ABOUT THE BOOK

The middle childhood years are a unique developmental time when children undergo critical physical, cognitive, and social changes. There are substantial health issues in middle childhood which need increased focus. The book is based on the research work done by Dr. Nirja Singh, Principal, National P.G. College, Lucknow (U.P.) India, independently for the Minor Research Project entitled, "Middle Childhood Health among the Pasi of Lucknow District: A Holistic Study", under University Grants Commission aid. The research is the holistic study of middle childhood health among the Pasi Children of Lucknow. The Pasi are a scheduled caste of India. This study shall have important implications in the field of Anthropology, Nutrition and Growth, Medicine, Sociology, Social Work and Public Health. This research can play a critical role in response to global health challenges. The book shall help in understanding how access to health services can be improved and, more generally, how the supply of health care can be increased, as culture based interventions are known to have better success rate in improving access to and utlilization of health services.

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(AN EMPIRICAL STUDY OF PASI CHILDREN)
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PREFACE

The middle childhood years are a unique developmental time when children undergo critical physical, cognitive, and social changes. This is the age of critical development falling between infancy and adolescence. Monitoring of growth and development during middle childhood is important for improving overall health. Further, culturally based interventions are known to have better success rate in improving access to and utlilization of health services.

Health and development research has largely focused on early childhood (i.e., 0–5 years old) and adolescence (12–17 years old). Very little is known about health and functioning during middle childhood. This has been due to critical development occurring in the first five years of life and high morbidity and mortality accompanying risky behavior in adolescence. But there are substantial health issues in middle childhood which need increased focus.

The book is based on the empirical study done between the years 2011 to 2012, under UGC (University Grants Commission) aid. It is a holistic study of middle childhood health among the Pasi Children of Lucknow. The Pasi is a scheduled caste found in the states of Bihar, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Punjab, Uttarakhand, Uttar Pradesh, West Bengal and Delhi in India and Terai region of Nepal.

Content of the book is divided into seven chapters. Chapter-1 which is introductory in approach, deals with aim and objectives rationale for the study and interdisciplinary relevance of the topic. Chapter-2 contains a review of the relevant literature on childhood health, with special reference to middle childhood and children of lower socio-economic background. Chapter-3 deals with research methodology. While in the Chapter-4, the detailed account of the universe of research, i.e., the city of Lucknow and the sample have been given.

Chapter-5 is the description of the personal characteristics and socio-economic background of the Pasi children selected for the study. It includes age, sex, educational level, occupation, family structure, number of siblings,

parent's educational & occupational level, family income, pattern of residence and other variables. Chapter-6 deals with the conditions of health and environment, status of health problems of the Pasi children, prevalent system of medicine and choice of medicine. The chapter also discusses the status of general awareness among the parents about the health care and other facilities provided by the government and other institutions. Chapter-7 is a discussion of the health status of the Pasi children on the basis of the interpretation of anthropometric measurements. Actual stature, weight and body measurements including skinfolds, girths, and breadths have been collected here for purposes of assessing growth and body fat distribution. The mean values of the various measurements are compared with the recent available national and international data to present the health status of the Pasi children in local, national and global perspective.

Chapter-8 is divided into two sections. Major findings of the study and conclusion have been given in its first section. The second section of this chapter throws light on the strategies to develop a positive attitude towards middle childhood health among poor and other weaker section, especially for scheduled castes. On the basis of analysis various suggestions have been given to initiate effective programmes that help the children and their families. It is suggested that the community, the government and the NGOs should work in co-ordination with active participation of the senior citizens.

This study shall have important implications in the field of Anthropology, Nutrition and Growth, Medicine, Sociology, Social Work and Public Health. This research can play a critical role in response to global health challenges. The research shall help in understanding how access to health services can be improved successfully.

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INTRODUCTION

Health is the general condition of a person in all aspects. It is also a level of functional and/or metabolic efficiency of an organism. According to Clements (1932), 'Health is of universal interest and concern'. In 1948 World Health Organization (WHO) defined health as 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity'. In 1986, the WHO, in the Ottawa Charter for Health Promotion, said that health is 'a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities'. Thus, overall health is achieved through a combination of physical, mental, and social well-being, which, together is commonly referred to as the 'Health Triangle'. Achieving and maintaining health is an ongoing process. Effective strategies for staying healthy and improving one's health include several elements and hygiene is one of these elements.

So, health is an important determinant of well-being and an important indicator of growth & development. The health problems of any community are influenced by interplay of various factors including social, economic and political ones. The common beliefs, customs and practices related to health and disease influence the health seeking behaviour of the community.

Health research till date is mainly focused upon the generation of new technologies but research concerning implementation of already proven technologies has not been given enough emphasis, though in the last two decades some researches have focused on delivery of healthcare.

Nutrition, Anthropology, and Public Health can together conduct fundamental biological, cultural, behavioral and translational research to reduce health inequalities globally and domestically and improve access to, supply and utilization of health care services and lead to betterment of life. Anthropology with its focus on heterogeneity in socio-biological aspects of

nutrition and social gradients in health has a particularly important role to play in modern global scenario (McGarvey, 2009).

Studying social and cultural dimensions of ill health and healthcare, particularly disparities in child health and developmental outcomes has become all the more necessary in the present global and dynamic scenario.

Therefore, this study has been proposed to explore ill health and healthcare in a holistic anthropological perspective – exploring both the physical and socio-cultural dimensions of health. The research shall focus on studying disparities in child health and development outcomes in a scheduled caste community - the Pasi, in the North Indian city of Lucknow. It shall attempt to derive anthropologically informed questions, concepts, and measures dedicated to improving health and reducing differences.

MIDDLE CHILDHOOD

The research shall focus on middle childhood, a distinct and critical development period. Developmental change is continuous, so any division of human development into age periods is arbitrary. Nevertheless, some features of middle childhood can be discerned that distinguish it from the early childhood years.

The middle childhood years are a unique developmental time when children undergo critical physical, cognitive, and social changes. During this time, children enter school, and their social context broadens beyond their families. This is the age of critical development falling between infancy and adolescence.

Middle childhood is a period of continued neurophysiologic changes, particularly synaptogenesis and myelination in the prefrontal cortex (PFC), the brain center responsible for a range of executive functioning including attentional control, working memory, reasoning, behavioral self-regulation and monitoring, inhibition, information processing, and goal-setting.

Socially, this period is characterized by new and defining social structures that involve increasing levels of independence, development and maintenance of peer relationships, increased self-regulation needs, intellectual challenges, and pubertal changes, all of which have implications

for health and functioning, and employ some degree of executive functioning.

There is no exact consensus regarding an age range defining middle childhood. Middle childhood has also been differentiated from adolescence cross-culturally, largely by the onset of puberty (Collins, 1984). Middle childhood has been delimited differently by many scholars, as ages 6 to 10 (Eccles, 1999), and ages 6 to 12 (Collins, 1984).

Due to early start of formal schooling nowadays in India and sometimes early onset of puberty (between age 10–12) the middle childhood period may vary. But we here propose to undertake a study of 6 - 11 year old children as part of our study of middle childhood health and development as most children start primary school at about age 6 and enter middle or junior high school around age 11, which many also use to mark the beginning of adolescence.

Health and development research has largely focused on early childhood (i.e., 0–5 years old) and adolescence (12–17 years old). Very little is known about health and functioning during middle childhood. This has been due to critical development occurring in the first five years of life and high morbidity and mortality accompanying risky behavior in adolescence. But there are substantial health issues in middle childhood which need increased focus.

By traditional definitions of health, the middle childhood population is often considered healthier than any other age group (Collins, 1984). However, by a broader definition — one that includes health problems that have behavioral and social origins (Guyer, et.al., 2000) — there are a significant number of health problems affecting this population - mental health, health risk behaviors, and child victimization. In addition, some unhealthy behaviors of adolescence (e.g., poor nutritional habits, smoking) may have antecedents in middle childhood and some behaviors actually begin in middle childhood. These behaviors are linked to many diseases (e.g., hypertension, cancer and diabetes) that are unlikely to emerge clinically until adolescence and adulthood. Thus, the middle childhood

years present an opportunity for early intervention to encourage healthy behaviors and prevent disease among adolescents and adults.

The health and wellbeing of the middle childhood population is part of a continuum that depends on what happens during infancy and early childhood and influences the behaviors and outcomes of adolescents and adults. Promoting the health of the middle childhood population, through research and policy development, would complement progress made in the areas of early childhood and adolescence, leading to a comprehensive approach for ensuring healthy development throughout childhood.

Monitoring of growth and development during middle childhood is important for improving overall health. Further, culturally based interventions are known to have better success rate in improving access to and utlilization of health services.

With a population of 3,647,834, Lucknow accounts for 2.19 percent of the population of Uttar Pradesh. Scheduled Castes and Scheduled Tribes form 779,370 and 21.37 percent of the population respectively. The three largest scheduled caste groups are Pasi, Chamar and Rawat (Annexure - 1.1). This research focuses on the Pasis which form an important scheduled caste group in the region.

THE PASIS

The Pasi is a scheduled caste found in the states of Bihar, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Punjab, Uttarakhand, Uttar Pradesh, West Bengal and Delhi (Table no.- 1.1). A small number of Pasi are also found in the Terai region of Nepal.

Table – 1.1

Distribution of Pasis in India

S.No.	State	Populations of Pasis
1	Bihar	701,000
2	Delhi	32,000
3	Haryana	17,000
4	Jharkhand	64,000
5	Madhya Pradesh	46,000
6	Maharashtra	19,000
7	Punjab	12,000
8	Uttarakhand	12,000
9	Uttar Pradesh	5,881,000
10	West Bengal	39,000

Source: http://www.joshuaproject.net/peoples.php

The Pasi are found throughout Uttar Pradesh, but are concentrated in Hardoi, Sitapur, Kheri, Shahjahanpur, Lucknow and Allahabad. They were supposedly the earliest inhabitants of the Awadh region.

They are a community of small peasant farmers. Many have started to migrate to cities, and are now engaged in businesses, private and government service and industrial labour.

The Pasi have a number of exogamous clans, the main ones being Amlak, Bhargav, Jamdagni, Parswa, and Piplak. They have sub-groups viz. Bauriya, Bittiha, Ahirs, Gujjar, Khatik, Rajpasi. A small number of Pasi have converted to Islam, and are known as Turuk Pasi (Singh, 1971, Nag and Harit, 1972).

The colonial anthropologists Rose (1919) and Ibbetson (1916) claim that the name Pasi is derived from the Hindi word *pasa*, meaning 'noose', with the help of which they climb the tall toddy palm tree. Ghurye, an Indian sociologist, also asserts that Pasi means 'a user of noose and is the name of an aboriginal caste living by catching wild birds, small game and tapping palms'.

During the British rule the Pasi were known as a criminal tribe who were thieves, looters and marauders. They were skilled in the use of bow and arrow and stick. In 1952, when the colonial Criminal Tribes Act, 1924, was repealed the parliament, the Pasi were declared a Scheduled Caste. This granted them the benefit of reserved quotas in government jobs, admissions to medical and engineering colleges, and other such schemes. However, they still suffer the effects of the caste system which has left them despised and rejected.

OBJECTIVES

1. To examine the socio-biological aspects of middle childhood health among the Pasis, a scheduled caste population in an urban setting and understand the role of social stratification in provision and utilization of healthcare in a global world.

2. To explore the socio-cultural, physical, economic, institutional and environmental factors affecting growth and behavior during middle childhood. Thus to assess the health conditions vis-à-vis education (maternal and overall family educational attainment), financial status (assessments of poverty, income, wealth), employment status, household characteristics (number of children, family structure) and living conditions - sanitation, hygiene, rural infrastructure; subjective social status, etc.

3. To understand the role of gender in health status both in terms of undernourishment and growth dynamics; to explore gender dimension in health vis-à-vis income, education, employment and household characteristics.

4. To undertake an effective assessment of the prevailing health infrastructure and its actual working conditions; thus to give an assessment of the prevailing child health schemes.

5. Propose interventions and policy changes based on empirical field research evaluated against the criteria of efficacy and effectiveness;

deliverability, affordability, and sustainability; ethical methods; and predicted effect on equity in the population (Tomlinson, et. al., 2007).

RATIONALE FOR THE STUDY AND EXPECTED CONTRIBUTION

The present empirical study leads to first-hand data about health and socio-cultural factors which can help in the design of more targeted social interventions to address caste disparities in child health and developmental outcomes in middle childhood.

This research can also play a critical role in response to global health challenges. By helping gain knowledge of the influence of culture on the well-being and health of children and insight into the social-cultural dimensions of health care interventions targeted at children, this research shall help in understanding how access to health services can be improved and how the supply of health care can be increased. It shall help contribute to culture-sensitive and more targeted interventions in pediatrics and health programmes directed at children. The research shall also try to incorporate a specific child-perspective on health and health care and the role of children as creative social actors.

INTERDISCIPLINARY RELEVANCE

This study shall have important implications in the field of Anthropology, Nutrition and Growth, Medicine, Sociology, Social Work and Public Health.

This research can play a critical role in response to global health challenges. The research shall help in understanding how access to health services can be improved and, more generally, how the supply of health care can be increased.

REVIEW OF LITERATURE

Many researchers have focused on concepts and evidence about global health (Merson, et al., 2006; Jamison, et al., 2006; Garrett, 2007 & Koplan, et.al., 2009).

Health inequalities have been a major concern for both health researchers and workers (Marmot, et.al., 1997; Marmot, 2005; Ruger, 2006; Wilkinson & Pickett, 2006), including the importance of political forces in influencing inequalities (Navarro & Shi, 2001).

Development across health/functioning domains is largely dependent on one's social environment (Shonkoff & Phillips, 2000). The association between socio-economic status (SES) and health has been observed in many studies (Kaplan, et.al. 1987; Smith, 1998; Marmot & Wilkinson, 1999; Case, et al., 2002; Chen, et.al., 2006; Shavers, 2007; Cutler, 2008 & Currie, 2008).

The objective and subjective indicators that may be used as a part of social assessment include perceptions of quality of life; sense of community; perceived functional capacity; employment rates; differences in levels of income; access to transportation and transportation services; alcohol-related auto crashes; housing density; crime; trust or distrust in government; air and water quality; access to health, mental health, and social services; and education (Kreuter & Lancaster).

It is known that socio-economically disadvantaged children have poorer physical and mental health and lower social and school/academic functioning compared to children with higher socioe-conomic status (SES). Poor health in child-hood is likely to affect adult well-being directly through its effects on health, and indirectly through its effects on other forms of human capital accumulation (Currie & Stabille, 2003). However, sociological and anthropological studies of middle childhood are few in number. Consequently, additional information is needed on the role of social and cultural structures and influences in middle childhood experiences (Collins, 1984 & Nuru-Jetter, et.al., 2010).

Several studies have noted the interaction between social stratification and socio-economic health gradients (Haas, 2006 & Braveman, et.al., 2005).

An unfortunate characteristic of the Indian social milieu is stratification of the population based on caste. Many lower castes are treated as untouchables and they are among the most downtrodden of society. In an attempt to uplift these lowest castes, the Indian Constitution includes a list of castes and tribes in its schedules for whom special benefits (such as reservations in educational institutions, employment, etc.) are enshrined. Persons belonging to these 'scheduled caste or tribes' are considered to be at the bottom of the social order and are some of the most underprivileged and disadvantaged in Indian society.

Many studies have focused on studying differences in utilization of health care services across caste (Burgard, 2002; Stephenson & Tsui, 2002; Basu, 1990; Luke & Munshi, 2007 & Bardhan, et. al., 1989) or health investment by caste (Bonu & Baker, 2003; Kabir et al., 2003 & Kapoor et al., 2003) and understand the effects of the age-old caste system on health outcomes.

Nutrition and health assessment in most Indian studies has been done through diet survey, nutritional deficiency signs or clinical examination and also by nutritional anthropometric indices such as weight for age, height for age and weight for height (Sachdev 1995 & Tiwari, et. al., 2005).

The National Institute of Nutrition (NIN, 2000) has carried out nutritional surveys on 30 tribal groups spread over nine states and UTI of India during the last 20 years.

In India, many recent studies have been conducted on the nutritional status of preschool children and have revealed a high rate of malnutrition: (Mahapatra, et al., 2000; Jose & Indira, 2000; Dubey, et al., 2003; NNMB, 2002; Mitra, et al., 2004; Tiwari, et al., 2005 & Reddy et al., 2006). Mitra, et al. (2004) have studied the health status of Brahmin (higher caste), Teli & Rawat (lower caste) preschool children of Central India. Many studies have focused on the scheduled caste pre-school children (Uppal, et.al., 2005;

Kumari, 2005 & Siddhu, 2002). Several studies have focused on rural preschool children (Rao et. al. 1961; Rao 2001; Laxmaiah, et al., 2002; Sen, 1994; Thind 2004 & Reddy, et. al., 2006). Quite a few studies have assessed the nutritional status of tribal preschool children in different states: Gonds of Madhya Pradesh (Rao, et al., 2005, 2006), Raj Gonds (Sharma, et.al., 2006); Kodaku (Dolla, et al., 2005); Maria Gond (Rao & Rao, 1994); Kamar of Raipur (Kumar, et al., 1993); Abujmaria (Mitra, 2001); Gond and Kamar of Chhattisgarh (Mitra, et. al., 2007); Pahariyas of Rajmahal Hills, Bihar (Choudhary, 2001); Hos of Orissa (Ghosh, et. al., 2001); Great Andamanese (Rao, et. al., 1998); Dhankas of Rajasthan (Bhardwaj & Kapoor (2007); Saharias of Rajasthan (Rao, et. al., 2006).

High prevalence of chronic and acute undernutrition was also observed in other tribal and caste preschool children in India (Maurya & Jaya, 1997; Iqbal, et al., 1999; NNMB, 2000, 2002; Mahapatra, et al., 2000; Mitra, et al., 2004; Rao, et al., 1994, 2005; NFHS II, 1998-99).

Besides, there have been substantial studies on adolescent health as they constitute approx. 22% of the Indian population. There have been studies focusing on sexual and reproductive health (Jejeebhoy, 1998; Watsa, 1993; Goparaju, 1993; Savara & Sridhar, 1994; Sharma & Sharma 1995 & Nair, 2004), nutritional deficiencies, reproductive health problems, pregnancy (Bhatia & Chandra, 1993; Chhabra, 1992), sexuality, sexually transmitted diseases, and mental and physical stress-related problems

However, very few studies have focused specifically on the health status during middle childhood in India and abroad.

During the fall of 2000, the Policy Information and Analysis Center for Middle Childhood and Adolescence at the University of California, San Francisco, launched a Middle Childhood Initiative to increase awareness of the health and well-being needs of children ages 6-11. They focused on demographic characteristics of the American middle childhood population and other features of these children's environment. They presented measures of health care access and utilization, and traditional health status indicators (mortality, chronic illnesses and disabilities, hospitalizations, emergency rooms visits, common illnesses, and dental health) alongwith

other important health issues (mental health, health risk behaviors, diet and obesity) and the safety of children's environments (Biehl, et.al., 2002).

Later a panel of experts from diverse fields convened to frame a health agenda for the middle childhood population. They identified six themes concerned with improving the health and well-being of the middle childhood population: namely, the value of children, as well as two immediate influences on children's lives: parents and community; building awareness of developmental tasks of middle childhood and creating developmentally appropriate indicators; the role of antecedent factors during middle childhood and their relationship to the onset of adolescent health behaviors and the need for ecological approaches; The importance of safe and nurturing environments for children; specific health issues of the middle childhood population which include mental health, risky behaviors, nutrition and exercise, oral health and special populations; and finally developing more effective health systems (Brindis, et.al., 2002).

In India, Rao & Rao (1966) carried out a linked cross-sectional study and undertook statistical analysis of measurements obtained on school going boys of ages 5-16 for estimating norms and growth rates. Medhi, et.al. (2006) assessed the growth and nutritional status of school age children (6-14 years) of tea garden workers of Assam. Studies have been conducted to assess the prevalence of anemia among urban school children aged 5-15 years in Punjab (Verma, et.al., 1998) and in Bangalore (Muthayya, et.al., 2007). Himaz (2009) has explored the reasons for persistent stunting in Andhra Pradesh.

While some other studies have focused on the behavioral dimensions of health in middle childhood - psychological adjustment of ethnic minority children (Atzba-Poria, 2004); and the prevalence and pattern of psychological disturbance (Sarkar, et al., 1995).

Children's perception are important in promoting health in middle childhood. Of late, a few studies have focused their attention on this perspective also. Swaminathan, et.al. (2009) documented children's views on healthy eating, perceptions of healthy and unhealthy foods and health consequences of consuming unhealthy foods in the age group of 7-15 years

from three schools with varying socio-economic status (SES) in order to translate the knowledge of children into positive behaviour change towards healthy eating.

Dongre, et. al. (2007) studied the prevalence of intestinal parasites and its epidemiological correlates among rural Indian school going (6-14 years) children and the effect of focused, need based child to child hygiene education on personal hygiene of school children.

This study has been conducted to fill the lack of research on health during middle childhood, as it covers the factors influencing health during middle childhood and suggests measures for improving the health institution.

RESEARCH METHODOLOGY

Social research is a systematic method of exploring, analyzing and conceptualizing social life in order to extend, correct or verify knowledge, whether that knowledge may aid in the construction of a theory or in the practice of an art stating it still differently. Social research seeks to find explanations, for unexplained social phenomena, to clarify the doubtful and correct the misconceived facts of social life. It is carried on both for discovering new facts and verification of the old ones. There are various benefits of social research. They help in social control, social cohesion, social welfare, social predication and social growth.

Human behaviour is less predictable than the events with which most of scientists have been dealing. The task of anthropologist, or for that matter the social scientist, has always been very difficult on yet another count, here the scientists and the object of study belong to the same species, possessing common physical /cultural traits and the 'laboratory' is human society, of which the scientist is also a part.

In any social research, a proper and feasible methodology needs to be chalked out fulfill the aim of field work successfully. Research on middle childhood presents special methodological problems. Unobtrusive access to information is much more difficult, as the reactivity of participants to being observed increases. Furthermore, settings and problems for children in middle childhood are more complex than those for infants and preschoolers. This research uses the quantitative and qualitative research methods, which are adapted to research in specific fields, such as, the urban child and children & medicines. As it is a holistic study of health among the Pasi Children, which reveals both the aspects of their life, socio-cultural and physical aspects, therefore, along with social research methods, Anthropometry is parallel used here for the assessment of their nutrition, growth and development.

I. FIELD WORK AND DATA COLLECTION

All the techniques of data collection have some advantages and disadvantages. Therefore, help of more than one technique has been taken here, for the collection of data, which are given below:

I. Sampling

This study deals with complex society. So for this study, cases have been taken through sampling, so that they represent all sections of the society. Sampling has been employed here to draw a small and manageable sample.

The Pasi children belong to age group of 6-11 years, living in Lucknow city are the universe of this study and the sample of this study consists of 300 children. Out of this, 150 are male child and 150 are female child.

For the selection of the sample, firstly, a list of wards in Lucknow city has been prepared, and then through random sampling 10 wards has been selected to represent the entire city (Annexure-1.2). Then according to sex and age-group, from each ward 30 children have been selected through snow-boll sampling, who are typical of the category and are useful in giving insight to the study. This is done in order to avoid the bias of the researcher and to make the sample representative of all strata of the universe. However, in order to get the accurate, precise and unbiased result from the sample, utmost care was exercised in selecting the sample to ensure representativeness of the universe.

ii. SOURCES OF DATA COLLECTION

In the course of this study, primary as well as secondary sources of data have been used.

A. Primary Sources

Data from primary sources has been gathered and recorded through following techniques and devices:

a. Rapport Establishment: In the early stage of the field work, to create 'rapport 'and obtain information was rather a difficult job. Several visits had to be paid to the informants in order to develop acquaintance with and for explaining them the purpose of the present research. But after becoming familiar and establishing 'rapport' with them, the work of obtaining information became very smooth.

b. Observation: Observation technique has been used in the families, as well as homes, where these children are living. This has enabled the researcher to see the actual ways of life and the social environment

children. Many things, which cannot be imagined without being seen and therefore cannot be included in the interview schedules, come to light through observation. Therefore this is one of the most important tools of social anthropological research and this has been extensively used here.

c. Interview: Interview has been taken of the children in the sample, their family members, neighbours, friends, doctors and government & NGO workers. Medical histories of children & parents and information pertaining to chronic medical conditions and injuries/accidents have been collected from parents with the use of a pretested interview schedule.

d. Case Study: Case studies have been used according to the requirement of the study. I have taken case studies of some respondents as they provide a deeper understanding of the subject under study. They help in throwing light on the underline process involved in the life of a unit. Some case histories were noted as a ready reckoner to facilitate the interviewing process for which sometimes several visits have been to make.

e. Field Notes: During the course of the field work of this study, all the relevant field notes have been recorded very carefully, as sometimes, observations which at the time seemed unimportant often turn out to be extremely significant.

These notes include all of the observations together with the time and place they were made and the names of others present. The provisional interpretation of these observations, keeping the facts and inferences as distinct as possible, has also been written down. They have proved to be useful now that the data are being analyzed and presented.

f. Tape Recording: Tape recording has been used sparingly because it seemed unethical to record a conversation without telling the respondent and doing it in a sly manner. On the other hand, it would make the respondent conscious and it would hamper the process of a free exchange of views.

g. Measurements and Indices: Anthropometric measurements have been performed to assess nutritional status with the use of standard

methods described by Weiner and Lourie (1981). It is a rapid, inexpensive, and noninvasive means of determining short- and long-term nutritional status (Frisancho, 1990; Zemel, 1997; WHO, 1995). The following measurements have been taken for assessment of health status: height vetex, body weight, upper arm circumference, chest girth, chest breadth, calf circumference, triceps skin-fold thickness and sub-scapular skinfold thickness. Appropriate reference data has been used to evaluate nutritional status (WHO, 2006).

Appropriate index has been derived from the above anthropometric studies to assess health status – body mass index.

Per day calorie intake of the children has been calculated with '24 Hour Recall Method'.

B. Secondary Sources

In this study in addition to utilization of the data collected from primary sources, data from secondary sources has been collected. These secondary sources are books, journals, government publications & reports, news papers, census reports, NGO records, internet and other available sources related to the study.

II. PLAN OF ANALYSIS, INTERPRETATION AND REPORT WRITING

Systematic analysis, however, is a special process used at the time the whole body of the gathered data - facts and ideas, figures and ideas - is at hand. In this study analysis of research data and report writing have been done in following steps:

i. Scrutiny of the Assembled Data

A fruitful early step in the analysis was a critical examination of the assembled materials, keeping steadily in the mind the purpose of the study and its possible bearing on research.

ii. Preparation of an Outline

After a thorough review of the material, an outline – a 'blueprint' of the study has been prepared. This outline was in reality a classification of the major aspects of the assembled facts.

iii. Content Analysis

For content analysis, firstly the refined categories and classes of the facts have been grouped, and then the found reasonable explanations of the relation have also been given.

iv. Statistical Tests

Appropriate statistical tests, like mean and standard deviation have been performed to evaluate health status and provision and utilization of health services.

v. Report Writing

The last step in this study was the writing of final report which covers all the relevant aspects and dimensions of the research. Here the following devices have been used to present the analysis and findings of this research:

A. Tables: After analysis the condensed data has been tabulated according to the requirements of the various aspects of the study. Then the tables have been interpreted in the light of the present situation. This interpretation has been given in order to co-relate the facts presented in earlier studies and the actual situation of the middle childhood health among the Pasi of Lucknow district.

B. Maps: The important maps also have been included in this study.

C. Graphs and Charts: Graphs and charts condense large amounts of information into easy-to-understand formats that clearly and effectively communicate important points. Bar graphs, pie charts, line graphs, and histograms are an excellent way to illustrate analysis results. Therefore, the frequent use of graphs and charts has been done in presenting the report.

THE AREA AND PEOPLE

The present study is an empirical and micro level study of middle childhood health among the Pasis of Lucknow.

LUCKNOW

The Indian Territory has been divided into several states for administrative reasons. The state of Uttar Pradesh is one of the northern states of the country and has its capital at Lucknow.

Geography

Lucknow, is situated 123 Mts. above sea level. The district is somewhat irregular in shape but nearly approaches an oblong pitched obliquely in a direction northwest by Southeast, with the cantonment situated somewhat in the middle. It is situated between 26.30° & 27.10° North latitude and 80.30° & 81.13° East longitudes. The total area covered by Lucknow is around 3204 square kilometers. District Barabanki, surrounds it on the eastern side, on the western side by district Unnao, on the southern side by Raebareli and on the northern side by Sitapur and Hardoi districts. Only some parts of its south and southwestern boundaries are natural and the rest are manmade in nature. River Gomti flows through the city. Some of the tributaries of this river are Kukrail, Loni and Beta etc. Sai river flows from the south of the city and in the east enters district Raebareli.

Lucknow has 4 tehsils:

(1) Sadar
(2) Mohanlalganj
(3) Bakshi ka talab
(4) Malihabad

Lucknow has 8 development blocks:

(1) Kakori
(2) Malihabad
(3) Bakshi ka talab
(4) Gosainganj
(5) Sarojini nagar
(6) Mall

(7) Chinhat
(8) Mohanlalganj

Lucknow also has 834 villages. Lucknow city is divided in 110 wards and there is only one city council (Nagar Mahapalika).

Population

The population of district Lucknow as per census 2001 is 36,47,834. The female population stands at 17,15,517 and the males are 19,32,317 in number. The female ratio for every 1000 males is 888. The population density is 25,41,101 sq. km. The literacy rate of Lucknow is 21,29,942 which comprises of 12,50,877 males and 879,065 females.

Climate, Flora and Fauna

Lucknow has a warm subtropical climate with cool, dry winters from December to February and dry, hot summers from April to June. The rainy season is from mid-June to mid-September, when Lucknow gets an average rainfall of 1,010 mm, mostly from the south-west monsoon winds. In winter the maximum temperature is around 21 degrees Celsius and the minimum is in the 3 to 4 degrees Celsius range. Fog is quite common from late December to late January. Summers can be quite hot with temperatures rising to the 40 to 45 degree Celsius range, the average highs being in the high 30's.

The forest area is negligible in the district. Shisham, Dhak, Mahua, Babul, Neem, Peepal, Ashok, Khajur, Mango and Gular trees are grown here. In fact different varieties of mangoes specially Dashari are grown in Malihabad block of the district and exported to other countries too. The main crops are wheat, paddy, sugarcane, mustard, potatoes, and vegetables such as cauliflower, cabbage, tomato, etc are grown here. Similarly sunflowers, roses, and marigold are cultivated on quite a large area of the land. Apart from this many medicinal and herbal plants are also grown here.

Lion, tiger, leopard, hyena, wolf, jackal, and monkey are the main wild animals in the forest areas. While the domestic animals include horse, cow, goat and pig. Dog and cat are the main pet animals. Some of the main birds are sparrow, peacock, parrot, pigeon and cock. Of the reptiles, crocodile, pythons, and many kind of snakes are found. Rats and

frogs are seen in considerable numbers. Insects like grasshoppers, beetles, crickets and cockroaches are common.

A Brief History

Avadh is claimed to be among the most ancient of Hindu states. According to popular legend, Ramchandra of Ayodhya, the hero of the Ramayana, gifted the territory of Lucknow to his devoted brother Lakshman after he had conquered Lanka and completed his term of exile in the jungle. Therefore, people say that the original name of Lucknow was Lakshmanpur, popularly known as Lakhanpur or Lachmanpur.

This is a plausible theory since there is a mound called 'Lakshman Tila' which lies on the northwest border of the city. According to another theory the city got its name after an architect called 'Lakhna' who constructed a fort for the Sheikh rulers under whose reign the region was during the 15th century. The fort that was called Lakhna Quila no longer exists.

It symbolizes the combined Hindu - Muslim culture of the country and has become synonymous with "Adab" or etiquettes, which is the characteristic trait of Lucknow.

Lucknow, which has always been a major centre of culture and learning, was, to begin with, a part of the Kaushal kingdom. For a long time after the downfall of the Suryavanshi of Ayoydha the region of Avadh, to which Lucknow belonged, went without stable administration with various dynasties and empires quarrelling over their claim over it. They included the mighty Magdahans, Kushans, Gurjaras, Pratiharas, Bhars and Pasis. In the face of absence of steady leadership the vast Avadh region got divided into small kingdoms, which came to be ruled by different Rajput clans. The lack of unity left Avadh vulnerable at the time of the invasion of Mahmud Ghazni in the beginning of the 11th century. When Ghazni left India, he installed his nephew Syed Salar Masud as the governor of the Avadh region. However, the Rajputs won back their territory for a short period before Avadh was brought under the rule of the Sheikhadas, the first of who was Shiekh Abul Hussain of Salempur. The Sheikhs of Bijnor and the Pathans of Ramnagar soon established themselves in the area around Lakshman Tila and the former built a fort there, which was named Lakhan Qila after the architect who designed it.

A small township prospered and grew around the fort and this is the town that we now know as Lucknow city. In 1394, Lucknow came under the Sharqui Sultans of Jaunpur after which it passed into the hands of the Delhi's Lodi dynasty. Following the advent of the Mughals, the district was won over by Humayun in 1526. The Mughals lost the territory for a brief period to the Afghans before winning it back in 1528. In 1539, Sher Shah Suri defeated Humayun and Lucknow remained under the control of the Suri dynasty until the Mughal's reestablished supremacy by defeating Sher Shah's successor. Thereafter Lucknow continued to progress and achieved great glory and prosperity, particularly under Akbar, during whose time it was a part of the Sarkar of Avadh Suba. The city has been greatly praised for its beauty by Abul Fazal in Ain-e-akbari.

The next major rulers of Lucknow were the Nawabs of Avadh. The avadh dynasty was established by Saadat Khan Bahadur, the governor of Avadh, after he defeated the Sheikhzada rulers of Lucknow. Saadat khan was succeeded by Safdarjung who shifted his capital from Lucknow to Faizabad.

With the defeat of Nawab Shuja-ud–Daula at the hands of the British East India Company in 1764's battle of Buxar, a major portion of Avadh or Oudh was given away to the British under the treaty that followed. Lucknow regained its position as the capital of Avadh during the reign of Nawab Asif-ud-daula who is responsible for the construction of several beautiful building in the city.

