



## CHILD HEALTH CARE – A CASE STUDY IN VISAKHAPATNAM DISTRICT OF ANDHRA PRADESH

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### **Abstract**

Many things we need can wait. The child cannot. Now is the time his bones are being formed, his blood is being made, his mind is being developed. To him we cannot say tomorrow, his name is today

### **Gabriela Mistral**

Children are future society of the world and it is necessary to give importance to their health. Care should be taken to the mother and child health, and the children up to the age of five years in which most of the children prone to many diseases like diarrhea, cholera, typhoid, jaundice, pneumonia, chicken pox, measles etc. The children are prone to these diseases due to malnutrition and lack of proper immunization. This is basically lack of awareness among the illiterate, ignorance of the village population and few people not taking seriously. Preschool children below five years are vulnerable group of the population and their nutritional status is considered to be a sensitive indicator of health and nutrition. Each year, millions of women, newborns and children die from preventable causes. While the interventions that could save their lives are widely known, they are often not available to those most in need. Government of India proclaimed a National Policy on Children in August 1974 declaring children as, "supremely important asset". The policy provided the required framework for assigning priority to different needs of the child. The programme of the Integrated Child Development Services (ICDS) was launched in 1975 seeking to provide an integrated package of services in a convergent manner for the holistic development of the child. "Understanding how diseases spread and how to reduce the risks of fresh infection are essential if children are to be cared for safely and healthily. Knowledge of preventive measures and childhood immunization schedule is also important in order to save children from diseases. Data obtained from RCH-2 was used for the study purpose. The data was filtered and analyzed. The statistical Package of Social Science (SPSS) tool was used for analysis of data. The total women of 731 in the age group of 15-44 and the children in the age group of 0-6 years were 242 in the study area of the district. Immunization of the children is a very important component of the Universal Immunization Programme (UIP) started by the Government of India in 1985-86. To understand the coverage of immunization, data of all those children who were twelve months and above and born since 1<sup>st</sup> January 1999 to the time of survey were collected. As recommended by World Health Organization (WHO) breast feeding should be initiated immediately after birth and should be continued exclusively up to four months. The WHO also suggests that the yellowish milk, known as colostrum's, should be given to the baby because it provides protection against certain infections. Children age 6-24 months is most vulnerable to anemia and it can result in impaired cognitive performance, behavioral and motor development, co-

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ordination, language development and scholastic achievement, besides increasing morbidity from infectious diseases. Anemia among pregnant women results in increased risk of premature delivery and low birth weight. The Antenatal check-ups are necessary during the pregnancy of a woman. The mother and children's health of the district will be vital and valuable source of information for making further improvements in child health policies and programmes. Government, Health organization, NGO's and anganwadi workers should create more awareness and treatment practices on childhood diseases among pregnant women, mothers and children to reduce the mortality rate in the district.

**Key Words:** Child health, Immunization, Anemia, disease, Knowledge, nutritional, awareness, antenatal

### **Introduction:**

Many things we need can wait. The child cannot. Now is the time his bones are being formed, his blood is being made, his mind is being developed. To him we cannot say tomorrow, his name is today.

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Children are future society of the world and it is necessary to give importance to their health. Care should be taken to the mother and child health, and the children up to the age of five years in which most of the children prone to many diseases like diarrhea, cholera, typhoid, jaundice, pneumonia, chicken pox, measles etc. The children are prone to these diseases due to malnutrition and lack of proper immunization. This is basically lack of awareness among the illiterate, ignorance of the village population and few people not taking seriously.

In addition to the nutritious diet immunization is also very much important to save the children. The problem is not only in Visakhapatnam or in India. It is in the entire world. There are so many reasons and causes for which we need a solution to save the children. In the interest of the children the governments, non-governmental organizations, public organizations, policy makers and mainly social workers efforts are put together to find a solution for the problem. The intervention of social work such as creating awareness in all levels of community about nutrition, how does it works effectively in children health, disadvantage of poor nutrition and health problems, importance of immunization and how the diseases affect the children health if not administered in time.

There are so many children population prone to various diseases has to be identified and immediate action should be initiated through social intervention certainly would save the life of children. Timely immunization would save disability, morbidity and mortality of the children. It is necessary to create awareness of the importance of breast milk among the rural and urban population in order to minimize the health problems among children's and immunizes the children against various health problems. The change in culture in urban areas reduces the feeding activity rather rural mother population.

