

Summer Training Report

By

Atharva Bahad

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Institute of Health Management Research is really a progressive institute and follows a goal of creating best managers and brings it into reality, which will perform challenging endeavour in management field for welfare of human being. I wish to avail this opportunity to express my sincere thanks to my faculty mentor **Prof. Sunita Nigam**, who continuously supervised my work with utmost care and zeal and who have always been a friend and philosopher and guided as in my endeavour to present my summer report on topic **“NUTRITIONAL STATUS OF CHILDREN BELOW AGE 5 YEARS IN INDIA: SOCIO-ECONOMIC STATUS AS THE PREDOMINANT CONTEXTUAL DETERMINANT”**. It’s great pleasure to express my deep sense of gratitude and the wholehearted thanks to **Dr. Pankaj Gupta, President, IIHMR University**. I offer my special thanks to **Dr. P.R.Sodani, Dean, Training Dean, IIHMR University** for giving me opportunity to undertake this project. Lastly, I express my deep sense of gratitude to all teaching staff of the institute and all my friends, family members, who directly and indirectly helped me to complete the report.

ABSTRACT

India being a developing nation there is a huge gap in the social classes across the states and districts of the nation. As it is highly populated nation nutritional status is major concern as large number of people are poor leading to the malnutrition and stunted growth in children below age 5 years. The purpose of the study was to establish the relation between the socio-economic status and the nutrition status of children.

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PART 1

Report on Work from Home (Assigned by Faculty)

NUTRITIONAL STATUS OF CHILDREN BELOW AGE 5 YEARS IN INDIA: SOCIO-ECONOMIC STATUS AS THE PREDOMINANT CONTEXTUAL DETERMINANT

INTRODUCTION

India contributes to high number of undernourished children on the planet, which add to high mortality in the nation. Around 46% of the children underneath the age of 5 years in India i.e. around 45 million young men and young ladies are underweight or malnourished as far as the standard load for age paradigm (NFHS III Report, 2007). The National Plan of Action on Nutrition aims to bring down the prevalence of existing under nutrition among children by half and lower birth weight to less than 10%. From many countries, India is one of them which has high prevalence of unnourished children. Despite of improvement in economy, the last decade does not progress with a good pace considering the advancement of nutritional status of children. Although, the prevalence underweight is of 42.5%, wasting is 19.8 % and stunting among under five is 48%.[1] Nutrition is an important determinant of good health, good wellbeing etc. Child malnutrition has an impact over cognitive function and contributes to poverty through affecting how an individual go through a productive life.[2] The child's nutritional status is directly related to maternal nutritional status. An undernourished pregnant woman may give birth to a stunted or unnourished child and the cycle continuous.

The lower income groups have the common problem of undernutrition and limited to smaller extent in the upper income group. Nutritional status plays a vital role in deciding the health status of children. To carry out the proper Implementation and planning of nutrition interventions the accurate evaluation of nutritional status is very important. The objective of the study was to study the factors which are associated with stunting, wasting and underweight among under-five children.

The SDGs adopted by the United nations which are also known as global goals aim at providing enough nutrition for all under SDG 2 which is Zero hunger. The goal is to achieve food security, end hunger and practice sustainable agriculture.

Following stated are the targets and goals with their respective indicators

1. To end hunger, particularly in poor and vulnerable, infants. To ensure safe and enough nutrition all year round by 2030.
 - Prevalence of undernutrition and severe to moderate food security.
2. To end all forms of malnutrition also achieve internationally agreed targets for stunting and wasting in children underage of 5 years
 - Prevalence of malnutrition.

There is increase in India's GDP by 50% since 1991, more than one third of the world's malnourished children live in India. Among these, half of the children under age 3 years are underweight and a third of wealthiest children are over-nutrient.[3] Major causes for malnutrition in India is the prevalence of economic inequality.

Malnutrition is one of the major health issues leading to high child mortality rates and causes more than 50% children deaths, reticular in low socioeconomic classes. Inadequate nutrition and infectious diseases are the major causes of lack of nutrition in children. These children are also less productive physically and mentally. Malnutrition has long lasting effects in children as it also affects them as adult by influencing adversely their logical development and working capacity. To identify the causes and indications it is important to establish a relation between various socio-economic factors and the healthcare indicators.

