel even for standard medical care is woefully inadequate in the public health system. More than one-fifth of the sanctioned posts for doctors are vacant, while over 40 per cent of the PHCs have no laboratory technicians and nearly one-fifth have no pharmacists. This is direct fallout of the nature of our medical educational system, which is largely based on the Western model, is urban-centric and does not produce the right kind of health workers. Only 20 per cent of the medical professionals are available for 70 per cent of the country's population, in rural India.

According to the report of WHO (2009), only 10 per cent of the total subsidy goes towards the benefit of the poorest 20 per cent of the population, whereas the richest 20 per cent avails itself of 33 per cent of the subsidy. Access to quality health care is a basic human right and should be viewed as a fundamental right of every citizen. A healthy nation is a prerequisite for social and economic development. More economic growth measured in gross financial terms, as is evident, does not

ensure that. To make the public health care system work requires determined political leadership, adequate investment and appropriate policy instruments rooted in ground realities.

### Review of Literature

**Ann Lubbock and Stephenson (2008)** explored the utilization of maternal health care services in the department of Matagalpa, Nicaragua. Results revealed that delays in seeking health care during pregnancy are influenced not only by poor access to care and economic barriers but also by individual and community knowledge and acceptance of maternal health services. Evidence suggested that in order to improve maternal health outcomes in this region, interventions must be targeted at a hierarchy of levels such as individual, household and community.

**Bajpai, Nirupam et al., (2013)** calculated the lack of availability of specialist services, due to both a shortage of specialist doctors in appropriate locations (specifically in the fields of pediatrics, anesthesia, and obstetrics) and poor infrastructure or management practices, is a pervasive concern throughout rural India. Data indicates that the key causal factors are insufficient number of sanctioned positions, private sector pull from public sector human resources, inappropriate location postings of specialist doctors, absenteeism, lack of confidence, and poor infrastructure. The problem is multifaceted, spanning human resource and governance issues.

**Dance Gudeva Nikovska and Fimka Tozija (2014)** explored social determinants of health (SDH) and equity in access to healthcare services

for TB patients in RM, aimed at complex analysis of factors that cause inequities. World Health Survey questionnaire was used to collect data. Analysis of access has identified these determinants as important barriers in access to health services. The study has documented the basic SDH of TB patients in RM, as well as barriers in access to healthcare, providing useful baseline information to facilitate determination where to concentrate future efforts.

**Fadima Yaya Bocoum, et al., (2014)** following a systematic sampling technique, the survey covers 500 households with children less than 5 years of age from 24 villages. The data analysis was conducted with SPSS taking into account the socio-economic status (SES) of the household to examine any differences in the utilisation of the prevention method and expenditure quintiles. An asset-based index, created through principal components analysis (PCA), was used to categorize the households into quintiles. Most of the households received bed nets and other preventive method for free. There is equity in expenditures across SES groups. Free distribution of ITNs ensured that there was equity in ITN ownership among households. More research on the possibility of increasing access to other locally relevant methods of malaria control that proved to be effective is need.

### Objectives of the Study

- v To study the socio-economic background of sample respondents;
- v To study the equity healthcare services in to the health seekers

### Hypotheses

- v There is no significant relationship between equity and socio-economic variables.

### Methodology

The researcher selected the study area in Salem District. The study is based on primary and secondary data. There are 75 PHCs available in Salem District. Moreover, the PHCs were categorised into three heads such as number of deliveries taken place, number of inpatients and outpatients. Hence from each zone about 9 PHCs were selected. Ultimately 36 PHCs were selected as samples; around 3 per cent of samples (patients) were identified as respondents, through simple random sampling method. Around 720 sample respondents were selected by using

simple random sampling method. The researcher analysed the received information by using the simple statistical and econometric tools like percentage distribution, scaling technique and Chi-square analysis.