Preschool children below five years are vulnerable group of the population and their nutritional status is considered to be a sensitive indicator of health and nutrition.

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Prevalence of underweight among children is determined by anthropometric measurements and clinical assessment and deficiency signs which need to be addressed. Feeding needs to be introduced and the infant is most vulnerable to infection. Most of the infants are born with low birth weight in rural areas compared to urban child population. In general the major nutritional deficiency sign encountered among preschool children are those of protein energy malnutrition and vitamin A deficiency.

Each year, millions of women, newborns and children die from preventable causes. While the interventions that could save their lives are widely known, they are often not available to those most in need. The statistics worldwide shows that each year

- More than 60 million women deliver at home without skilled care.
- About 530,000 women die from pregnancy related complications with some 68,000 of those deaths resulting from unsafe abortion.
- About 4 million babies die within the first month of life (the newborn period), and more than 3 million die as still births.
- Over 10 million children under the age of five die.
- Moreover, nearly all (99 percent) maternal, newborn, and child death occur in low and middle income countries.

Data on children's health and its influences are needed to maximize the health of children and the health of the adults they will become. India is the home to the largest child population in the world. "The development of children is the first priority on the country's development agenda, not because they are the most vulnerable, but because they are our supreme assets and also the future human resources of the country". In these words, our Tenth Five Year Plan (2002-07) underlines the fact that the future of India lies in the future of Indian children – across income groups, geographical locations, gender and communities.

As per 2001 census, India has around 157.86 million children, constituting 15.42% of India's population, who are below the age of 6 years. Of these 157.86 million children, 75.95 million children are girls and remaining 81.91 million children are boys. The sex ratio among children (0-6 years) as per Census 2001 is 927 i.e. 927 females per 1000 males. A significant proportion of these children live in economic and social environment which impedes the child's physical and mental development. These conditions include poverty, poor environmental sanitation, disease, infection, inadequate access to primary health care, inappropriate child caring and feeding practices etc. Government of India proclaimed a National Policy on Children in August 1974 declaring children as, "supremely important asset". The policy provided the required framework for assigning priority to different needs of the child. The programme of the Integrated Child Development Services (ICDS) was launched in 1975 seeking to provide an integrated package of services in a convergent manner for the holistic development of the child.

### **Review of Literature:**

Social work is a social science involving the application of social theory and research methods to study and improve the lives of people, groups, and societies. It is of various services designed to aid the poor and aged and to increase the health and welfare of the children. It incorporates and uses other social sciences as a means to improve the human condition and positively change society's response to chronic problems. Social work is a

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profession committed to the pursuit of social justice, to the enhancement of the quality of life, and to the development of the full potential of each individual, group and community in the society. It seeks to simultaneously address and resolve social issues at every level of society and economic status, but especially among the poor and sick. Social workers are concerned with social problems, their causes, their solutions and their human impacts. They work with individuals, families, groups, organizations and communities.

Social Work and Social Intervention: Primary concern of social work profession being people in their life situations where they have to constantly strike a delicate balance between compulsions of their social environment on one hand and their capacity to cope with on the other. Social work principles, skills, techniques and values for helping individuals, groups, or communities to enhance or restore their capacity for psychosocial functioning and to create societal conditions favorable to their goals. Social work intervention is often discharged through use of a single method or a combination of methods as found necessary. Six widely recognized methods of social work profession are

- Social case work is aimed at helping individual on a one to one basis
- Group Work is a process of social work in which the qualified worker helps individuals in a group.
- Community Organization is the process of stimulating and assisting the local community to identify, evaluate, plan and co-ordinate its efforts to meet its own “felt” and “unfelt” needs and develop cooperative and collaborative spirit in working together.
- Social work Administration involves directing the overall programme of a social service agency. Its functions include setting agency and programme objectives, analyzing social conditions in the community and making decisions.
- Social Action is concerned with changing the social environment to meet the recognized needs of the individuals of disadvantaged groups by application of tactics involving conflict, confrontation and negotiations.
- Social Work Research may be defined as systematic investigation intended to add to available knowledge in a form that communicable and verifiable.