METHODOLOGY

Initially we searched PubMed and Google Scholar between 01/05/2020 and 28/05/2020. Key words which were used for the search are socioeconomic trends, nutritional trends, stunting, malnutrition, underweight, wasting socioeconomic variables etc. This review is organized to determine the significant association of the socio-economic variables with respect to the diseases such as underweight stunting and wasting. Initially the data was collected and sorted amongst the studies which was needed for the real purpose. The data was taken strictly on the basis that the data had further carried out with the chi-square test at the confidence interval of 95%. This was done to make the comparison much easier. After this the data was carefully observed and certain interpretations were made. The data of the 3 studies were compared step by step with respect to the socioeconomic variables and their association with the diseases such as underweight, stunting and wasting. For e.g. the p value for the socio-economic variable such as age was compared with the other two studies and certain interpretations were made.

The malnutrition diseases which are most prevalent in children less than 5 years of age are:

1. Stunting
Stunting is a type of malnutrition caused by insufficient nutrients leading to low height and stunting of growth.
2. Underweight
Caused by malnutrition it is a sign of deficiency and leading cause in child mortality.
3. Wasting – (SAM) & (MAM)
SAM- severe acute malnutrition
MAM- moderate acute malnutrition

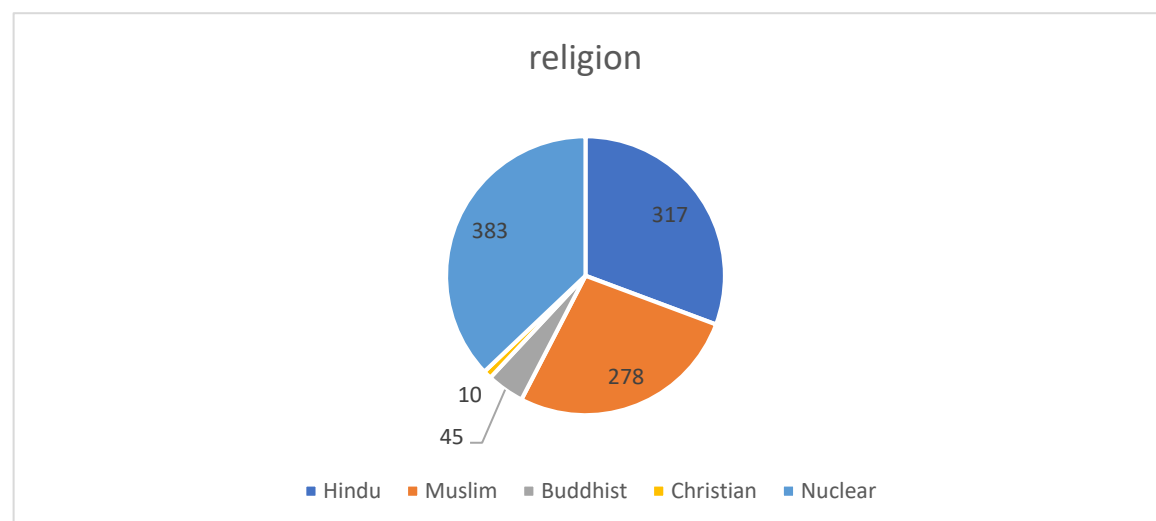
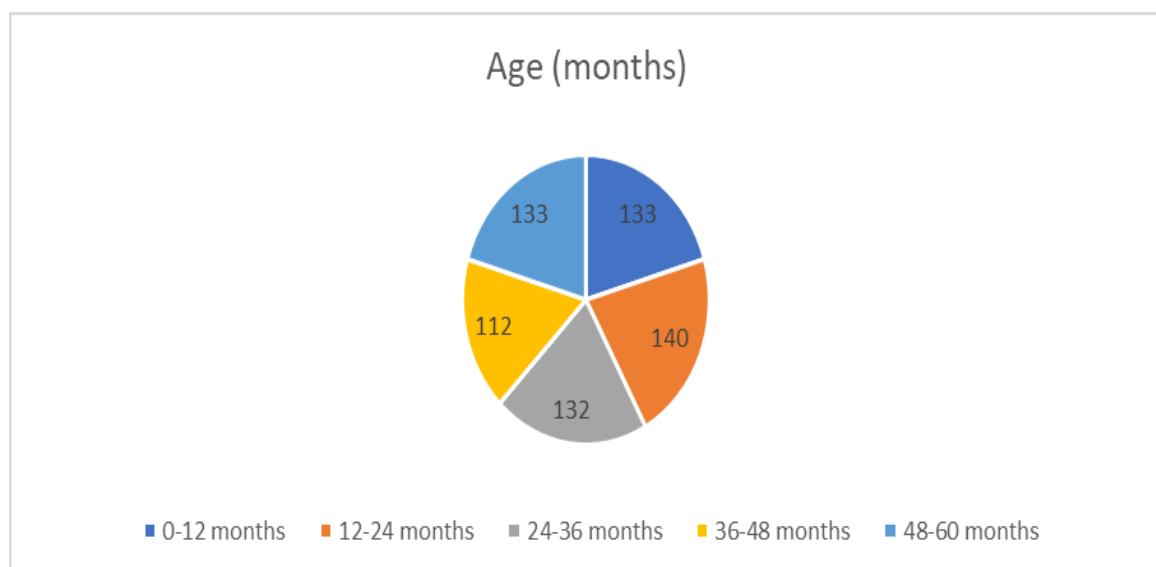
Various variables can be:

- Age
- Gender and religion
- Education and socio-economic status of parents
- Birth weight and birth order
- Maternal health; Etc.