### Summary and Conclusion

#### Socio-Economic Background of the Sample Respondents

Generally it is necessary to study the socio-economic background of the sample respondents. The socio-economic factors include religion, gender, age group, social status, type of the household, educational, occupational and income of the respondents also.

**Table – 1.1**  
**Socio-Economic Background of the Sample Respondents**

Socio-economic variable	No. of sample respondents	Percent
<b>Religious</b>		
Hindu	674	97.7
<b>Gender</b>		
Female	619	86.0
<b>Age group (in years)</b>		
21 - 30	343	47.8
<b>Social status</b>		
MBC	321	44.6
<b>Type of the household</b>		
Nuclear household	503	69.9
<b>Marital status</b>		
Married	642	89.2
<b>Educational attainment</b>		
Illiterates	265	36.8
<b>Occupational Status</b>		
Non - workers	468	65.0
<b>Earnings of the member ( Rs. per month)</b>		
Unearned members	460	63.9
<b>Total</b>	<b>720</b>	<b>100.0</b>

*Source: Primary Data*



It is found that more than nine tenth (97.7 percent) belongs to Hindu religion. From this, the researcher infers that, 44.6 percent of them are Most Backward Community (MBC). This shows that, mostly Salem District is dominated by these set of people and they belong to the following communities viz., MBC, BC and SC/ST. We infer that nearly two third (69.9 percent) are in nuclear household system. From this survey, with respect to sex of the sample household members, eight tenth (86.0 percent) are females. More than four tenth (47.8 percent) were in the productive age group of 21 to 30 years.

The researcher showed an interest to know the marital status of the sample household members. From the total members, more than eight tenth (89.2 percent) were married. The educational attainment has also been categorised into five categories viz., primary, secondary, higher secondary, higher education and illiterates respectively. Three tenth (36.8) were illiterates. It is evidenced that, when the level of education goes in higher side,

then there is small percentage in the distribution of sample household members.

Non workers (65.0 percent) are in higher side. From this, it is found that, unlike the general opinion, there is a wide spread of other occupational pattern which are prevailing in the randomly selected sample villages. It is necessary to study the income of the sample household members when we discuss in the socio-economic background. Around six tenth (63.9 percent) had no income and the sample members are either housewives or unearned members.

**Services of Doctors'**

On the basis of the respondents of the selected beneficiaries of NRHM about the treatment given to them by the doctors' at PHCs and analysis was made on the equity aspects. The fairness and impartiality of the doctors' in giving treatment to the rural people assumes significance in the context of the caste domination in rural areas. So the caste group wise respondents were recorded and analysed here.

**Table – 1.2**  
**Services of Doctors' Equity**

Social variable		Doctors' Services			
		Poor	Moderate	Good	Total
Community	SC	55 (48.6)	16 (14.1)	42 (37.1)	113 (16.0)
	ST	37 (44.5)	9 (10.8)	37 (44.5)	83 (12.0)
	BC	118 (58.1)	29 (14.2)	56 (27.5)	203 (28.0)
	MBC	178 (55.4)	37 (11.5)	106 (33.0)	321 (44.5)
<b>Total</b>		<b>388</b> <b>(53.8)</b>	<b>91</b> <b>(12.6)</b>	<b>241</b> <b>(33.4)</b>	<b>720</b> <b>(100.0)</b>

Source: Primary Data

Note: Figures in Parentheses are percent

It was found that majority of the MBC and BC respondents opined that there is fairness and impartiality in the services of doctor's at PHCs. However, the respondents from the SC and ST category found unequal treatment by the doctor's PHCs in the selected sample areas. Five tenth (53.8 percent) of the respondents said that doctors' service is poor, the reason doctor approach and

treatment inflexible of the respondents. Three tenth (33.4 percent) of the respondent said that good. Doctor's service given overall 720 of sample respondents from the SC and ST category people socially and economically poor, poverty that the reason. Only limited hospitals (12.6 percent) said that the treatment is moderate.