"Social Work in Child Health Care" is an attempt to provide all basic information on child health care to make health worker an expert. In this endeavor, the book makes interesting discussion on role of childcare worker, health care professionals and parents; tests, screening, caring of ill child, factors affecting child health and chronic illness; preventive measures and immunization and mental health. The book is of paramount importance to students, teachers, health workers and general readers." "Understanding how diseases are spread and how to reduce the risks of fresh infection are essential if children are to be cared for safely and healthily. Knowledge of preventive measures and childhood immunization schedule is also important in order to save children from diseases.

To investigate the treatment for malnutrition and immunization Social work research addresses psychosocial problems, preventive interventions, treatment of acute and chronic conditions, and community, organizational, policy and administrative issues. Covering the lifespan, social work research may address clinical, services and policy

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issues. It benefits consumers, practitioners, policy-makers, educators, and the general public by: Examining prevention and intervention strategies for health and mental health, child welfare, ageing, substance abuse, community development, managed care, housing, economic self-sufficiency, family well-being, etc.; Studying the strengths, needs, and inter-relationships of individuals, families, groups, neighborhoods, and social institutions and providing evidence for improved service delivery and public policies.

Levels of Intervention: There are three levels of intervention. Primary prevention, crisis intervention and secondary intervention

Primary Prevention: this involves anticipating and forestalling the eruption of conflict, in an individual, family or community especially that which could result in some sort of setback or violence.

Crisis Intervention: This may involve rescuing the victim or removing the perpetrator of abuse and further help restore some measure of equilibrium immediately after a crisis, providing relief from conflict on temporary basis, or using a crisis for long term ends.

Secondary Intervention: This may be short term or long term intervention. It involves superficial monitoring of a situation to contain recurrence of violence or destruction and any further deteriorating trends. It may include affecting fundamental changes in individuals or whole families, their personality, behavior, patterns of interaction or environmental and social circumstances.

**Statement of the Problem:** Period of the human life span between infancy and adolescence, extending from ages 1-2 to 12-13. There are many childhood diseases and disorders can be prevented if care is taken in time. Any illness, impairment and abnormal condition affect primarily infants and children. The problem need to be identified and addressed properly through social work intervention to save the child population from diseases caused by lack of nutrition and immunization. Mainly in rural areas poor hygienic condition and lack of awareness shows more childhood diseases. Poverty is the main factor in urban slums and in rural areas. The poor socio-economic background in these areas would prevent the children and their mothers for taking proper treatment for the diseases. These result in impairment among the children and more number of deaths among children and mothers. There are number of infectious diseases, illness that strikes primarily during childhood. These include familiar contagious diseases such as chicken pox, Measles, Mumps and German measles (Rubella) these diseases impart long term immunity which is why they are infrequent among adult who have often had them as children. Infectious diseases remain a leading cause of infant and child mortality in developing countries and also in the study area. This circumstance stems from poor nutrition, insufficient hygiene, insanitary water supplies, sparse immunization programme and shortage of medical facilities. The child is living through active and critical phases of development, the approach to the diagnosis and treatment of children's and emotion disturbances is necessarily different from that employed with adults.

Immunization is a way of protecting child against serious disease. Once children have been immunized their bodies can fight those diseases if they come into contact with them. If a child is not immunized they will be at risk from catching the disease and will rely on the other people immunizing their children to avoid become infected. There will

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always be some children who are left unprotected, Because a) they cannot be immunized for medical reasons, b) they cannot get to the vaccine services, c) they are too young to be immunized and d) for a few, the vaccine doesn't work. If more people choose not to immunize their children, then the number of children at risk of catching a disease will increase and outbreaks of the disease will occur. The only time to stop immunizing children is when a disease has been eradicated worldwide. There is a recommended schedule for childhood immunizations. It gives children the best chance of developing immunity against these diseases in a safe and effective way and minimizes their risk of catching the diseases. The objectives of the study is:

1. To examine the breast feeding and Immunization.
2. To study nutrition status and Anemia.
3. To assess utilization of maternal and health care services