The decline of the Avadh dynasty was inevitable once the British firmly established themselves as the most powerful force in the region. The last Nawab was Wajid Ali Shah who is best known for his contribution to Urdu poetry, music, dance, and other arts. He was exiled to Calcutta and in 1856 the administration of Avadh passed into the hands of the British.

Lucknow played an imp role during the first war of independence in 1857 under the leadership of Begum Hazrat Mahal. Though the struggle for independence failed that time, Lucknow continued to be a major centre of activity for the freedom fighter until the country finally gained independence in 1947.

The credit for making Lucknow the way it is today goes to the Nawabs of Avadh who, apart from constructing some magnificent monuments, left behind a tradition of courtesy, hospitality and charm in a city, where polite conversation and an appreciation of all things beautiful is a way of life. This is reflected in the delicate and intricate embroidery of 'Chicken' and 'Zari' work, the beautifully designed gold and silver jewellery, the sweet smelling perfume or 'Itra' and the metal crafts that the city is famous for.

Culture

In Lucknow, people are from various religions, in which maximum share is of Hindus and Muslims and there are some small groups of Sikhs, Christians, Jains, and Buddhists. Here all the festivals related to every religion are celebrated but Hindu and Muslim festivals, such as Holi, Diwali, Id-ul-juha and Id-ul fitar etc. are celebrated with great pomp and show.

As two communities, Hindu and Muslim, living side by side for centuries, sharing similar interests and speaking a common language in Lucknow, Thus the culture of Lucknow have become a mixture of the culture of these two communities and it can be seen in its every aspect. For example, numbers of buildings were constructed having mixed architecture of these two main communities. Imambaras and Masjid of Dhaniya Mehri, Imambara Bait-ul-mal constructed by Jhau Lal, Parain (Panditain) Ki Masjid at Aminabad, Hanuman Mandir constructed by the financial help of mother of Wajid Ali Shah at Aliganj and Masjid Raja Tikait Rai of Raja Bazaar are some of the golden examples of this culture.

Lucknow is bravely struggling to retain its old world charm while at the same time acquiring a modern lifestyle. Regarded as one of the finest cities of India, Lucknow represents a culture that combines emotional warmth, a high degree of sophistication, courtesy, and a love for gracious living. The 'Pehle-Aap' (after you) culture, popularised as a tagline for the society of Lucknow, is waning. But a small part of Lucknow's society still possesses such etiquette. This sublime cultural richness famous as 'Lakhnawi Tehzeeb' blends the cultures of two communities. Many of the cultural traits and customs peculiar to Lucknow have become living legends today. The credit for this goes to the secular and syncretic traditions of the Nawabs of Awadh, who took a keen interest in every

walk of life, and encouraged the traditions to attain a rare degree of sophistication.

Language

Both Hindi and Urdu are spoken in Lucknow, but Urdu has been the lingua franca of the city for centuries. Under the rule of Nawabs, Urdu flourished and turned into one of the most refined languages. In recent years the use of Urdu has reduced significantly. Day-to-day transactions in the city are typically performed in Hindi or English. Nevertheless, Lucknowites are still known for their polite and polished way of speaking which is noticed by visitors to this charming city. In its rural areas mostly Avadhi dialect is spoken.

Localities

The urban area is spread equally on both sides of the Gomti River. The commercial and residential areas on Cis-Gomti side are Hazratganj, Alambagh, RDSO (Research Design and Standard Organisation) Colony, Charbagh, Aishbagh, Kaiserbagh, Aminabad, Husainganj, Model Houses, Lal Bagh, Golaganj, Wazirganj, Rajendra Nagar, Malviya Nagar, Sarojini Nagar, Aishbagh, Rajajipuram, Haiderganj, Thakurganj, Chowk and Saadatganj. The residential settlements in the Trans-Gomti area are Nirala Nagar, Aliganj, Daliganj, Mahanagar, Old and New Hyderabad, Nishatganj, Indira Nagar , Manas Enclave near Kukrail picnic spot, Gomti Nagar and Gomti Nagar Extn., Nilmatha Cantt. Vikas Nagar, Khurram Nagar and Janakipuram. Aminabad is the heart of the city and the oldest traditional marketplace after Chowk. It is among the most crowded place of Lucknow.

Civic Administration

Lucknow is the political and administrative capital of Uttar Pradesh. The city elects members to the Lok Sabha as well as the Uttar Pradesh Vidhan Sabha (State Assembly).

The city is under the jurisdiction of a District Collector, who is an IAS officer. The Collectors are in charge of property records and revenue collection for the Central Government, and oversee the national elections held in the city. The Collector is also responsible for maintaining law and order in the city.

The city is administered by the Lucknow Municipal Corporation with executive power vested in the Municipal Commissioner of Lucknow also called the City Mayor. An Assistant Municipal Commissioner oversees each ward for administrative purposes.

The Lucknow Police is headed by a Inspector General, who is an IPS officer. The Lucknow Police comes under the State Home Ministry. The city is divided into several police zones and traffic police zones, each headed by a Deputy Inspector General of Police. The Traffic Police is a semi-autonomous body under the Lucknow Police. The Lucknow Fire Brigade department is headed by the Chief Fire Officer, who is assisted by Deputy Chief Fire Officers and Divisional Officers.

Economy

Lucknow is not only a major market & trading city in Northern India, but is also an emerging hub for producers of goods and services. Being the capital of Uttar Pradesh state, the Government departments and the public sector undertakings are the principal employers of the salaried middle class. Liberalization has created many more opportunities in the business and service sector and self-employed professionals are burgeoning in the city. Lucknow also provides a good catchment area for the recruitment of quality personnel by information technology companies for the BPO hubs. The city is the headquarters of both the Small Industries Development Bank of India (SIDBI) and the Pradeshiya Industrial and Investment Corporation of Uttar Pradesh (PICUP). The Regional office of the Uttar Pradesh State Industries Development Corporation (UPSIDC) is also located here. The other business-promoting institutions that have a presence in Lucknow are the Confederation of Indian Industry (CII) and Entrepreneurship Development Institute of India (EDII).

Among the bigger manufacturing units, Lucknow has Hindustan Aeronautics Limited, Tata Motors, Eveready Industries and Scooters India Limited. Processing industries include milk production, steel-rolling units and LPG bottling. The city's small-scale and medium-scale industrial units are located in the industrial enclaves of Chinhat, Aishbagh, Talkatora and Amousi.

Real estate is one of the many booming sectors of the economy. There are several malls, residential complexes and business complexes throughout the city.

Traditionally, Lucknow has been a 'Mandi' town for mangoes, melons, and grains grown in the surrounding areas. Sugarcane-growing plantations and sugar industries are also in close proximity. Lucknow is famous for its small scale industries that are based on unique styles of embroidery, namely, Chikan and Lakhnawi Zardozi, both of which are significant foreign exchange earners. Chikan has caught the fancy of fashion designers in Bollywood and abroad. During the period of the Nawabs, kite-making reached a high level of artistry, and is still a small-scale industry. Lucknow has also been an industrial producer of tobacco products like 'Kivam', edible fragrances like 'attars' and handicrafts such as pottery, earthen toys, silver and gold foil work, and bone carving products.

Lucknow, with its excellent educational, commercial, banking and legal infrastructure, is witnessing rapid growth in information technology, banking, retailing, construction and other service sectors. All the major public and private sector banks of India, Reserve Bank of India (RBI), foreign banks and the big oil marketing companies have their presence in the city. The Ministry of Communications & Information Technology has set up Software Technology Parks of India in 2001 which is playing an important role to promote IT/ITes Units in the region. Insurance companies, both, public and private, as well as leading cellular phone companies are present in the city as well. Currently, biotechnology and information technology are the two focus areas to promote economic development in and around the city.

Education and Research

Lucknow is a hub of education and research with many premier institutions. Schools and higher educational institutions in Lucknow are administered either by the Directorate of Education, the UP government, or private organizations.

Higher education institutions in the city include several universities—University of Lucknow, Uttar Pradesh Technical University (UPTU), Dr Ram Manohar Lohiya National Law University (RMLNLU), Babasaheb Bhimrao Ambedkar University, Amity University and Integral

University; medical institutes like Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS), Chhatrapati Shahuji Maharaj Medical University (CSMMU), Sahara Hospital, Apollo Hospital and ERA's Lucknow Medical College; and management institutes like IIM Lucknow, Institute of Management Science University of Lucknow and Jaipuria Institute of Management.

Lucknow is famous all over India for its schooling. Public schools in Lucknow—which employ either English or Hindi as the language of instruction—are affiliated to one of two administering bodies: the Uttar Pradesh Board of High School and Intermediate Education (UPB), Allahabad or the Central Board for Secondary Education (CBSE), Delhi. Private schools in Lucknow—which employ either English or Hindi as the language of instruction—are affiliated to one of three administering bodies: the Uttar Pradesh Board of High School and Intermediate Education (UPB), Allahabad or the Indian Certificate of Secondary Education (ICSE), Delhi or the Central Board for Secondary Education (CBSE), Delhi. Lucknow is home to really old and prestigious schools.

Notable higher education or research institutes in Lucknow include Central Drug Research Institute (CDRI), National Botanical Research Institute (NBRI), Indian Institute of Toxicology Research (IITR) (Formerly: Industrial Toxicology Research Centre (ITRC)), Indian Institute of Sugarcane Research (IISR) and Birbal Sahni Institute of Palaeobotany, Geological Survey of India (GSI) and Bhartendu Academy of Dramatic Arts.

Sports

Lucknow has traditionally been a sports-loving city. In the past Pehlwani, Kabbadi, chess, kite flying, pigeon flying, cock fighting, Tanga race and Gulli Danda were popular pastimes. For decades Lucknow hosted the prestigious Sheesh Mahal Cricket Tournament. Today cricket, football, badminton, golf and hockey are among the most popular sports in the city.

The main sports hub is the K. D. Singh Babu Stadium which also has a world-class swimming and indoor games complex. The other stadiums are at Charbagh, Mahanagar, Chowk and Sports College. The Lucknow Golf Club, on the sprawling greens of La Martiniere College, is a famous golf cours.

Transport

The available multiple modes of public transport in the city are taxis, city buses, cycle rickshaws, auto rickshaws and CNG Buses. The city bus service is run by Lucknow Mahanagar Parivahan Sewa a division of Uttar Pradesh State Road Transport Corporation (UPSRTC).

Lucknow has good road, rail and air links with the rest of the country.The major bus terminus is Dr. Bhimrao Ambedkar bus station at Alambagh. Another important bus station is at Kaiserbagh. Earlier, another bus terminus operated at Charbagh, directly in front of the main railway station, but has now been reestablished as a city bus depot. The city is served by several Railway stations at different parts of the city. The main railway station is Lucknow Railway Station at Charbagh. It has an imposing structure built in 1923. Lucknow has a further thirteen railway stations viz. Alamnagar, Malhaur, Utretia, Transport Nagar, Dilkhusha, Gomti Nagar, Badshahnagar, Manak Nagar, Amausi, Aishbagh junction, Lucknow City, Daliganj and Mohibullapur.The Amausi International Airport serves as the city's main airport and is located about 20 km from the city centre.

THE SAMPLE

Since this is a small exploratory study designed to address preliminary questions of research related to middle childhood health and development, a small but adequate sample size of 300 children has been examined.

This study is a cross-sectional study. Therefore, an equal sample of children of each gender and age has been selected from the ten selected wards of the city out of the one hundred and ten wards of Lucknow city.

Further, while selecting the sample, emphasis has been laid on selecting children from differing socioeconomic status - income, wealth and family educational attainment in order to study the impact of these factors on health and development.

Table No. - 4.1

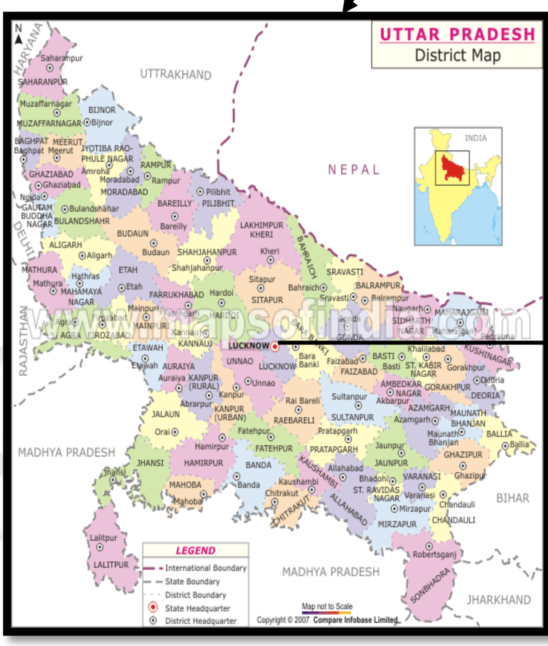
Sample Size

Age-groups	Number of the Respondents		
	Male	Female	Total
6 – 7 years	30	30	60
7 – 8 years	30	30	60
8 – 9 years	30	30	60
9 – 10 years	30	30	60
10 – 11 years	30	30	60
Total	**150**	**150**	**300**

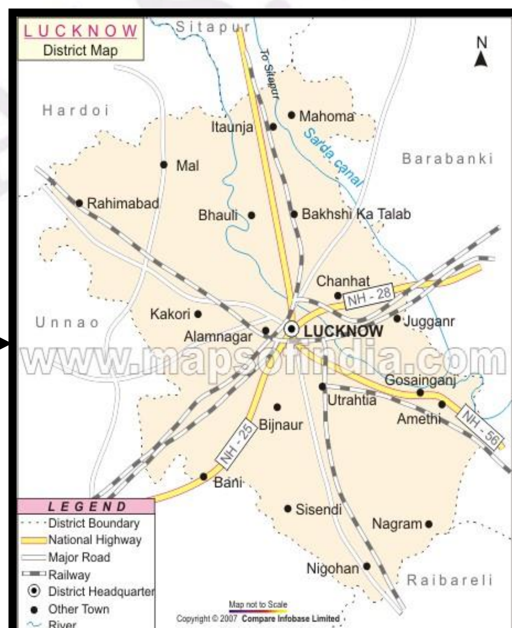
For this study, as outlined earlier the age class of 6-11 year old children (middle childhood stage) has been examined on health and development parameters. However, since there are important differences within this age group also, while undertaking statistical study, children of each age have been grouped separately (Table no.-4.1).

Map No. – 4.1
World

Map No. – 4.2
India



Map No. – 4.3
Uttar Pradesh



Map No. – 4.4
Lucknow District

Map No. – 4.5
Lucknow City

PASI CHILDREN:

SOCIO-ECONOMIC BACKGROUND

The chapter deals with the personal characteristics and socio-economic background of the Pasi children selected for the study. In any empirical study, information about the personal characteristics of the respondents is of great importance.

It includes age, sex, educational level, occupation, family structure, number of siblings, parent's educational & occupational level, family income, pattern of residence and such other variables, which impact directly on one's living conditions and overall health. Thus in social researches, analysis of these variables cannot be overlooked. The description gives a clear perspective of the social and cultural life of a particular section of the society to which they belong.

CHILD GROUPS

As described in Chapter – 4 (The Area and People), the sample of 300 Pasi children was selected and classified on the basis of sex and age. The category of the Pasi children includes the age class of 6-11 year old children. To know about their health problems, they have been further classified in different age groups, which vary from one age group to another (Figure no.-5.1).

The age groups have been divided with the intervals of one year, but the last figure of each group is repeated in next group because if the age of the person is a few days or months more, he/she gets included in the next group. For example, if the age of an individual is 7 years and a few months or exact 8 years, he has been included in the age group of 7-8 years, but if his age is 8 years and a few months, than he has been included in the age group of 8-9 years.

Figure No. - 5.1
The Age Composition

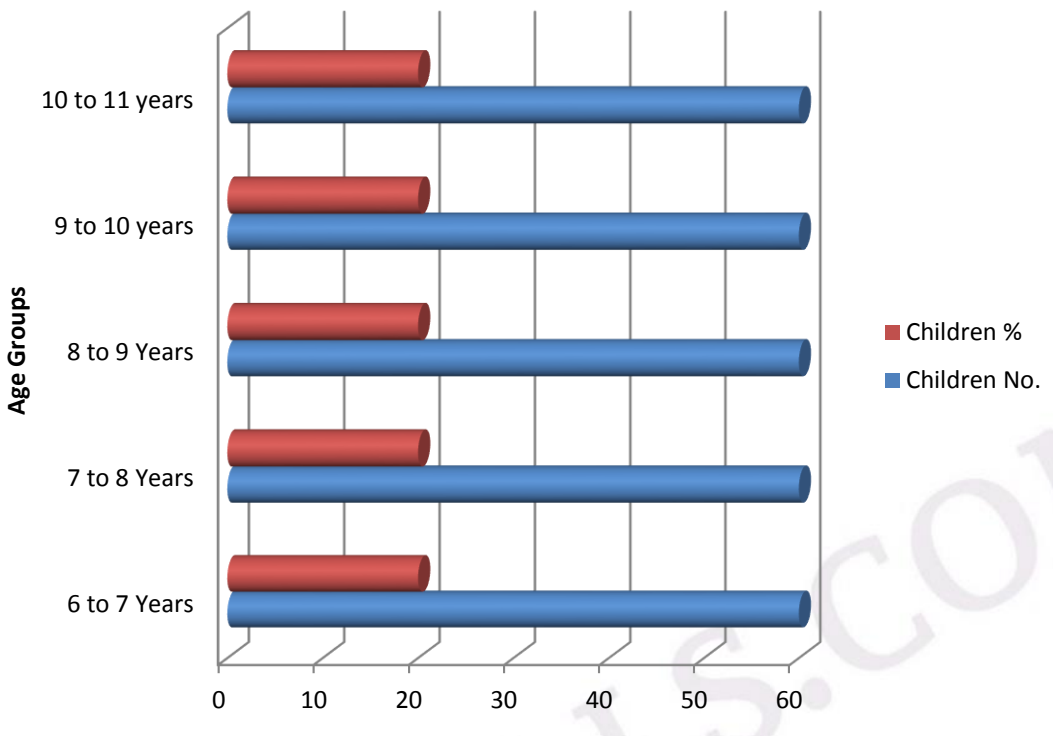
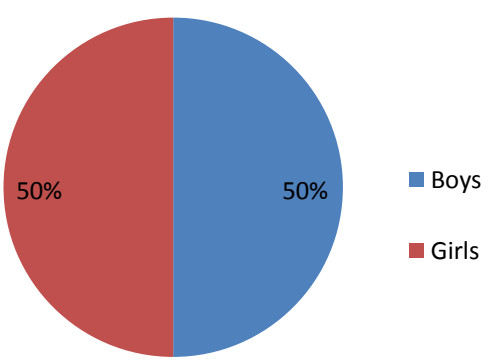


Table no.-5.1 shows that in all the age groups 60 children (20%) have been selected.

AGE AND SEX

For the present study, the same number of the boys and the girls has been taken (Figure no.-5.2). The reason, for selecting the equal number of both the male and female child, is to know about the gender difference in their health and health related problems.

Figure No. - 5.2
Gender Distribution



Along with it, these boys and girls have been further classified in different age groups to highlight their problems, according to their gender and advancing age.

Figure No. - 5.3
Age & Sex Composition

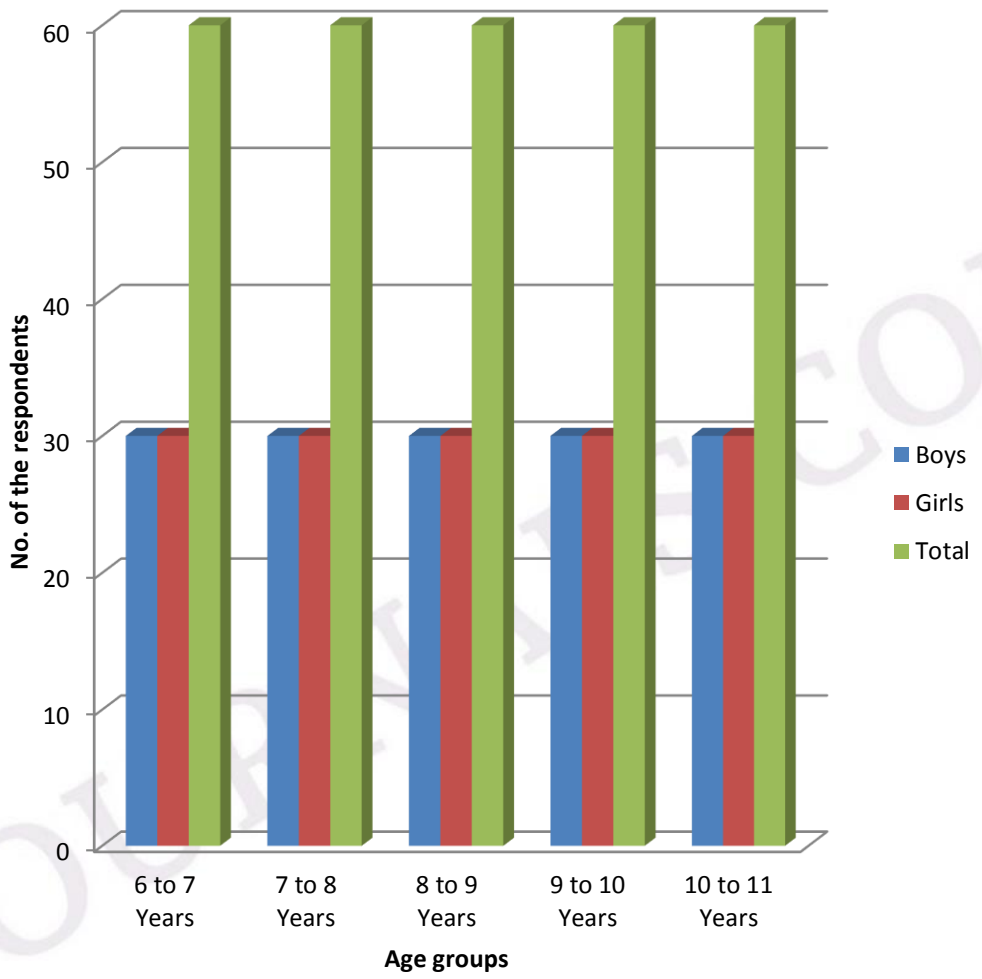
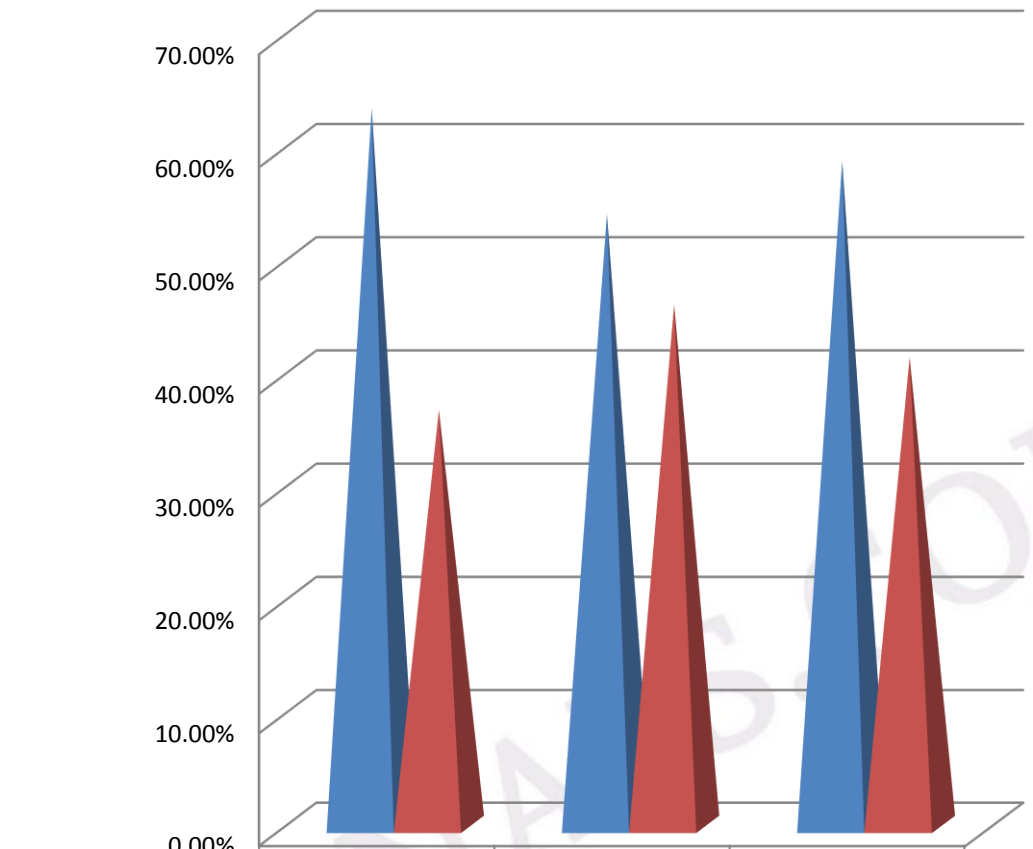


Figure no.-5.3 reveals the age wise sex composition of the children. The number of the boys and girls in each age group is the same, i.e., 30.

EDUCATIONAL STATUS

Education and health, these two aspects of culture are interlinked. If the child goes to school, he knows and learns several things about health, hygiene and sanitation, which sometimes he cannot learn in their own family environment, due to unawareness and lower educational level of their parents and other family members.

Figure No. - 5.4
Access to Education



	Boys	Girls	Total
Going to School	63.33%	54%	58.67%
Not Going to School	36.67%	46%	41.33%

Figure no.-5.4 shows the access to education of the Pasi children. According to it, overwhelming majority of the children (58.67%) are getting education in the school, while, (41.33%) children are deprive of this facility. Along with it, among those who are getting education in the school the percentage of the boys (63.33%) is higher than the girls (36.67%).

The main reason, for this gender difference in education is that some lower income group Pasi families believe that according to traditional norms men have to go outside for work and they manage the economic affairs of the families, while women always manage the household works. Therefore, education is a necessity for men not for women. Thus, girls should learn the household works. Hence, in some families girls are not sent to school, while in several families, due to poverty, they give preference to the boys for education.

Table No. – 5.1

Educational Status

S. No.	Age Group	Educational Status																	
		Going to School						Not Going to School						Total					
		Boys		Girls		Total		Boys		Girls		Total		Boys		Girls		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	6 - 7 Years	13	13.68	9	11.11	22	12.5	17	30.91	21	30.43	38	30.65	30	20.00	30	20.00	60	20.00
2	7 - 8 Years	14	14.74	13	16.05	27	15.34	16	29.09	17	24.64	33	26.61	30	20.00	30	20.00	60	20.00
3	8 - 9 Years	17	17.89	16	19.75	33	18.75	13	23.64	14	20.29	27	21.77	30	20.00	30	20.00	60	20.00
4	9 - 10 years	25	26.32	21	25.93	46	26.14	5	9.09	9	13.04	14	11.29	30	20.00	30	20.00	60	20.00
5	10 - 11 years	26	27.35	22	27.16	48	27.27	4	7.27	8	11.59	12	9.68	30	20.00	30	20.00	60	20.00
	Total	**95**	**100**	**81**	**100**	**176**	**100**	**55**	**100**	**69**	100	**124**	**100**	**150**	**100**	**150**	**100**	**300**	**100**

In case of access to school, the difference can also be seen in different age groups (Table no.-5.1). There is a gradual increase in the number of school going Pasi children with advancement in age. In the age groups of 6 to 8 years, mostly the children are not going to school, because of their parent's unawareness towards proper education from the early childhood. While, in the age groups of 8 to 11 years, the children are not going to school, either due to financial problems of the family or they are not ready to go to school for education in absence of proper guidance, as they have the fear of syllabus, teacher and exams. In case of financial problems, not only the children are getting deprive of school education, but they have to involve in several economic activities for raising their family income. Thus, they have no money and time for their education.

OCCUPATIONAL STATUS

Middle childhood is the age of holistic growth and development of the children, in all the dimensions, i.e, physical, mental and social. This is the stage when child goes to school and knows about their socio-cultural environment and gets the solutions of their several queries. These early experiences reflect in their personality. As, for a healthy personality, it is required that the person should be healthy, physically and mentally both. But, if the child is not going to school and he is bothered to do hard work for his survival, it always adversely affect his health, physically and mentally.

Figure No. - 5.5
Occupational Status

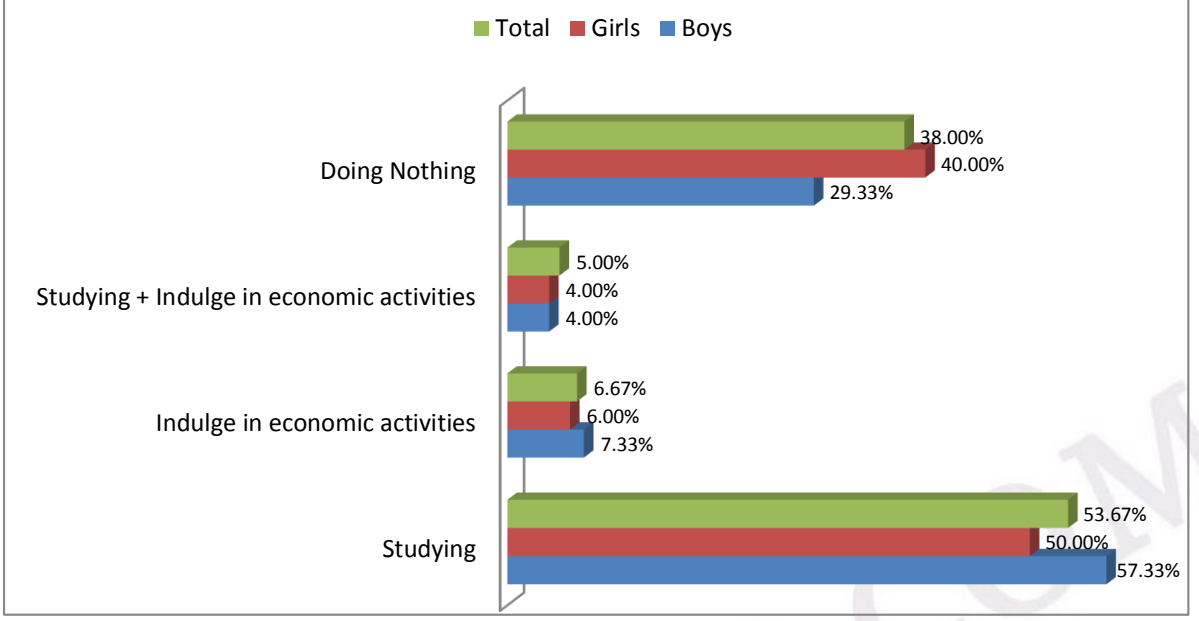


Figure no. 5.5 reveals that a large majority of the children are going to school (53.67%), followed by those, who are doing nothing (38%). 11.67% children are indulge in economic activities, due to the socio-economic problems of their family. Out of these, 5% children are indulge in some economic activity and also go for study, while 6.67% children are not getting education in the school and are bothered to do hard work for the fulfillment of their own basic needs and family requirements. Of these, most of the boys are working at hotels, shops or homes as helpers, while girls are mostly assisting their working mothers in babysitting and housekeeping at her working place.

In all the working categories, the number of the boys is higher than the girls, while among those who are doing nothing, the number of girls is higher. It clearly manifest that, however, there is gender discrimination in access to education, i.e, the preference is given to boys, but in the percentage of male child labour is also higher than the females. The traditional norm, that the males should perform work outside is the main reason of this difference. Therefore, those girls who are not doing anything, mostly helping their mothers in household works and look after their siblings.

FAMILY STRUCTURE

The place of the family in the life of an individual needs no explanation but the place of family in the life of a child is something ought to be explained because this is the phase when he needs more time and care from their parents and other family members. The early experiences imbibed in the personality of any individual and family is the earliest school of a child, where he learns the socio-cultural behaviour, as socialization and enculturation are its most important functions.