**Table - 1.2a**  
**Community and Doctors' Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	9.537	6	0.15	Not Significant

*Note: denote at 1 percent*

It is noted from the above table 1.2a, that the 'p' value is less than .010 and hence the result is not significant at 5 percent level. Hence the hypothesis is rejected. Similarly, there is no significant relationship between

community and doctors' services. However, the respondents from the SC and ST category of the socially backward some place community problem and partiality in PHCs.

**Services of Staff Nurses'**

The service of the staff nurses' is indispensable and necessary especially during periods of emergency and delivery.

**Table - 1.3**  
**Services of Staff Nurses' Equity**

Social variable		Staff Nurses' Services			
		Poor	Moderate	Good	Total
Community	SC	42 (37.1)	50 (44.2)	21 (18.5)	113 (16)
	ST	47 (56.6)	24 (28.9)	12 (14.4)	83 (12)
	BC	74 (36.4)	83 (40.8)	46 (22.6)	203 (28)
	MBC	114 (35.5)	134 (41.7)	73 (22.7)	321 (44.5)
<b>Total</b>		<b>277</b> <b>(38.4)</b>	<b>291</b> <b>(40.4)</b>	<b>152</b> <b>(21.1)</b>	<b>720</b> <b>(100.0)</b>

*Source: Primary Data*

*Note: Figures in Parentheses are percent*

The researcher had an interest to know the services of staff nurses' of the sample household members. From the total members, majority of the BC, MBC and SC respondents opined that there is fairness and impartiality in the services of staff nurses' at PHCs. However, the respondents from the ST category found are unequal treatment by the staff nurses' of PHCs in these areas. Majority

of the respondents (40.4 percent) said that staff nurses' service is moderate, 38.4 percent of the respondents said that the same services is poor. Two tenth (21.1 percent) of the respondents availability of staff nurses' services said that good. Overall, staff nurse's service is very important for the diseases like delivery, antenatal checkup, normal diseases and emergency cases.

**Table - 1.3a**  
**Community and Staff Nurses' Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	14.100	6	0.03	Significant

*Note: denote at 1 percent*

It noted from the above table 1.3a, that the 'p' value is greater than .05 and hence the result is significant at 10 percent of level. Hence the hypothesis is accepted. Similarly, there is significant relationship between community and

staff nurse's services. However, the respondents from the SC, ST, BC and MBC category given the staff nurses' services different place of PHCs are unequal. Hence the hypothesis is accepted.

**Services of Village Health Nurses'**

The village health nurses go to the doorstep of every pregnant woman in the village and offer them treatment and advice.

**Table - 1.4**  
**Services of Village Health Nurses' Equity**

Social variable		Village Health Nurses' Services			
		Poor	Moderate	Good	Total
<b>Community</b>	SC	21 (2.9)	63 (55.7)	29 (25.6)	113 (16.0)
	ST	35 (4.8)	37 (44.5)	11 (13.2)	83 (12.0)
	BC	42 (5.8)	103 (50.7)	58 (28.5)	203 (28.0)
	MBC	44 (6.1)	185 (57.6)	92 (28.4)	321 (44.5)
<b>Total</b>		<b>142 (19.7)</b>	<b>388 (53.8)</b>	<b>190 (26.3)</b>	<b>720 (100.0)</b>

*Source: Primary Data*

*Note: Figures in Parentheses are percent*

This table shows that the majority of MBC four tenth (44.5

percent) of the respondents given in the services of village health nurse's at

PHCs. One tenth (12.0 percent) of the ST respondents enchanting these services. However, the respondents from the SC and ST category of the respondents going to the PHCs at time and village health nurse's services are unequal. Village health nurses' given the home delivery treatment and others services

for money. More than half (53.8 percent) of the respondents said that village health nurses' service is moderate and 26.3 percent of the respondents said that service is good. Nearly two tenth (19.7 percent) of the respondents said that village health nurses' service is poor.