**Method & Tool:** Visakhapatnam district is one of the 23 districts in Andhra Pradesh. The total land area of the district is 111,611 Square kilometers. As per the 2001 census, the total population of the district is 37.90 lakhs and constitutes about 5% of the population of the state. Data collected from RCH-2 was used for the study purpose. The data was filtered and analyzed. The statistical Package of Social Science (SPSS) tool was used for analysis of data. This chapter deals with methodological procedures adopted in this study. The prime objective of the study is to analyze and understand the child health care of the children in the age group of zero to six years of the married women and husband associated with the utilization of reproductive and Child Health (RCH) services in various socio-economic and demographic settings. The data used for the purpose of the study, which is collected from the District Level Household Survey of RCH 2002 of Visakhapatnam district. The survey was carried out in 974 households comprising 584 households from rural areas and 390 from urban areas. The total population covered in the survey was 4309 with a sex ratio of 100 males per 100 females. In the 974 households surveyed, there were a total of 894 eligible women (usual residents or visitor, currently married women in the age group of 15-44 years) of whom 731 women were interviewed, while only 459 husbands could be interviewed.

The data was filtered and analyzed. The statistical SPSS tool was used for data and chi-square analysis. Mainly the percentage of each and every case was taken for analysis and got the results by using cross tabulation method. The independent and dependent variables have been cross tabulated and the percentage was arrived and entered. The significance was mentioned in the tables. This chapter explained the statistical methods used for the selection of samples for the study. Further, the respondents classified as Low, Medium and High standard living. The total women of 731 and the children in the age group of 0-6 years were 242 in the study area of the district. The respondent's response rate in the study area may vary according to the different category of health services.

**Immunization of the children:** Immunization of the children is a very important component of the Universal Immunization Programme (UIP) started by the Government of India in 1985-86. To understand the coverage of immunization, data of all those

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children who were twelve months and above and born since 1<sup>st</sup> January 1999 to the time of survey were collected. Immediately after birth, the baby is given one drop of oral polio – Zero drops. Out of 198 children, around 62.6 percent had received POLIO-zero. This proportion was quite higher in the urban areas (97.5 percent) compared to rural areas (41.9 percent). 32.9 percent children belong to SC/ST and 80.5 percent children from other caste had reported received one drop of oral polio drop. Less than 50.0 percent of the children do not have health facility in their village and 41.1 percent had reported that they have health facility in their village. BCG vaccination had reported 77.8 percent out of which rural and urban children had received 65.4 and 97.7 percent respectively. According to caste SC/ST children had received 46.3 percent and in other caste 97.1 percent children had received BCG vaccination. 79.4 percent had reported that there was no health facility in their village.

Children receives all the three doses of DPT injection shows 65.5 percent and one and two doses shows 75.9 and 74.0 percent respectively. In all the doses urban and other caste children had received this vaccination. More than half of the children do not have the health facility in their village. 23.0 percent of the children were reported that they were not administered DPT injection, out of which rural and SC/ST population were high. It was observed from the table that polio doses were slightly higher among the children when compare to DPT injection. More than half of the children among SC/ST and rural areas avail all the two doses except among SC/ST who had reported 40.7 percent against three doses of Polio vaccination. 15.8 percent were reported that they were not administered Polio vaccination. This shows the lack of awareness in the rural women and the lack of health facility available. Measles vaccination is found to be low among the rural, SC/ST, non-literate and low standard of living women.

Measles is one of the important vaccinations for children. According to the district 62.2 percent of children had received Measles vaccination, out of which rural and urban children had received 47.9 and 85.0 percent respectively. Other caste children had received this vaccination shows 80.5 percent which is high when compared to SC/ST children with 32.8 percent. More than half of the children do not have the facility in their village. 48.6 percent children have reported of full vaccination. Urban and other caste children had received full vaccination. Comparatively rural and SC/ST children percentage was found to be low. 13.4 percent children received no vaccination at all. 31.7 percent SC/ST children had reported that they have received no vaccination at all.

Regarding Hepatitis B, only 28.7 children had received and about 55.4 percent from urban had received this vaccination and 37.1 percent from other caste respondents in the district. It seems that the awareness of Hepatitis B among the parents was very less when compare to other vaccinations. To reduce the night blindness children are supposed to get Vitamin A supplement. The percentage of children who did not get any dose of Vitamin A supplement decreased with increase in residence and caste status levels of education. But the availability of health facility in the villages did not make much difference in the proportion of children who did not get any dose of Vitamin A supplement. 52.7 percent



children received no Vitamin A supplement out of which rural and SC/ST caste children in the table shows 63.0 and 66.4 percent respectively.