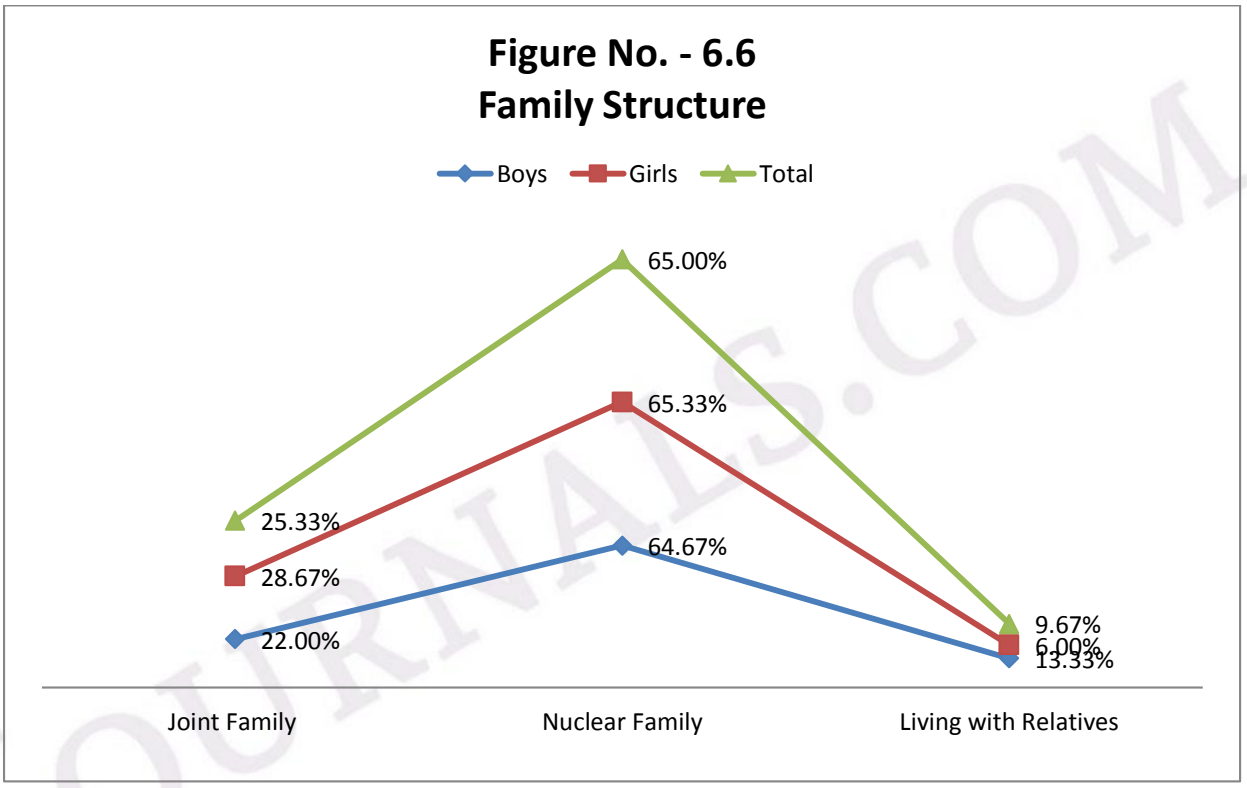


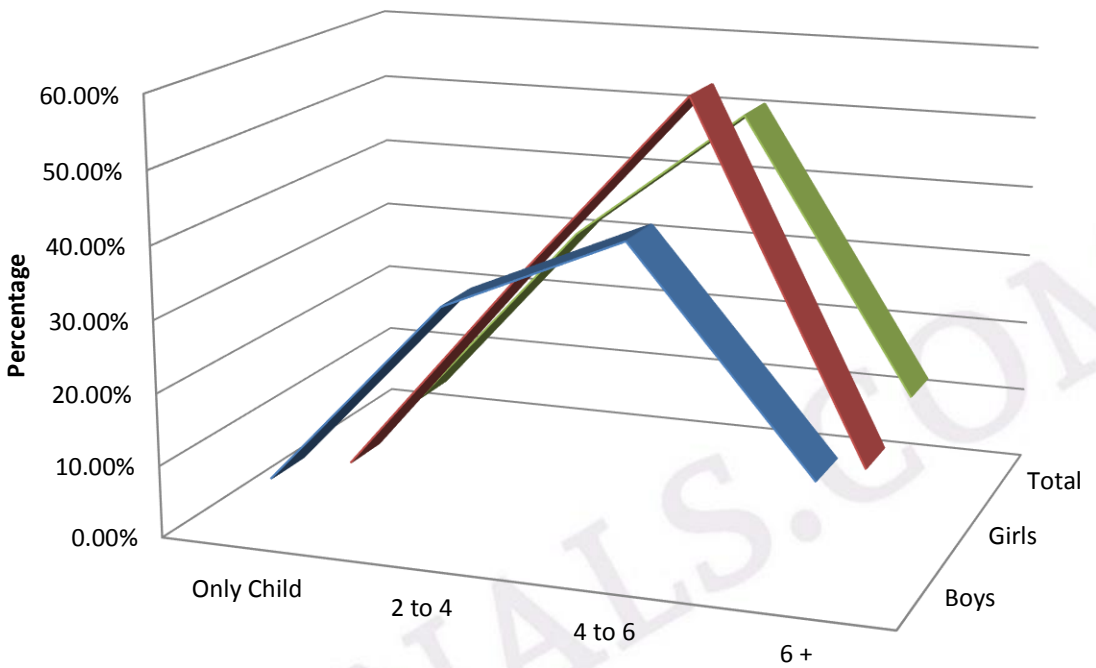
Figure no.-6.6 shows the type of family in which these Pasi children are living. According to it, most of the Pasi children are living in nuclear families (65%), which is an urban characteristic and 25.33% are living in joint families, while 9.67% children are living with their relatives, due to some socio-economic problems, as either they are studying or working here.

SIBLINGS IN THE FAMILY

Every person needs some companionship in all stages and phases of life. The siblings play an important role. Child learns several things living with their siblings. But, sometimes, if an individual has many children, he cannot give sufficient time to each child. Along with it, in absence of sufficient socio-economic means for living, he cannot give a comfortable and healthy life to their all offspring. Thus, number of siblings has significant impact on both the

rearing and sharing. Therefore, the number of siblings affects the he health care of the child in the family.

Figure No. 6.7
Number of Siblings



	Only Child	2 to 4	4 to 6	6 +
Boys	7.33%	33.33%	44.00%	15.33%
Girls	2.00%	30.67%	58.00%	9.33%
Total	4.67%	32.00%	51.00%	12.33%

In most of the Pasi families, the number of the siblings was 4-6 (51%), followed by 2-4 (32%), 6+ (12.33%). While, there are only 4.67% children, who are the only child of their parents.

PARENT'S EDUCATION

Educated parents not only can give better life and future to their children, their educational level but also affects the health of the child because well educated parents can understand the modern trends in the field of health and diseases, along with their traditional ways and can rationally decide what is better for their child's health.

Here, in 2.33% cases the father is not alive and in 3% cases the mother. But the educational level of all the parents has been noted, which helps in understanding the family's educational environment.

Figure No. 6.8
Parent' Educational Status

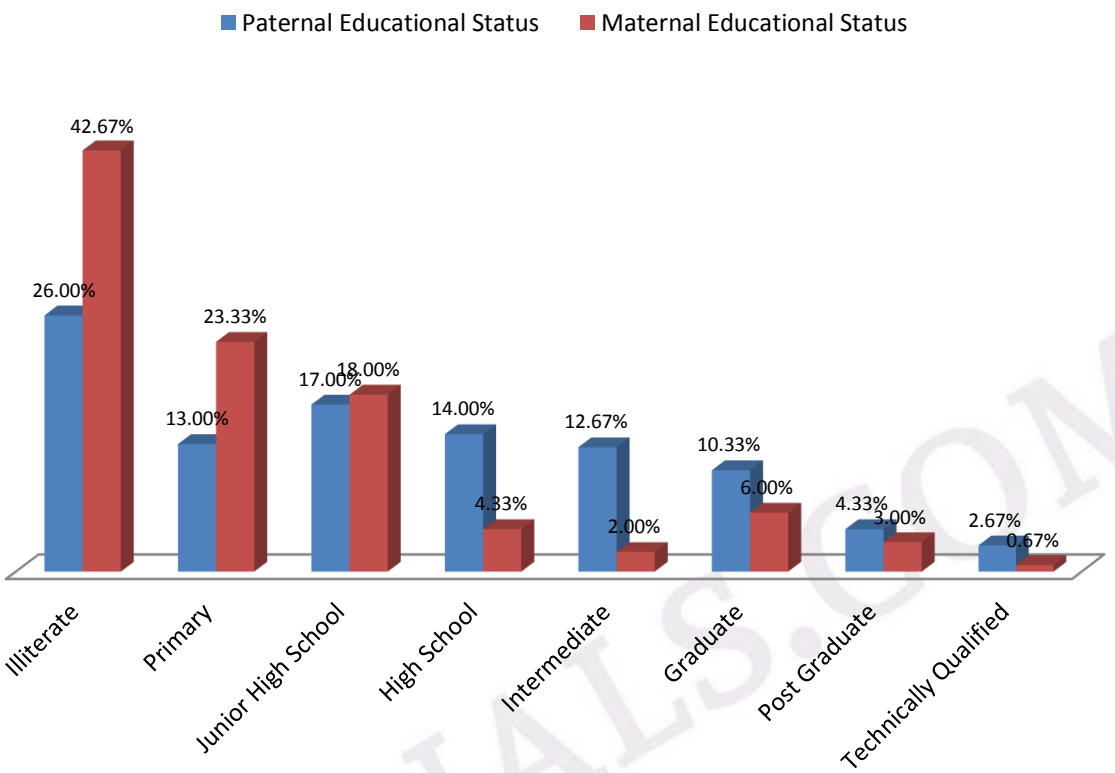


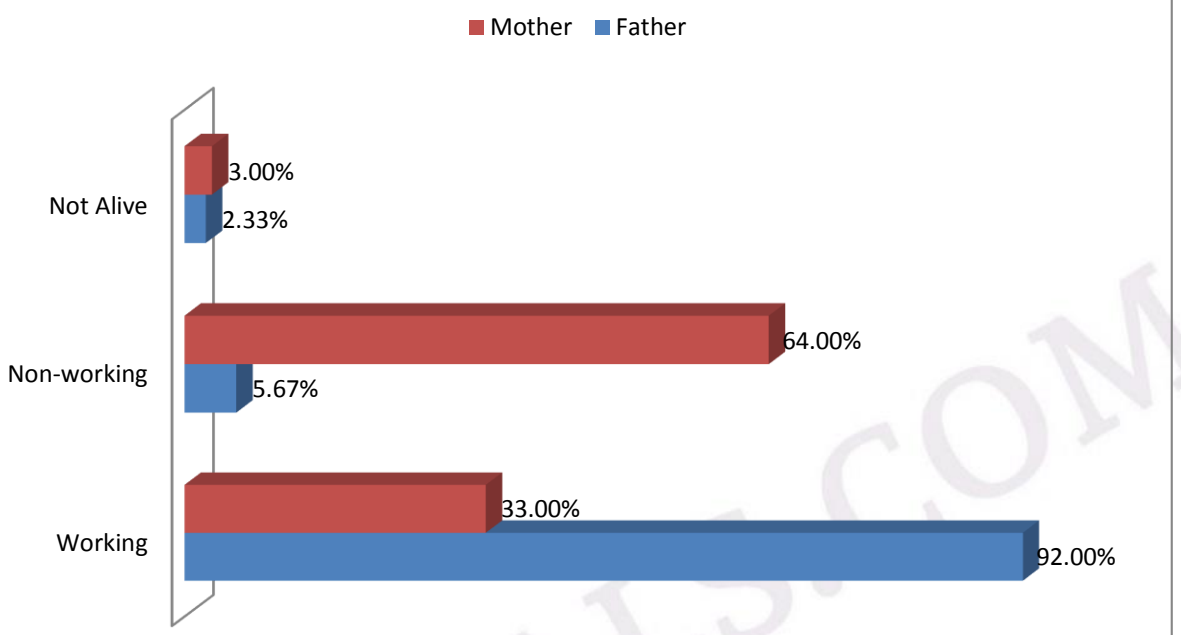
Figure no.-6.8 shows the parent's educational level. According to it, among the fathers, 26% are illiterate, while in case of mothers, 42.67% are illiterate. The largest group among the literate fathers is constituted by those who are educated up to junior high school (17%), followed by those who are educated up to high school (14%), primary (13%), intermediate (12.67%), graduate (10.33%) and post graduate level (4.33%). 2.67% are technically qualified. In case of literate mothers, the largest group is constituted by those who are educated up to primary (23.33%), junior high school (18%), graduate (6%), high school (4.33%), post graduate level (3%) and intermediate (2%). Only 0.67% mothers were technically qualified. Thus, the paternal literacy level is 74% and maternal literacy level is 57.33%.

PARENT'S OCCUPATION

Occupational status of the parents is always reflected in the child care. Whether the parents have proper earning to fulfill the requirements of their children or not? Have they got proper time to look after their children or not? These are some important factors which have their own impact on the rearing

and caring of a child. Here, the present occupational status of the parents has been divided into two categories, i.e., working or non-working.

Figure No. 6.9
Present Occupational Status of the Parents



According to Figure no.-6.9 father of 92% children are working, while in 5.67% cases, they are not presently engaged in any employment, due to their socio-economic and health problems. In case of maternal occupation, it was found that 64% mothers were non-working, i.e, they are simply house wives, while 33% mothers were engaged in some type of occupation. In 3% cases, mothers are not alive, while father of 2.33% children are not alive.

FAMILY INCOME

Income of the family and health care of the children are closely related aspects. In case of better earning, the parents can provide better health care facilities to their children. In the present study it is found that approximate 2/3 families, the father is working, while in approximate 1/3 families the mother is also working. There are several households, in which both the parents are engaged in economic activities. Along with parents, children are also giving contribution in raising the family income in several families. Like this, in some joint families more than two members of the family are earning. Therefore, to know the families' economic status, the whole family income has been noted here.

Figure No. - 6.10
Family Income

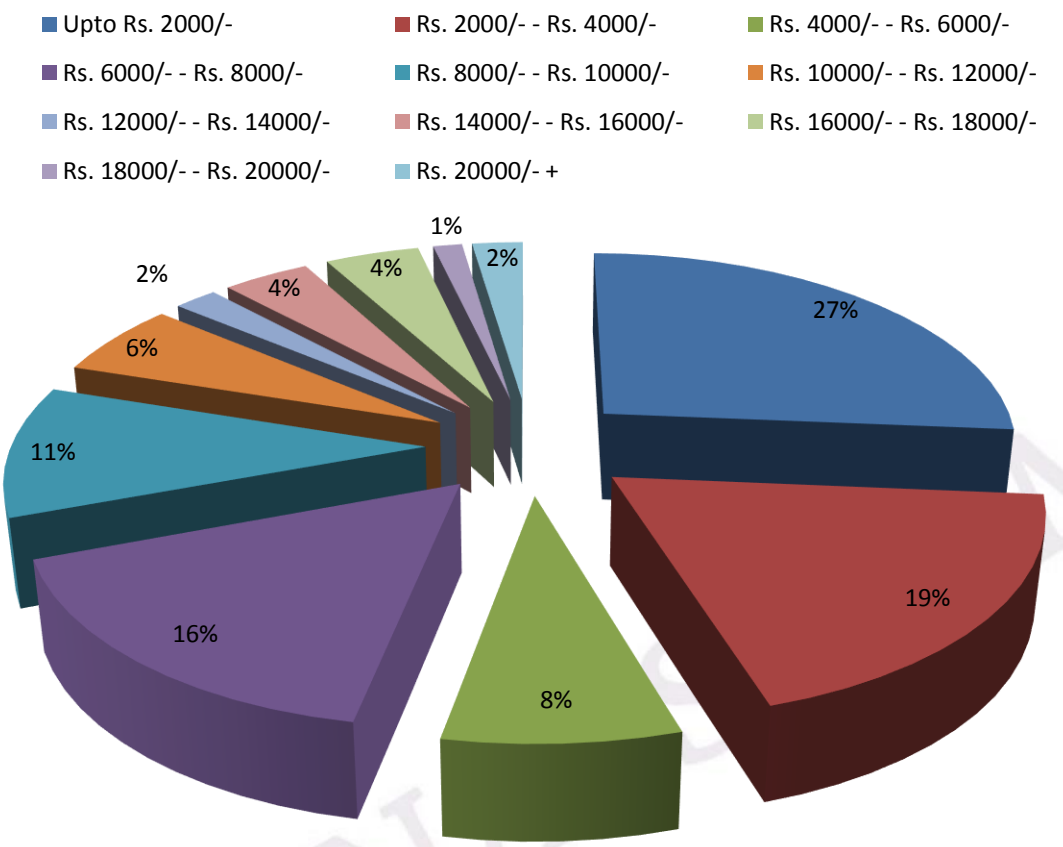


Figure no.-6.10 reveals the monthly family income of the Pasi children. According to it, most of the families' monthly income is upto Rs. 2000/- (27%), followed by Rs. 2000/- to Rs. 4000/- (19%), Rs. 6000/- to Rs. 8000/- (16%), Rs. 8000/- to Rs. 10000/- (11%), Rs. 4000/- to Rs. 6000/- (8%), Rs. 10000/- to Rs. 12000/- (6%), Rs. 14000/- to Rs. 16000/- (4%), Rs. 16000/- to Rs. 18000/- (4%), Rs. 12000/- to Rs. 14000/- (2%), Rs. 20000/- + (2%) and Rs. 18000/- Rs. 20000/- (1%). Thus, in majority of the 54% families, the total monthly income is upto Rs. 6000/-, followed by Rs. 6000/- to Rs. 12000/- (33%), while only 13% families' monthly income varies from Rs. 12000/- to Rs. 20000/- and more.

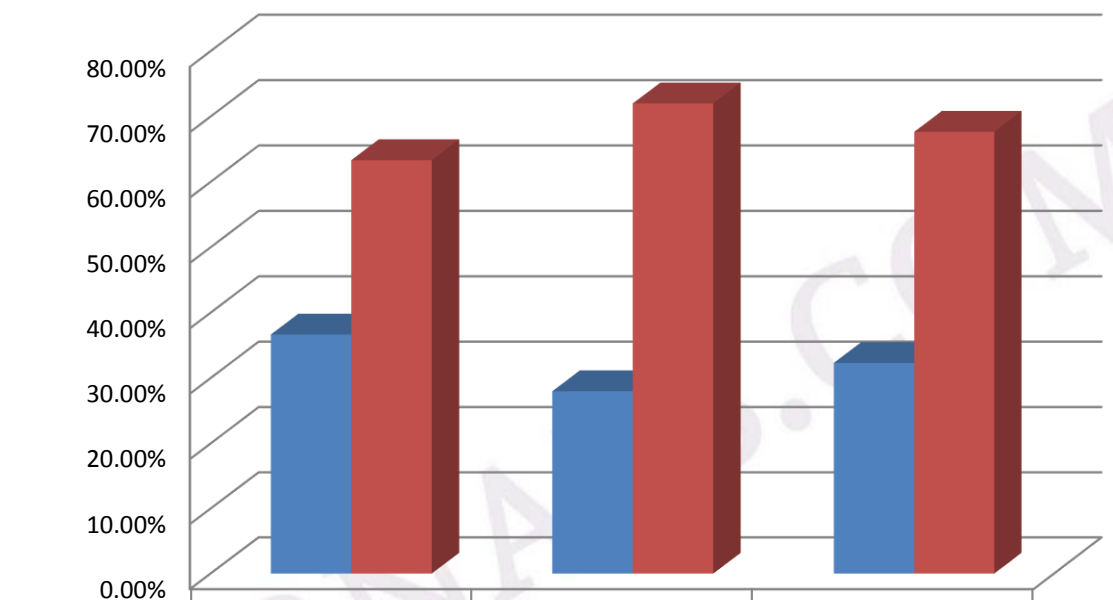
PATTERN OF RESIDENCE

Type of house not only reveals the socio-economic status of the family, but it is also closely related to health of the family members. Proper living arrangements related to hygiene, sanitation and ventilation, symbolize good health.

As the study was conducted on all the socio-economic categories of Pasi families in Lucknow, therefore, it was found that some Pasis are living in well

furnished houses in good colonies of the city, while many of them are living in slums. Several Pasi families have no permanent houses, they are living in huts, which they have built on road side open plots. Here, the type of residence has been broadly divided into two categories: *Kaccha* houses and *Pucca* houses (Figure no.-6.11).

Figure No. - 6.11
Pattern of Residence



	Boys	Girls	Total
Kaccha House	36.67%	28.00%	32.33%
Pucca House	63.33%	72.00%	67.67%

Figure no.-6.11 shows that most of the Pasi children are living in *Pucca* houses (67.67%), while 32.33% are living in *Kaccha* houses.

HEALTH AND ENVIRONMENT

Health is 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity' (WHO, 1948). Health is one of the principle assets of every human being, but achieving and maintaining health is an ongoing process. Effective strategies for staying healthy and improving one's health include several elements. According to Mukherjee and Nandy (1986), health is not only the result of interaction between an individual's hereditary contribution with his natural and cultural environment but it is largely determined by the biological and cultural adaptation and evolution of the society and the population. Thus, health status of different communities is influenced by their way of life including their social and economic conditions, nutrition and living conditions, dietary habits, housing, education, child rearing practices, socio-religious beliefs, taboos and superstitions etc.

CONCEPT OF HEALTH

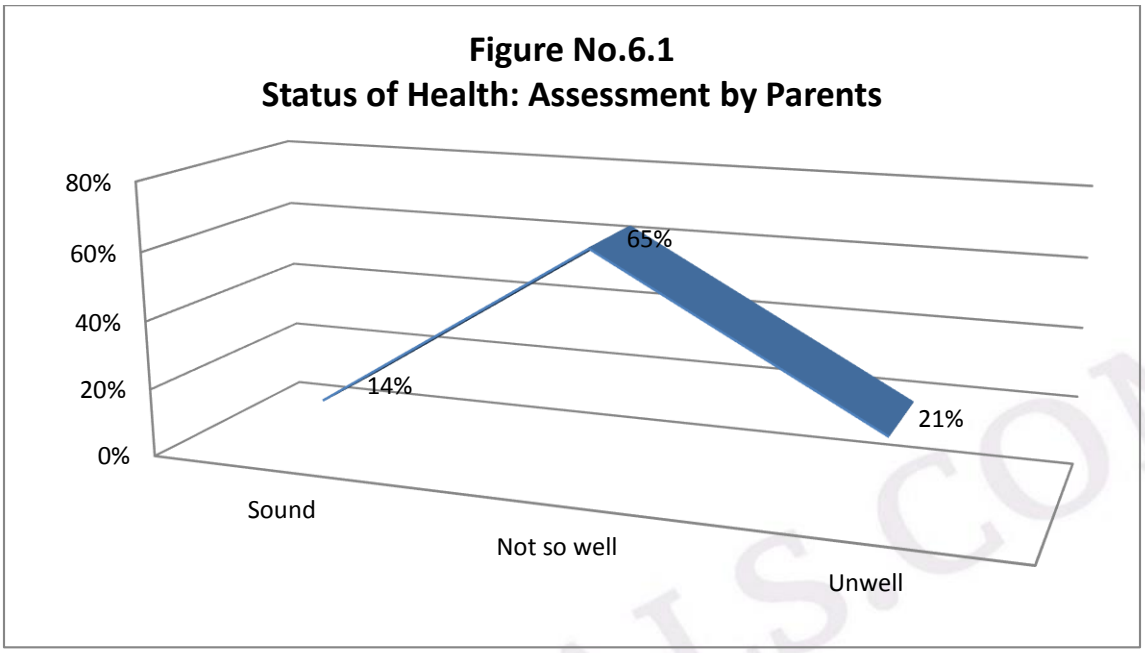
In the present study, it is found that generally the Pasi believe that a person, who is physically fit and active, is a healthy person. They feel that health cannot be achieved merely by taking a pill every day, or by observing a few restrictions.

ASSESSMENT BY THE PARENTS

Figure no.-6.1 reveals the assessment of the Pasis about the health status of their children. The assessment has been classified into three categories: sound, not so well and unwell. 'Sound' health was reported by those parents, whose children were not suffered from any health problems for 6-8 months. Most of the cases, in which 'unwell' health condition was reported, the children were suffering from some kind of diseases at the time of interview. While, 'not so well' condition was reported, where the

children more often suffered from minor ailments, like, cold & cough, fever and indigestion etc.

Figure No.6.1
Status of Health: Assessment by Parents



According to Figure no-6.1, an overwhelming majority of the Pasi parents (65%) have reported 'not so well' health condition of their children, followed by those, who have reported 'unwell' health condition (21%). While, 14% persons have stated that their children have 'sound' health. There is no remarkable difference visible between the assessment about the health of boys and girls.

ASPECTS RELATED TO HEALTH

The medical history of man can only be understood through an in-depth study of the different socio-cultural systems of the human being, as health and disease are indispensably related to the bio-cultural spectrum of a community in a particular environment. The cultural practices of any community have direct effect on the health. Therefore, various aspects of the life and culture related to their health and sickness have been studied here, which are as follows:

Dwelling Pattern

The form and structure of houses are directly related with sanitation and health. Good arrangement of houses symbolizes good health.

Figure No. - 6.2
Type of Residence

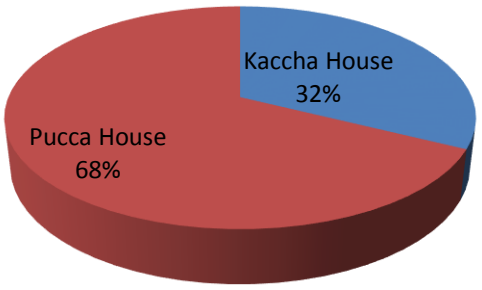


Figure no. 6.2 shows that majority of the Pasi families (67.67%) are living in *Pucca* houses. Of these, some houses are well furnished and well maintained, situated in various localities of the city. While, many of them are one or two room *Pucca* houses with tin shades or roof made up of *Patias*, in lower income group colonies, with less facilities. Some *Pucca* houses are in slums, in which the condition of ventilation and sanitation is very poor.

32.33% families are living in one room *Kaccha* houses or huts. Therefore, there is no separate kitchen, bathroom and toilet in their houses. There is no proper system of drainage and ventilation in their houses. The water supply through tap in their houses is not available. They use hand pumps in their locality. The toilet facility is not available, thus, mostly people use public toilets or go in open for defecation.

Hygiene

Most of the Pasi families are aware of their personal hygiene practices, only a few are not conscious in this direction. Mostly they use

toothpaste to clean their teeth from tooth brush. Sometimes they clean their teeth with finger. Most of the people take regular bath and they wash their clothes. But in some lower income group families, these people do not pay attention towards the hygiene of their kids. Their children are seen wearing dirty clothes and playing at unhygienic places.

In *Kaccha* houses, all the activities are restricted to one room and some open areas. As, there is no separate kitchen in their houses, therefore, they cook their food in open areas on *Kaccha chulha* (mud hearth). They wash their utensils with soaps or ash. The domestic hygienic conditions are not so good. Unawareness and unhealthy practices clubbed with the poor socio-economic conditions manifest themselves in the form of unhygienic surroundings at community level. They throw their garbage on the empty lands or plots nearby. There is no proper drainage system. There is no community level effort made for improving the hygienic condition of their habitat.

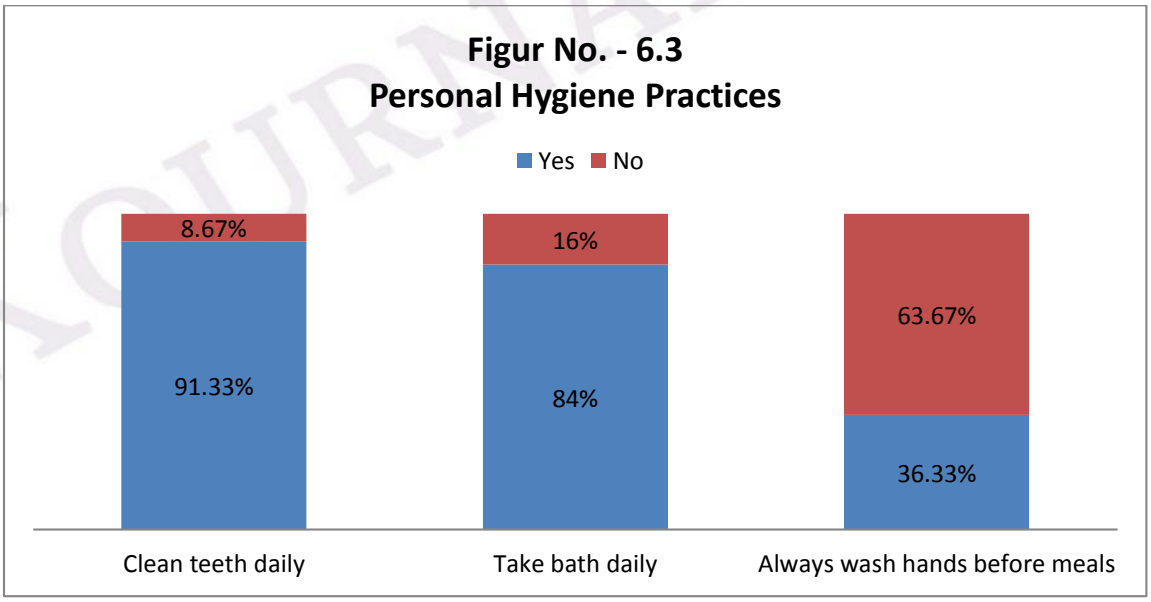


Figure no.-6.3 reveals the level of personal hygiene practices among the Pasi children. According to it, overwhelming majority of the children clean their teeth daily (91.33%) take bath daily (84%) and only 36.33% always wash their hands before taking meals.

Birth and Child Care

Most of the Pasi families are utilizing maternity and child health services, provided by the government. For their delivery, overwhelming majority of the women (in 72.67% families) go to the government hospitals, where free delivery facility is available for people living below poverty line. Along with it, in 'Janani Suraksha Yojana', free medicines are provided to them and some money is also given. But the percentage is very meager of them who are not aware about these facilities, they do not get benefitted and the deliveries are conducted at home. In the case of delivery in hospital, the parents from lower income group families generally vaccinate their newly born baby but later on, they do not take their child to hospital for vaccination for the booster doses. However, the Government workers come to their places to give Polio drops to the children time to time.

Figur No. - 6.4
Child Birth: Access to Hospital

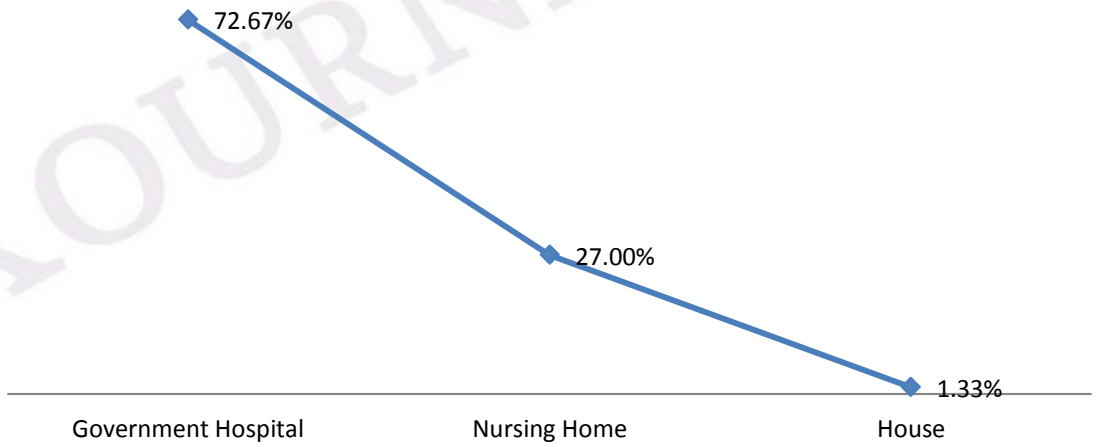
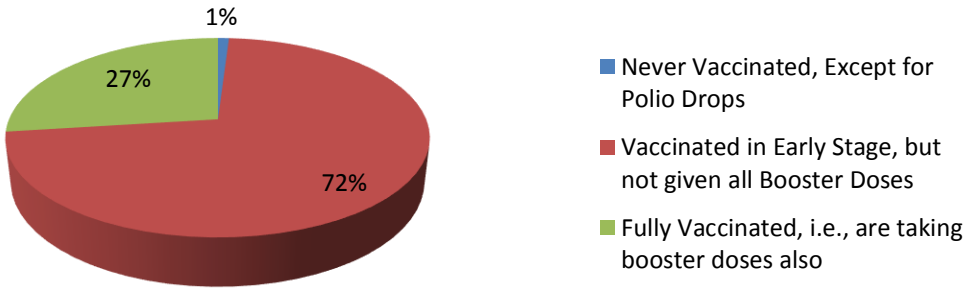


Figure no.-6.4 reveals that only 20% people go to the government hospitals for delivery and 5% opt the private nursing homes, while 75% deliveries take place at home. Among them, in most of the cases, the children are breast fed for more than three years. There is no fixed duration for sucking the baby.

Figure No. - 6.5
Status of Vaccination among Children



According to figure no.-6.5, 27% children are not only vaccinated after birth in hospital, but also taking booster doses. While, 72% children had vaccinated in infant stage, but due to unawareness and socio-economic problems of their parents, they could not completed follow up booster doses. As, the Polio drops are provided to each children at their own home by the government and NGOs, therefore there was no any child which had not taken polio drops. So, 1% children were, however, taken polio drops, but except for it they were never vaccinated for other diseases, as their mothers were delivered at home and had not taken any medical guidance and suggestions for delivery and child care.

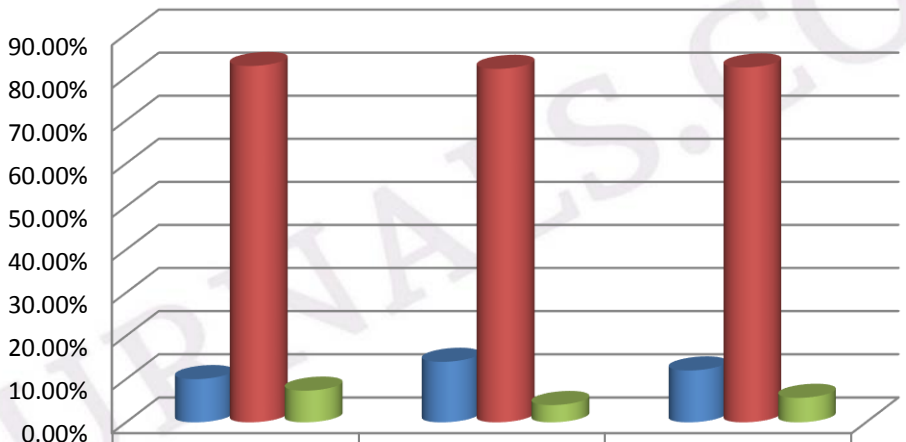
Food Habits and Nutrition

These people are both vegetarian as well as non-vegetarian in their food habits. They took wheat, rice, *arhar, jowar* and *bajara* as their staple cereals. In non-vegetarian food they take fish, mutton and chicken. In lower income group families, people take pork also. They do not take non-vegetarian food daily, as most of them cannot afford it. Their daily diet consists of *roti, daal, chawal* and *sabji*. They use mustard oil as cooking medium. They cook non-vegetarian food on special occasions, i.e., social gatherings, ceremonies, feasts and festivals. Normally males take heavy diet than female. In lower income group families, due to poverty and lack of awareness, their food do not include nutrients, like, milk and fruits in their

diet, even, no special care is taken for the diet of children and pregnant women.

It was reported that, generally, in middle income group families, it is believed that three meals (including breakfast) are the sufficient food for the whole day, while lower income group families believe that two meals are sufficient. Another criteria of sufficient food intake is related with 'Satisfaction', i.e., whether the person is satisfied or not. The number of meals in the regular diet of the Pasi children is shown in the Figure no.6.6.

Figure No. - 6.6
Diet Pattern



	Boys	Girls	Total
One meal	10.00%	14.00%	12.00%
Two meals	82.67%	82.00%	82.33%
Not regular meals	7.33%	4.00%	5.67%

According to Figure no.6.6, a majority of the children (82.33%) are taking two meals in a day, followed by those who are taking one meal in a day (12%). While, 5.67% children have reported that there is no restrict diet pattern, as the meals depend on the availability of the food and time.