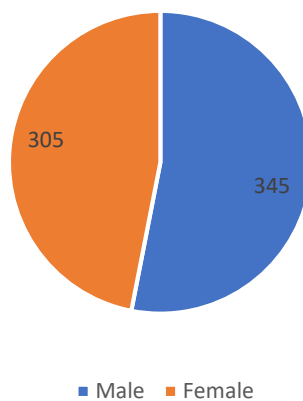
RESULTS AND OBSERVATIONS

Study 1

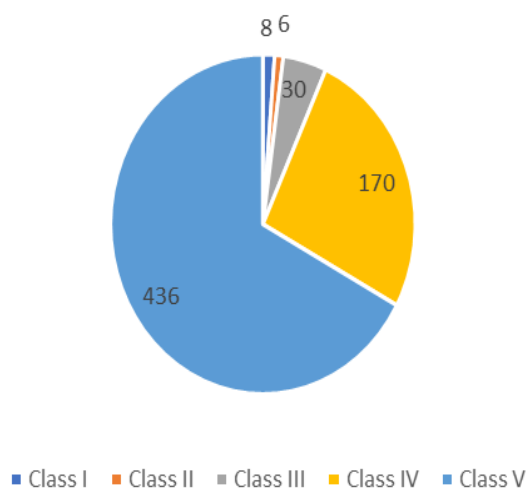
The sociodemographic profile of under 5 children are shown in the figures below



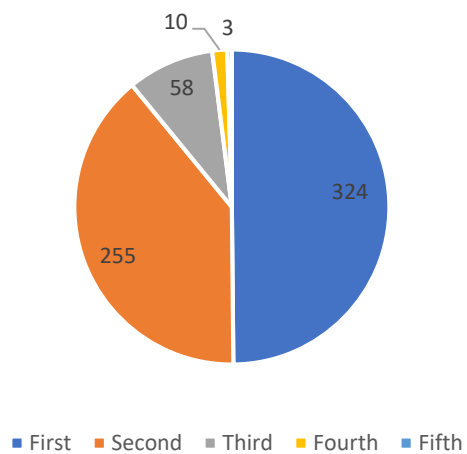
gender

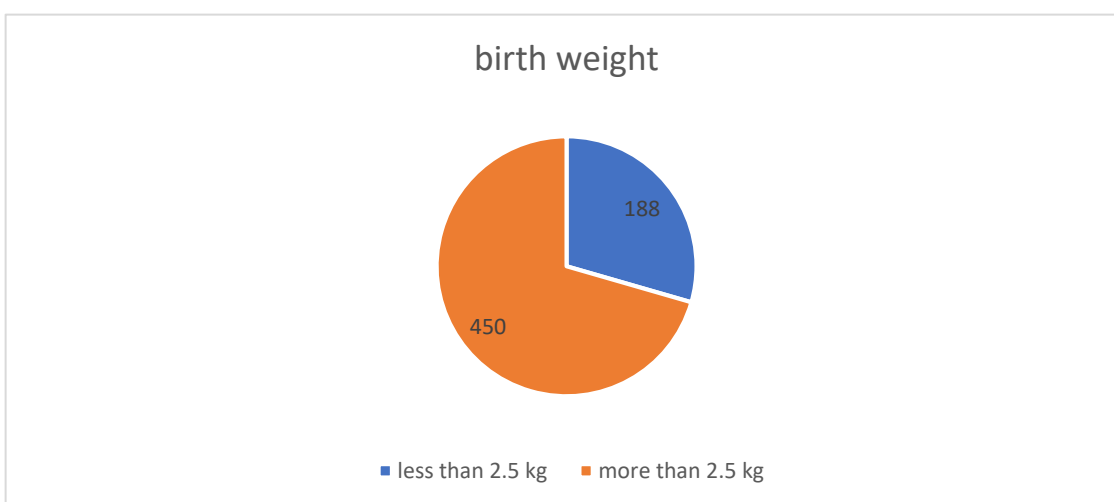
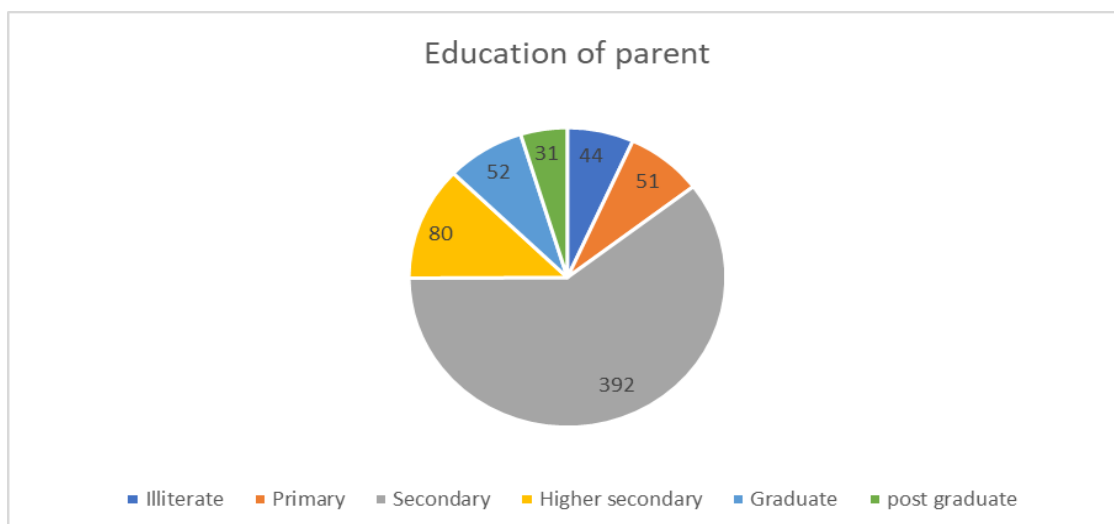