Children receives iron folic acid tablets/Liquid show 7.9 percent out of which urban residence and other caste children in the district indicates 18.3 and 10.3 respectively which was high when compare to rural and SC/ST children. According to the residence characteristics, among 198 children rural has 122 and urban has 76 respondents respectively. Relating to caste 75 from SC/ST and 121 from other caste reported on vaccination. The proportion of fully immunized children increased with increase in the residence and caste status. Immunization awareness was considerably good in the district among the other caste, education background and medium and high standard of living population. Awareness among the rural population was found to be less.

Social organizations including Non-Governmental Organizations (NGO's) needs to be involved to create awareness of immunization and consequences affecting the children lives in their later stage through stage play, songs and other means to reach the rural areas and also people living in the tribal areas of the district. The sole dependence on and demand for public health services was responsible for relatively better coverage of immunization in tribal areas compared to rural areas where the private sector plays a major role. The vaccination services for children need to be examined and improved. Children age 12-23 months and 24-35 months who received specific vaccinations according to residence in Visakhapatnam district. 81.0 percent in the age group of 12-23 months and 75.8 percent 24-35 children received BCG. Out of which urban children percentage who received BCG vaccination was high when compare to rural children in the same age group. 80.4 percent of the children in the age group of 12-23 months received at least one DPT injection and 74.3 percent of children in the age group of 24-35 months had received at least one DPT injection in the district. At least one DPT dose for both the age group children response rates was high among urban children than rural children in the district. Three doses of DPT found to be slightly lower than other two doses of DPT injection among the rural and urban children in the age groups of 12-23 and 24-35 months. Children who do not get DPT injection had found to be high in the rural than urban children in both the age groups.

Polio with single and two doses among 12-23 months age group had shown 81.2 percent and the same doses among 24-35 months age group found to be 81.1 and 78.5 percent respectively. Complete doses of polio percentage among the children in the district were slightly lower as 67.5 percent for 12-23 months of age and 73.1 percent in the age group of 24-35 months. The urban percentage of both the ages of the children found to be high when compared to rural children. Regarding measles vaccination 64.5 percent children in the age group of 12-23 months had received vaccination and 68.6 percent children in the age group of 24-35 months had reported that they have received measles vaccination. In this type of vaccination, it was observed that in both the age group the children percentage among urban children were high when compared to rural children.

Only 49.6 percent of the children in the age group of 12-23 months and 53.2 percent of the children in the age group 24-35 months received full vaccination in the district. Full

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vaccination percentage is more in urban children in both the age groups when compare to rural percentage of children. A comparison of the administration of different vaccines in both the age groups reveals that the proportion of the children who received the three doses of DPT, Polio and Measles vaccines is higher by 3.0 to 5.6 percentage points in the older age group of 24-35 months compared to their counterparts in the younger age group of 12-23 months, while the proportion of the children receiving BCG is higher by 5.2 percentage points in the younger age group than those in the older age group.

Polio 0 vaccinations in the table show 12-23 months with 64.1 percent and 24-35 months age group with the total percentage of 61.0. The urban children had received Polio 0 vaccination in the urban areas in the above age group shows 96.4 and 92.3 percent respectively. This percentage is higher when compared to rural children with 42.6 and 44.0 percent respectively. When compare to Polio BCG percentage among both the age groups is better in the rural children as 70.8 and 64.0 and high in the urban groups. Full Polio doses percentages found to be good both in urban and in rural of both the age groups. This shows that the women are aware of the polio doses. Rural women are appreciable in taking care of the children against polio. The children without vaccination percentage show 12.9 and 10.9 in the age groups of 12-23 months and 24-35 months respectively. The percentage in the rural children is high when compare to urban children of the group mentioned above.

In total number of children 70 children were in the age group of 12-23 months, 83 children were in the age group of 24-35 months. Rural children response in the age group of 12-23 months shown 42 and 24-35 months age group was 54. The same age groups in the urban area had shown 28 and 29 respectively.

**Breast feeding and Weaning Practices:** As recommended by World Health Organization (WHO) breast feeding should be initiated immediately after birth and should be continued exclusively up to four months. The WHO also suggests that the yellowish milk, known as colostrum's, should be given to the baby because it provides protection against certain infections. Afterwards, it has to be supplemented with other semisolid and solid foods. Exclusive breastfeeding minimizes exposure to waterborne and food borne pathogens and reduces the risk of infants being fed nutritionally-inferior foods.