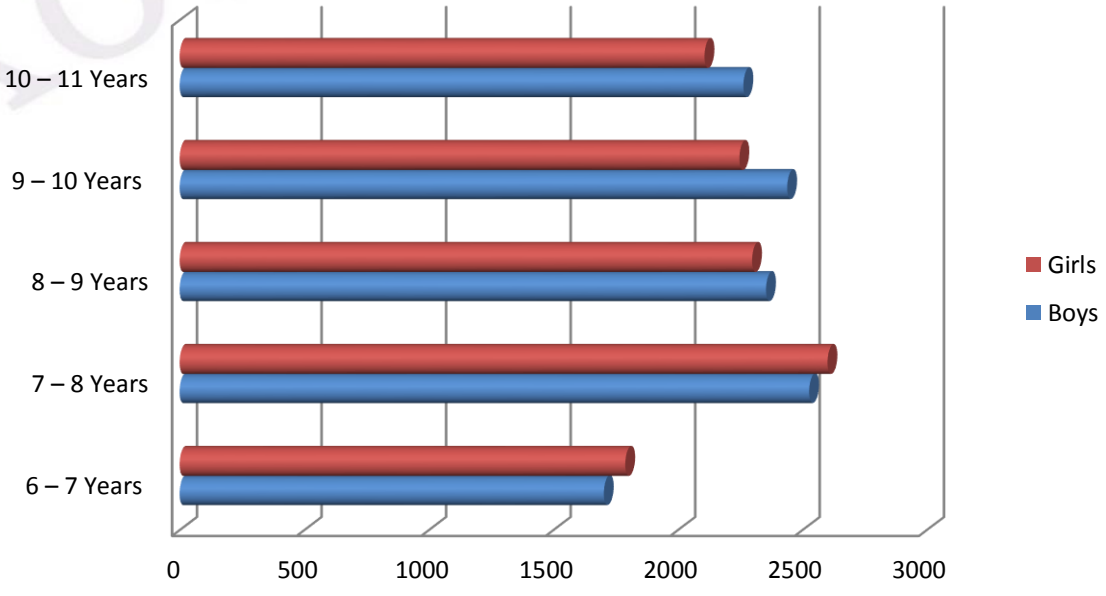
However, 82.33% children are taking two meals in a day, but due to the unawareness and poverty, most of the children are not properly nourished (Table no.-6.1). Nourishment and balanced diet go hand to hand

and a little knowledge about the balanced diet resulted in improper nourishment.

Table No. – 6.1
Per Day Calorie Intake

S. No.	Age Groups	Sex	Number of Individuals	Mean (Calorie)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6-7 Years	Boys	30	1703.02	316.80	129.33	182.90
		Girls	30	1789.01	201.91	82.43	116.57
2	7-8 Years	Boys	30	2527.26	239.26	97.68	138.13
		Girls	30	2601.23	273.73	111.75	158.04
3	8-9 Years	Boys	30	2354.16	213.81	87.29	123.44
		Girls	30	2298.15	227.16	92.74	131.15
4	9-10 Years	Boys	30	2439.07	346.80	141.58	200.22
		Girls	30	2247.20	349.29	142.60	201.66
5	10-11 Years	Boys	30	2263.26	224.91	91.82	129.85
		Girls	30	2107.18	369.48	150.84	213.32

Figure No. - 6.7
Per Day Calorie Intake



Per day calorie intake has been calculated through 'Twenty-four Hour Recall Method', shown in Table no.-6.1 & Figure no.-6.7, has also been compared with standard value (Swaminathan, M., 1982). Following conclusions are drawn:

1. 6-7 Years Age Group
   - The boys take 1703.02 ± 316.80 calorie per day which is less than the standard value 1800.00 calorie.
   - The girls take 1789.01 ± 201.91 calorie per day which is less than the standard value 1800.00 calorie.

2. 7-8 Years Age Group
   - The boys take 2527.26 ± 239.26 calorie per day which is more than the standard value 2400.00 calorie.
   - The girls take 2601.23 ± 273.73 calorie per day which is more than the standard value 2400.00 calorie.

3. 8-9 Years Age Group
   - The boys take 2354.16 ± 213.81 calorie per day which is less than the standard value 2400.00 calorie.
   - The girls take 2298.15 ± 227.16 calorie per day which is less than the standard value 2400.00 calorie.

4. 9-10 Years Age Group
   - The boys take 2439.07 ± 346.80 calorie per day which is more than the standard value 2400.00 calorie.
   - The girls take 2247.20 ± 349.29 calorie per day which is less than the standard value 2400.00 calorie.

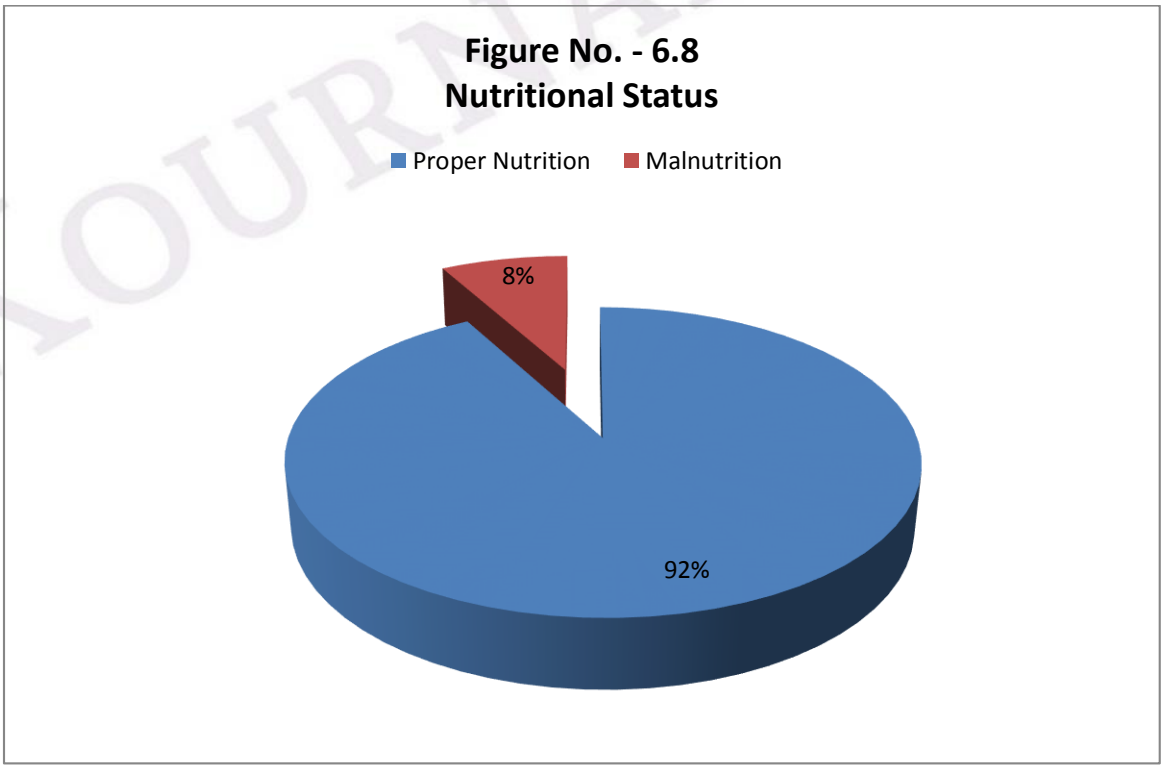
5. 10-11 Years Age Group
   - The boys take 2263.26 ± 224.91 calorie per day which is less than the standard value 2400.00 calorie.
   - The girls take 2107.18 ± 369.48 calorie per day which is less than the standard value 2400.00 calorie.

Thus, the children are not getting proper nutrition according to their age, which is affecting their growth and development, as the under-nutrition retards their physical and cognitive growth. So that, these undernourished children can fail to grow up to their full genetic potential.

The quantity and quality of food stuff in the daily diet of the children is varying. In some families, the parents are aware about the proper nutrition of their children. They try to provide them various nutrients in proper amount, as they are educated, aware and financially capable. While, in most of the families, due to socio-economic problems and unawareness of the parents, the children are not getting balanced diet according to their age.

Malnutrition was reported among most of the children, which is not only one of the largest causes of morbidity, but is also retarding their complete growth. In most of the cases, it was in the form of under-nutrition and imbalanced diet, while in several cases the children were suffering from specific deficiency.

Figure No. - 6.8
Nutritional Status

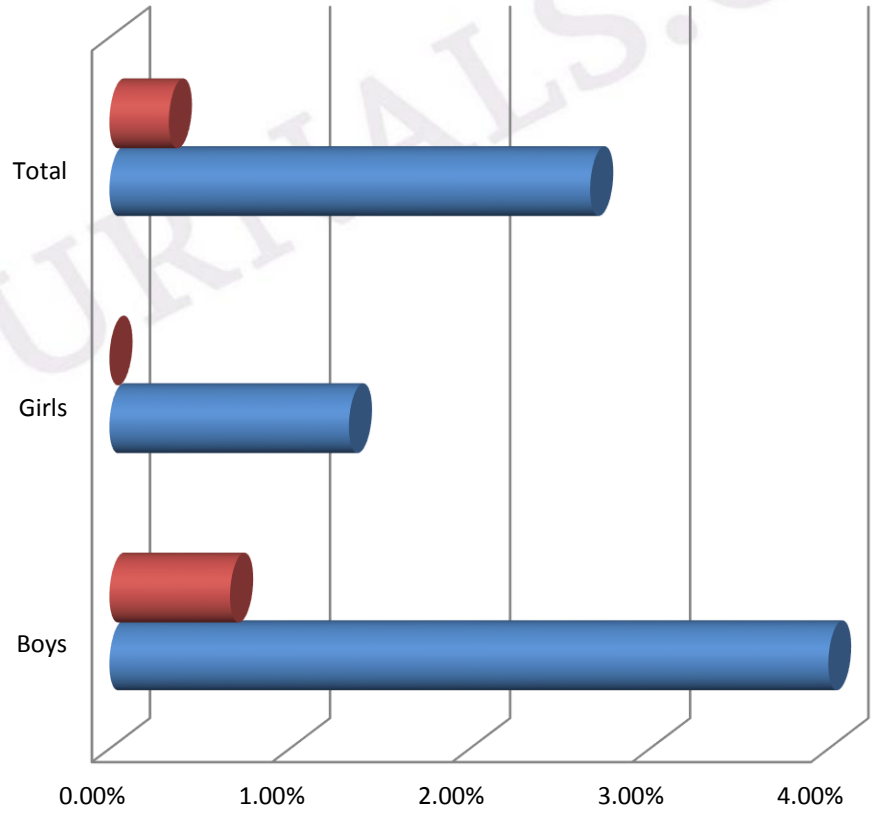


Nutritional status of the children shows that only 8% are taking proper diet, while overwhelming majority, i.e., 92% are malnourished and taking imbalanced diet (Figure no.-6.8).

Unhealthy Practices

Intake of liquor, *pan masala* & *gutka* and *bidi* & cigarette smoking are prevalent. Even the women, adolescents and children are also addicted of these unhealthy practices. All these things cause bad effects on the health of Pasi children, either directly or indirectly. Even in some lower income group families, they spend the major part of their income on these things.

Figure No. - 6.9
Unhealthy Practices: Addiction



	Boys	Girls	Total
Bidi & Cigarette	0.67%	0	0.33%
Pan masala & Gutka	4.00%	1.33%	2.67%

Figure no.-6.9 shows the percentage of unhealthy practices among the Pasi children, it reflects that a few boys (4%) and girls (0.67%) have the addiction of *pan masala* and *gutka*, while only one boy is addicted to *bidi* and cigarette. These children belong to the age group of 8-11 years. All of them are from lower income group families and are engaged in some type of economic activity.

MINOR AILMENTS AND COMMON DISEASES

Disease is a pathological condition of a part, organ or system of an organism resulting from various causes, such as, infection, genetic defect or environmental stress, and characterized by an identifiable group of signs and symptoms. For the survival of organism, it is necessary that the disease should be cured. In absence of any treatment, it can cause death. However, there are a few diseases which are not dangerous or fatal and only require simple treatment, which can be done at home. Minor ailments are diseases which are not dangerous and require simple treatment and subside on their own after sometime. Children keep getting one ailment after the other, as after cough and cold, there might be boils on the skin or diarrhoea or an earache or something else. These are not serious problems and somebody can easily deal with them at home. Children are more vulnerable to these ailments. They catch diseases easily and recover fast too.

In the present study, those minor ailments and common diseases are recorded, from which the children were suffered in the whole cycle of the last one year. The minor ailments reported among them are cold & cough, fever, pain in abdomen, eye infection, ear infection, skin infection, worm infection and dental carries (Figure no.-6.10). While, the common diseases found among them are diarrhoea, dysentery, pneumonia, malaria, chicken pox, measles, diphtheria, whooping cough, mumps, jaundice, tuberculosis and dengue (Figure no.-6.11).

Figure No. - 6.10
Minor Ailments

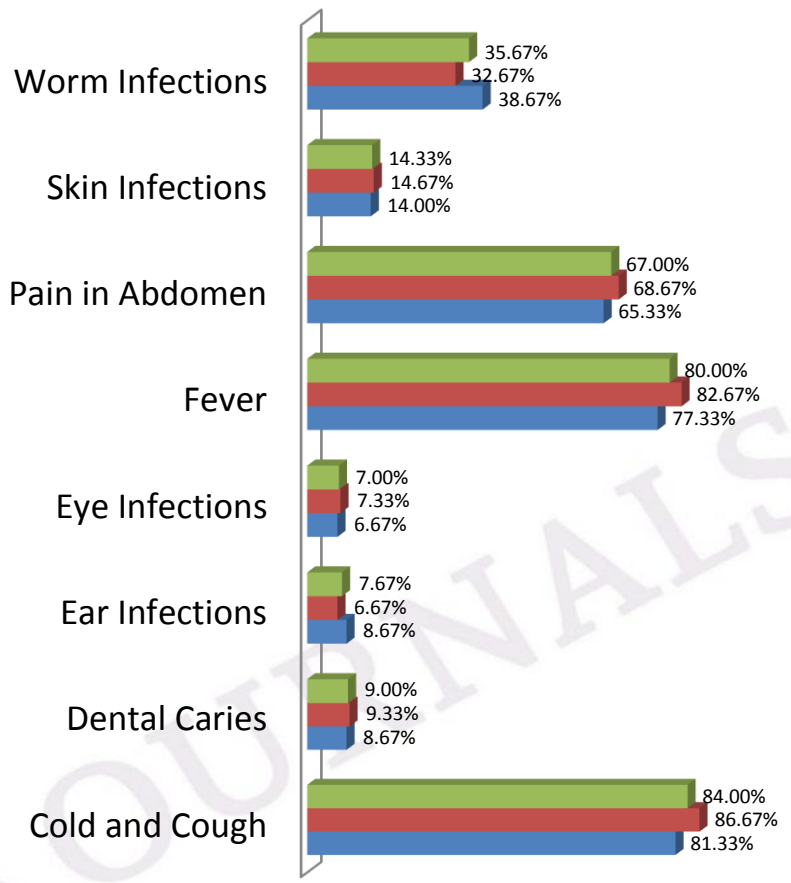


Figure No. - 6.11
Common Diseases

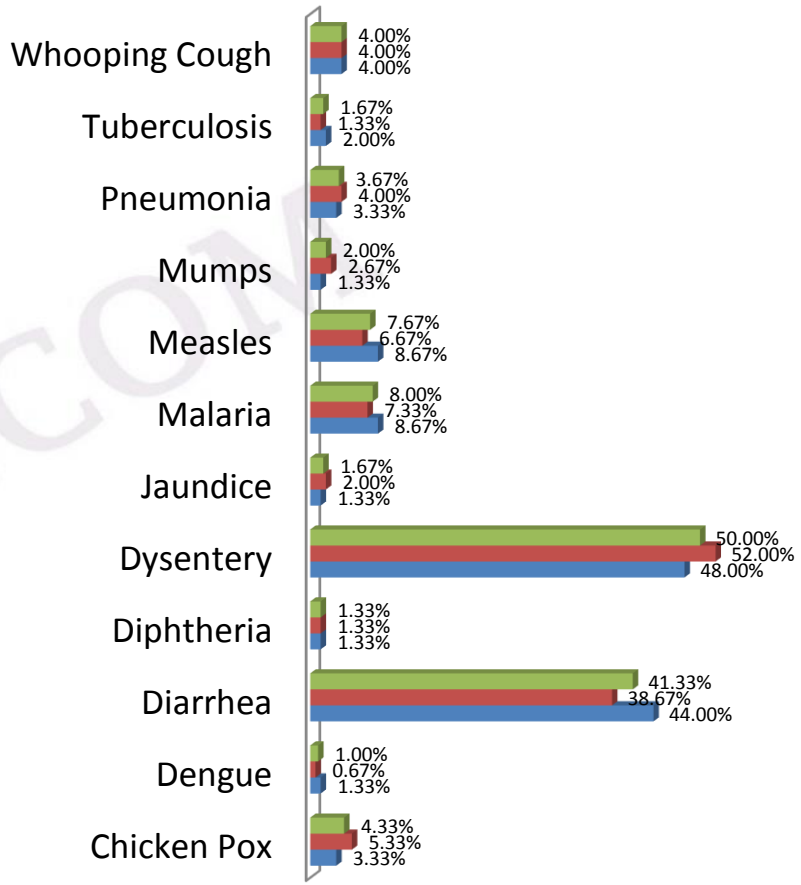


Table No. – 6.2

Minor Ailments and Common Diseases

S.No.	Ailments and Diseases	Age Group	Children Suffering					
			Boys		Girls		Total	
			No.	%	No.	%	No.	%
I.	Minor Ailments							
1	Cold and Cough	6-7 Years	29	19.33	29	19.33	58	19.33
		7-8 Years	25	16.67	28	18.67	53	17.67
		8-9 Years	26	17.33	25	16.67	51	17.00
		9-10 Years	23	15.33	26	17.33	49	16.33
		10-11 Years	19	12.67	22	14.67	41	13.66
		Total	122	81.33	130	86.67	252	84.00
2	Dental Caries	6-7 Years	3	2.00	1	0.67	4	1.33
		7-8 Years	2	1.33	3	2.00	5	1.67
		8-9 Years	2	1.33	4	2.67	6	2.00
		9-10 Years	1	0.67	2	1.33	3	1.00
		10-11 Years	5	3.33	4	2.67	9	3.00
		Total	13	8.67	14	9.33	27	9.00

Contd.

3	Ear Infections	6-7 Years	6	4.00	3	2.00	9	3.00
		7-8 Years	3	2.00	4	2.67	7	2.33
		8-9 Years	1	0.67	1	0.67	2	0.67
		9-10 Years	2	1.33	1	0.67	3	1.00
		10-11 Years	1	0.67	1	0.67	2	0.67
		Total	13	8.67	10	6.67	23	7.67
4	Eye Infections	6-7 Years	3	2.00	2	1.33	5	1.67
		7-8 Years	1	0.67	1	0.67	2	0.67
		8-9 Years	3	2.00	1	0.67	4	1.33
		9-10 Years	2	1.33	5	3.33	7	2.33
		10-11 Years	1	0.67	2	1.33	3	1.00
		Total	10	6.67	11	7.33	21	7.00
5	Fever	6-7 Years	25	16.67	23	15.33	58	19.33
		7-8 Years	24	16.00	30	20.00	54	18.00
		8-9 Years	22	14.67	31	20.67	53	17.67
		9-10 Years	29	19.33	20	13.33	49	16.33
		10-11 Years	16	10.67	20	13.33	36	12.00
		Total	116	77.33	124	82.67	240	80.00

Contd.

6	Pain in Abdomen	6-7 Years	22	14.67	28	18.67	50	2.54
		7-8 Years	27	18.00	19	12.67	46	2.34
		8-9 Years	23	15.33	17	11.33	40	2.03
		9-10 Years	15	10.00	22	14.67	37	12.33
		10-11 Years	11	7.33	17	11.33	28	9.33
		Total	98	65.33	103	68.67	201	67.00
7	Skin Infections	6-7 Years	4	2.67	7	4.67	11	3.67
		7-8 Years	6	4.00	3	2.00	9	3.00
		8-9 Years	5	3.33	4	2.67	9	3.00
		9-10 Years	3	2.00	3	2.00	6	2.00
		10-11 Years	3	2.00	5	3.33	8	2.67
		Total	21	14.00	22	14.67	43	14.33
8	Worm Infections	6-7 Years	19	12.67	11	7.33	30	10.00
		7-8 Years	9	6.00	13	8.67	22	7.33
		8-9 Years	11	7.33	7	4.67	18	6.00
		9-10 Years	9	6.00	12	8.00	21	7.00
		10-11 Years	10	6.67	6	4.00	16	5.33
		Total	58	38.67	49	32.67	107	35.67

Contd.

II. Common Diseases								
1	Chicken Pox	6-7 Years	1	0.67	1	0.67	2	0.67
		7-8 Years	-	-	-	-	-	-
		8-9 Years	2	1.33	3	2.00	5	1.67
		9-10 Years	1	0.67	4	2.67	5	1.67
		10-11 Years	1	0.67	-	-	1	0.33
		Total	5	3.33	8	5.33	13	4.33
2	Dengue	6-7 Years	-	-	-	-	-	-
		7-8 Years	1	0.67	-	-	1	0.33
		8-9 Years	-	-	-	-	-	-
		9-10 Years	-	-	1	0.67	1	0.33
		10-11 Years	1	0.67	-	-	1	0.33
		Total	2	1.33	1	0.67	3	1.00
3	Diarrhea	6-7 Years	20	13.33	14	9.33	34	11.33
		7-8 Years	19	12.67	14	9.33	33	11.00
		8-9 Years	9	6.00	18	12.00	27	9.00
		9-10 Years	12	8.00	7	4.67	19	6.33
		10-11 Years	6	4.00	5	3.33	11	3.67
		Total	66	44.00	58	38.67	124	41.33

Contd.

4	Diphtheria	6-7 Years	-	-	1	0.67	1	0.33
		7-8 Years	1	0.67	1	0.67	2	0.67
		8-9 Years	-	-	-	-	-	-
		9-10 Years	1	0.67	-	-	1	0.33
		10-11 Years	-	-	-	-	-	-
		Total	2	1.33	2	1.33	4	1.33
5	Dysentery	6-7 Years	18	12.00	12	8.00	30	10.00
		7-8 Years	12	8.00	20	13.33	32	10.67
		8-9 Years	11	7.33	23	15.33	34	11.33
		9-10 Years	17	11.33	9	6.00	26	8.67
		10-11 Years	14	9.33	14	9.33	28	9.33
		Total	72	48.00	78	52.00	150	50.00
6	Jaundice	6-7 Years	1	0.67	-	-	1	0.33
		7-8 Years	-	-	-	-	-	-
		8-9 Years	1	0.67	-	-	1	0.33
		9-10 Years	-	-	1	0.67	1	0.33
		10-11 Years	-	-	2	1.33	2	0.67
		Total	2	1.33	3	2.00	5	1.67

Contd.

7	Malaria	6-7 Years	3	2.00	1	0.67	4	1.33
		7-8 Years	3	2.00	2	1.33	5	1.67
		8-9 Years	1	0.67	1	0.67	2	0.67
		9-10 Years	2	1.33	4	2.67	6	2.00
		10-11 Years	4	2.67	3	2.00	7	2.33
		Total	13	8.67	11	7.33	24	8.00
8	Measles	6-7 Years	1	0.67	1	0.67	2	0.67
		7-8 Years	2	1.33	3	2.00	5	1.67
		8-9 Years	5	3.33	3	2.00	8	2.67
		9-10 Years	3	2.00	1	0.67	4	1.33
		10-11 Years	2	1.33	2	1.33	4	1.33
		Total	13	8.67	10	6.67	23	7.67
9	Mumps	6-7 Years	1	0.67	1	0.67	2	0.67
		7-8 Years	-	-	1	0.67	1	0.33
		8-9 Years	1	0.67	1	0.67	2	0.67
		9-10 Years	-	-	-	-	-	-
		10-11 Years	-	-	1	0.67	1	0.33
		Total	2	1.33	4	2.67	6	2.00

Contd.

10	Pneumonia	6-7 Years	1	0.67	3	2.00	4	1.33
		7-8 Years	2	1.33	1	0.67	3	1.00
		8-9 Years	-	-	1	0.67	1	0.33
		9-10 Years	1	0.67	1	0.67	2	0.67
		10-11 Years	1	0.67	-	-	1	0.33
		Total	5	3.33	6	4.00	11	3.67
11	Tuberculosis	6-7 Years	-	-	1	0.67	1	0.33
		7-8 Years	1	0.67	-	-	1	0.33
		8-9 Years	-	-	-	-	-	-
		9-10 Years	1	0.67	1	0.67	2	0.67
		10-11 Years	1	0.67	-	-	1	0.33
		Total	3	2.00	2	1.33	5	1.67
12	Whooping Cough	6-7 Years	3	2.00	1	0.67	4	1.33
		7-8 Years	2	1.33	1	0.67	3	1.00
		8-9 Years	-	-	2	1.33	2	0.67
		9-10 Years	1	0.67	1	0.67	2	0.67
		10-11 Years	-	-	1	0.67	1	0.33
		Total	6	4.00	6	4.00	12	4.00

Contd.

	Base*	**6-7 Years**	**30**	20.00	**30**	20.00	**60**	20.00
		7-8 Years	**30**	20.00	**30**	20.00	**60**	20.00
		8-9 Years	**30**	20.00	**30**	20.00	**60**	20.00
		9-10 Years	**30**	20.00	**30**	20.00	**60**	20.00
		10-11 Years	**30**	20.00	**30**	20.00	**60**	20.00
		Total	**150**	100	**150**	100	**300**	100

***In this sample of 300 respondents, some ailments and diseases are reported by several respondents causing an overlap in the number of responses for various symptoms. It is, therefore, meaningless to calculate percentages against a definite total. 'Base' here has been given to indicate the number of respondents interviewed instead of giving the word 'total'.

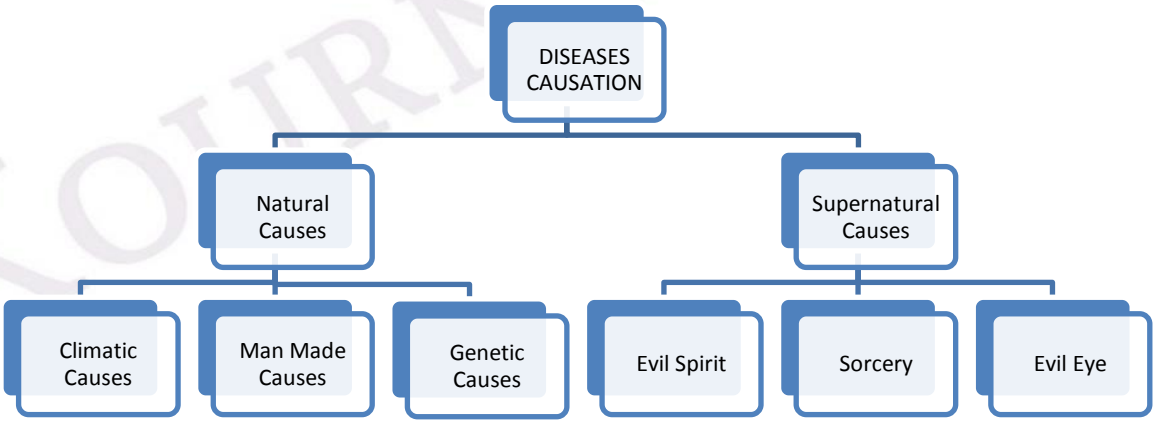
It is a significant fact that not a single case of Polio was recorded among them, which is the successful result of polio eradication programme run by the government, along with the co-operation of the NGOs.

As it is firsthand information, no any physical examination and clinical testing were conducted, therefore, it cannot be concluded that the Pasi children are not suffering from other severe diseases, such as, heart disease and cancer etc. They might be also suffering from other diseases.

DISEASES CAUSATION

The several factors, which are affecting the health condition of these children (Figure no.-6.12) can be broadly divided into two categories: natural causes and supernatural causes.

Figure No. – 6.12
Diseases Causation



1. Natural Causes

In this category, those causes of diseases and health destruction are included which can be explained logically and have scientific base. These are of two types:

a. Climatic Causes: Seasonal changes cause health problems, especially in children. Lucknow has tropical climate with three seasons - winter, summer and rainy season. These seasonal changes are severe for the health of those people, who have not proper shelter for the protection from climatic fluctuations. Winters are too cold and summer is too hot. Rainy season plays a positive role to spread the contagious diseases.

b. Man Made Causes: Those causes are included in this category, which originate due to mainly unawareness and carelessness of people. The main man made causes of diseases among the Pasi children are:

i. Inadequate, unbalanced and low nutritional diet due to lower level of education and awareness.

ii. Non-availability of essential nutrients due to socio-economic problems.

iii. The nature and the conditions in which they work, because hard work combined with poor nutrition leads to the state of general disability which is called deficiency illness.

iv. Various stress and strain due to socio-economic problems.

v. Environmental conditions, such as, poor sanitation, lack of basic amenities, for e.g., unclean water and improper drainage system tend to make the environment itself a health hazard.

vi. Alcoholism, tobacco smoking and intake of *pan masalas* and *gutkas* among the people, which affects the health of the children directly or indirectly.

vii. Increasing pollution due to rapid development in the changing times and life style create environmental hazard which affects the health adversely.

viii. Neglect and non-adoption of preventive measures, due to lower level of education or lack of awareness or socio-economic problems made them more prone to illness.

ix. Unavailability or poor quality of health services.

c. Genetic Causes: Some genetically transmitted health problems have also seen among the children.

2. SUPERNATURAL CAUSES

Among most of the lower income group Pasi families, many diseases are believed to be caused by supernatural agencies. If somebody fall sick seriously and suddenly or when disease take a sudden bad shape or when it is derangement of the mental faculties, these people assign it to a supernatural cause. Even, in several middle income group families also, people believe in these super natural causes of diseases. These supernatural causes are evil spirit, sorcery and evil eye.

a. Evil Spirit: There is a belief among them that the souls of the person, who have committed suicide or met with an accident, interfere with the living persons and harm them. They bring sickness and misfortunes of all kinds.

b. Sorcery: These people fear the magic of the enemy as much as they fear the evil spirits. An enemy, be a neighbour or a relative, through magic of his own or with the help of sorcerer, can bring disease and destruction upon another. If the condition remains undiagnosed and untreated, it can lead to death.

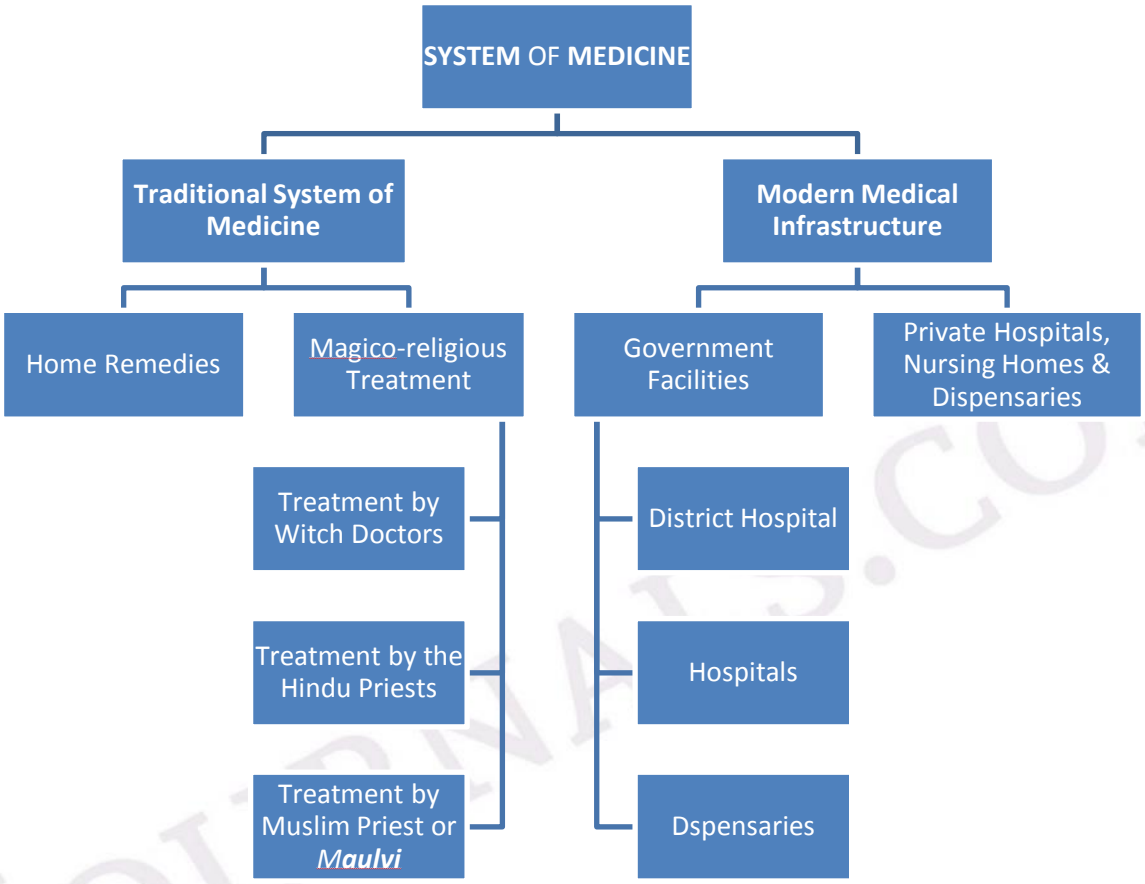
c. Evil Eye: It is believed among these people that some individuals have the faculty to cast a spell on others by just looking at them. Some do it involuntarily at whosoever comes in their path; others do it voluntarily because they are jealous of others and desire to possess what others have. The thing may perish, the person may get ill or more often have an accident. Children are believed to be particularly susceptible to the effect of the evil eye.

TREATMENT

Traditional system and modern system, both type of medicinal system are practiced (Figure no.-6.13). Home remedies and magico-religious treatment are included in their traditional system of medicine. They take firstly self-treatment for general ailments. For magico-religious treatment they go to witch doctors, Hindu priests and Maulvis. Modern medicine is available in the form of allopathic, homeopathic ayurvedic and all other types of the treatment.