**Table – 1.4a**  
**Community and Village Health Nurses' Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	43.857	6	<0.001	Highly Significant

*Note: denote at 1 percent*

It is noted from the above table 1.4a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent of level. Hence the hypothesis is accepted. Similarly, there is highly significant relationship between community and village health nurses' services. However, the respondents from the ST category of the socially backward some place

community problem prevails in PHCs that reason for are unequal of the village health nurse's services. Moreover, the VHNs are not interested to attend the patient those who belong to ST community and also they are not going to the ST people's hours. This shows the inequity, while providing services to the people. Hence the hypothesis is accepted.

**Services of Pharmacist**

All the respondents taking services of pharmacist in PHCs, such type of diseases namely delivery, antenatal checkup, BP, diabetics, cold, fever and headache viz., very useful in the given medicine in PHCs.

**Table – 1.5**  
**Services of Pharmacist Equity**

Social variable		Pharmacist services			Total
		Poor	Moderate	Good	
Community	S.C	50 (44.2)	37 (32.7)	26 (22.9)	113 (16.0)
	S.T	39 (46.9)	10 (12.0)	34 (40.9)	83 (12.0)
	B.C	102 (50.2)	68 (33.5)	33 (16.0)	203 (28.0)
	M.B.C	136 (42.3)	130 (40.5)	55 (17.0)	321 (44.5)
<b>Total</b>		<b>327</b> <b>(45.4)</b>	<b>245</b> <b>(34.0)</b>	<b>148</b> <b>(20.4)</b>	<b>720</b> <b>(100.0)</b>

*Source: Primary Data*

**Note: Figures in Parentheses are percent**

It was found that socio economic namely SC, ST, BC and MBC of the respondents opined that there is partiality MBC of the respondent in the services of pharmacist at PHCs. However, the respondents from all category found equal treatment by the pharmacist and in some PHCs, the pharmacist service

are unequal. Four tenth 45.4 percent of the respondents said that pharmacist service is poor and three tenth 34.0 percent of the respondents said that the same service is moderate. Two tenth 20.4 percent of the respondents given the PHCs pharmacist services good.

**Table – 1.5a  
Community and Pharmacist Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	45.217	9	<0.001	Highly Significant

**Note: denote at 1 percent**

It is noted from the above table 1.5a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent level. Hence the hypothesis is accepted. Similarly, there is highly significant relationship

between community and pharmacist services. However, the respondents from the SC and ST category of the socially backward experience unequal service of the pharmacist. Hence the hypothesis is accepted.

**Services of Beds**

With regard to the availability of bed facility, all the category respondents comfortable and maintained clean.

**Table – 1.6  
Services of Beds Equity**

Social variable		Availability of Bed Services			
		Poor	Moderate	Good	Total
Community	SC	64 (56.6)	47 (41.5)	2 (1.7)	113
	ST	59 (71.0)	22 (26.5)	2 (2.4)	83
	BC	95 (46.8)	101 (49.7)	7 (3.4)	203
	MBC	140 (43.6)	164 (51.0)	17 (5.3)	321
<b>Total</b>		<b>358 (49.7)</b>	<b>334 (46.3)</b>	<b>28 (3.8)</b>	<b>720 (100.0)</b>

**Source: Primary Data**

**Note: Figures in Parentheses are percent**

It was found that majority of the BC, MBC and SC of the respondents in the services of beds at PHCs. However, the respondents from the ST category

found unequal treatment by providing beds in PHCs. Nearly half (49.7 percent) of the respondents said that availability of bed service is poor and four tenth

(46.3 percent) of the respondents given the same services said that moderate. Availability of beds services are only in

upgraded PHCs. About 3.8 percent of the respondents said that the availability of bed service is good.