Exclusive breastfeeding is defined as no other food or drink, not even water, except breast milk, but allows the infant to receive drops and syrups (vitamins, minerals and medicines). A recent WHO expert group reviewed the evidence for the optimal duration of exclusive breastfeeding and concluded that infants should be exclusively breastfed for six months. Evidence includes a trial by Kramer et.al which demonstrated protection against gastrointestinal tract infection in infants when exclusive breastfeeding to six months was promoted, and studies which suggest that infants who continue to be breastfed for six months do not show growth deficits.

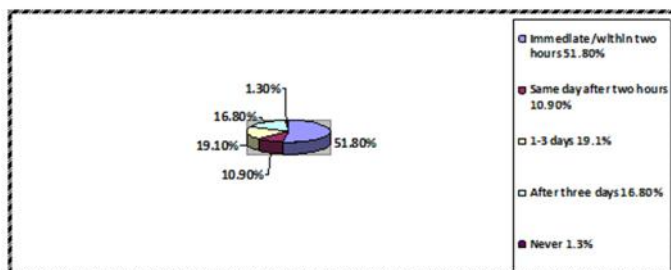


Breastfed children typically grow more quickly than non-breastfed children in the first 2-3 months of life, and less rapidly from 3-12 months. There are unlikely to be adverse consequences associated with this slower growth, which has been attributed to the ability of breastfed infants to self-regulate their milk intake according to their needs. Not breastfeeding is unlikely to lead to a growth advantage where there is a high risk of diarrheal morbidity in non-breastfed children. Breastfeeding may also be cardio-protective and protective against obesity.

Fatty acids in breast milk assist in infant brain and visual development and breastfeeding is thought to enhance cognitive outcome in children. A meta-analysis of 20 observational studies found that breastfed infants scored three higher points higher for cognitive development compared to formula-led infants. The effect was first seen at six months and persisted until 15 years of age, but there may be problems with confounding factors.

The prevalence of exclusive breastfeeding is difficult to determine. Measures often look at current status rather than status since birth and include all children 0-4 months, which overestimates the prevalence. Exclusive breastfeeding for six months is rare; WHO estimates that 35% of infants aged 0-4 months are exclusively breastfed

**Figure 1** Breast Feeding DLHS- RCH 2002



**Nutritional status and anemia:** In the second round of District Level Health Survey (DLHS) Reproductive Child Health (RCH) information on weight of children under six years of age, and prevalence of iron deficiency anemia among children under six years (0-71 months), adolescent girls 10-19 years and pregnant women age 15-44 is collected. To facilitate assessment of prevalence of malnutrition among children, the weight of children under six years was measured using Uni-Scale and hemoglobin levels of children, adolescent girls and pregnant women were measured from the blood samples collected using the test-kit. The superstitious belief of people toward giving blood sample and non-availability particularly, of children and adolescent girls at the time of survey have affected the response rate used in the estimation of hemoglobin levels. According to the Hemoglobin response rate among the children were 46.5 percent pregnant women response rate shows as high as 80.8 percent Adolescent women response rate shows 29.8 percent. This shows that children response rate is good, because the number of children were high in the district

Children under six years of age classified by weight-for-age index according to selected background characteristics depicted in the above table. About 46.3 percent of the

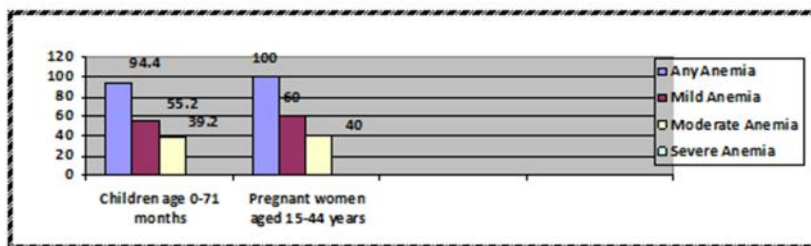


children investigated in the Visakhapatnam district of Andhra Pradesh State in 2002, Second round RCH survey is found to be underweight, while 20.7 percent are severely underweight giving not so impressive nutritional status of children. Children in the age of 6-11 months (45.0 percent), 12-23 months of age (43.0 percent), 24-47 months of age (46.0 percent) and 48-71 months of age (55.8 percent) children are underweight and considered undernourished. Severely under nourished children in the same age groups are between 20.0 and 23.3 percentage.