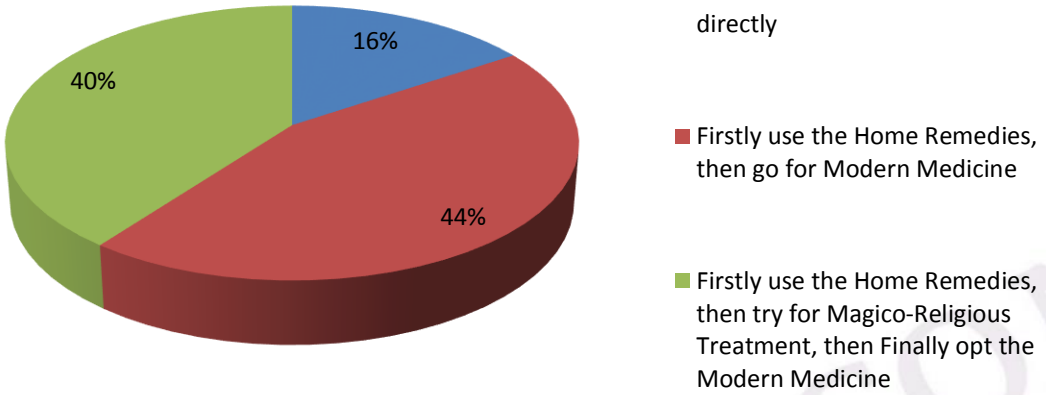
The health services provided by the government yet available but not fully utilized. Generally, Pasis from the lower income group families do not prefer to go to government hospitals or health care services as their first means of treatment because most of them have reported that due to their lower socio-economic condition, the doctors and the staff do not co-operate with them. Even sometimes, they demand undue financial advantages from them. For seasonal fever, cold & cough and other general health problems, they try for home remedies or buy medicines from local medical stores. It is found that in several other health problems, these people do not seek out for any treatment in the initial state of sickness, due to which the sickness becomes chronic. When the ailments become acute then they do seek for some treatment. They lay hand on domestic remedies for some days but when the medicine fails to give any relief and the ailment becomes acute taking a chronic form, they go to local medicine men or witch doctors as according to them this is an attack of an evil-spirit. When the local medicine men or witch doctors fail to provide any relief they consult the doctor. There are only some families, belongs to middle income group, which believe in consulting the doctor immediately after the occurrence of any disease.

Figure No. - 6.13
Prevalent System of Medicine



However, there is a well developed health infrastructure to provide free medical facilities and health coverage to the people of Lucknow in the form of government health institutions, but due to unawareness and lack of education most of the Pasi people (40%) opt the modern medicine as their last choice in the health problems of their children. They utilize it only when they feel that the self treatment and magico-religious treatment are getting fail in improving their health condition. There are only 16% people go for modern medicine directly and 44% go for it after using home remedies (Figure no.-6.14).

Figure No. - 6.14
Choice of Treatment



Thus, the belief in supernatural agency is predominant in the context of health, disease and treatment.

AWARENESS ABOUT SCHEMES AND PROGRAMMES

Healthcare in India features a universal health care system run by the constituent states and territories of India. The Constitution charges every state with 'raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties'. The National Health Policy was endorsed by the Parliament of India in 1983 and updated in 2002.

Children constitute principle assets of any country. Children's development is as important as the development of material resources and the best way to develop national human resources is to take care of children. India has the largest child population in the world. All out efforts are being made by India for the development and welfare of children. A lot has been done for the health, nutrition and education of the children. A

number of policy initiatives have been taken for this purpose (Annexure - 1.3). The NGO sector is giving parallel support for this mission.

In constitutional provisions and several schemes and programmes, running for the welfare of the children, there are special provisions have been made for scheduled castes also. But, among the parents and family members of the Pasi children, the general awareness about the welfare schemes and health care provisions made by the government for them and their children, is very low (Figure no.-6.15).

Figure No. - 6.15
Awareness about Schemes and Programmes among Parents

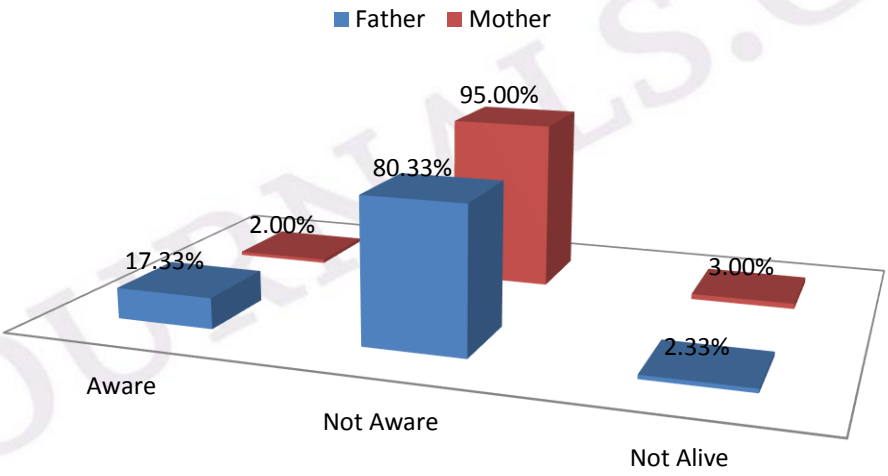


Figure no. 2.14 reveals that, overwhelming majority of the parents (80.33% fathers, and 95% mothers) are not aware about the maximum schemes and programmes running for the welfare of their children. Thus, however, government is doing a lot of efforts for the welfare of the children, with special privilege to schedule caste for their upliftment in the society, but due to unawareness of the parents, these children are not completely benefitted. Therefore, there is some lack in the proper implementation of these schemes and programmes.

ANTHROPOMETRIC MEASUREMENTS: ASSESSMENTS OF GROWTH AND NUTRITIONAL STATUS

Anthropometry is the study of the measurement of the human body in terms of the dimensions of bone, muscle, and adipose (fat) tissue. It provides the single most portable, universally applicable, inexpensive and non-invasive technique for assessing the size, proportions and composition of the human body. It reflects both health and nutritional status and predicts performance, health and survival. It is a valuable tool for guiding public health policy and clinical decisions.

The collection of body measurements, or anthropometry, has become a basic tool for monitoring the health of children, as the anthropometric measurements are intended as an indicator of child's nutritional, growth and health status. The reliability of weight gain as an indicator of child health is widely recognized, and major episodes of illness are almost invariably associated with loss of weight. Height for age also is taken into account when the health status of children is assessed.

The present chapter discusses the health status of the Pasi children on the basis of the interpretation of anthropometric measurements. Actual stature, weight and body measurements including skinfolds, girths, and breadths have been collected here for purposes of assessing growth and body fat distribution.

Anthropometric Measurement Include:

1. Height Vertex
2. Body Weight
3. Upper Arm Circumference
4. Chest Girth
5. Chest Breadth
6. Calf Circumference

7. Triceps Skinfold
8. Sub-scapular Skinfold

Index Include:

Body Mass Index

All the above mentioned body measurement have been taken on 300 Pasi children, selected in the sample. Then the mean value of each measurement has been calculated (Table no.-7.1). Here, the mean values of the various measurements are compared with the recent available data.

At the international level, 'WHO Child Growth Standards: Length/height-for-age, weight-for-age, weight-for-length, weight-for-height and body mass index-for-age' (World Health Organization, 2006) and "Anthropometric Reference Data for Children and Adults: United States, 2003-2006" (National Health Statistics Report, 2008) are referred for comparison.

While, on national level, the comparison has been done with "Nationwide Reference Data for Height, Weight and Body Mass Index of Indian Schoolchildren" (Marwaha, R.K.; Tandon, N.; Ganie, M.A.; Kanwar, R.; Shivprasad; Sabharwal, A.; Bhadra, K.; Narang, A., 2011) and 'Weight (Kg), Height (cm) and BMI by age and gender: Rural India (16 States)' given in "Nutrient Requirements and Recommended Dietary Allowances for Indians" (National Institute of Nutrition, Indian Council of Medical Research, 2009). However, in the reference data of international level, the values are available in mean value also, along with percentile values, but in national level reference data, the measurement values are available only in percentile values. Thus, the comparison has been done accordingly.

Table No. 7.1

Mean of Various Measurements

S. No.	Age Groups (Years)	Mean of Various Measurements															
		Boys								Girls							
		Height Vertex (Cm.)	Body Weight (Kg.)	Upper Arm Circum. (Cm.)	Chest Girth (Cm.)	Chest Breadth (Cm.)	Calf Circum. (Cm.)	Triceps (Mm.)	Sub-scapular Skinfold (Mm.)	Height Vertex (Cm.)	Body Weight (Kg.)	Upper Arm Circum. (Cm.)	Chest Girth (Cm.)	Chest Breadth (Cm.)	Calf Circum. (Cm.)	Triceps (Mm.)	Sub-scapular Skinfold (Mm.)
1	6-7	114.0 ± 7.11	19.07 ± 1.25	15.07 ± 0.67	54.33 ± 0.83	16.97 ± 0.65	21.60 ± 1.05	4.67 ± 0.58	3.33 ± 0.58	113.70 ± 7.26	19.37 ± 3.35	16.83 ± 2.75	56.40 ± 2.69	16.83 ± 1.93	22.90 ± 3.31	5.00 ± 1.00	3.67 ± 0.58
2	7-8	119.87 ± 2.72	22.60 ± 2.13	17.03 ± 0.06	55.87 ± 1.66	17.57 ± 0.57	22.20 ± 1.22	5.00 ± 1.00	3.67 ± 0.58	116.83 ± 9.61	21.33 ± 3.01	16.30 ± 1.30	56.17 ± 2.57	17.10 ± 0.61	23.00 ± 1.00	6.67 ± 0.58	4.33 ± 1.15
3	8-9	130.67 ± 6.51	26.67 ± 5.13	17.50 ± 1.32	58.00 ± 1.73	17.83 ± 2.81	23.00 ± 2.18	6.33 ± 0.58	5.33 ± 0.58	128.83 ± 13.30	25.07 ± 0.90	18.47 ± 0.72	58.77 ± 3.29	17.57 ± 0.65	23.63 ± 2.32	7.67 ± 0.58	5.67 ± 0.58
4	9-10	133.13 ± 6.14	28.30 ± 3.75	18.10 ± 0.17	60.00 ± 3.32	18.50 ± 1.25	23.63 ± 1.93	7.33 ± 0.58	5.33 ± 1.15	133.11 ± 5.24	28.00 ± 0.87	20.30 ± 1.93	63.83 ± 0.29	18.16 ± 1.11	27.13 ± 1.50	8.33 ± 0.58	6.00 ± 1.00
5	10-11	138.53 ± 4.41	29.33 ±2.89	20.97 ± 3.01	63.47 ± 1.27	18.93 ± 1.92	26.33 ± 1.59	8.67 ± 1.15	6.00 ± 1.00	136.73 ± 5.35	28.53 ± 4.01	21.17 ± 2.80	65.55 ± 2.19	18.43 ± 1.24	26.37 ± 2.51	9.67 ± 0.58	7.67 ± 0.58

1. HEIGHT VERTEX

Height vertex reveals the stature of the body. It measures the distance from vertex to floor. Here, this measurement of the Pasi children shows that their height is increasing linearly with the age from 6 to 11 years (Table no.-7.2 & Figure no.-7.1). Boys are, on the average, slightly taller than girls between 6 to 9 and 10 to 11 years of age. While the mean stature of boys and girls are identical at the age group of 9 to 10 years.

In the age group of 6 to 8 years, the mean values are less than the height-for-age standards given by World Health Organization (Annexure-1.4). While, from 8 to 11 years of age this value are more than the standard reference values.

Table No. 7.2

Measurement No. – 1: Height Vertex

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Cm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	114.00	7.11	2.90	4.11
		Girls	30	113.70	7.26	2.96	4.20
2	7 – 8	Boys	30	119.87	2.72	1.11	1.57
		Girls	30	116.83	9.61	3.92	5.55
3	8 – 9	Boys	30	130.67	6.51	3.66	3.76
		Girls	30	128.83	13.30	5.43	7.68
4	9 – 10	Boys	30	133.13	6.14	2.51	3.55
		Girls	30	133.11	5.24	2.14	3.08
5	10 – 11	Boys	30	138.53	4.41	1.80	2.55
		Girls	30	136.73	5.35	2.18	3.09

Figure No. - 7.1
Mean Height by Age and Sex

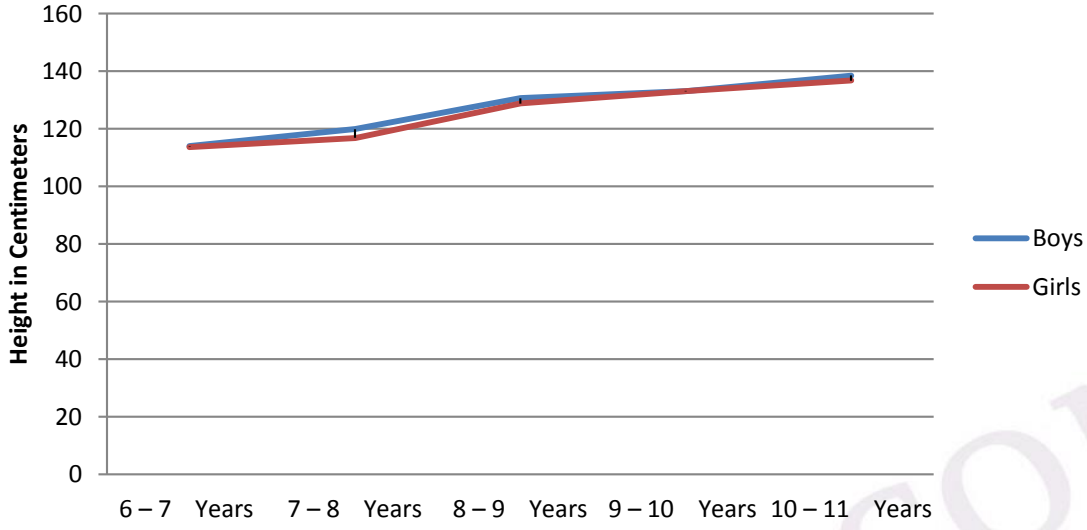
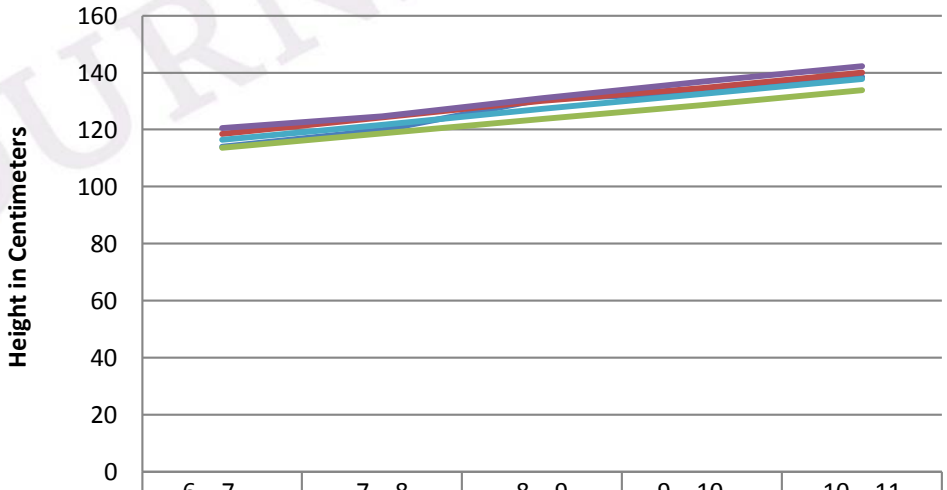
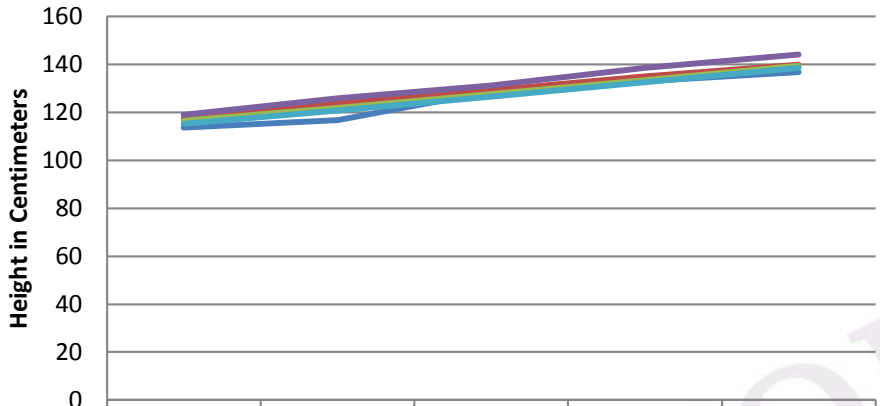


Figure No. - 7.2
A Comparison of Mean Height of Pasi Boys with Different Studies



	6 – 7 Years	7 – 8 Years	8 – 9 Years	9 – 10 Years	10 – 11 Years
Pasi Boys	114	119.87	130.67	133.13	138.53
Indian Rural Boys	118.5	124.3	130.1	134.6	140
Indian Schoolboys	113.63	118.66	123.68	128.7	133.86
U.S. Boys	120.6	124.7	131.1	136.8	142.3
W.H.O.	116.44	121.73	127.27	132.57	137.78

Figure No. - 7.3
A Comparison of Mean Height of Pasi Girls with Different Studies



	6 – 7 Years	7 – 8 Years	8 – 9 Years	9 – 10 Years	10 – 11 Years
Pasi Girls	113.7	116.83	128.83	133.11	136.73
Indian Rural Girls	117.5	123.6	129.2	135	140
Indian Schoolgirls	116.63	121.98	127.65	133.51	139.45
U.S. Girls	119	125.8	131.3	138.6	144.2
W.H.O.	115.12	120.81	126.56	132.49	138.64

Figure no.-7.2 & 7.3 reveals the comparison of mean height of Pasi children with Different studies. According to these figures, the height of Pasi boys in the age group of 6 to 9 years, is higher than the Indian schoolboys (Marwaha, R.K., 2011), while less than all other categories. In the age group of 8 to 9 years, their mean height is higher than both, Indian rural boys (National Institute of Nutrition, Indian Council of Medical Research, 2009) and Indian schoolboys. In the age group of 9 to 11 years, they are smaller than Indian rural boys and U.S. boys (National Health Statistics Report, 2008) and taller than Indian schoolboys and W.H.O. standards (World Health Organization, 2006).

In case of girls, in the age groups of 6 to 8 years and 10 to 11 years, the Pasi girls are smaller than all other categories. While in the age group of

8 to 9 years, they are taller than Indian schoolgirls and W.H.O. standards and in 9 to 10 years age group their height is more than W.H.O. standards.

2. BODY WEIGHT

The weight of Pasi children is linearly increasing with the age from 6 through 11 years (Table no.-7.3 & Figure no.-7.4). Boys are, on the average, slightly heavier than girls between 7 to 9 years and 10 to 11 years. However, from 6 to 7 years of age, girls are slightly heavier. The mean weight of boys and girls are identical at the age group of 9 to 10 years. Except for boys of 8 to 10 years and girls of 8 to 9 & 10 to 11 years, in all the age groups of both the sexes, the mean value of weight is less than the weight-for-age standards of W.H.O (Annexure-1.5).

Table No. 7.3

Measurement No. – 2: Body Weight

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Kg.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	19.07	1.25	0.51	0.72
		Girls	30	19.37	3.35	1.37	1.92
2	7 – 8	Boys	30	22.60	2.13	0.87	1.22
		Girls	30	21.33	3.01	1.23	1.74
3	8 – 9	Boys	30	26.67	5.13	2.09	2.96
		Girls	30	25.07	0.90	0.37	0.52
4	9 – 10	Boys	30	28.30	3.75	1.33	2.17
		Girls	30	28.00	0.87	0.36	0.50
5	10 – 11	Boys	30	29.33	2.89	1.18	1.67
		Girls	30	28.53	4.01	1.04	2.31

Figure No. - 7.4
Mean Weight by Age and Sex

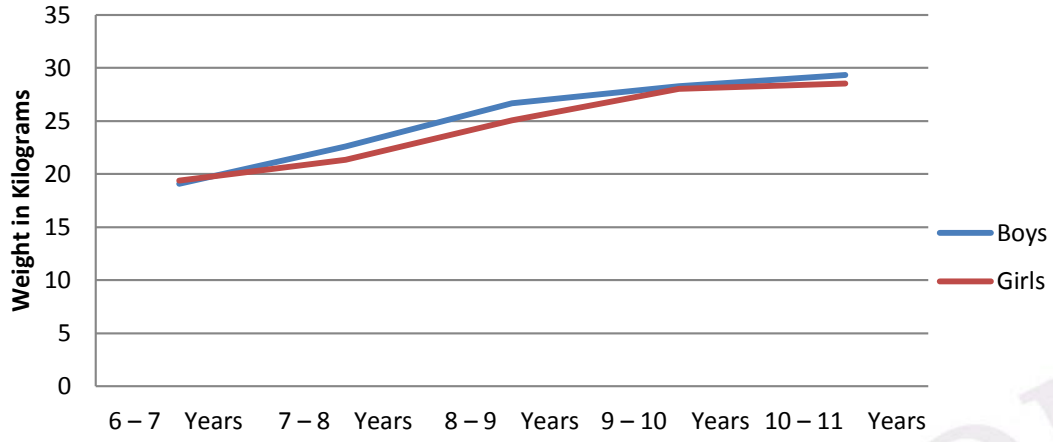
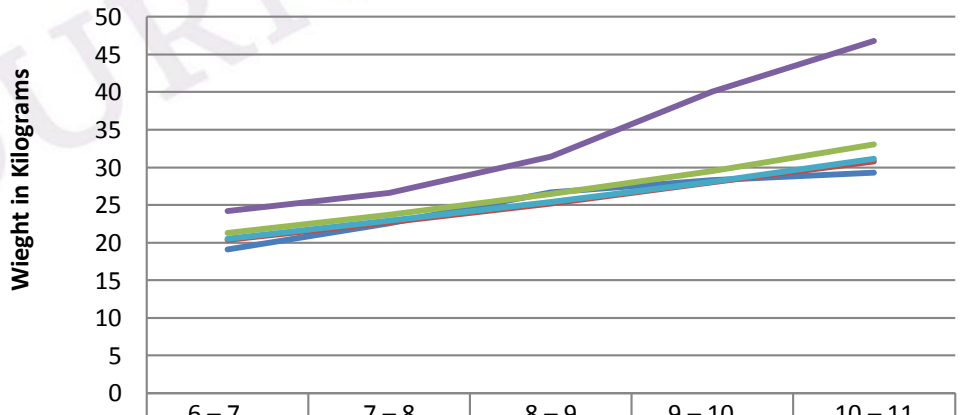
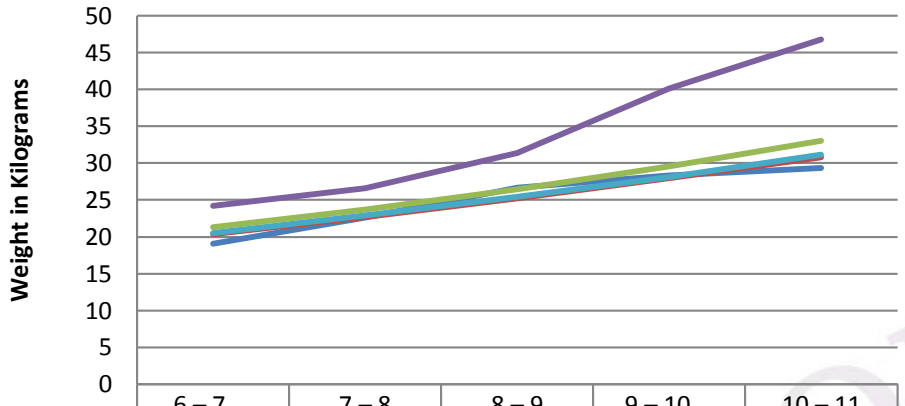


Figure No. - 7.5
A Comparison of Mean Weight of Pasi Boys with Different Studies



	6 – 7 Years	7 – 8 Years	8 – 9 Years	9 – 10 Years	10 – 11 Years
Pasi Boys	19.07	22.6	26.67	28.3	29.33
Indian Rural Boys	20.4	22.7	25.2	28	30.8
Indian Schoolboys	21.3	23.69	26.43	29.54	33.03
U.S. Boys	24.2	26.6	31.4	40.1	46.8
W.H.O.	20.51	22.89	25.42	28.11	31.16

Figure No. - 7.6
A Comparison of Mean Weight of Pasi Girls with Different Studies



	6 – 7 Years	7 – 8 Years	8 – 9 Years	9 – 10 Years	10 – 11 Years
Pasi Boys	19.07	22.6	26.67	28.3	29.33
Indian Rural Boys	20.4	22.7	25.2	28	30.8
Indian Schoolboys	21.3	23.69	26.43	29.54	33.03
U.S. Boys	24.2	26.6	31.4	40.1	46.8
W.H.O.	20.51	22.89	25.42	28.11	31.16

The comparison with various international and national studies (Figure no.-7.5 & 7.6) shows the mean weight in kilograms of Pasi boys are lighter from all other categories in the age group of 6 to 8 and 10 to 11 years. In the age group of 8 to 9 years, they are heavier than Indian rural boys, Indian schoolboys and W.H.O. standard. In the age group of 10 to 11 years, they are again heavier than both, Indian rural boys and W.H.O. standards.

Thus there is, however, linear and gradual increase in growth rate of body weight, but it is not completely satisfactory according to age.

3. UPPER ARM CIRCUMFERENCE

Upper arm circumference is the circumference of the left upper arm, measured at the mid-point between the tip of the shoulder and the tip of the elbow (acromium and the olecranon process). In children, this measurement is useful for the assessment of nutritional status.

Table No. 7.4

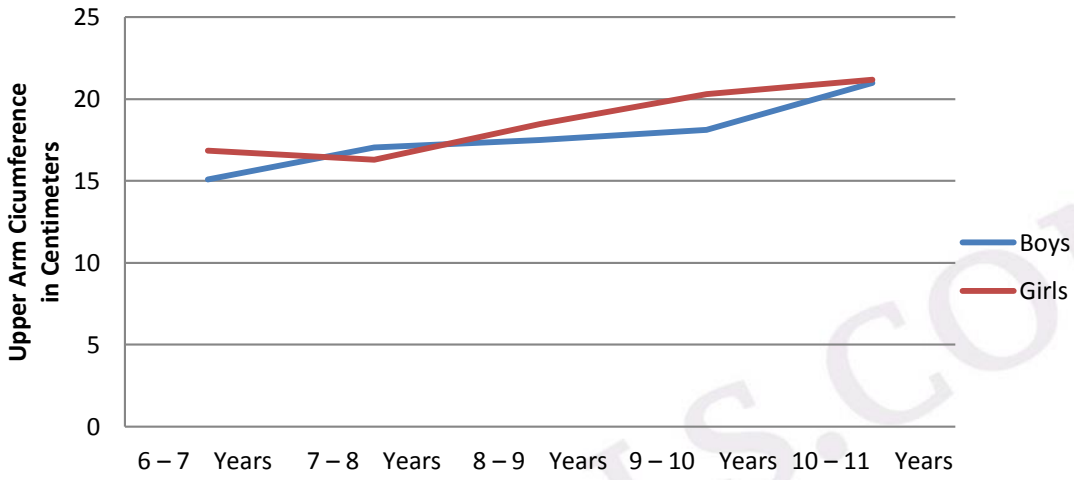
Measurement No. – 3: Upper Arm Circumference

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Cm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	15.07	0.67	0.27	0.38
		Girls	30	16.83	2.75	1.12	1.59
2	7 – 8	Boys	30	17.03	0.06	0.02	0.03
		Girls	30	16.30	1.30	0.53	0.75
3	8 – 9	Boys	30	17.50	1.32	0.54	0.76
		Girls	30	18.47	0.72	0.29	0.42
4	9 – 10	Boys	30	18.10	0.17	0.07	0.10
		Girls	30	20.30	1.93	0.79	1.11
5	10 – 11	Boys	30	20.97	3.01	1.23	1.74
		Girls	30	21.17	2.80	1.14	1.61

Table no.-7.4 and Figure no.-7.7 reveals that upper arm circumference is gradually increasing in both the sexes with the advancement in age. This measurement is larger in the girls in all the age

groups, except for 7 to 8 years of age group, in which it is slightly increased in boys.

Figure No. - 7.7
Mean Upper Arm Circumference by Age and Sex



Overall the upper arm circumference measurement reveals an increased growth rate among all the children.

4. CHEST GIRTH

Chest circumference is measured at the level of fourth costosternal (rib) joints, counting the number of ribs from above. This measurement is useful for the evaluation of growth, health and nutritional status.

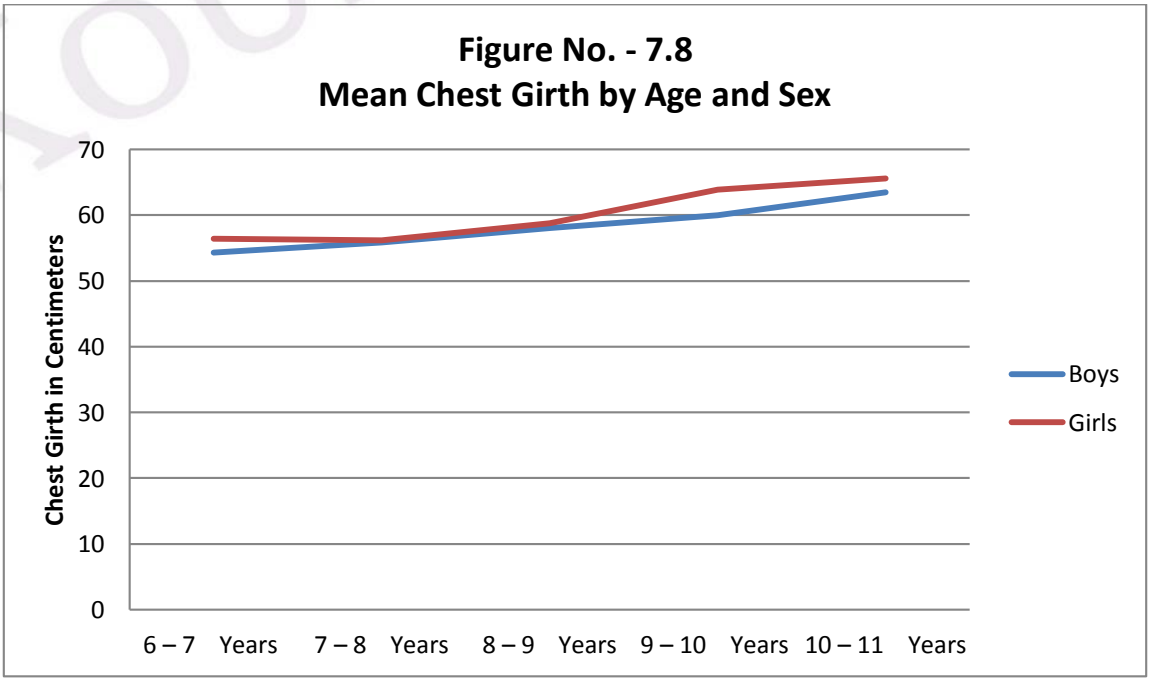
In the present study it is found that chest girth is increasing with the age from 6 to 11 years (Table no.-7.5 & Figure no.-7.8). It is, on the average, consistently larger in girls in all the age groups. The difference, however, is negligible at 7 to 9 years of age group, but further this difference is increasing with the advancement in age.

Table No. 7.5

Measurement No. – 4: Chest Girth

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Cm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	54.33	0.83	0.34	0.48
		Girls	30	56.40	2.69	1.10	1.55
2	7 – 8	Boys	30	55.87	1.66	0.68	0.96
		Girls	30	56.17	2.57	1.05	1.48
3	8 – 9	Boys	30	58.00	1.73	0,71	1.00
		Girls	30	58.77	3.29	1.34	1.90
4	9 – 10	Boys	30	60.00	3.32	1.36	1.92
		Girls	30	63.83	0.29	0.12	0.17
5	10 – 11	Boys	30	63.47	1.27	0.52	0.73
		Girls	30	65.55	2.19	0.89	1.26

Figure No. - 7.8
Mean Chest Girth by Age and Sex



Thus, the chest girth measurement reveals a linear increase in growth rate of Pasi children of all the age groups.

5. CHEST BREADTH

Chest Breadth is the maximum horizontal breadth of the chest at the level of the nipple. It is a relevant measurement in the study of growth of the children.

Table No. 7.6

Measurement No. – 5: Chest Breadth

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Cm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	16.97	0.65	0.27	0.38
		Girls	30	16.83	1.93	0.79	1.11
2	7 – 8	Boys	30	17.57	0.57	0.23	0.33
		Girls	30	17.1	0.61	0.25	0.35
3	8 – 9	Boys	30	17.83	2.81	1.15	1.62
		Girls	30	17.57	0.65	0.27	0.38
4	9 – 10	Boys	30	18.50	1.25	0.51	0.72
		Girls	30	18.16	1.11	0.45	0.64
5	10 – 11	Boys	30	18.93	1.92	0.78	1.11
		Girls	30	18.43	1.24	0.51	0.72

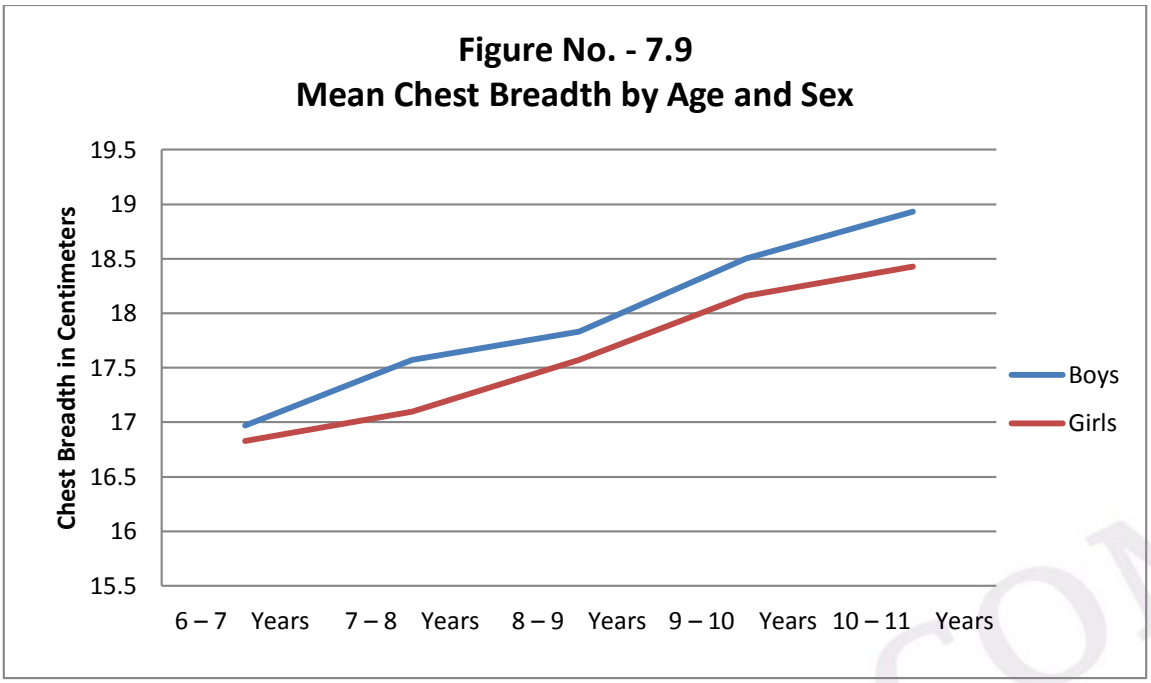


Table no.-7.6 & Figure no.-7.9 reveals chest breadth of Pasi children is increasing with the advancing age from 6 to 11 years. Boys are consistently larger than girls in their chest measurement.