Socioeconomic status



Birth order





Factors which are associated with stunting among under five children

As shown in Table 1, a statistically significant difference can be observed between stunting and socioeconomical factors such as the education of interviewed parents, type of family, birth weight and birth order and cannot observe significant association between age, gender, religion and socioeconomic status.

Factors which associated with underweight among under five children

As shown in Table 2, a statistically significant association can be observed between the proportion of under five children with underweight with respect to their socioeconomic status, age, birth weight, education of interviewed parent and birth order and cannot observe significant association between Gender, religion and type of family.

Factors which are associated with SAM and MAM among under five children

As shown in Table 3, a statistically significant association can be observed between the proportion of under five children with SAM and MAM with respect to the education status of interviewed parents, birth weight and birth order and cannot observe significant association between age, gender, religion, socioeconomic status, and type of family.

Table-1

Factors which are associated with stunting among under five children

Variables		Nutritional status		Total	Chi square	p value
		Stunted	Normal			
Age (Months)	0-12	47(35.34)	86(64.66)	133(100)	2.38	> 0.05
	12-24	59(42.14)	81(57.86)	140(100)		
	24-36	57(43.18)	75(56.82)	132(100)		
	36-48	48(42.86)	64(57.14)	112(100)		
	48-60	52(39.10)	81(60.90)	133(100)		
Type of family	Nuclear	140(36.55)	243(63.45)	383(100)	6.32	< 0.05
	Joint	120(45.80)	142(54.20)	262(100)		
	Broken	3(60.00)	2(40.00)	5(100)		
Education of parents	Illiterate	25(56.82)	19(43.18)	44(100)	13.57	< 0.05
	Primary	28(54.90)	23(45.10)	51(100)		
	Secondary	155(39.54)	237(60.46)	392(100)		
	Higher sec.	28(35.00)	52(65.00)	80(100)		
	Graduate	19(36.54)	33(63.46)	52(100)		
Birth Weight	postgraduate	8(25.81)	23(74.19)	31(100)	4.04	<0.05
	<2.5 Kg	88(46.81)	100(53.19)	188(100)		
	≥2.5 Kg	172(38.22)	278(61.78)	450(100)		
Birth order	First	112(34.57)	212(65.43)	324(100)	20.19	<0.01
	Second	109(42.75)	146(57.25)	255(100)		
	Third	31(53.45)	27(46.55)	58(100)		
	Fourth	8(80.00)	2(20.00)	10(100)		
	Fifth	3(100.00)	0(00.00)	3(100)		