The proportion of undernourished children in terms of weight-for-age index shows inverse relationship with standard of living index, as it decreases from 56.5 percent 33.9 percent underweight children as the index passes from low to high category. About 34.8 percent of low standard of living women had reported that their children were under weight. Also proportion of underweight children was lower for the children of more educated mothers (26.1 percent) as compared with those of illiterate mothers (51.2 percent) and those of less educated mothers (61.7 percent). According to severely undernourished proportion of underweight children was lower for the children of more educated mothers (6.5 percent) as compared with those of illiterate mothers (27.2 percent) and those of less educated mothers (23.4 percent).

**Anemia:** A minimum level of hemoglobin in the blood is necessary for transfer of oxygen from the lungs to different tissues and organs of the body. Low level of hemoglobin in the blood characterizes anemia and it has determined effects on the health of children, adolescent girls, and pregnant women in particular. Children age 6-24 months is most vulnerable to anemia and it can result in impaired cognitive performance, behavioral and motor development, co-ordination, language development and scholastic achievement, besides increasing morbidity from infectious diseases. Anemia among pregnant women results in increased risk of premature delivery and low birth weight. As anemia is a serious health problem affecting nearly half of the population, DLHS-RCH undertook direct measurement of hemoglobin levels among children under six years of age, adolescent girls age 10-19 years and pregnant women age 15-44 years by collecting blood sample in the field using filter paper technique and these samples were sent to the National Institute of Health and Family Welfare (NHFW), New Delhi or National Institute of Nutrition (NIN), Hyderabad or Institute for research in Reproduction (IRR), Mumbai for ascertaining the level of hemoglobin using proper pathological procedure.

The recommended level of hemoglobin for classifying pregnant women and children (6-71 months) into not anemic. Anemic, mild, moderate and sever anemic categories are a minimum of 11.0g/dl, 8.0-10.9g/dl, 5.0-7.9g/dl and less than 5.0g/dl respectively. Whereas for adolescent girls the recommended hemoglobin levels for the same categories are a minimum of 12.0g/dl, 10.0-11.9g/dl, 8.0-9.9g/dl and less than 8.0g/dl. Figure 2 Anemia among children and Pregnant Women



It is observed from the above table that as many as 94.4 percent of children under six years of age suffer from some level of anemia, 55.2 percent of them are mildly anemic and 39.2 percent are moderately anemic. There are minor differences in the prevalence of anemia among children by their age and sex and by background characteristics of their mothers, but anemia is substantial for children in every group, ranging from 90 to 100 percent. The children from the age of 0-23 months (100.0 percent) were reported with any anemia, Children at the age of 24-47 months were suffering from Mild anemia (50.9 percent) and Moderate anemia (43.4 percent) and children at the age group of 48-71 months old were reported from mild anemia (63.5 percent) and suffering from moderate anemia (26.9 percent). Anemia is classified into three categories as mild, moderate and severe on the basis of hemoglobin levels given below.

1. 8 – 10.9 g/dl - Mild Anemia
2. 5 – 7.9 g/dl - Moderate Anemia
3. < 5 g/dl - Severe Anemia

The recommended hemoglobin count for classifying a pregnant woman as non-anemic is 11.0 g/dl or more.

**Utilization of maternal health services:** It is an important and vital objective in the district services and this household survey is to provide information on maternal and child health care practices. This portion presents information on antenatal, natal and postnatal care received by currently married women who had their last live/still birth since January 1, 1999 to survey date. In this section Antenatal checkup data is collected on selected background characteristics like age group, children ever born, residence, religion, caste, education, standard of living and health facility available in the village. Based on the data it will be known about the present ANC facility and also can assess and provide antenatal health checkups and facility to the currently married women. The social background characteristics linked with health personnel provide ANC facility and gives the percentage and number of women utilizing the facility. Every woman utilizes ANC services provided in urban and rural areas of the district. In general more ANC facilities are available for the women residing in the urban area when compared to rural area. In Visakhapatnam district 83.5 percent of the pregnant women had received ANC services. Doctors are the main ANC service providers with 73.8 percent. It may be mentioned that 6.4 percent of the women received ANC services only at home by ANM. Women below 20 years with 94.4 percent and women in the age group of above 20 to 34



with 81.1 percent had availed ANC services. This indicates that the services are reaching to a majority population. Women in the above age groups had availed ANM Nurse/LHV services as 5.5 percent and 4.1 percent respectively. Children birth order of 1 and 2 were availing the ANC services with 96.0 and 88.8 percentages respectively. It was learnt in the study area that women with less than twenty years and 35 years and above, women with one or two children and more urban women had availed any ANC services. Hindu, other caste, literate, medium and high standard of living women had received any ANC services during pregnancy.