**Table – 1.6a**  
**Community and Availability of Beds Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	24.628	6	<0.001	Highly Significant

*Note: denote at 1 percent*

It is noted from the above table 1.6a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent level. Hence the hypothesis is accepted. Similarly, there is highly significant relationship between community and availability of

bed services. The availability of bed services during delivery, antenatal and emergency cases are unequal to the socially backward groups viz., SC and ST. Hence the hypothesis is accepted.

**Services of Operation Theatre**

With respect to availability of the facility of operation theatre services, it is available only in general hospital and it is not available in PHCs. The patients are sent to the nearby general hospital.

**Table – 1.7**  
**Services of Operation Theatre Equity**

Social variable		Operation Theater Services			
		Poor	Moderate	Good	Total
Community	SC	8 (3.5)	17 (7.6)	22 (9.8)	47 (21.0)
	ST	9 (4.0)	7 (3.1)	13 (5.8)	29 (13.0)
	BC	12 (5.3)	35 (15.6)	20 (8.9)	67 (30.0)
	MBC	10 (4.4)	48 (21.5)	22 (9.8)	80 (35.8)
<b>Total</b>		<b>39</b> <b>(17.4)</b>	<b>107</b> <b>(47.9)</b>	<b>77</b> <b>(34.5)</b>	<b>223</b> <b>(100.0)</b>

*Source: Primary Data*

*Note: Figures in Parentheses are percent*

From the total respondents, only 223 utilized operation theater services. Operation theater service given the one tenth 13.0 percent of the respondent said that ST category. The same service provide to respondents those who

belongs to MBC (35.8 percent). It was found unequal treatment in PHCs among the service seekers. Four tenth (47.9 percent) of the respondents given the operation theater service is

moderate, the same services given at PHCs said that (17.4 percent) poor.

**Table – 1.7a**  
**Community and Operation Theater Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	21.091	6	<0.001	Highly Significant

*Note: denote at 1 percent*

It is noted from the above table 1.7a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent level. Hence the hypothesis is accepted. Similarly, there is highly significant relationship between community and operation

theater services. Mostly of the SC and ST category given the treatment at PHCs Operation Theater services not available tribal and rural areas. The patients are going to the private and general hospitals. Hence the hypothesis is accepted.

**Services of Lab Technician**

As lab technician services are not available in some PHCs, they have to go to private hospitals for their needs and these cost them much.

**Table – 1.8**  
**Services of Lab Technician Equity**

Social variable		Lab Technician Services			
		Poor	Moderate	Good	Total
Community	SC	4 (0.8)	46 (9.6)	30 (6.2)	80 (16.7)
	ST	3 (0.6)	12 (2.5)	11 (2.3)	26 (5.4)
	BC	18 (3.7)	86 (18.0)	58 (12.1)	162 (33.9)
	MBC	23 (4.8)	110 (23.0)	76 (15.9)	209 (43.8)
<b>Total</b>		<b>48</b> <b>(10.0)</b>	<b>254</b> <b>(53.2)</b>	<b>175</b> <b>(36.6)</b>	<b>477</b> <b>(100.0)</b>

*Source: Primary Data*

*Note: Figures in Parentheses are percent*

It was found that all the four category total sample 477 respondents, majority of the respondent previously tell them MBC category. Half (53.2 percent) of the respondents said that lab technician service is moderate and three tenth (36.6 percent) of the

respondents the given service is good. Overall, PHCs lab technician services is unfair due to the reason of inpatient and outpatients are large numbers and providing this service is very critical. One tenth (10.0 percent) of the respondents said that poor.

**Table – 1.8a  
Community and Lab Technician Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	26.286	6	<0.001	Highly Significant

*Note: denote at 1 percent*

It is noted from the above table 1.8a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent level. Hence the hypothesis is accepted. Similarly, there

is highly significant relationship between community and lab technician services also.

**Services of Ambulance**

Ambulance services are the life – saving service. All the people are aware of this service and they know of it as “108 service”.