8) Purohit L et al. Int J Community Med Public Health. 2017 Apr;4(4):1171-1178

Table 2

Factors which associated with underweight among under five children

Variables		Nutritional status		Total	Chi square	p value
		Underweight	Normal			
Age (Months)	0-12	41(30.83)	92(69.17)	133(100)	14.1	< 0.01
	12-24	41(29.29)	99(70.71)	140(100)		
	24-36	54(40.91)	78(59.09)	132(100)		
	36-48	52(46.43)	60(53.57)	112(100)		
	48-60	60(45.11)	73(54.89)	133(100)		
Socioeconomic status	I	1(12.50)	7(87.50)	8(100)	15.54	<0.01
	II	1(16.67)	5(83.33)	6(100)		
	III	7(23.33)	23(76.67)	30(100)		
	IV	51(30.00)	119(70.00)	170(100)		
	V	188(43.12)	248(56.88)	436(100)		
Education of parent	Illiterate	23(52.27)	21(47.73)	44(100)	14.5	<0.05
	Primary	24(47.06)	27(52.94)	51(100)		
	Secondary	156(39.80)	236(60.20)	392(100)		
	Higher sec.	21(26.25)	59(73.75)	80(100)		
	Graduate	17(32.69)	35(67.31)	52(100)		
Birth weight	postgraduate	7(22.58)	24(77.42)	31(100)	9.33	< 0.01
	<2.5 Kg	89(47.34)	99(52.66)	188(100)		
	≥2.5 Kg	155(34.44)	295(65.56)	450(100)		
Birth order	First	101(31.17)	223(68.83)	324(100)	19.34	< 0.01
	Second	107(41.96)	148(58.04)	255(100)		
	Third	31(53.45)	27(46.55)	58(100)		
	Fourth	7(70.00)	3(30.00)	10(100)		
	Fifth	2(66.67)	1(33.33)	3(100)		

8) Purohit L et al. Int J Community Med Public Health. 2017 Apr;4(4):1171-11

Table-3

Factors which are associated with SAM and MAM among under five children

Variables		Nutritional status			Total	Chi square	p value
		SAM	MAM	Normal			
Age (months)	0-12	4(3.01)	11(8.27)	118(88.72)	133(100)	7.52	>0.05
	12-24	6(4.29)	12(8.57)	122(87.14)	140(100)		
	24-36	6(4.55)	15(11.36)	111(84.09)	132(100)		
	36-48	8(7.14)	14(12.50)	90(80.36)	112(100)		
	48-60	10(7.52)	18(13.53)	105(78.95)	133(100)		
Education of parents	Illiterate	5(11.36)	6(13.64)	33(75.00)	44(100)	19.15	<0.05
	Primary	5(9.80)	7(13.73)	39(76.47)	51(100)		
	Secondary	22(5.62)	48(12.24)	322(82.14)	392(100)		
	Higher sec.	2(2.50)	4(5.00)	74(92.50)	80(100)		
	Graduate	0(00.00)	3(5.77)	49(94.23)	52(100)		
	Postgraduate	0(00.00)	2(6.45)	29(93.55)	31(100)		
Birth weight	<2.5 Kg	15(7.98)	25(13.30)	148(78.72)	188(100)	6.14	<0.05
	≥2.5 Kg	19(4.22)	43(9.56)	388(86.22)	450(100)		
Birth order	First	11(3.40)	28(8.64)	285(87.96)	324(100)	18.5	<0.05
	Second	16(6.27)	32(12.55)	207(81.18)	255(100)		
	Third	4(6.90)	7(12.07)	47(81.03)	58(100)		
	Fourth	2(20.00)	2(20.00)	6(60.00)	10(100)		
	Fifth	1(33.33)	1(33.33)	1(33.34)	3(100)		

8) Purohit L et al. Int J Community Med Public Health. 2017 Apr;4(4):1171-1178

Study 2

Also, another study on the topic “Trends in Socioeconomic and Nutritional Status of Children Younger Than 6 Years in India” provides valuable information by showing significant association of the undernutrition in children and the socioeconomic trends. From another study, Table 4 provides information about the association of different categories of socioeconomic variables and the level of prevalence of undernutrition for the children which are younger than 6 years. From the above information it is observed that all the socioeconomic variables have an association with the children’s nutritional status. From the analysis shown it can be said that both boys and girls are equally affected but the girls position has a slight upper edge. The concentration of undernutrition and is negatively related with the age of the mother. There is almost no difference between rural and urban places. Also, the percentage of malnourished children radically decreases when the standard of living increases. From the same study we can observe that there is a positive and strong relationship of illiteracy of mother with undernutrition this is also relevant for father’s illiteracy, though its significance is less.