The Antenatal check-ups are necessary during the pregnancy of a woman. ANC's are available at different places such as home, Government, private Public Health Centre's (PHC's) and at Sub Centre's (SC's). The above table presents the data of Antenatal Care (ANC) coverage and ANC services by different categories of health facility by selected background characteristics of the currently married women. About 43 percent of the women had approached government health facility which includes Public Health Centre's (PHC's) and Sub-centre's (SC's), while 40.2 percent had approached private health facility and 6.4 percent had reported that they have received the services only at home by Antenatal Maid ANM.

**Summary & Conclusion:** The child care and mothers health in the study has thrown light on important issues like antenatal, postnatal care, breast feeding, nutritional status, anemia, immunization and utilization of health services in the district. Here in the study the comprehensive health and wellbeing of Visakhapatnam District women and children were appraised. The mother and children's health of the district will be vital and valuable source of information for making further improvements in child health policies and programmes.

1. Infant mortality rate has come down as 50 in 2001 from 58 in 1991 in the district. This is high when compare to AP state (United Andhra) of 43 in 2001.
2. Only 35.3 percent children in the rural areas had received full vaccination. Children around 63.0 percent had received Polio zero drops. Out of these only 42.0 percent children had received Polio zero drops among the rural areas of the district.
3. More than sixty five percent of the children who were twelve months and above had received all the three doses of DPT injection and Polio doses.
4. Only 25.3 percent children had received vaccination from the Government Hospital and only 18.1 percent had received vaccination from the private hospital. 28.7 percent had received through ANM. 34.0 percent do not have ANM facility in their village and 25.0 percent had reported that there was no Government Hospital.
5. Little progress in the immunization coverage in the district especially in the rural areas of the district. Immunization coverage is high in the urban areas when compare to rural areas.
6. Women first breastfeeding immediately and within two hours of birth to the child had reported 51.8 percent in this Rural.



7. Hemoglobin response rate among children under six years of age had reported 46.5 percent and among pregnant women in the age group of 15-44 years it was 81.0 percent.
8. Anemia in the district is linked to poor nutrition.
9. 94.4 percent of children less than six years of age suffer from anemia. Out of this 55.2 percent with mild anemia and 39.2 percent had reported moderate anemia. 67.0 percent of male children and 48.0 percent of female children had reported mild and moderate anemia respectively.
10. Only 28.0 percent of women had received full Ante Natal Care (ANC) services which is less in the district.

### **Suggestions for improvement**

1. Suggested to improve proper quality Antenatal care (ANC) services which can reduce women from pregnancy complications. ANC services include education, counselling, screening and treatment to monitor and to promote the well-being of the mother and fetus.
2. Proper care and measures need to be identified for pregnancy complications especially in rural areas to reduce the mortality rate of the children.
3. Steps to be taken to improve the health services with the help of social work organizations and anganwadi workers in the district.
4. Awareness to be created among women in the district on breast milk especially immediately after birth and the first milk.
5. Importance of the breast milk is to be taught and awareness to be created among the pregnant women in the district.
6. Awareness must be created for the importance of polio immunization among rural areas and spread the importance to protect the children from killer diseases like BCG, DPT and Measles.
7. Health workers and other social organizations should concentrate on children vaccination especially in the age group of 12-23 months.
8. Underweight children and their mothers need to be educated for proper nutritious diet by health workers for proper height and weight.
9. Awareness to be created among rural women of the seriousness of diarrhea, Hepatitis and pneumonia through posters, and road shows and tell the mothers what to do when the child is suffering from these diseases.
10. Awareness to be created on anemia among pregnant women and children in the district.
11. Government, Health organization, NGO's and anganwadi workers should create more awareness and treatment practices on childhood diseases among pregnant women, mothers and children to reduce the mortality rate in the district.

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