**Table – 1.9  
Services of Ambulance Equity**

Social variable		Availability of Ambulance Services			
		Poor	Moderate	Good	Total
Community	SC	5 (0.8)	40 (7.1)	42 (7.5)	87 (15.5)
	ST	1 (0.1)	13 (2.3)	17 (3.0)	31 (5.5)
	BC	3 (0.5)	96 (17.1)	77 (13.7)	176 (31.4)
	MBC	7 (1.2)	138 (24.6)	121 (21.6)	266 (47.5)
<b>Total</b>		<b>16 (2.8)</b>	<b>287 (51.2)</b>	<b>257 (45.8)</b>	<b>560 (100.0)</b>

*Source: Primary Data*

It was found that SC (5.5 percent) of the respondent said that given the ambulance services. Half (51.2 percent) of the respondents said that availability of ambulance service is moderate and 2.8 percent of the

respondents said that the same service is poor. Reasonable availability of ambulance services only upgraded PHCs, some PHCs rural and urban areas. In tribal area ambulance service is not available at PHCs.

**Table – 1.9a  
Community and Availability of Ambulance Services - Chi square Test**

	Chi square Value	df	p	Remark
<b>Community</b>	82.103	9	<0.001	Highly Significant

*Note: denote at 1 percent*



It is noted from the above table 1.9a, that the 'p' value is greater than .05 and hence the result is highly significant at 10 percent level. Hence the hypothesis is accepted. Similarly, there is highly significant relationship between community and availability of ambulance services. Mostly of the SC and ST category given the treatment at PHCs ambulance services and it is not available tribal and limited in rural areas. Hence the hypothesis is accepted.

### Conclusion

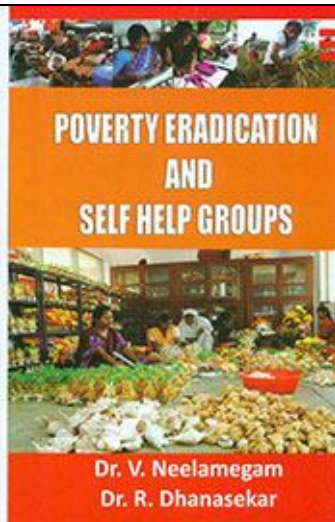
From the analysis, it is concluded that the PHCs leads to increase the utilisation of health centers. The services rendered by PHCs should be monitored and scanned by authorities in order to improve the services and performance to achieve the Millennium Development Goals (MDGs). Moreover, solutions to be made, with regard to the public health system accountable, affordable and accessible by improved management of resources and community action.

### Reference

- Ø Ann Lubbock and Stephenson (2008), "Utilisation of Maternal Health Care Services", Department of Matagalpa, Nicaragua, *Rev Panam Salud Publica/Pan American Journal of Public Health*, 24(2).
- Ø Ardyuth Netithanakul and Kusol Soonthorndhada (2009), "Equity in Health Care Utilization of the Elderly: Evidence from Kanchanaburi DSS, Thailand", *Journal of Population and Social Studies*, 18(1).
- Ø Bajpai, Nirupam et al (2013), "Increasing the Availability of Skilled Birth Attendance in Rural India", submitted to UNICEF India and International Advisory Panel to NRHM, Ministry of Health and Family Welfare, New Delhi, Columbia Global Centres - South Asia Working Paper Series No. 9.
- Ø Balarajan, Selvaraj and Subramanian (2011), "Healthcare and Equity in India", *The Lancet*, 377(9764):505 – 515.
- Ø Brown, Medlock and Murray (2014), "Impact of Drought on Vector-Borne Diseases – How Does one Manage the Risk", *Public Health*, 128(1): 29–37.
- Ø Dance Gudeva Nikovska and Fimka Tozija (2014), "Social Determinants of Equity in Access to Healthcare for Tuberculosis Patients in Republic of Macedonia – Results from a Case-Control Study", *International Journal Health Policy Management*, 3(4):199–205.
- Ø Emerson and Brigham (2014), "Health Behaviours and Mental Health Status of Parents with Intellectual Disabilities: Cross Sectional Study", *Public Health*, 127(12):1111–1116.
- Ø Faysal El Kak and Hibah Osman (2010), "The Safety and Quality of Childbirth in the Context of Health Systems: Mapping Maternal Health Provision in Lebanon", *Midwifery*, 26(5):549 – 557.
- Ø Ingrid Vargas (2014), "Inequities in Access to Health Care in Different Health Systems: a Study in Municipalities of Central