Table-4

Percentage Distribution of Malnourished (Weight for Age) Children Younger Than 6 Years in India by Socioeconomic Groups

variables	subcategory	N	malnourished	not malnourished	P Value
Gender	Boys	104626	50.3	49.7	166.51
	Girls	95741	47.4	52.6	
Type of residence	Rural	146818	50.6	49.4	658.9
	urban	53549	44.1	55.8	
Age of mother	15-24	71592	50.4	49.6	111.35
	25-34	107675	47.8	52.2	
	35+	21000	49.1	50.9	
Mother's education	Illiterate	101362	55.1	44.9	3543.21
	Literate	93005	41.8	58.2	
Father's education	Illiterate	57051	55.4	44.6	1350.51
	Literate	143316	46.3	53.7	
Religion and caste	ST (non-Cristian)	21656	54.8	45.2	1891.55
	Hindu (SC)	37051	52.9	47.1	
	Muslim	23.023	49.5	50.5	
	Hindu (others)	106147	47.9	52.1	
	others	8646	38.8	61.3	
	ST(Cristian)	3844	24.1	75.9	

[9] Trends in Socioeconomic and Nutritional Status of Children Younger Than 6 Years in India.

Asia-Pacific Journal of Public Health 23(3) 324 –340 © 2011.

Study 3

Also, another study on the topic “Socioeconomic Inequalities in Childhood Undernutrition in India: Analysing Trends between 1992 and 2005” shows the significant association of underweight and stunting with respect to the socioeconomic variables. From the table no 5 and 6 we can observe that there is an association with respect to the variables such as gender, household wealth, caste, maternity and the type of education. There is very low difference for the male and female gender when compared for the underweight as well as for the stunting for the children aged under 3. The underweight and stunting prevalence can be seen increased gradually when compared with the household-wealth which is subcategorized from richest quintile to the poorest quintile. The maternity education is

further sub categorized into no schooling, primary, secondary and above secondary. Also, the prevalence of underweight and stunting is decreasing gradually and positively in the no schooling to above secondary schooling order. Also, there is almost no difference between the type of residence whether it is urban, or rural but urban residence has an upper edge for the prevalence of stunting and underweight in children.

Table 5

The predicted probabilities which are taken at 95% confidence interval for the severely underweight and underweight for the categories of social determinants (N=78310).

Variable	subcategory	p value
Gender	male	0.34
	female	0.32
Household wealth	richest quintile	0.19
	second quintile	0.28
	third quintile	0.34
	fourth quintile	0.4
	poorest quintile	0.43
Caste	scheduled caste	0.39
	scheduled tribe	0.38
	no caste	0.37
	other caste	0.34
Maternity education	no schooling	0.36
	Primary	0.34
	Secondary	0.3
	>secondary	0.22
Type of residence	urban	0.34
	Rural	0.33

[10] Socioeconomic inequalities in childhood undernutrition in India.

Table 6

Predicted probabilities (95% confidence intervals) for stunted and severely stunted across categories of social determinants over the three survey years (N=69605).

Variable	subcategory	p value
Gender	male	0.42
	female	0.39
Household wealth	richest quintile	0.26
	second quintile	0.35
	third quintile	0.42
	fourth quintile	0.54
	poorest quintile	0.5
Caste	scheduled caste	0.46
	scheduled tribe	0.43
	no caste	0.43
	other caste	0.42
Maternity education	no schooling	0.43
	primary	0.42
	secondary	0.38
	>secondary	0.29
Type of residence	urban	0.42
	rural	0.4

[10] Socioeconomic Inequalities in Childhood Undernutrition in India.

DISCUSSION

From study 1 by observing the tables and figures it is noted that the study was done on the 650 under five children and those were characterized under various categories such as age, type of family, education of parents, socio economic status, religion, birth weight and birth order. The malnutrition diseases such as stunting, underweight and wasting were analysed significantly with respect to the categories mentioned earlier. The Chi square value were determined along with the p value. The p values of every variables were compared significantly and only those variables which showed significant values were said to be associated with that disease e.g., in table 1 only the variables which has p values < 0.05 among all the variables were selected and therefore showed the significant association with only those variables. Similarly, from the study 2 and 3 only the socioeconomic variables are taken which has the significant association with the diseases.

CONCLUSION AND RECOMMENDATIONS

By analysing the data and the results obtained from the study it is confirmed that there is an presence of socio-economic difference in undernutrition in India. It was also found that the type of family, parents' education, birth weight, birth order and household wealth has positively affected socio-economic inequality in and the cause of stunting and undernutrition in children. Also, only the education of parents, birth weight and birth order have a significant association of children below 5 years of age with wasting. Hence it can be concluded that nutritional status and socio-economic status negatively impacts the mental and physical growth of children.

It is important to implement some strategies which are required for bettering the nutritional status of children in India as the lesser levels of nutrition among children can cause serious consequences in their physical and mental growth. As there is disproportion in society there is burden on the poor for which policies should be implemented according to the states. Programmes should be more focused on nutrition of poor.