Thus, overall chest breadth size shows a linear increase among all the child groups.

6. CALF CIRCUMFERENCE

Calf circumference is the maximum horizontal circumference of the calf, which is increasing with the age from 6 to 11 years both, in boys and girls.

Table no.-7.7 & Figure no.-7.10 reveals that generally this measurement is larger in boys in the whole age range, with the difference between means rather consistent throughout.

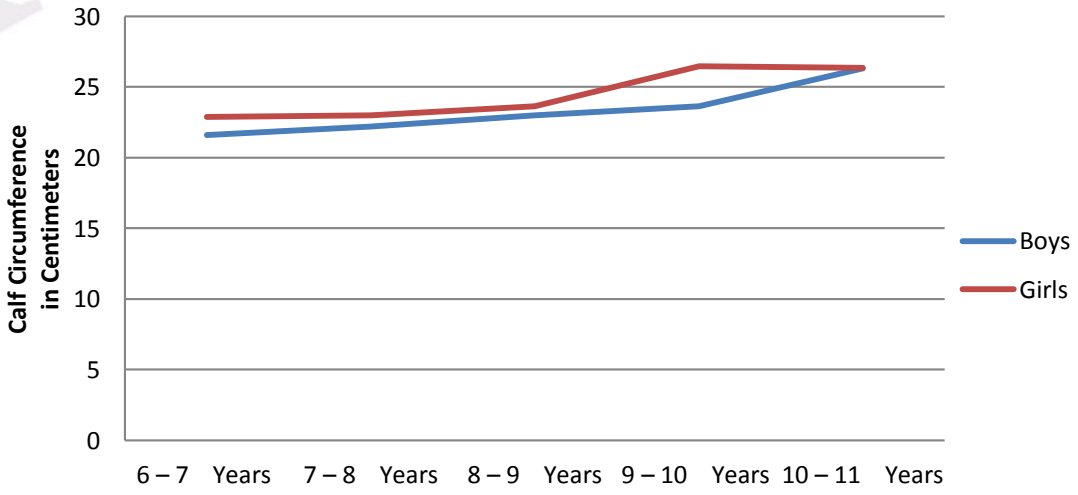
Thus, gradual increase in calf circumference reveals the increasing growth rate among the children.

Table No. 7.7

Measurement No. – 6: Calf Circumference

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Cm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	21.60	1.05	0.43	0.61
		Girls	30	22.90	3.31	1.35	1.91
2	7 – 8	Boys	30	22.20	1.22	0.50	0.70
		Girls	30	23.00	1.00	0.41	0.58
3	8 – 9	Boys	30	23.00	2.18	0.89	1.26
		Girls	30	23.63	2.32	0.95	1.34
4	9 – 10	Boys	30	23.63	1.93	0.79	1.11
		Girls	30	26.47	1.50	0.61	0.87
5	10 – 11	Boys	30	26.33	1.59	0.65	0.92
		Girls	30	26.37	2.51	1.02	1.45

Figure No. - 7.10
Mean Calf Circumference by Age and Sex



Double thicknesses of skin and subcutaneous fat measured as skinfold thicknesses have a long history in nutrition-related research. Accordingly, skinfold thicknesses have been used in myriad studies of nutritional status, body composition, and relative subcutaneous fat distribution. Thus, triceps skinfold and sub-scapular skinfold measurements provide a mean of estimating the amount of fat of the body. They are important in the study of body composition and the caloric aspects of nutritional status.

7. TRICEPS SKINFOLD MEASUREMENT

The triceps skinfold measurement is taken on the back of the upper arm, over the triceps muscles with skinfold caliper.

Table No. 7.8

Measurement No. – 7: Triceps Skinfold

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Mm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	4.67	0.58	0.24	0.33
		Girls	30	5.00	1.00	0.41	0.58
2	7 – 8	Boys	30	5.00	1.00	0.41	0.58
		Girls	30	6.67	0.58	0.24	0.33
3	8 – 9	Boys	30	6.33	0.58	0.24	0.33
		Girls	30	7.67	0.58	0.24	0.33
4	9 – 10	Boys	30	7.33	0.58	0.24	0.33
		Girls	30	8.33	0.58	0.24	0.33
5	10 – 11	Boys	30	8.67	1.15	0.47	0.66
		Girls	30	9.67	0.58	0.24	0.33

Figure No. - 7.11
Mean Triceps Skinfold by Age and Sex

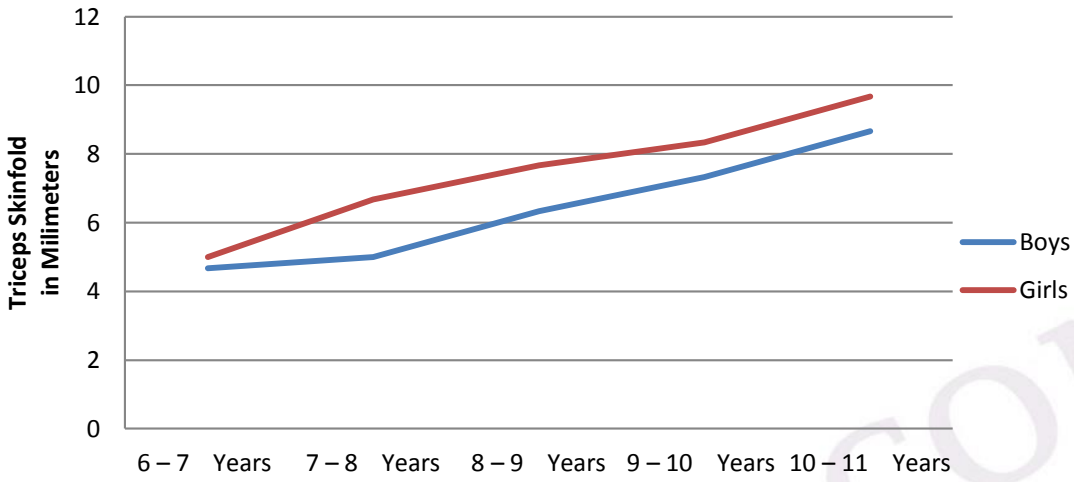


Table no.-7.8 & Figure no.-7.12 shows that, however, there is a gradual increase in triceps skinfold thickness among the Pasi children of all the age groups, but it is consistently greater in girls than boys.

Figure No. - 7.12
A Comparison of Mean Triceps Skinfold of Pasi Boys with American Boys

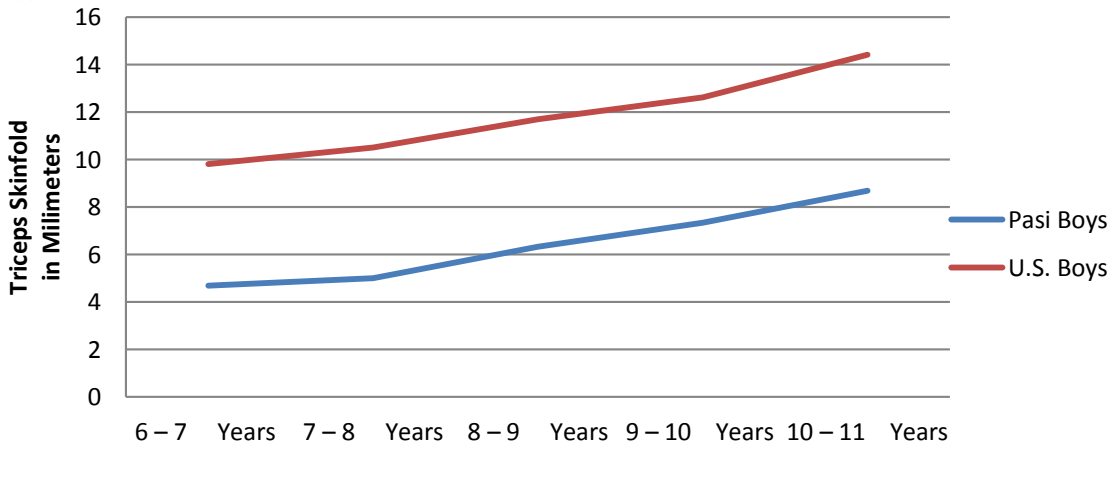


Figure No. - 7.13
A Comparison of Mean Triceps Skinfold of Pasi Girls with American Girls

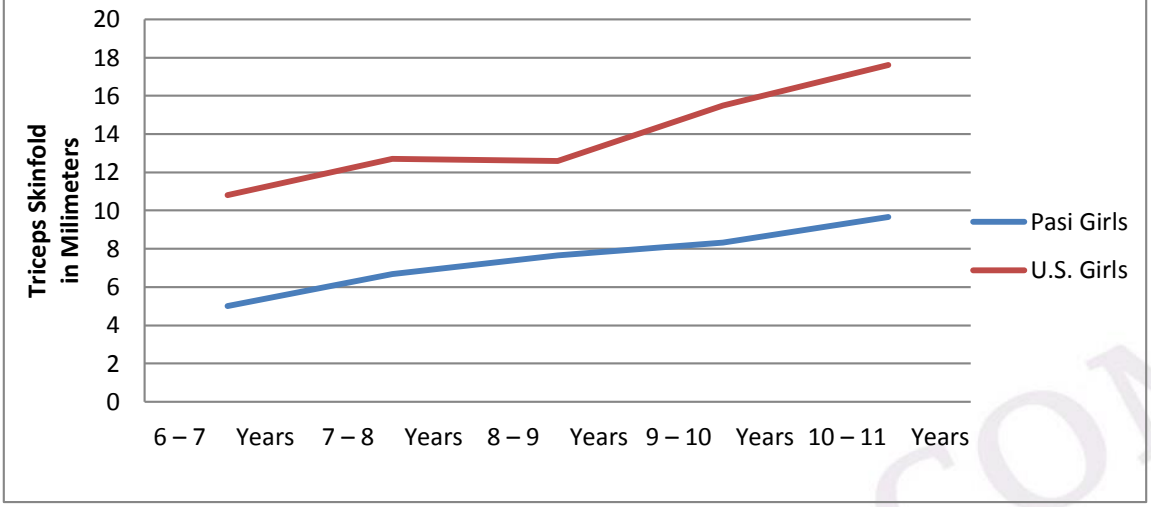


Figure no. 7.12 & 7.13 reveals the comparison of mean triceps skinfold thickness with U.S. children. It shows that in case of both the sexes, its value is very less among the Pasi children then the U.S. children.

Thus, there is consistent increase in triceps skinfold among the Pasi children, but it shows fat level in their body is comparatively less.

8. SUB-SCAPULAR SKINFOLD MEASUREMENT

Sub-scapular measurement is taken below the inferior angle of scapula with the help of skinfold caliper.

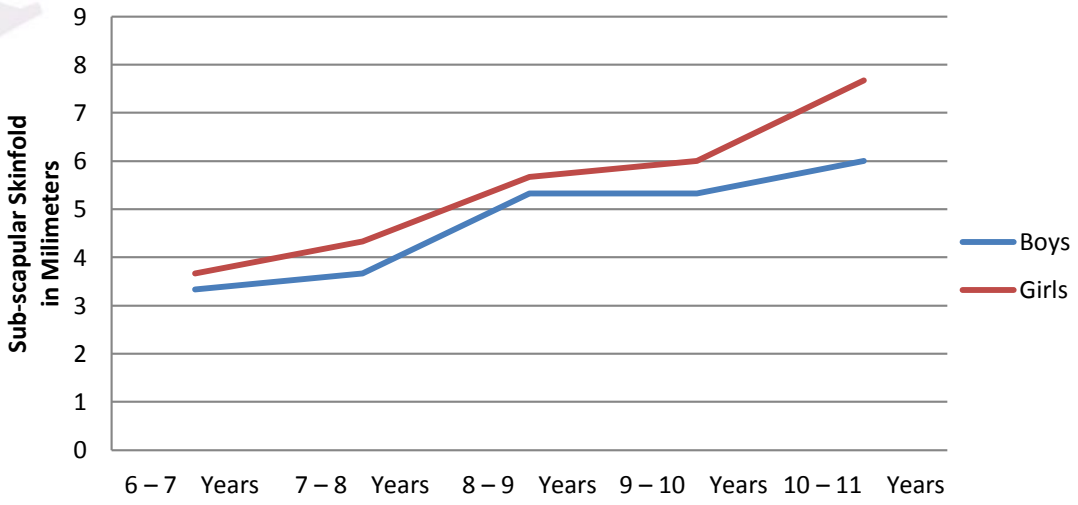
This measurement is very important to know about the fat level in the body, which has a direct relation with nutrition. The measurement of sub-scapular skinfold thickness is of great importance for the assessment of health and nutritional intake, especially in children. Therefore, it has been included in various national and international studies.

Table No. 7.9

Measurement No. – 8: Sub-scapular Skinfold

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean (Mm.)	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	3.33	0.58	0.24	0.33
		Girls	30	3.67	0.58	0.24	0.33
2	7 – 8	Boys	30	3.67	0.58	0.24	0.33
		Girls	30	4.33	1.15	0.47	0.66
3	8 – 9	Boys	30	5.33	0.58	0.24	0.33
		Girls	30	5.67	0.58	0.24	0.33
4	9 – 10	Boys	30	5.33	1.15	0.47	0.66
		Girls	30	6.00	1.00	0.41	0.58
5	10 – 11	Boys	30	6.00	1.00	0.41	0.58
		Girls	30	7.67	0.58	0.24	0.33

Figure No. - 7.14
Mean Sub-scapular Skinfold by Age and Sex



According to table no.-7.9 & Figure no.-7.14, there is a consistent increase in sub-scapular skinfold thickness among the Pasi children, but its value is greater in girls than boys in all the age groups.

Figure No. - 7.15
A Comparison of Mean Sub-scapular Skinfold of Pasi Boys with American Boys

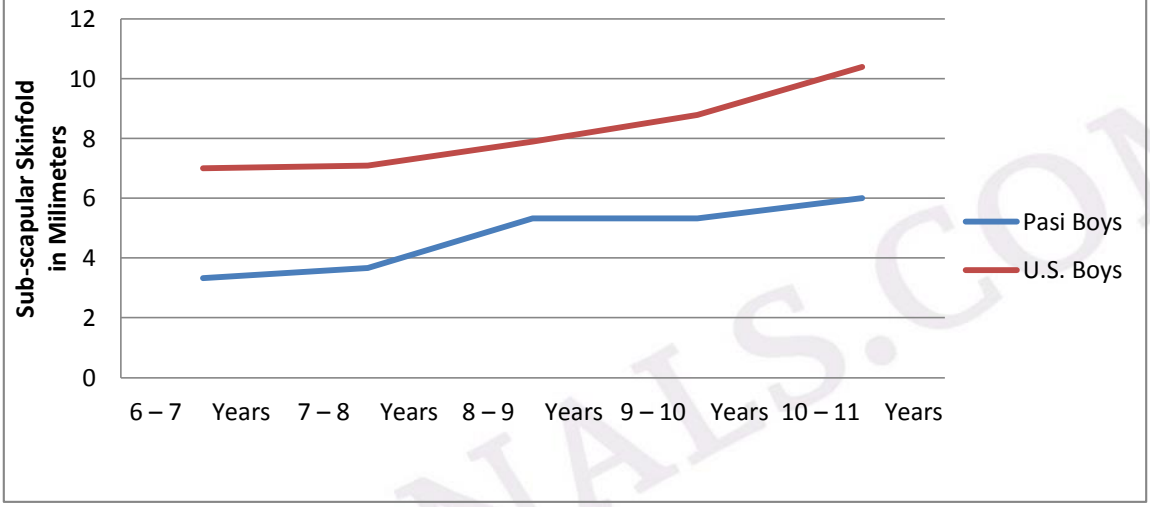
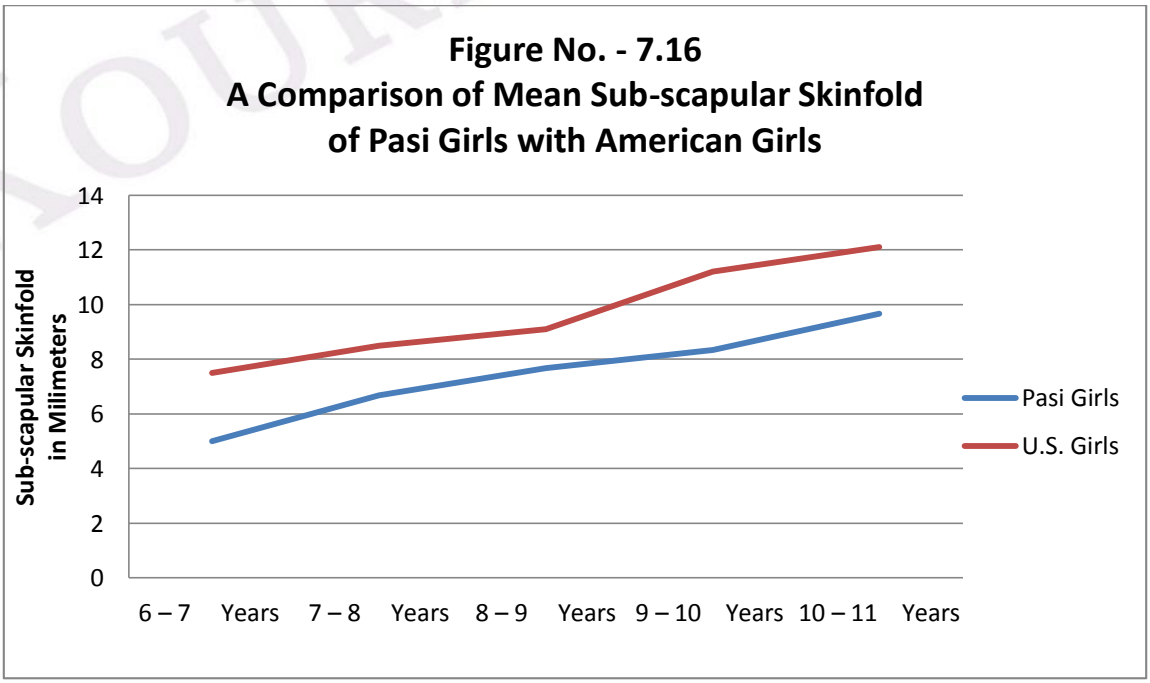


Figure No. - 7.16
A Comparison of Mean Sub-scapular Skinfold of Pasi Girls with American Girls



On the basis of the comparison of mean sub-scapular skinfold thickness of Pasi children with U.S. children (Figure no. 7.15 & 7.16), it is found that in both the sexes, its value is much less among the Pasi children than the U.S. children.

BODY MASS INDEX (BMI)

Body Mass Index is an index between the two body measurements, viz., the height and weight. The former is highly influenced by genetic factors and the latter by environmental factors. The first measurement is relatively constant for respective age, but the second one is more fluctuating according to changing environmental conditions. The resultant index, thus, is the predictor of genetic as well as environmental influences. The index in turn is predictive of the health conditions and the effect of related factors, socio-economic conditions and the effects of related factors, such as, adequacy or inadequacy of the food and thereby the chronic energy deficiency, etc. Hence, the results of BMI can be verified by the results of dietary intake-adequacy, proper-improper, etc (Kulkarni, V.S. & Alizad, S.S.).

Here, Body mass index for each child is calculated according to 'Quetelet's' Index, which is statistical correlation of the relationship between the height and weight of an individual arrived at by dividing body weight (kilogram) and height in meter^2. In people older than 20 years a BMI of <18 is considered underweight, 18-25 is normal, 25-30 is overweight and a BMI of greater than 30 is considered obese. But in children the underweight, normal, overweight or obese BMI number is not the same as in adults. For children, BMI-for-age percentile is used, as amount of body fat changes with age and amount of body fat is different between girls and boys.

In the present study the value of BMI-for-age used is based on reference data of the World Health Organization (WHO) report (Annexure-

1.6). A child is considered underweight or having low BMI when his BMI-for-age is >5th percentile, normal weight when his BMI-for-age is between 5th to 85th , overweight when his BMI-for-age is between 85th to 95th and obese when his BMI-for-age is ≥95th percentile.

Table No. 7.10

Body Mass Index

S. No.	Age Group (Years)	Sex	Number of Respondents	Mean	Standard Deviation	Standard Error of Standard Deviation	Standard Error of Mean
1	6 – 7	Boys	30	14.70	0.82	0.33	o.47
		Girls	30	14.89	0.63	0.26	0.36
2	7 – 8	Boys	30	15.67	0.82	0.33	0.47
		Girls	30	15.68	3.43	1.40	1.98
3	8 – 9	Boys	30	15.50	1.63	0.67	0.94
		Girls	30	15.43	2.96	1.21	1.71
4	9 – 10	Boys	30	15.94	0.93	0.38	0.54
		Girls	30	15.82	1.65	0.67	0.95
5	10 – 11	Boys	30	15.36	1.81	0.74	1.05
		Girls	30	15.21	1.06	0.43	0.61

Figure No. - 7.17
Body Mass Index
(Kilograms/Meter^2)

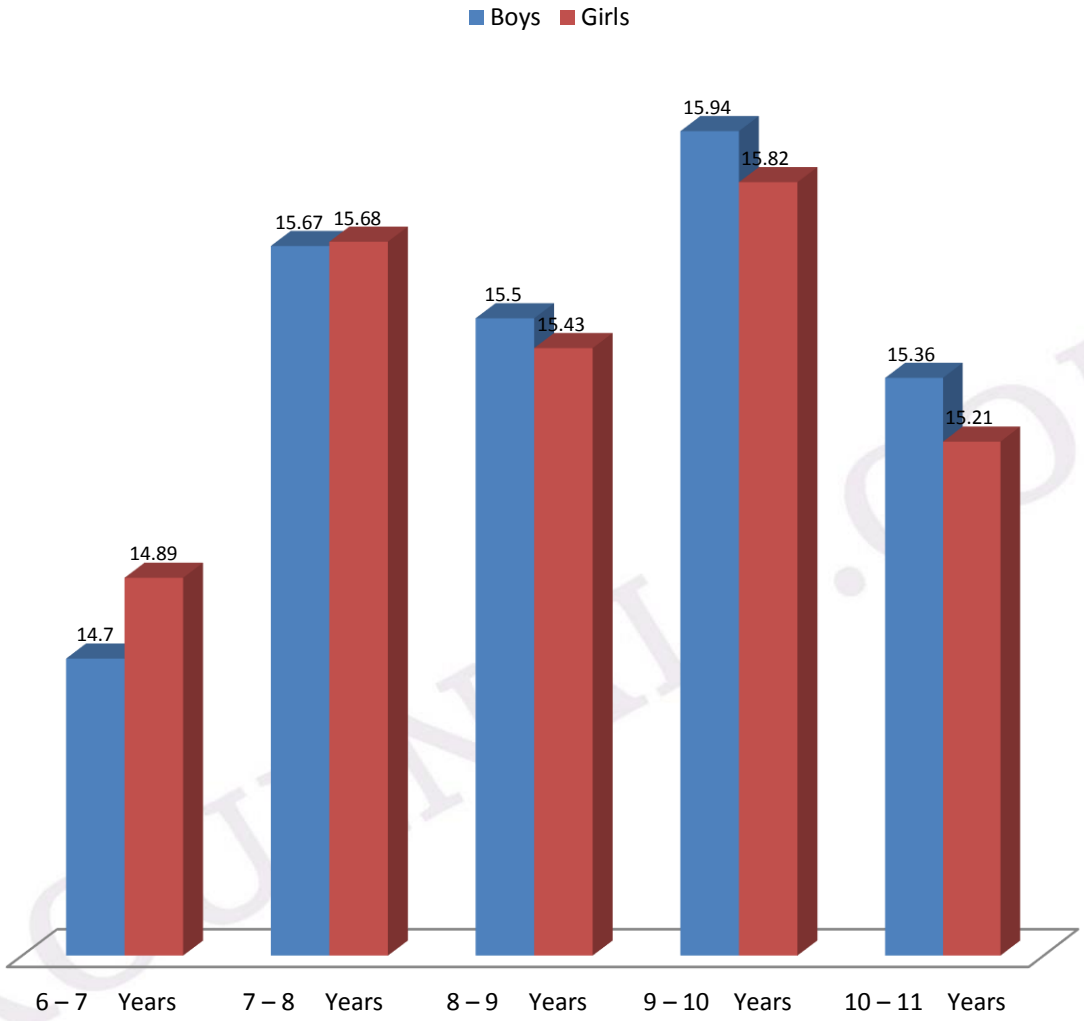
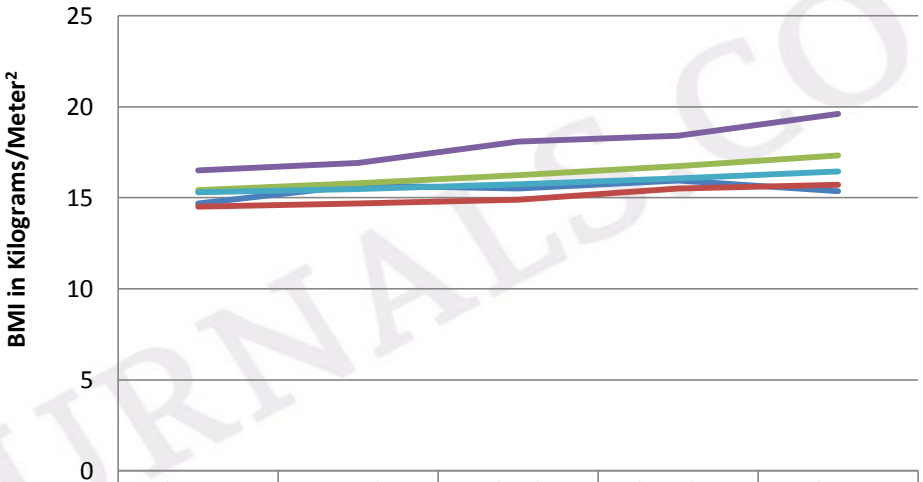


Table no.-7.10 & Figure no.-7.17 shows the mean value of BMI of Pasi children. It shows that in case of both the sexes, its value is increased from 6 -7 years to 7-8 years of age group, but decreased again in the age group of 8-9 years age group. Again the value is increased in all the age group of 9-10 years and decreased in the age group of 10-11 year. In most of the age groups, i.e., from 8 to 11 years, the BMI value is less than the boys. It may be due to gender discrimination prevalent in the society.

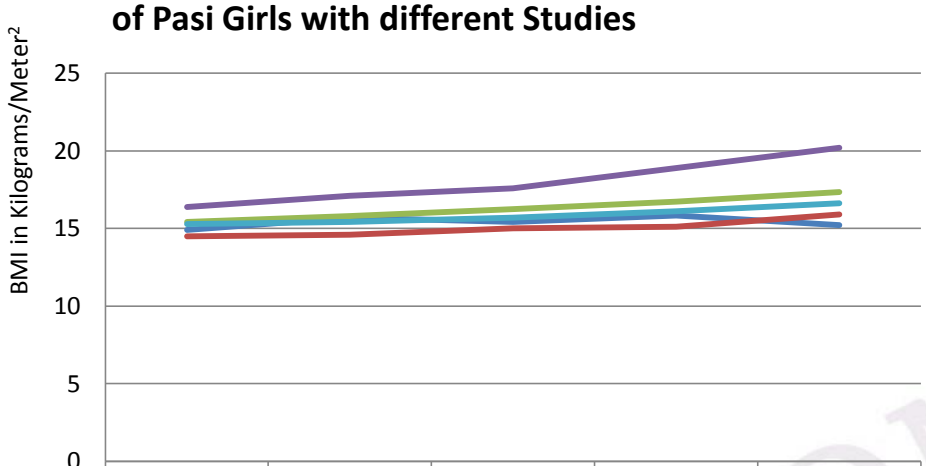
When the mean value of BMI of age group is compared in with BMI-for-age, reference data of W.H.O. report. Then it is found that the mean value of all the age groups of both sexes reveals the normal weight category. But, the normal range category ranges from 5th percentile to 85th percentile, and in all the age groups BMI value is ranged between 15th to 50th percentile value. So, values are too far from overweight values.

Figure No. - 7.18
A Comparison of Mean BMI of Pasi Boys with Different Studies



	6 – 7 Years	7 – 8 Years	8 – 9 Years	9 – 10 Years	10 – 11 Years
Pasi Boys	14.7	15.67	15.5	15.94	15.36
Indian Rural Boys	14.5	14.7	14.9	15.5	15.7
Indian Schoolboys	15.43	15.79	16.23	16.74	17.33
U.S. Boys	16.5	16.9	18.1	18.4	19.6
W.H.O.	15.31	15.48	15.74	16.05	16.44

Figure No. - 7.19
A Comparison of Mean BMI of Pasi Girls with different Studies



	6 - 7 years	7 - 8 years	8 - 9 years	9 - 10 years	10 - 11 years
Pasi Girls	14.89	15.68	15.43	15.82	15.21
Indian Rural Girls	14.5	14.6	15	15.1	15.9
Indian Schoolgirls	15.43	15.79	16.23	16.74	17.33
U.S. Girls	16.4	17.1	17.6	18.9	20.2
WHO	15.27	15.43	15.68	16.1	16.61

However, the BMI value in all the age group shows the normal category, but comparison with different studies (Figure no.-3.18 & 3.19) reveals that, generally its value is higher than Indian rural children, but less than Indian school children belonging to upper socio-economic strata, American children and even its value is lesser than 50th percentile value of W.H.O reference report. This less BMI value may be attributed to the poor dietary intake, large family size, unawareness about the balanced diet, poor access to health facilities and gender discrimination.

CONCLUSION AND SUGGESTIONS

Monitoring of growth and development during middle childhood is important for improving overall health, as it is the age of critical development, falling between infancy and adolescence, when children undergo critical physical, cognitive, and social changes. Further, culturally based interventions are known to have better success rate in improving access to and utlilization of health services. The present research has been conducted to explore the socio-cultural, physical, economic, institutional and environmental factors affecting health, growth and development during middle childhood among the Pasis, a scheduled caste population in an urban setting of Lucknow. The effort has been done to give an assessment of the prevailing child health schemes. It also proposes the interventions and policy changes based on empirical field research evaluated against the criteria of efficacy and effectiveness; deliverability, affordability, and sustainability; ethical methods; and predicted effect on equity in the population. Thus, it presents the holistic study of middle childhood health among the Pasi Children of Lucknow.

The study is based on selected 300 Pasi children including 150 boys and 150 girls. The sample has been further classified into different age groups. Overall picture shows that their health and health related problems vary according to age and gender. It is found that, however, a majority of the children are getting education in the school; perhaps, it is the impact of the awareness drive for 'Sarva Siksha Abhiyan' through mass media. But there is also a large percentage of those children, who are deprive of it, due to unawareness, lower educational status and socio-economic problems of their parents. Some children are struggling for existence and are indulge in economic activities, while some others are indulge in economic activities with their studies. The nature and the conditions of their work is adversely affecting their health, as hard work combined with poor nutrition leads to the state of general disability which is called deficiency illness. However, it is evident that gender discrimination is also present with regard to access to education, i.e, the preference is given to boys. But simultaneously, the percentage of the male child labour is also higher than the females. May be, the traditional

value, that the males can perform work outside the home, is the main reason behind the fact.

Most of the Pasi children belong to nuclear families, which is an urban characteristic, while some others are living in joint families or with their relatives. In most of the Pasi families, the number of the siblings was more than four. This large number of siblings has an adverse effect on both, their rearing and sharing and finally on their health and hygiene. The level of illiteracy and lower educational level is very high among the parents, which is negatively affecting the child health care practices and utilization of modern medical facilities as it tends to be unawareness towards programmes and policies run by the government and non-government organizations.

Family provides social and affectional as well as material support. It is the family which fulfills the basic material needs for survival, growth and development of the child. Approximately in 2/3 families, only father is working, while in approximately 1/3 families the mother is also working. In some cases, children are also contributing in raising the family income in several. In some joint families more than two members of the family are earning, most of them are 'joint' in nature. The data shows that in overwhelming majority of the families, the whole family income is not more than Rs. 6000/- per month, which is a meager amount for daily expenditure and for the health care.

Health is one of the basic need and access to health services is deniable right of everyone. The social milieu of these children precluded the actual enjoyment of the right to have access to health facilities on par with other sections of the society. Generally the Pasi believe that a person, who is physically fit and active, is a healthy person, but an overwhelming majority of the Pasi parents are not satisfied with the health condition of their children.

The shelter is one of the important basic needs of human being for which he has been struggling ever since. The study includes on all the socio-economic categories of Pasi families but it is found that most of them are living in slums and huts on road side open plots. In all the *Kaccha* houses including some *Pucca* houses, the living arrangements related to hygiene, sanitation and ventilation are very poor, which symbolizes the poor health status of the its inmates. Unawareness and

unhealthy practices clubbed with the poor socio-economic conditions manifest themselves in the form of unhygienic surroundings also at community level. There is a lack of community level effort to improve the hygienic condition of their habitat.