- Colombia and North-Eastern Brazil", *International Journal for*
- Ø John K Ganle and Michael Parker (2014), "Inequities in Accessibility to and Utilisation of Maternal Health Services in Ghana after User-Fee Exemption: A Descriptive Study", *International Journal for Equity in Health*, 13, (1) 89.
- Ø Lena Nasstrom and Anna Stromberg (2014), "Patient Participation in Patients with Heart Failure Receiving Structured Home Care - a Prospective Longitudinal Study", *BMC Health Services Research*, 14:633.
- Equity in Health*, 13 (1): 84.
- Ø Liden and Suerie Moon (2014), "WHO's Role in the Global Health System: What Can Be Learned from Global R&D Debates", *Public Health*, 128(2):167-172.
- Ø Syed Saad Andaleeb (2001), "Service Quality Perceptions and Patient Satisfaction: A Study of Hospitals in a Developing Country", *Social Science and Medicine***Error! Hyperlink reference not valid.**:1359-1370.

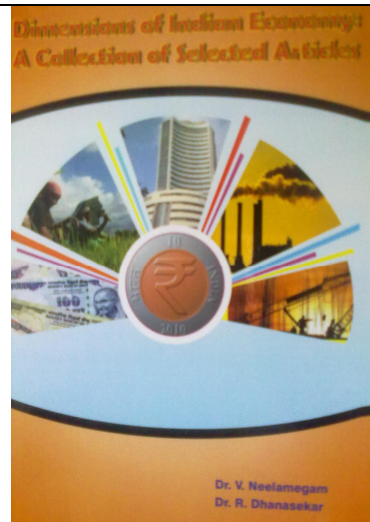
### Buy Edited Volume Books



#### **Poverty Eradication & Self Help Groups (Eds)**

(ISBN 978-93-313-2119-0),

309 Pages, Rs.995.



#### **Dimensions of Indian Economy: A Collection of Selected Articles (Eds)**

(ISBN 978-81-923796-2-3),

201 pages, Rs.1,195.



# Multidisciplinary Global Journal of Academic Research (MGJAR)

Vol. II Issue. I January 2015 ISSN:2394-1758

---

## HEALTHCARE DELIVERY SYSTEM IN INDIA

Anbalagan Sathanantham  
ME., PhD Scholar,  
Bharath University, Chennai, Tamilnadu.

---

### Abstract

*Over the past couple of decades with impressive economic growth in India there has been a revolution in healthcare delivery systems. Although remarkable improvements have been made in the healthcare segment in India in the past 20 years, the healthcare outcomes are still inadequate when compared to other developed countries. The government healthcare expenditure is significantly low and people are spending money out of pocket for their healthcare need and it becomes expensive. The healthcare expenditure is a major issue for families in low and middle income groups especially for people living in rural area. The healthcare costs are also attributed to be a leading cause of poverty in India.*

*Unlike in most other developed counties, ratio of hospitals and healthcare providers (i.e. doctors, support staff) to patients is significantly low in India, impacting timely healthcare delivery. In the past 5 years, progress has been made with new commitments by central and state governments to address these inequities and gaps in healthcare system. However, the health system in India needs to be reconfigured if these commitments are to provide optimum benefits to the people. In this context, this paper attempts to review the current state of healthcare delivery in India and to identify factors responsible for delivering quality care.*

**Key Words:** Health Care, Delivery

---

## Introduction

With current increased growth in Indian economy and Information technology, India has the potential to become a knowledge superpower on one hand while on the other hand people in India are facing extreme health care deliver concerns. The people who can afford the costly healthcare are getting best possible services, while majority of the population cannot even get basic healthcare services especially in rural areas. The healthcare policy in developed country is stronger when compared with India. Lack of political commitment, inadequate government investment and ineffective policies have led to an inefficient healthcare delivery.