REFERENCES

- 1) Bhutia BT. Protein Energy Malnutrition in India: The Plight of Our Under Five Children. *J Family Med Prim Care*. 2014;3(1):63–7.
- 2) United Nations Children’s Fund, World Health Organization. Levels and trends in child malnutrition: UNICEF-WHO-The World Bank joint child malnutrition estimates. (UNICEF, New York; WHO, Geneva; The World Bank, Washington, DC; 2012). Available at: http://www.who.int/nutgrowth_db/cover.pdf. Assessed on 12 January 2017.
- 3) <https://equityhealth.biomedcentral.com/articles/10.1186/s12939-019-1093-0>
- 4) Training course on child growth assessment: WHO child growth standards, A-introduction:8. Available at http://whqlibdoc.who.int/publications/2008/9789241595070_A_eng.pdf. Assessed on 12 January 2017.
- 5) WHO Child Growth Standards Length/height-for-age, weight-for-age, weight-for-length, weight-forheight and body mass index-for-age Methods and development. Available from http://www.who.int/childgrowth/publications/technical_report_pub/en/index.html Assessed on 22 January 2017.
- 6) WHO child growth standards and the identification of severe acute malnutrition in infants and children. A Joint Statement by the World Health Organization and the United Nations Children’s Fund: 2. Available at: URL: http://www.unicef.org/nutrition/files/stmtchild_growth_sam_final.pdf. Assessed on 12 January 2017.
- 7) Taking action nutrition for survival, growth and development: Available at http://www.who.int/pmnch/topics/child/acf_whitepaper.pdf. Assessed on 2 January 2009.
- 8) Purohit L et al. *Int J Community Med Public Health*. 2017 Apr;4(4):1171-1178
- 9) Trends in Socioeconomic and Nutritional Status of Children Younger Than 6 Years in India. Susmita Bharati, MSc, PhD, Manoranjan Pal, MSc, PhD, Suman Chakrabarty, MSc, PhD, and Premananda Bharati, MSc, PhD. *Asia-Pacific Journal of Public Health* 23(3) 324 –340 © 2011 APJPH Reprints and permission: <http://www.sagepub.com/journalsPermissions.nav> DOI: 10.1177/1010539511403455 <http://aph.sagepub.com>
- 10) Socioeconomic Inequalities in Childhood Undernutrition in India: Analyzing Trends between 1992 and 2005. Malavika A. Subramanyam, Ichiro Kawachi, Lisa F. Berkman, S. V. Subramanian. doi:10.1371/journal.pone.0011392.t00

PART 2
Report on Online Course

Online Course



DoaneX: HCA-603x

Healthcare Organization and Delivery Models

Course Description

This course helps in examining how the healthcare delivery systems and the disruptive innovation are the important topics in healthcare. Leaders can understand the poor outcomes and their need of change by understanding organizations and current delivery systems. The cost-effective and efficient systems in all parts of the world allows to learn how to implement the ideas into the next advancement in the healthcare delivery. This course helps to analyse U.S. and other global healthcare systems. This course also helps to understand the effects various healthcare systems on their health outcomes.

Objective of the course

This course is part of the DoaneX Healthcare Administration MicroMasters program. This course is structured into modules, sections, and units. Each module contains a combination of video content and the material that will be needed need to learn the included topics. It also includes links to additional sources of information which helps digging even deeper into these topics.

Key Learnings

Introduction

Healthcare delivery reform and disruptive innovation are key aspects to leading in a healthcare environment. Regardless of the country or region, leaders within healthcare need to have a broad understanding of a variety of healthcare delivery systems that exist across the globe. Exposing the different types of healthcare delivery systems at the global level allows for a healthcare leader to incorporate new innovations into current healthcare delivery models.

Healthcare in US

The United States Department of Health and Human Services is the principal federal agency that provides governance over the healthcare services in the United States. The organizations that organize under the US Department of Health and Human Services are:

1. The research programs are organized for the prevention, health and safety by Center for Disease Control.
2. Health and biomedical research responsibilities are taken under by the National Institute of Health.
3. The healthcare access for people that are non-insured, medically vulnerable or underinsured are improved by the health resources and services administration
4. The research on health information technology, outcomes, practices, effectiveness and clinical guidelines are conducted by the agency for healthcare research and quality

The United States healthcare system is complex and expensive. Americans spend on average \$9892 per capita. With a total population of 321.19 million people, the United States healthcare system has opportunities for reform. In 2010, the government passed the Affordable Care Act which act as a bridge for healthcare between the individuals, employers and government. This plan allowed all the Americans to access to quality and affordable healthcare. While the ACA has faced challenges in recent years, most consumers of healthcare and healthcare leaders recognize that there is an opportunity for innovation, refinement and changes to the current policy. Medicare provides health services to adults of the age of 65 years old and some individuals with documented disabilities.