Most of the Pasi families are utilizing the government facilities for safe delivery in hospitals, as they are aware of the facilities provided by 'Janani Suraksha Yojana'. As a result generally the newly born baby is vaccinated in the hospital but later on, they do not even bother for the booster doses. The Government and NGO volunteers visit their places to vaccinate against Polio, thus, except for polio, the level of vaccination for various diseases is very low among these children, which is a severe health hazard.

However, a large majority of children are taking two meals in a day, but most of the children are not properly nourished. The quantity and quality of food stuff in the daily diet of the children is varying. Only in a few families the parents are aware about the proper nutrition. They try to provide their children various nutrients, as they are educated, aware and financially capable. While, in most of the families, due to socio-economic problems and unawareness of the parents, the children are not getting balanced diet according to their age. Per day calorie intake of the children manifests the fact. Malnutrition is reported among most of the children, which is not only one of the largest causes of morbidity, but is also retarding their cognitive, physical and emotional growth. In most of the cases, it was in the form of under-nutrition and imbalanced diet, while in several cases the children are suffering from specific deficiency. Addiction to bad habits, like, *pan masala* & *gutka* and *bidi* & cigarette smoking is reported among a few children belong to the age group of 8-11 years and are from lower income group families and are also engaged in some type of economic activity.

The minor ailments reported among them are cold & cough, fever, pain in abdomen, eye infection, ear infection, skin infection, worm infection and dental carries. While, the common diseases are diarrhoea, dysentery, pneumonia, malaria, chicken pox, measles, diphtheria, whooping cough, mumps, jaundice, tuberculosis and dengue. The several factors, which are affecting the health condition of these children, can be broadly divided into two categories: natural causes and supernatural

causes. Natural causes include the climatic, man-made and genetic causes, while evil eye, evil spirit and sorcery are included in the category of supernatural causes. Both, traditional and modern medicinal systems are reported. However, there is a well developed health infrastructure, with free medical facilities and health coverage in the form of government health institutions do exist, but due to unawareness and lack of education most of the Pasi people opt the modern medicine as their last choice. They utilize it only when they feel that the home remedies and magico-religious treatment are getting fail. Thus, the belief in supernatural agency is dominant in the context of health, disease and treatment.

In constitutional provisions and several schemes and programmes, running for the welfare of the children, there are special provisions for scheduled castes also. But, among the parents and family members of the Pasi children, the general awareness towards these schemes is very low and even they do not bother to collect any information in this regard. As a result their children are not completely benefitted. The reason behind this may be the improper implementation of these programmes and schemes.

As, the collection of body measurements, or anthropometry, has been a basic tool for assessing the child's nutritional, growth and health status. Therefore, Actual stature, weight and body measurements including skinfolds, girths, and breadths have been collected for the assessment. The mean values of all these measurements has been tried to compare with the recent available national and international data to assess the health status of the Pasi children in local, national and global perspective. The analysis reveals a linear increase in growth rate of Pasi children in all the age groups. In height, weight, chest breadth measurements generally the mean values of boys is higher than the girls, but for chest girth, upper arm circumference, calf circumference, triceps skinfold and sub-scapular skinfold thickness, the measurement are larger among the girls in most of the age groups, which manifests a general growth pattern. The comparison of skinfold thickness of Pasi children with American children reveals that fat level in their body is much less, i.e., they are generally ectomorphic in physique.

Body Mass Index is an index between the two body measurements, viz., the height and weight. The former is highly influenced by genetic factors and the latter by environmental factors. The first measurement is relatively constant for respective age, but the second one is more fluctuating according to changing environmental conditions. The resultant index, thus, is the predictor of genetic as well as environmental influences. Here, the height measurement of the Pasi children shows that their height is increasing linearly with the age from 6 to 11 years and as according to WHO standards. But there is, however, linear and gradual increase in growth rate of body weight, but it is not completely satisfactory according to age. The mean value of BMI of Pasi children varies from one age group to another and from boys to girls. While comparing the mean value of BMI with reference data of W.H.O. report, though these are found within the normal range of weight category, which ranges from 5^{th} percentile to 85^{th} percentile. In the present study the BMI value is ranging between 15^{th} to 50^{th} percentile value, which is a clear picture of inadequate and imbalanced diet. In most of the age groups, the BMI value of girls is less than the boys, which is a significant fact. Comparative analysis with other studies reveals that generally its value is higher than Indian rural children, but less than Indian school children belonging to upper socio-economic strata and American children. BMI value may be attributed to the poor dietary intake, large family size, unawareness about the balanced diet, poor access to health facilities and gender discrimination.

SUGGESTIONS

It is high time for the government to ameliorate the health care programmes according to the need of the urban people belonging to scheduled castes. To cope up with both the old and the new challenges the need is to get a sound infrastructure and making sure that it has been implemented to perfection. There is a huge need gap in terms of availability of number of hospitals, medical and para-medical staff in the localities where these Pasi people live. Better policy regulations and the establishment of public-private partnerships (PPP) are possible solutions to the problem of manpower shortage. The affluent persons should be involved in health care programmes, improvised by the Government. The

NGOs should also come forward to provide services in implementing these programmes and making these people aware about existing facilities and their rights.

Health services have three facets: curative, which refers to alleviation and treatment of diseases; preventive, that prevents infectious and parasitic diseases; and promotive, which includes the ways of improvement and promotion in the health care. Any local level programme of health services should encompass all the three facets.

The government and voluntary organizations have to play a very significant role particularly in effective implementation of a strategy which places a great premium on the care of the scheduled caste children through family, community, institutional and non-institutional services. This role should encompass advocacy, promotion, development and cater to different types of needs of the children. It requires concerted and co-ordinated efforts of the government, NGOs, learned bodies and society.

Child health care needs should be on high priority, with a goal of good affordable health services, heavily subsidized for the poor & weaker section. Provision for regular health checkups of the children and required treatment on priority basis should be made through involvement of the local NGOs.

The best remedy can be provided by free treatment and follow up services for the children. NGOs should provide mobile health services and special health camps. These programmes should be funded by a public-private partnership (PPP). The private practitioners should feel their obligation to the poor children by providing treatment at nominal charges.

For the promotion of healthy childhood, the information should be provided to the children and their family members about the nutritional need in middle childhood, early detection of diseases and prevention from secondary complications through health education programmes. Along with it, the information about the effects of life-styles on health status in childhood should be also highlighted. Family should be provided counseling and information for the care and treatment of children through *Nukkad Natak* and Puppet shows etc. The

health education programmes should be strengthened by using mass media and folk media.

There is a need to educate the community about the importance of hygiene, safe drinking water and basic sanitation facilities, and local NGOs can be involved in this process of awareness generation to make it a mass campaign.

The Insurance Regulatory and Development Authority (IRDA) is the governing body responsible for promoting insurance business and introducing insurance regulations in India. Only 10% of the Indian population today has health insurance coverage. Thus it is the need of the time to provide health insurance, as it will be a powerful way of increasing accessibility to quality healthcare delivery. Public sector health insurance schemes for the poor children should be on no-profit, no-loss basis. Private sector health insurance schemes for the children belonging to lower income groups must be subsidized.

National Health Policy, which was announced in the year 1983 and updated in 2002; and National Policy for children, which was announced in 1974, should be implemented properly in each and every nook and corner of the society.

Lack of awareness and poverty is major factor responsible for poor child health care among scheduled caste people. The condition can be improved through inculcating in them individualistic and moralistic values of self-denial, temperance, forethought, thrift, sobriety and self-reliance. These values will help them in proper utilization of the various development schemes, which in turn lead to the stability/improvement in their lives.

To develop a proper perspective of the health problems of the children vis-a-vis the dwindling support of the family, it is required firstly to understand the requirements of the children, their problems and the attitude of their parents, family members and society. In this regard, it is also very important and vital to know about the shortcomings of existing welfare programmes and related problems. Therefore, with the involvement of different disciplines, interventional research activities should be carried out to have more knowledge regarding health problems and solutions of the children.

A scientific and reliable database should be established for which focused research activities are required, as adequate data and information are essential to formulate policies and evaluate progress.

A comprehensive simple health services could be developed in which the community identifies its own health needs and develops primary needs. It cannot be possible without the help of local elected leaders, i.e., '*Sabhasads'* of the district wards.

The health of children is not necessary for them alone but for the whole society. The children are 'Tomorrow' of the Nation and the Creation but they have their own 'Today'. Therefore, it is our duty to protect the 'Today' of these tangible assets.

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Annexure - 1.1
DISTRIBUTION OF SCHEDULED CASTES IN DISTRICT OF UTTAR PRADESH

S.No.	District	Population (2001)	Scheduled Caste Population (2001)	Percentage	Scheduled Castes (Largest Three)
1	Agra	3,620.436	788,394	21.78	Chamar (593,263), Kori (56,634) and Balmiki (51,649)
2	Aligarh	2,992,286	634,270	21.20	Chamar (396,997), Khatik (57,331) and Balmiki (55,414)
3	Allahabad	4,936,105	1,065,097	21.58%	Pasi (412,466), Chamar (402,3470 and Kol (106,164)
4	Ambedkar Nagar	2,026,876	495,375	24.44	Chamar (438,182), Dhobi (29,364) and Pasi (7,809)
5	Auraiya	1,179,993	326,788	27.69	Chamar (210,649), Dhanuk (38,687) and Kori (22,478)
6	Azamgarh	3,939,916	1,013,801	25.73	Chamar (829,755), Pasi (87,872) and Dhobi (34,343)
7	Badaun	3,069,426	524,684	17.09	Chamar (331,011), Balmiki (56,7123) and Dhobi (55,713)
8	Bagpat	1,163,991	127,813	10.98	Chamar (89,732), and Balmiki (27,232
9	Bahraich	2,381,072	342,747	14.39	Chamar (160,679), Pasi (62,426) and Kori (37,979)
10	Ballia	2,761,620	454,647	16.46	Chamar (304,224), Dusadh (59,649) and Gond (33,116)
11	Balrampur	1,682,350	226,753	13.48	Kori (92,734), Pasi (48,552) and Chamar (30,585)

12	Banda	1,537,334	320,226	20.83	Chamar (213,002), Kori (52,162) and Dhobi (19,783)
13	Barabanki	2,673,581	718,897	26.89	Pasi (379,012), Chamar (224,996) and Kori (31.192)
14	Bareilly	3,618,589	457,771	12.65	Chamar (250,911), Dhobi (72,628) and Balmiki (55,294)
15	Basti	2,084,814	435,082	20.87	Chamar (344,350), Dhobi (43,044) and Khatik (23,523)
16	Bijnor	3,131,619	655,806	20.94	Chamar (571,454), Balmiki (42,135) and Bhuiyar (18,353)
17	Bulandshahr	2,913,122	588,683	20.21	Chamar (436,047), Balmiki (51,804) and Khatik (37,562)
18	Chandauli	1,643,251	399,174	24.29	Chamar (285,302), Dusadh (21,573) and Musahar (18,752)
19	Chitrakoot	766,225	201,839	26.34	Chamar (116,878), Kol (39,472) and Kori (17,265)
20	Deoria	2,712,650	493,344	18.19	Chamar (290,458), Gond (82,993) and Dhobi (36,687)
21	Etah	2,790,410	478,665	17.5	Chamar (285,485), Dhobi (71,764) and Balmiki (40,653)
22	Etawah	1,338,871	313,470	23.41	Chamar (190,517), Dhanuk (39,088) and Kori (25,678)
23	Faizabad	2,088,928	471,839	22.59	Pasi (175,258), Kori (149,274) and Chamar (90,143)
24	Farrukhabad	1,570,408	258,080	16.43	Chamar (126,154), Dhanuk (37,970) and Dhobi (32,031)

25	Fatehpur	[2,308,384	578,070	25.04	Chamar (215,829), Pasi (195,629) and Kori (57,796)
26	Firozabad	2,052,958	387,047	18.85	Chamar (233,693), Dhobi (41,407) and Kori (33,383)
27	Gautam Buddha Nagar	1,202,030	190,022	16.31	Chamar (140,549), Balmiki (28,069) and Khatik (6,529)
28	Ghaziabad	3,290,586	593,780	18.04	Chamar (448,862), Balmiki (72,764) and Kori (29,887)
29	Ghazipur	3,037,582	649,510	21.38	Chamar (518,794), Dhobi (23,712) and Dusadh (23,600)
30	Gonda	2,765,586	433,491	15.67	Kori (195,711), Chamar (71,931) and Pasi (68,873)
31	Gorkakhpur	3,769,456	831,070	22.05	Chamar (522,742) , Pasi (110,900) and Beldar (74,237)
32	Hamirpur	1,043,724	237,902	22.79	Chamar (133,601), Kori (44,258) and Basor (26,251)
33	Hardoi	3,398,306	1,065,848	31.36	Chamar (497,693), Pasi (424,758) and Dhobi (59,039)
34	Jalaun	1,454,452	393,307	27.04	Chamar (240,753), Kori (61,470) and Dhobi (30,203)
35	Jaunpur	3,911,679	857,883	21.93	Chamar (636,277), Pasi (112,804) and Dhobi (36,207)
36	Jhansi	1,744,931	489,763	28.07	Chamar (271,048), Kori (88,814) and Dhobi (40,946)
37	Jyotiba Phule Nagar	1,499,068	258,857	17.27	Chamar (224,565), Balmiki (20,674) and Dhobi (6,655)

38	Kannauj	1,388,923	256,038	18.43	Chamar etc. (141,819) , Dhanuk (42,694) and Dhobi (23,643)
39	Kanpur Dehat	1,563,336	388,419	24.85	Chamar (234,591), Kori (44,780) and Dhanuk (37,732)
40	Kanpur Nagar	4,167,999	685,809	16.45	Chamar (304,424), Kori (95,008) and Pasi etc. 89,895
41	Kaushambi	1,293,154	466,853	36.10	Pasi (283,145)m Chamar (96,207) and Dhobi (36,537)
42	Kushinagar	2,893,196	524,149	18.12	Chamar (283,033), Gond (65,886) and Dhobi (51,673)
43	Lakhimpur Kheri	3,207,232	820,359	25.58	Chamar (353,143) , Pasi (333,880) and Dhobi (50,960)
44	Lalitpur	977,734	243,788	24.93	Chamar (138,167), Saharya (44,587) and Dhobi (20,857)
45	Lucknow	3,647,834	776,502	21.29	Pasi (334,398), Chamar (229,704) and Rawat (47,396)
46	Mahamaya Nagar	1,336,031	336,739	25.20	Chamar (220,953), Dhobi (37,195) and Kori (22,775)
47	Maharajganj	2,173,878	424,190	19.51	Chamar (265,168), Pasi(57,353) and Dhobi (54,072)
48	Mahoba	708,447	182,614	25.781	Chamar (116,164), Kori (24,117) and Basor (20,011)
49	Mainpuri	1,596,718	308,390	19.31	Chamar(148,402), Dhanuk (62,125) and Dhobi (40,918)

50	Mathura	2,074,516	406,600	19.60	Chamar (302,459), Balmiki (28,951) and Kori (28,868)
51	Mau	1,853,997	421,677	22.74	Chamar (265,168), Dhobi (57,353) and Gond (54,072)
52	Meerut	2,997,361	552,692	18.44	Chamar (443,200), Balmiki (65,570) and Khatik (11,337)
53	Mirzapur	2,116,042	566,160	26.76	Chamar (285,801), Kol (123,996) and Pasi (39,515)
54	Moradabad	3,810,983	604,253	15.86	Chamar (468,335), Balmiki (57,442) and Dhobi (19,006)
55	Muzaffarnagar	3,543,362	478,324	13.50	Chamar (375,600) Balmiki (58,716) and Kori (19,006)
56	Pilibhit	1,645,183	250,495	15.23	Chamar (92,574), Pasi (41,941) and Dhobi (37,930)
57	Pratapgarh	2,731,174	601,043	22.01	Pasi (286,572), Chamar (244,002) and Dhobi (29,171)
58	Rae Bareli	2,872,335	856,749	29.83	Pasi (474,133), Chamar (226,481) and Kori (66,161)
59	Rampur	1,923,739	257,365	13.38	Chamar (170,475), Balmiki (26,206) and Dhobi (23,847)
60	Saharanpur	2,896,863	629,340	21.73	Chamar (546,674), Balmiki (26,206) and Dhobi (23,847)
61	Sant Kabir Nagar	1,420,226	300,902	21.19	Chamar (215,913), Beldar (35,387) and Dhobi (29,537)

62	Sant Ravidas Nagar	1,353,705	292,747	21.63	Chamar (184,397), Pasi (70,259) and Dhobi (11,146)
63	Shahjahanpur	2,547,855	451,492	17.72	Chamar (194,784), Dhobi (66,941) and Pasi (52,046)
64	Shravasti	1,176,391	216,352	18.39	Pasi (89,123), Chamar (53,996) and Kori (33,958)
65	Siddharthnagar	2,040,085	337,311	16.53	Chamar (238,032), Pasi (43,062) and Dhobi (41,445)
66	Sitapur	3,619,661	1,153,661	31.87	Pasi (599,413), Chamar (437,085) and Dhobi (59,687)
67	Sonbhadra	1,463,519	613,497	41.92	Chamar (179,239), Gond (132,946) and Kharwar (excluding Benbansi) (64,738)
68	Sultanpur	3,214,832	715,297	22.25	Chamar (304,624), Kori (196,096) and Pasi (146,096)
69	Unnao	2,700,324	827,255	30.64%	Pasi (396,538), Chamar (290,198) and Dhobi (52,906)
70	Varanasi	3,138,671	435,545	13.881	Chamar (308,100), Khatik (31,251) and Dhobi (21,206)

Source: http://www.censusindia.gov.in/Tables_Published/Basic_Data_Sheet.aspx

Annexure – 1.2

WARDS IN LUCKNOW CITY AND SELECTED WARDS FOR THE STUDY

List of Wards in Lucknow City

Ward No.	Name of the Wards	Ward No.	Name of the Wards
1	IBRAHIM PUR WARD	56	DALIGANJ WARD
2	RAJA BIJLI PASI WARD	57	VIKRMADITYA WARD
3	TILAK NAGAR WARD	58	LAL BAHADUR SHASTRI WARD _IIND
4	SAROJNI NAGAR WARD PART-1	59	HUSAINA BAD WARD
5	AMBEDKAR NAGAR WARD PART-2	60	LABOUR COLONY WARD
6	SAHEED BHAGAT SINGH WARD	61	BEGUM HAZRAT MEHAL WARD
7	MALVIYA NAGAR WARD	62	MAHANAGAR WARD
8	LAL BAHADUR SHASTRI WARD PART-1	63	TRIVENI NAGAR WARD
9	KANHAIYA MADHAV PUR WARD	64	KUNWER JYOTI PRASAD WARD IST
10	KHARIKA WARD	65	RAM TEERATH WARD
11	CHINHAT WARD	66	HIND NAGAR WARD
12	FAIZULLAH GANJ WARD	67	MANKAMESHWAR MANDIR WARD
13	LALKUAN WARD	68	CHANDRABHAN GUPT NAGAR WARD
14	AMBEDKAR NAGAR WARD-IST	69	RAM JI LAL NAGAR WARD
15	SAROJNI NAGAR WARD IIND	70	SAHADAT GANJ WARD
16	HAIDAR GANJ WARD IIND	71	NETA JI SUBHASH WARD
17	HAZRAT GANJ WARD	72	GANESH GANJ WARD
18	OM NAGAR WARD	73	VIDHYA DEVI WARD IIND
19	KESARI KHERA WARD	74	MAHA KAVI JAI SHANKAR PRASAD
20	GURU GOVIND SINGH WARD	75	SARDAR PATEL NAGAR WARD
21	SHARDA NAGAR WARD	76	BABU BANARSHI DAS WARD
22	GURU NANAK NAGAR WARD	77	BHARTENDU HARISH CHANDRA WARD
23	JAGDISH CHANDRA BOSE WARD	78	ALAM NAGAR WARD
24	INDIRA PRIYADARSANI WARD	79	MASHK GANJ WARD
25	BALA GANJ WARD	80	SHEETLA DEVI WARD
26	BABU KUNJ BIHARI LAL WARD	81	RAJEEV GANDHI WARD_IIND
27	NIRALA NAGAR WARD	82	AYODHYA DAS WARD

28	GEETA PALLI WARD	83	RAJAJI PURAM WARD
29	RAM MOHAN RAI WARD	84	LOHIYA NAGAR WARD
30	SHANKAR PURVA WARD IIND	85	AMBAR GANJ WARD
31	NISHAT GANJ WARD	86	KASHMIRI MOHLLA WARD
32	FAIZULLAH GANJ WARD IST	87	INDRA NAGAR WARD
33	RAJENDRA NAGAR WARD	88	VIDYAWATI DEVI WARD-1
34	RANI LAXMI BAI WARD, AMINABAD	89	ALI GANJ WARD
35	JANKIPURAM WARD – IST	90	ACHARYA NARENDRA DEV WARD
36	RAJIV GANDHI WARD-IST	91	JANKI PURAM WARD_IIND
37	ISMILE GANJ WARD IST	92	DAULAT GANJ WARD
38	MAITHLI SARAN GUPT WARD	93	YADU NATH SANYAL WARD
39	AISHBAGH WARD	94	MOULVIYA GANJ WARD
40	RAFI AHMAD KIDWAI WARD	95	WAZEER GANJ WARD
41	ISMILE GANJ WARD IIND	96	BASHEERAT GANJ WARD
42	COLVIN COLLEGE WARD	97	BHAWANI GANJ
43	LALA LAZPAT RAI WARD	98	YAHIYA GANJ WARD
44	CHITRA GUPT NAGAR WARD	99	SANKER PURVA WAD-1ST
45	PAPER MILL COLONY WARD	100	NAZER BAGH WARD
46	GOLAGANJ PEER JALEEL WARD	101	ASHARFA BAD WARD
47	HAIDAR GANJ WARD IST	102	BAJRANG BALI WARD
48	MAHATAMA GANDHI WARD	103	VIVEKA NAND PURI WARD
49	BABU JAGJIVAN RAM WARD	104	CHOWK KALI JI BAZER WARD
50	HARDEEN RAI NAGAR WARD	105	GADI PEER KHA WARD
51	KADAM RASUL WARD	106	KUNDRI RAKABGANJ WARD
52	GOMTI NAGAR WARD	107	MAULANA KALBEY ABEED WARD-1ST
53	MALLAHI TOLA WARD-IST	108	MAULANA KALBEY ABEED WARD-2ND
54	KUNWER JYOTI PRASAD WARD-IIND	109	MALLAHI TOLA WARD-2ND
55	MOTILAL NEHRU WARD	110	RAJA BAZAR WARD

Source: Source: http://lucknow.nic.in/ward-detail/parisiman_english_latest.htm

List of Ten Selected Wards for the Study

S.No.	Ward No.	Name of the Ward	Mohalla
1.	**8**	**LAL BAHADUR SHASTRI WARD PART-1**	1. A BLOCK INDIRA NAGAR 2. SECTOR-22,23,24 3. SARVODAYA NAGAR 4. LUV KUSH NAGAR PARTLY 5. SECTOR 20, PRAKASH LOK, SAMADDIPUR
2.	**10**	**KHARIKA WARD**	1. SUBHANI KHERA 2. GHOSIYANA 3. KUMHAAR MANDI 4. RAVINDRA NAGAR 5. NEPAL GANJ 6. GOPAL NAGAR 7. NAYI TOLA 8. PASIYANA 9. BANGALI TOLA 10. RAIBARELI ROAD 11. GANDHI NAGAR 12. LONGA KHEDA 13. CHAMRAHI 14. MOHARI BAGH
3.	**11**	**CHINHAT WARD**	1. NAYA GAON 2. VIJAYI PUR 3. KATOTHA 4. TAKVA 5. RISHA PARTLY 6. CHINHAT A,B,C,D,E,F,H BLOCK VINEET KHAND
4.	**17**	**HAZRAT GANJ WARD**	1. MAHATMA GAHDHI ROAD 2. BALMIKI MARG 3. MAKBARA ROAD SHAHJANAF ROAD 4. LAPLAS 5. SAPRU MARG 6. LAURANCE TERENCE 7. HAZRAT GANJ BAZAR 8. A.K.HALWASIA ROAD 9. CAIPAR ROAD 10. KHANDARI PURWA 11. TRILOK NATH ROAD

			12. BELDARI LANE 13. FROM UDA BAI CHAURAHA TO RIGHT SIDE RANA PRATAP MARG TO SHANI MANDIR, TILAK MARG & LAXMAN MELA STHAL TO RIGHT SIDE OF SIKNDAR NAGAR
5.	**32**	**FAIZULLAH GANJ WARD IST**	1. SITAPUR ROAD TO KESHAV NAGAR RIGHT SIDE OF DIVIDER ROAD
6.	**34**	**RANI LAXMI BAI WARD, AMINABAD**	1. GAUTAM BUDH MARG 2. NAYA GAON WEST 3. QUISAR BAGH, OLD NAZIRABAD 4. MITRA BANDHU ROAD, NAZIRABAD, SHYAMA PRASAD MUKHARJEE ROAD 5. BAZAR JHAU LAL, KHAYALI GANJ 6. RAJA NAWAB ALI ROAD, KACHEHARI ROAD 7. R.K.TANDON ROAD, CHAKBAST ROAD 8. MARWARI GALI, GANNEY WALI GALI 9. GADBADJHALA, SRI RAM ROAD, AMINABAD PARK
7.	**68**	**CHANDRABHAN GUPT NAGAR WARD**	1. MUNNI LAL DHARAMSHALA ROAD 2. LOKMANYAGUNJ 3. RAILWAY MULTI STORY 4. PAY & CASH COLONY 5. CHANDRABHANU GUPT NAGAR (PANDARIBA) 6. SUBHASH MARG (HAIDAR CANNAL TO CHARBAGH BOTH SIDE OF ROAD) 7. A P SEN ROAD 8. GAUTAM BUDHA MARG (G.H. CANNAL TO CHARBAGH) 9. G.R.P. COLONY 10. DURGAPURI BLUNT SQUARE 11. PARTLY MAVAIYA 12. GOOD SHADE COLONY 13. NOTIFIED AREAR, CHARBAGH RAILWAY COLONY, SEWAGRAM STADIUM COLONY
8.	**70**	**SAHADAT GANJ WARD**	1. BIHARIPUR 2. SAHADAT GANJ KHAS 3. SARAY MUGAL 4. HASAN GANJ BAWLI 5. BAWLI BAZAR 6. MOHAMMAD GANJ 7. FATOHA BAD 8. GADAIYA SULTAN PUR 9. SAMRAHI ROAD

			10. BELWARI 11. HIYARD 12. KAGJI TOLA 13. PARASATA 14. DURGADEEN ROAD 15. BOTH SIDE OF MATADEEN ROAD 16. D0H0A0 ROAD PARTLY 17. SHEKHPUR ROAD
9.	**89**	**ALI GANJ WARD**	1. SHEKHA PUR 2. MINDIYA TOLA 3. ALI GANJ SECTER- A, B. F, I 4. FATEH PUR 5. TATAR PUR 6. CHAND GANJ 7. CHANDRA LOCK COLONY 8. CHAUDHARY TOLA 9. RAVINDDRA GARDEN 10. MIRZA BAGH
10.	**104**	**CHOWK KALI JI BAZER WARD**	1. CHOCK ROAD, KAMLA NEHRU MARG GADIYALI, LAAZ PAAT NAGAR, GOAL DAAR WAJA, DAHLA KUWA, CHOODI WALI GALI 2. CHOPADI TOLA, PHOOL WALI GALI 3. BAGH TOLA KALIYAN TOLA 4. KATARI TOLA, SONDHI TOLA 5. POOL GAMA, CHOBH DARI MOHALA PURANI SABJI MUNDI, GALI HAMAM 6. SAROY TAHSEEN, BAHURAN TOLA 7. AHROHI TRADE E.TC., SURANGI TOLA 8. NAAYI BADA, KHUN-KHUN JI ROAD 9. BAGH MAHANARYAN, MIRZA MANDI 10. KUCHA TEEPAR CHANDRA TOKRI TOLA 11. SAROY MALI KHA, 1 TO 50, DARJI BAGHIYA

Annexure – 1.3
CHILD WELFARE IN INDIA

Ministry of Health and Family Welfare 11-January, 2007 13:1 IST

Programmes and Policy Measures for Child Welfare

Children constitute principle assets of any country. Children's development is very important for the overall development of society and the best way to develop national human resources is to take care of children. India has the largest child population in the world. All out efforts are being made by the Government for the development and welfare of children. A number of policy initiatives have been taken for this purpose.

Policy Initiatives

The National Policy for children lays down that the State shall provide adequate services towards children, both before and after birth and during the growing stages for their full physical, mental and social development. The measures suggested include amongst others, a comprehensive health programme, supplementary nutrition for mothers and children, free and compulsory education for all children up to the age of 14 years, promotion of physical education and recreational activities, special consideration for children of weaker sections including SCs and STs and prevention of exploitation of children, etc.

The Government of India has also adopted the **National Charter for Children,** which has been prepared after obtaining the views/comments and suggestions of the State governments/UT Administrations, concerned Ministries and Departments and experts in the field. The National Charter is a statement of intent embodying the Government's agenda for children. The document emphasizes Government of India's commitment to children's rights to survival, health and nutrition, standard of living, play and leisure, early childhood care, education, protection or the girl child, empowering adolescents, equality, life and liberty, name and nationality, freedom of expression, freedom of association and peaceful assembly, the right to a family and the right to be protected from economic exploitation and all forms of abuse. The document also provides for protection of children in difficult circumstances, children with disabilities, children from marginalized and disadvantaged communities, and child victims. The document while stipulating the duties of the State and the Community towards children also emphasizes the duties of children towards family, society and the Nation. The National Charter for Children was notified in the Gazette of India on 9th February, 2004.

India has also acceded to the UN Convention on the Rights of the Child to reiterate its commitment to the cause of children. The objective of the Convention is to give every child the right to survival and development in a healthy and congenial environment.

India is also party to the Millennium Development Goals and the SAARC Conventions on Child Welfare and Combating Trafficking of Women and Children is SAARC Region.

Ministry of Women and Child Development has prepared a **National Plan of Action for Children** 2005 after harmonizing the goals for children set in the UN General Assembly Special Session on Children held in 2002 and the monitorable targets set in the Tenth Five Year Plan and goals for children in related Ministries/ Departments. The Action Plan has been prepared in consultation with concerned Ministries and Departments, States/UT Governments, non-Governmental organizations and experts. The National Plan of Action includes goals, objectives, strategies and activities for improving nutritional status of children, reducing IMR and MMR, increasing enrolment ratio and reducing drop out rates, universalisation of primary education, increasing coverage for immunization etc.

Child welfare programmes

Several Ministries and Departments of the government of India are implementing various schemes and programmes for the benefit of children. Some of the Schemes and programmes are as under:

Integrated Child Development Services (ICDS) being implemented by Ministry of Women and Child Development is the world's largest programme aimed at enhancing the health, nutrition and learning opportunities of infants, young children (O-6 years) and their mothers. It is the foremost symbol of India's commitment to its children – India's response to the challenge of providing pre school education on one hand and breaking the vicious cycle of malnutrition, mortality and morbidity o the other.

The Scheme provides an integrated approach for converging basic services through community based workers and helpers. The services are provided at a centre called the 'Anganwadi', which literally means a courtyard play centre, a childcare centre located within the village itself. The package of services provided are:

- Supplementary nutrition,
- Immunization,
- Health check-up
- Referral services,
- Pre-school non-formal education and
- Nutrition and health education

It is a centrally sponsored scheme implemented through the State Governments with 100% financial assistance from the Central Government for all inputs other than

supplementary nutrition which the States were to provide from their own resources. However, from the year 2005-06, the Government of India has decided to provide Central assistance to States for supplementary nutrition also to the extent of 50% of the actual expenditure incurred by States or 50% of the cost norms, whichever is less.

Creche Scheme for the children of working mothers:The Ministry of Women and Child Development has launched a new Creche Scheme in January 2006. The Scheme has been named as Rajiv Gandhi National Creche Scheme for the Children of working Mothers. These creches have been allocated to the Central Social Welfare Board, Indian Council for Child Welfare and Bhartiya Adim Jati Sevak Sangh in the ration of 80:11:9. The priority has been given to uncovered districts/areas and tribal areas while extending the scheme to maintain balance regional coverage. Eligibility criteria under the Revised Scheme has also been enhanced from Rs. 1800/- to Rs. 12000/- per month per family.

Nutrition component of Prime Minister Gramodya Yojana and Nutrition Programme for Adolescent Girls being implemented in 51 districts with additional central assistance provided by the Planning commission, directly and indirectly contribute to promoting nutrition of children. A National Nutrition Mission has also been set up with a view to enable policy direction to concerned Departments of the Government for addressing the problem of malnutrition in a mission mode.

Reproductive and Child Health Programme: Being implemented by the Ministry of Health and Family Welfare, the programme provides effective maternal and child health care, micronutrient interventions for vulnerable groups, reproductive health services for adolescent etc. Some important programmes cover

- Immunization for children for DTP, Polio and Tetanus Toxoid for women
- Vitamin A administration
- Iron and folic Acid for pregnant women.

This programme integrates all family welfare and women and child health services with the explicit objective of providing beneficiaries with 'need based, client centered, demand driven, and high quality integrated RCH services'. The strategy for the RCH programme shifts the policy emphasis from achieving demographic targets to meeting the health needs of women and children.

Pulse Polio Immunization Programme being implemented by the Ministry of Health and Family Welfare covers all children blow five years. It is a massive programme covers 166 million children in every round of National Immunization Day. The other immunization programmes include Hepatitis B, DPT and other routine immunization.

Other notable programmes for child health include, Universal immunization programme, control of deaths due to acute respiratory infections, control of diarrhoeal diseases, provision of essential new-born care to address the issue of the neonates, prophylactic programmes for the prevention and treatment of two micronutrient deficiencies relating to Vitamin A and iron, Anemia control programme, Border District Cluster Strategy and Integrated Management of Neo-natal and childhood illness.

Sarva Shiksha Abhiyan being implemented by the Department of Education provides for school infrastructure and quality improvement in education of the children. The specific objectives are,

- All children to be in school
- Universal retention by 2010
- Bridging all gender and social gaps at primary stage by 2007 and at elementary education level by 2010.