Though the state and central government allocation on healthcare fund has increased compared to earlier years, the per capita government expenditure for healthcare is considerably less in Indian when compared to other developed countries. Child mortality and women's health especially pregnancy care and delivery care, neo natal care are still challenging in rural areas due to lack of facility and healthcare providers.

## Literature Review: Current state of Healthcare Delivery in India

India has a growing young population with almost 50% of the people in the younger group with ability to improve countries economic growth. Having said that healthcare system for these people are very critical for the growth. Considering the current FLU's and H1N1 spread across the country, people are in need of acute care with minimal or no cost from the

government. Life style of people in India is changing and the kind of lifestyle they adopt has been rapidly changing due to this the new set of diseases affecting them. In India, life insurance is not driven by government unlike in other country hence the healthcare services of the common man is still difficult.

## Factors influencing Healthcare Delivery

There were many factors influencing effective healthcare delivery but few of them are very critical; a) Lack of infrastructure and advanced technologies implementation b) Hiring and training healthcare providers and support staff especially in rural areas c) Funding from government /private sector to execute one common healthcare model d) Proper governance model as an control in execution in healthcare delivery e) Covering entire population with healthcare insurance

## Discussion

Today's healthcare delivery in India requires revolution from the way it operates to ensure every citizen in the country received healthcare service without spending much money. The framework we proposed in this review needs to be explored in depth and its impact on healthcare delivery will have to be further explored. The government and public sectors need to come forward to make necessary health care policy and should commit to invest in a better healthcare delivery system.

## Acknowledgments

The author sincerely thanks Dr.R.Raja., ME, PhD, (HOD, Mechanical

department, BharathUniversity) for his support and guidance and for setting direction for this literature review. Dr.Thirukumaran Thangaraj PhD, (Scientist, Philips Healthcare, The Netherlands) for his healthcare insights. The author also thanks Er.S.Kirubananthan, ME, MBA, AEE/TNEB for his continued support.

## References

1. Paul VK, Sachdev HS, Mavalankar D, et al. Reproductive health, and child health and nutrition in India: meeting the challenge. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)61492-4.
2. towards achievement of universal health care in India by 2020: a call to action K Srinath Reddy, Vikram Patel, Prabhat Jha, Vinod K Paul, A K Shiva Kumar, LalitDandona, for The Lancet India Group for Universal Healthcare\*
3. Improving the quality of health care for chronic conditions J E Epping-Jordan, S D Pruitt, R Bengoa, E H WagnerRao M, Rao KD, Shiva Kumar AK, Chatterjee M, Sundararaman T.
4. Human resources for health in India. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)61888-0.
5. Shiva Kumar AK, Chen LC, Choudhury M, . Financing healthcare for all: challenges and opportunities. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)61884-3.
6. Sen B. Securing the right to health for all in India. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)62182-4.
7. Raj A. Gender equity and universal health coverage in India. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)62112-5.
8. Grover A, Citro B. India: access to affordable drugs and the right to health. *Lancet* 2011; published online Jan 12. DOI:10.1016/S0140-6736(10)62042-9.
9. Sudarshan H, Prashanth NS. Good governance in health care: theKarnataka experience. *Lancet* 2011; published online Jan 12 DOI:10.1016/S0140-6736(10)62041-7.
10. Dandona L, Katoch VM, Dandona R. Research to achieve health care for all in India. *Lancet* 2011; published online Jan 12.DOI:10.1016/S0140-6736(10)62034-X.



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