Healthcare in Switzerland

In Switzerland, mandatory Medical Health Insurance System is provided to the citizens. In Switzerland, residents must purchase health insurance within three months of arrival. The healthcare in Switzerland is decentralized and therefore health care system mainly exists at the state level. Subsidizing institutions and health services are controlled by public health ministry. Pharmaceutical, medical devices, homecare services, some preventive measures and the cost of selected vaccination and general practitioners are all covered by health insurance hospital services. Some preventive services and maternity care are fully covered

under health insurance. Also, the copayments and deductibles are not applicable for people under 25 of age. Just like the United States healthcare services, Switzerland also carries out methods such as Outpatient specialist care, after hours and primary Care. Switzerland also has healthcare innovations such as national strategy for the prevention of non-communicable diseases.

Healthcare in Norway

The responsibility for providing healthcare to the people is taken by the Norwegian government irrespective of their of age, gender, income race, or area of residency. The minister of health guides the ministry for health and care services. The Norwegian Institute for public health and National Board for Health Supervision audits the healthcare system. In Norway the healthcare system is delivered within the municipalities in accordance with government agencies. In Norway, individuals generally associate with one primary general practitioner. The general practitioners serve at the gatekeeper and provide referrals to specialists as needed. The states contract with individual practitioners who receive compensation from the states, fee for service, and from out of pocket payments. Specialists in private practice are contracted and are paid generally as a lump sum annually based on the type of specialist care they provide. In most cases patients can select a specialist but this can vary based on the location. There is no dedicated after-hours medical advice line but there is an urgent ambulance services available. Acute care hospital care is the responsibility of the regional health authorities and requires an acute care referral by a primary care provider unless there is an accident, heart attack or stroke where the individual is transported via an ambulance. Public hospitals are state owned and are governed by an executive board. The Norwegian parliament determines the types of services that will be delivered to the people. The government covers ambulatory care, hospital stays, acute primary health services, outpatient prescription medications and rehabilitation and dental care for the people till 18 years of age.

Healthcare in China

The Chinese government are responsible for the national health administration and policy. The oversight and executive delivery of healthcare services to the people is provided by National Health and Family Planning Commission. In addition to this entity, China also has The Ministry of Finance that provides funding for government health subsidies. The

primary care services are provided mainly through village doctors and health care workers in the rural areas and by general practitioners in urban communities. In 2014, there were nearly 1.06 million village doctors providing care in rural areas. Residents of the rural town can seek the services of general practitioners in larger cities if they choose. Outpatient specialists are generally employed within hospital settings. Specialists receive a base salary in addition to activity-based services that are provided. Patients can see a specialist without a referral from a general practitioner and can choose the specialist through the hospital. Hospitals in China can be public or private, nonprofit or for profit. Hospitals are paid through government subsidies and health insurance compensation. Many individuals are treated in the community or at home and the most severe patients are admitted for care. kidney disease and cardiovascular related events. This insurance provides supplemental insurance to support public financed insurance. This type of insurance would be available to most residents in 2016.

Leaders role in innovation

A leader must be a creative thinker and planner to make new innovations and increase the values of the organization. A leader must look after the goals, action and tactics which are dependent on the internal and external environment and maintaining the sense of consistency toward the vision and values of the organization. One of the important roles of the leader is to be a strategic thinker to maintain the smooth workflow amid the chaos of the organizational life. A strategic thinker and planner look at the present situations which are progressed according to the mission of the organization as well as take it forward with the same or greater efficiency in the future aspects according to the vision of the organization.

Middle managers role in healthcare management

There is lot of difference between the roles of middle managers healthcare innovation and the middle managers in the other industries as the middle managers in healthcare organizations as they must play management roles along with the clinical authority. To improve the implementation efficacy in healthcare organizations it is very important to understand the role of middle managers in innovation implementation. The future research in the health services research may fill the current gap by investigating middle managers' role in healthcare innovation implementation.

High performing healthcare system designing for patients with complex needs.

Ten recommendations for policymakers

- 1) High priority to make care co-ordination.
- 2) Identify patients in greatest need of proactive, co-ordinated care.
- 3) Learn from experience and scale up successful projects.
- 4) Train more general primary care physicians and geriatricians.
- 5) Facilitate communication between providers- for example through clinical record integration.
- 6) Engage patients in decisions about their care.
- 7) Engage clinicians in change and train and support clinical leaders.
- 8) Provide better support for care givers.
- 9) Redesign funding mechanisms to meet patients' needs.
- 10) Integrate health and social services, and physical and mental health care.