The Government of India is committed to realizing the goal of universalization of elementary education by 2010. Under Sarva Shiksha Abhiyan (SSA), the National flagship programme, the Government aims to provide free and compulsory elementary education to all children in the 6-14 age group by 2010.

A National Programme for education of girls at elementary level is also being implemented by the Department of Education for children in difficult circumstances including drop out girls, working girls, girls from marginalized social groups, girls with low levels of achievement to gain quality elementary education and to develop self esteem of girls through a community based approach.

Kasturba Gandhi Balika Vidyalaya is a new scheme being implemented by the Department of Educaiton, which enables opening of 750 specialresidential schools for the girl child belonging to SC/ST, other backward classes and minority in educationally backward blocks having low female literacy.

Mid-day meal Scheme is also one of the important schemes of the Government to aim universal enrollment and retention of children. Under the programmed nutrition snacks are provided to children attending schools.

Integrated programme for Street Children: The programme is being implemented by the Ministry of Social Justice and Empowerment. This programme aims at preventing destitution of children and facilitate their withdrawal from life on the streets. The programme is targeted towards children without homes and family ties, especially vulnerable to abuse and exploitation.

Integrated Programme for Juvenile Justice:The programme is being implemented by the Ministry of Social Justice and Empowerment with a view to providing carte to

children in difficult circumstances and children in conflict with the law through Government institutions and through NGOs. Some special features of the scheme areas:

- Establishment of a National Advisory Board on Juvenile Justice.
- Creation of a Juvenile Justice Fund.
- Training, orientation and sensitization of judicial, administrative police and NGOs responsible for implementation of JJ Act.
- Institutional are shall be used but only as a last measure by enlarging the range of suitable alternatives.
- Financial assistance to bring about a qualitative improvement in the existing infrastructure.
- Expansion of non-institutional services such as sponsorship, foster care, probation etc. as and an alternate to institutional care.

Child helpline childhelpline is a toll free telephone service (1098) which anyone can call for assistance in the interest of children. Being run with the support of Women and child welfare Ministry is working in 72 cities across the country. The **Shishu Greh Scheme** is also being implemented by the ministry to promote adoptions within the country and to ensure minimum standards in the care of abandoned/orphaned/destitute children. Grant-in-Aid upto a ceiling of Rs. 6 lakh is provided per unit of 10 children in a Shishu Greh.

The National Rural Health Mission, a scheme of health Ministry seeks to provide effective healthcare to rural population including large population of children throughout the country with special focus on 18 States, which have weak public health indicators and/or raise public spending on health from 0.9% of GDP to 2-3% of GDP. It aims to undertake architectural correction of the health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Programme and promote policies that strengthen public health management and service delivery in the country.

Elimination of Child Labour is being implemented by the Ministry of Labour which sanctions projects for rehabilitation of working children and for elimination of child labour. Under the project based Action Plan of the Policy, National Child Labour Projects (NCLPs) have been set up in different areas to rehabilitate child labour. A major activity undertaken under the NCLP is the establishment of special schools to provide non-formal education, vocational training, supplementary nutrition etc. to children withdrawn from employment. 150 Child Labour Projects have so far been sanctioned for rehabilitating children in the most endemic areas and 1.5 lakh children have already been mainstreamed in the special schools.

Prevention of Offences against Children: After wide consultations a draft Bill for offences Against Children has been prepared and circulated to the State Governments for their comments and views. After obtaining the comments of the State governments

and concerned Ministries and Departments a draft has bee prepared and circulated to the concerned Ministries and Departments for their comments and use.

Child Budgeting: The Government is also actively considering introducing child budgeting. The key objectives of the endeavor would be analyze budgetary provisions on social sector, to identify the magnitude of budgetary allocations made by the Centre/State Governments on schemes meant for addressing specific needs of children, to examine the trend in child specific expenditure etc. the main agenda for the exercise of child budgeting is to review resource allocations related to children; explore ways to increase budgetary allocations for children; assess budget utilization rates for social sector and child specific programmes, identify blockages and constraints to effective utilization; identify methods for tracking expenditure and monitoring performance to ensure that outlays translate into outcomes for children.

Pilot projects for combating trafficking of women and children: Three pilot projects are being implemented viz i) to combat trafficking women and children for commercial sexual exploitation under the sanction of tradition ii) pilot project to combat trafficking of women and children for commercial, sexual exploitation in source areas and iii) pilot project to combat trafficking of women and children for commercial sexual exploitation in destination areas. So far 30 projects have been sanctioned benefiting about 1500 women and girls.

Beside above said programmes and policy initiatives, a number of constitutional provisions have already made to ensure protection of dignity, rights and welfare of children. These include following :

Constitutional Provisions

- Article 14 provides that the State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.
- Article 15(3) provides that, “nothing in this article shall prevent the State for making any special provision for women and children”.
- Article 21 provides that no person shall be deprived of his life or personal liberty except according to procedure established by law.
- Article 21A directs the State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may by law, determine.
- Article 23 prohibits trafficking of human beings and forced labour.
- Article 24 prohibits employment of children below the age of fourteen years in factories, mines or any other hazardous occupation.
- Article 25-28 provides freedom of conscience, and free profession, practice and propagation of religion.
- Article 39(e) and (f) provide that the State shall, in particular, direct its policy towards securing to ensure that the health and strength of workers, men and

women and the tender age of children are not abused and that the citizens are not forced by economic necessity to enter avocations unsuited to their age or strength and that the children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that the childhood and youth are protected against exploitation and against moral and material abandonment.

- Article 45 envisages that the State shall endeavor to provide early childhood care and education for all children until they complete the age of six years.

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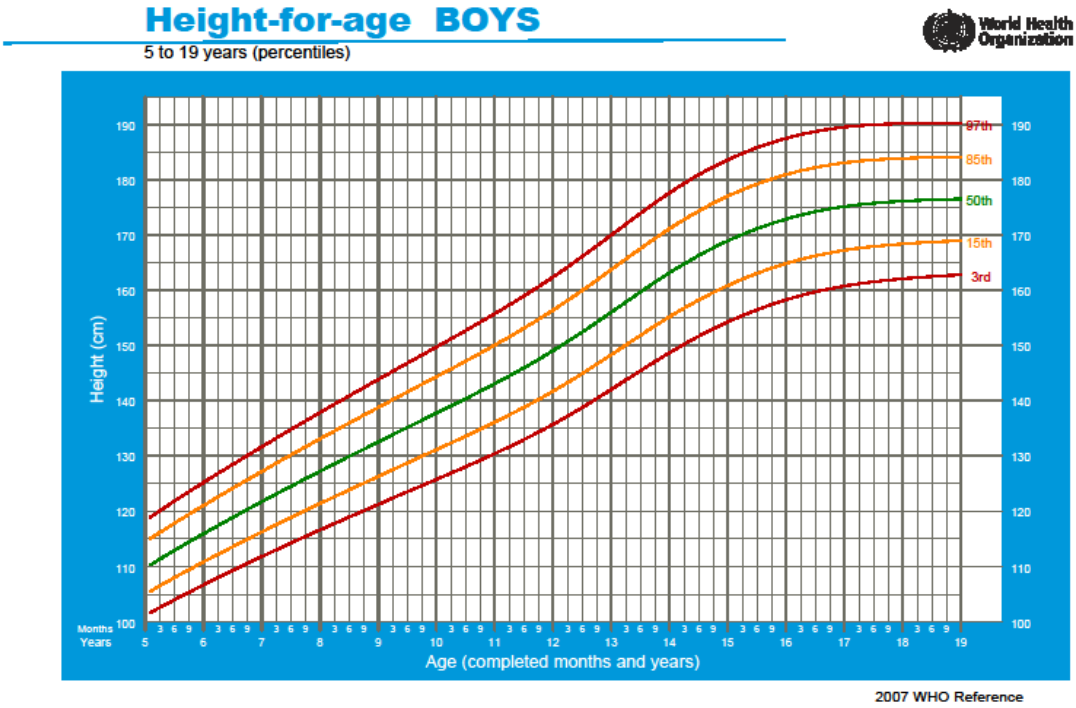
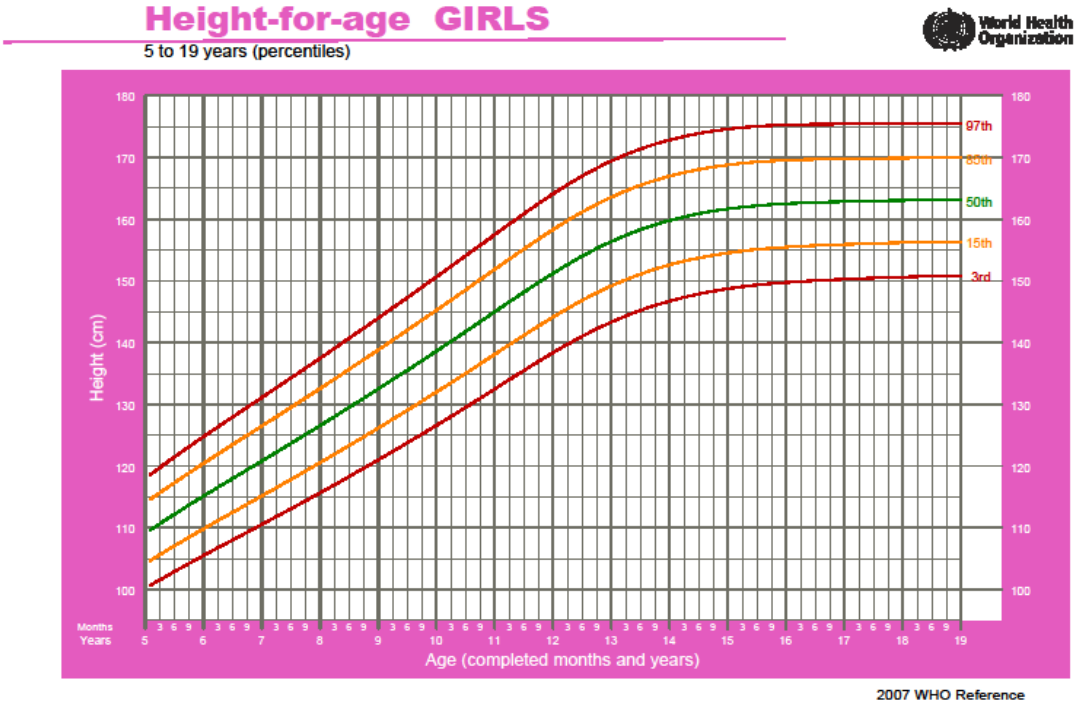
Annexure – 1.4
HEIGHT-FOR-AGE: WHO STANDARDS





Height-for-age BOYS

5 to 19 years (percentiles)

5: 1	**61**	1	110.2647	0.04164	4.5914	99.6	101.6	102.7	105.5	107.2	110.3	113.4	115.0	117.8	118.9	120.9
5: 2	**62**	1	110.8006	0.04172	4.6226	100.0	102.1	103.2	106.0	107.7	110.8	113.9	115.6	118.4	119.5	121.6
5: 3	**63**	1	111.3338	0.04180	4.6538	100.5	102.6	103.7	106.5	108.2	111.3	114.5	116.2	119.0	120.1	122.2
5: 4	**64**	1	111.8636	0.04187	4.6837	101.0	103.1	104.2	107.0	108.7	111.9	115.0	116.7	119.6	120.7	122.8
5: 5	**65**	1	112.3895	0.04195	4.7147	101.4	103.5	104.6	107.5	109.2	112.4	115.6	117.3	120.1	121.3	123.4
5: 6	**66**	1	112.9110	0.04203	4.7456	101.9	104.0	105.1	108.0	109.7	112.9	116.1	117.8	120.7	121.8	124.0
5: 7	**67**	1	113.4280	0.04211	4.7765	102.3	104.4	105.6	108.5	110.2	113.4	116.7	118.4	121.3	122.4	124.5
5: 8	**68**	1	113.9410	0.04218	4.8060	102.8	104.9	106.0	109.0	110.7	113.9	117.2	118.9	121.8	123.0	125.1
5: 9	**69**	1	114.4500	0.04226	4.8367	103.2	105.4	106.5	109.4	111.2	114.5	117.7	119.5	122.4	123.5	125.7
5:10	**70**	1	114.9547	0.04234	4.8672	103.6	105.8	106.9	109.9	111.7	115.0	118.2	120.0	123.0	124.1	126.3
5:11	**71**	1	115.4549	0.04241	4.8964	104.1	106.2	107.4	110.4	112.2	115.5	118.8	120.5	123.5	124.7	126.8
6: 0	**72**	1	115.9509	0.04249	4.9268	104.5	106.7	107.8	110.8	112.6	116.0	119.3	121.1	124.1	125.2	127.4
6: 1	**73**	1	116.4432	0.04257	4.9570	104.9	107.1	108.3	111.3	113.1	116.4	119.8	121.6	124.6	125.8	128.0
6: 2	**74**	1	116.9325	0.04264	4.9860	105.3	107.6	108.7	111.8	113.6	116.9	120.3	122.1	125.1	126.3	128.5
6: 3	**75**	1	117.4196	0.04272	5.0162	105.8	108.0	109.2	112.2	114.0	117.4	120.8	122.6	125.7	126.9	129.1
6: 4	**76**	1	117.9046	0.04280	5.0463	106.2	108.4	109.6	112.7	114.5	117.9	121.3	123.1	126.2	127.4	129.6
6: 5	**77**	1	118.3880	0.04287	5.0753	106.6	108.8	110.0	113.1	115.0	118.4	121.8	123.6	126.7	127.9	130.2
6: 6	**78**	1	118.8700	0.04295	5.1055	107.0	109.3	110.5	113.6	115.4	118.9	122.3	124.2	127.3	128.5	130.7
6: 7	**79**	1	119.3508	0.04303	5.1357	107.4	109.7	110.9	114.0	115.9	119.4	122.8	124.7	127.8	129.0	131.3
6: 8	**80**	1	119.8303	0.04311	5.1659	107.8	110.1	111.3	114.5	116.3	119.8	123.3	125.2	128.3	129.5	131.8
6: 9	**81**	1	120.3085	0.04318	5.1949	108.2	110.5	111.8	114.9	116.8	120.3	123.8	125.7	128.9	130.1	132.4
6:10	**82**	1	120.7853	0.04326	5.2252	108.6	111.0	112.2	115.4	117.3	120.8	124.3	126.2	129.4	130.6	132.9
6:11	**83**	1	121.2604	0.04334	5.2554	109.0	111.4	112.6	115.8	117.7	121.3	124.8	126.7	129.9	131.1	133.5
7: 0	**84**	1	121.7338	0.04342	5.2857	109.4	111.8	113.0	116.3	118.2	121.7	125.3	127.2	130.4	131.7	134.0
7: 1	**85**	1	122.2053	0.04350	5.3159	109.8	112.2	113.5	116.7	118.6	122.2	125.8	127.7	130.9	132.2	134.6
7: 2	**86**	1	122.6750	0.04358	5.3462	110.2	112.6	113.9	117.1	119.1	122.7	126.3	128.2	131.5	132.7	135.1
7: 3	**87**	1	123.1429	0.04366	5.3764	110.6	113.0	114.3	117.6	119.5	123.1	126.8	128.7	132.0	133.3	135.7
7: 4	**88**	1	123.6092	0.04374	5.4067	111.0	113.4	114.7	118.0	120.0	123.6	127.3	129.2	132.5	133.8	136.2
7: 5	**89**	1	124.0736	0.04382	5.4369	111.4	113.8	115.1	118.4	120.4	124.1	127.7	129.7	133.0	134.3	136.7
7: 6	**90**	1	124.5361	0.04390	5.4671	111.8	114.3	115.5	118.9	120.8	124.5	128.2	130.2	133.5	134.8	137.3
7: 7	**91**	1	124.9964	0.04398	5.4973	112.2	114.7	116.0	119.3	121.3	125.0	128.7	130.7	134.0	135.3	137.8
7: 8	**92**	1	125.4545	0.04406	5.5275	112.6	115.1	116.4	119.7	121.7	125.5	129.2	131.2	134.5	135.9	138.3
7: 9	**93**	1	125.9104	0.04414	5.5577	113.0	115.5	116.8	120.2	122.2	125.9	129.7	131.7	135.1	136.4	138.8
7:10	**94**	1	126.3640	0.04422	5.5878	113.4	115.9	117.2	120.6	122.6	126.4	130.1	132.2	135.6	136.9	139.4
7:11	**95**	1	126.8156	0.04430	5.6179	113.7	116.2	117.6	121.0	123.0	126.8	130.6	132.6	136.1	137.4	139.9
8: 0	**96**	1	127.2651	0.04438	5.6480	114.1	116.6	118.0	121.4	123.5	127.3	131.1	133.1	136.6	137.9	140.4
8: 1	**97**	1	127.7129	0.04446	5.6781	114.5	117.0	118.4	121.8	123.9	127.7	131.5	133.6	137.1	138.4	140.9
8: 2	**98**	1	128.1590	0.04454	5.7082	114.9	117.4	118.8	122.2	124.3	128.2	132.0	134.1	137.5	138.9	141.4
8: 3	**99**	1	128.6034	0.04462	5.7383	115.3	117.8	119.2	122.7	124.7	128.6	132.5	134.6	138.0	139.4	142.0
8: 4	**100**	1	129.0466	0.04470	5.7684	115.6	118.2	119.6	123.1	125.2	129.0	132.9	135.0	138.5	139.9	142.5
8: 5	**101**	1	129.4887	0.04478	5.7985	116.0	118.6	120.0	123.5	125.6	129.5	133.4	135.5	139.0	140.4	143.0
8: 6	**102**	1	129.9300	0.04487	5.8300	116.4	119.0	120.3	123.9	126.0	129.9	133.9	136.0	139.5	140.9	143.5
8: 7	**103**	1	130.3705	0.04495	5.8602	116.7	119.3	120.7	124.3	126.4	130.4	134.3	136.4	140.0	141.4	144.0
8: 8	**104**	1	130.8103	0.04503	5.8904	117.1	119.7	121.1	124.7	126.8	130.8	134.8	136.9	140.5	141.9	144.5
8: 9	**105**	1	131.2495	0.04511	5.9207	117.5	120.1	121.5	125.1	127.3	131.3	135.2	137.4	141.0	142.4	145.0
8:10	**106**	1	131.6884	0.04519	5.9510	117.8	120.5	121.9	125.5	127.7	131.7	135.7	137.9	141.5	142.9	145.5
8:11	**107**	1	132.1269	0.04527	5.9814	118.2	120.9	122.3	125.9	128.1	132.1	136.2	138.3	142.0	143.4	146.0
9: 0	**108**	1	132.5652	0.04535	6.0118	118.6	121.3	122.7	126.3	128.5	132.6	136.6	138.8	142.5	143.9	146.6
9: 1	**109**	1	133.0031	0.04543	6.0423	118.9	121.6	123.1	126.7	128.9	133.0	137.1	139.3	142.9	144.4	147.1
9: 2	**110**	1	133.4404	0.04551	6.0729	119.3	122.0	123.5	127.1	129.3	133.4	137.5	139.7	143.4	144.9	147.6
9: 3	**111**	1	133.8770	0.04559	6.1035	119.7	122.4	123.8	127.6	129.8	133.9	138.0	140.2	143.9	145.4	148.1
9: 4	**112**	1	134.3130	0.04566	6.1327	120.0	122.8	124.2	128.0	130.2	134.3	138.4	140.7	144.4	145.8	148.6
9: 5	**113**	1	134.7483	0.04574	6.1634	120.4	123.2	124.6	128.4	130.6	134.7	138.9	141.1	144.9	146.3	149.1
9: 6	**114**	1	135.1829	0.04582	6.1941	120.8	123.5	125.0	128.8	131.0	135.2	139.4	141.6	145.4	146.8	149.6
9: 7	**115**	1	135.6168	0.04589	6.2235	121.1	123.9	125.4	129.2	131.4	135.6	139.8	142.1	145.9	147.3	150.1
9: 8	**116**	1	136.0501	0.04597	6.2542	121.5	124.3	125.8	129.6	131.8	136.1	140.3	142.5	146.3	147.8	150.6
9: 9	**117**	1	136.4829	0.04604	6.2837	121.9	124.7	126.1	130.0	132.2	136.5	140.7	143.0	146.8	148.3	151.1
9:10	**118**	1	136.9153	0.04612	6.3145	122.2	125.0	126.5	130.4	132.7	136.9	141.2	143.5	147.3	148.8	151.6
9:11	**119**	1	137.3474	0.04619	6.3441	122.6	125.4	126.9	130.8	133.1	137.3	141.6	143.9	147.8	149.3	152.1
10: 0	**120**	1	137.7795	0.04626	6.3737	123.0	125.8	127.3	131.2	133.5	137.8	142.1	144.4	148.3	149.8	152.6
10: 1	**121**	1	138.2119	0.04633	6.4034	123.3	126.2	127.7	131.6	133.9	138.2	142.5	144.8	148.7	150.3	153.1
10: 2	**122**	1	138.6452	0.04640	6.4331	123.7	126.5	128.1	132.0	134.3	138.6	143.0	145.3	149.2	150.7	153.6
10: 3	**123**	1	139.0797	0.04647	6.4630	124.0	126.9	128.4	132.4	134.7	139.1	143.4	145.8	149.7	151.2	154.1
10: 4	**124**	1	139.5158	0.04654	6.4931	124.4	127.3	128.8	132.8	135.1	139.5	143.9	146.2	150.2	151.7	154.6
10: 5	**125**	1	139.9540	0.04661	6.5233	124.8	127.7	129.2	133.2	135.6	140.0	144.4	146.7	150.7	152.2	155.1
10: 6	**126**	1	140.3948	0.04667	6.5522	125.2	128.1	129.6	133.6	136.0	140.4	144.8	147.2	151.2	152.7	155.6
10: 7	**127**	1	140.8387	0.04674	6.5828	125.5	128.5	130.0	134.0	136.4	140.8	145.3	147.7	151.7	153.2	156.2
10: 8	**128**	1	141.2859	0.04680	6.6122	125.9	128.9	130.4	134.4	136.8	141.3	145.7	148.1	152.2	153.7	156.7
10: 9	**129**	1	141.7368	0.04686	6.6418	126.3	129.2	130.8	134.9	137.3	141.7	146.2	148.6	152.7	154.2	157.2
10:10	**130**	1	142.1916	0.04692	6.6716	126.7	129.6	131.2	135.3	137.7	142.2	146.7	149.1	153.2	154.7	157.7
10:11	**131**	1	142.6501	0.04698	6.7017	127.1	130.0	131.6	135.7	138.1	142.7	147.2	149.6	153.7	155.3	158.2
11: 0	**132**	1	143.1126	0.04703	6.7306	127.5	130.5	132.0	136.1	138.6	143.1	147.7	150.1	154.2	155.8	158.8
11: 1	**133**	1	143.5795	0.04709	6.7612	127.9	130.9	132.5	136.6	139.0	143.6	148.1	150.6	154.7	156.3	159.3
11: 2	**134**	1	144.0511	0.04714	6.7906	128.3	131.3	132.9	137.0	139.5	144.1	148.6	151.1	155.2	156.8	159.8

11: 3	**135**	1	144.5276	0.04719	6.8203	128.7	131.7	133.3	137.5	139.9	144.5	149.1	151.6	155.7	157.4	160.4
11: 4	**136**	1	145.0093	0.04723	6.8488	129.1	132.1	133.7	137.9	140.4	145.0	149.6	152.1	156.3	157.9	160.9
11: 5	**137**	1	145.4964	0.04728	6.8791	129.5	132.6	134.2	138.4	140.9	145.5	150.1	152.6	156.8	158.4	161.5
11: 6	**138**	1	145.9891	0.04732	6.9082	129.9	133.0	134.6	138.8	141.3	146.0	150.6	153.1	157.4	159.0	162.1
11: 7	**139**	1	146.4878	0.04736	6.9377	130.3	133.4	135.1	139.3	141.8	146.5	151.2	153.7	157.9	159.5	162.6
11: 8	**140**	1	146.9927	0.04740	6.9675	130.8	133.9	135.5	139.8	142.3	147.0	151.7	154.2	158.5	160.1	163.2
11: 9	**141**	1	147.5041	0.04744	6.9976	131.2	134.3	136.0	140.3	142.8	147.5	152.2	154.8	159.0	160.7	163.8
11:10	**142**	1	148.0224	0.04747	7.0266	131.7	134.8	136.5	140.7	143.3	148.0	152.8	155.3	159.6	161.2	164.4
11:11	**143**	1	148.5478	0.04750	7.0560	132.1	135.3	136.9	141.2	143.8	148.5	153.3	155.9	160.2	161.8	165.0
12: 0	**144**	1	149.0807	0.04753	7.0858	132.6	135.8	137.4	141.7	144.3	149.1	153.9	156.4	160.7	162.4	165.6
12: 1	**145**	1	149.6212	0.04755	7.1145	133.1	136.2	137.9	142.2	144.8	149.6	154.4	157.0	161.3	163.0	166.2
12: 2	**146**	1	150.1694	0.04758	7.1451	133.5	136.7	138.4	142.8	145.4	150.2	155.0	157.6	161.9	163.6	166.8
12: 3	**147**	1	150.7256	0.04759	7.1730	134.0	137.2	138.9	143.3	145.9	150.7	155.6	158.2	162.5	164.2	167.4
12: 4	**148**	1	151.2899	0.04761	7.2029	134.5	137.7	139.4	143.8	146.4	151.3	156.1	158.8	163.1	164.8	168.0
12: 5	**149**	1	151.8623	0.04762	7.2317	135.0	138.3	140.0	144.4	147.0	151.9	156.7	159.4	163.8	165.5	168.7
12: 6	**150**	1	152.4425	0.04763	7.2608	135.6	138.8	140.5	144.9	147.5	152.4	157.3	160.0	164.4	166.1	169.3
12: 7	**151**	1	153.0298	0.04763	7.2888	136.1	139.3	141.0	145.5	148.1	153.0	157.9	160.6	165.0	166.7	170.0
12: 8	**152**	1	153.6234	0.04764	7.3186	136.6	139.9	141.6	146.0	148.7	153.6	158.6	161.2	165.7	167.4	170.6
12: 9	**153**	1	154.2223	0.04763	7.3456	137.1	140.4	142.1	146.6	149.3	154.2	159.2	161.8	166.3	168.0	171.3
12:10	**154**	1	154.8258	0.04763	7.3744	137.7	141.0	142.7	147.2	149.9	154.8	159.8	162.5	167.0	168.7	172.0
12:11	**155**	1	155.4329	0.04762	7.4017	138.2	141.5	143.3	147.8	150.4	155.4	160.4	163.1	167.6	169.4	172.7
13: 0	**156**	1	156.0426	0.04760	7.4276	138.8	142.1	143.8	148.3	151.0	156.0	161.1	163.7	168.3	170.0	173.3
13: 1	**157**	1	156.6539	0.04758	7.4536	139.3	142.6	144.4	148.9	151.6	156.7	161.7	164.4	168.9	170.7	174.0
13: 2	**158**	1	157.2660	0.04756	7.4796	139.9	143.2	145.0	149.5	152.2	157.3	162.3	165.0	169.6	171.3	174.7
13: 3	**159**	1	157.8775	0.04754	7.5055	140.4	143.8	145.5	150.1	152.8	157.9	162.9	165.7	170.2	172.0	175.3
13: 4	**160**	1	158.4871	0.04751	7.5297	141.0	144.3	146.1	150.7	153.4	158.5	163.6	166.3	170.9	172.6	176.0
13: 5	**161**	1	159.0937	0.04747	7.5522	141.5	144.9	146.7	151.3	154.0	159.1	164.2	166.9	171.5	173.3	176.7
13: 6	**162**	1	159.6962	0.04744	7.5760	142.1	145.4	147.2	151.8	154.6	159.7	164.8	167.5	172.2	173.9	177.3
13: 7	**163**	1	160.2939	0.04740	7.5979	142.6	146.0	147.8	152.4	155.2	160.3	165.4	168.2	172.8	174.6	178.0
13: 8	**164**	1	160.8861	0.04735	7.6180	143.2	146.6	148.4	153.0	155.7	160.9	166.0	168.8	173.4	175.2	178.6
13: 9	**165**	1	161.4720	0.04730	7.6376	143.7	147.1	148.9	153.6	156.3	161.5	166.6	169.4	174.0	175.8	179.2
13:10	**166**	1	162.0505	0.04725	7.6569	144.2	147.6	149.5	154.1	156.9	162.1	167.2	170.0	174.6	176.5	179.9
13:11	**167**	1	162.6207	0.04720	7.6757	144.8	148.2	150.0	154.7	157.4	162.6	167.8	170.6	175.2	177.1	180.5
14: 0	**168**	1	163.1816	0.04714	7.6924	145.3	148.7	150.5	155.2	158.0	163.2	168.4	171.2	175.8	177.6	181.1
14: 1	**169**	1	163.7321	0.04707	7.7069	145.8	149.2	151.1	155.7	158.5	163.7	168.9	171.7	176.4	178.2	181.7
14: 2	**170**	1	164.2717	0.04701	7.7224	146.3	149.7	151.6	156.3	159.1	164.3	169.5	172.3	177.0	178.8	182.2
14: 3	**171**	1	164.7994	0.04694	7.7357	146.8	150.3	152.1	156.8	159.6	164.8	170.0	172.8	177.5	179.3	182.8
14: 4	**172**	1	165.3145	0.04687	7.7483	147.3	150.7	152.6	157.3	160.1	165.3	170.5	173.3	178.1	179.9	183.3
14: 5	**173**	1	165.8165	0.04679	7.7586	147.8	151.2	153.1	157.8	160.6	165.8	171.1	173.9	178.6	180.4	183.9
14: 6	**174**	1	166.3050	0.04671	7.7681	148.2	151.7	153.5	158.3	161.1	166.3	171.5	174.4	179.1	180.9	184.4
14: 7	**175**	1	166.7799	0.04663	7.7769	148.7	152.2	154.0	158.7	161.5	166.8	172.0	174.8	179.6	181.4	184.9
14: 8	**176**	1	167.2415	0.04655	7.7851	149.1	152.6	154.4	159.2	162.0	167.2	172.5	175.3	180.0	181.9	185.4
14: 9	**177**	1	167.6899	0.04646	7.7909	149.6	153.0	154.9	159.6	162.4	167.7	172.9	175.8	180.5	182.3	185.8
14:10	**178**	1	168.1255	0.04637	7.7960	150.0	153.5	155.3	160.0	162.9	168.1	173.4	176.2	180.9	182.8	186.3
14:11	**179**	1	168.5482	0.04628	7.8004	150.4	153.9	155.7	160.5	163.3	168.5	173.8	176.6	181.4	183.2	186.7
15: 0	**180**	1	168.9580	0.04619	7.8042	150.8	154.3	156.1	160.9	163.7	169.0	174.2	177.0	181.8	183.6	187.1
15: 1	**181**	1	169.3549	0.04609	7.8056	151.2	154.7	156.5	161.3	164.1	169.4	174.6	177.4	182.2	184.0	187.5
15: 2	**182**	1	169.7389	0.04599	7.8063	151.6	155.1	156.9	161.6	164.5	169.7	175.0	177.8	182.6	184.4	187.9
15: 3	**183**	1	170.1099	0.04589	7.8063	152.0	155.4	157.3	162.0	164.8	170.1	175.4	178.2	183.0	184.8	188.3
15: 4	**184**	1	170.4680	0.04579	7.8057	152.3	155.8	157.6	162.4	165.2	170.5	175.7	178.6	183.3	185.1	188.6
15: 5	**185**	1	170.8136	0.04569	7.8045	152.7	156.1	158.0	162.7	165.6	170.8	176.1	178.9	183.7	185.5	189.0
15: 6	**186**	1	171.1468	0.04559	7.8026	153.0	156.5	158.3	163.1	165.9	171.1	176.4	179.2	184.0	185.8	189.3
15: 7	**187**	1	171.4680	0.04548	7.7984	153.3	156.8	158.6	163.4	166.2	171.5	176.7	179.6	184.3	186.1	189.6
15: 8	**188**	1	171.7773	0.04538	7.7953	153.6	157.1	159.0	163.7	166.5	171.8	177.0	179.9	184.6	186.4	189.9
15: 9	**189**	1	172.0748	0.04527	7.7898	154.0	157.4	159.3	164.0	166.8	172.1	177.3	180.1	184.9	186.7	190.2
15:10	**190**	1	172.3606	0.04516	7.7838	154.3	157.7	159.6	164.3	167.1	172.4	177.6	180.4	185.2	187.0	190.5
15:11	**191**	1	172.6345	0.04506	7.7789	154.5	158.0	159.8	164.6	167.4	172.6	177.9	180.7	185.4	187.3	190.7
16: 0	**192**	1	172.8967	0.04495	7.7717	154.8	158.3	160.1	164.8	167.7	172.9	178.1	181.0	185.7	187.5	191.0
16: 1	**193**	1	173.1470	0.04484	7.7639	155.1	158.5	160.4	165.1	167.9	173.1	178.4	181.2	185.9	187.7	191.2
16: 2	**194**	1	173.3856	0.04473	7.7555	155.3	158.8	160.6	165.3	168.2	173.4	178.6	181.4	186.1	188.0	191.4
16: 3	**195**	1	173.6126	0.04462	7.7466	155.6	159.0	160.9	165.6	168.4	173.6	178.8	181.6	186.4	188.2	191.6
16: 4	**196**	1	173.8280	0.04451	7.7371	155.8	159.3	161.1	165.8	168.6	173.8	179.0	181.8	186.6	188.4	191.8
16: 5	**197**	1	174.0321	0.04440	7.7270	156.1	159.5	161.3	166.0	168.8	174.0	179.2	182.0	186.7	188.6	192.0
16: 6	**198**	1	174.2251	0.04429	7.7164	156.3	159.7	161.5	166.2	169.0	174.2	179.4	182.2	186.9	188.7	192.2
16: 7	**199**	1	174.4071	0.04418	7.7053	156.5	159.9	161.7	166.4	169.2	174.4	179.6	182.4	187.1	188.9	192.3
16: 8	**200**	1	174.5784	0.04407	7.6937	156.7	160.1	161.9	166.6	169.4	174.6	179.8	182.6	187.2	189.0	192.5
16: 9	**201**	1	174.7392	0.04396	7.6815	156.9	160.3	162.1	166.8	169.6	174.7	179.9	182.7	187.4	189.2	192.6
16:10	**202**	1	174.8896	0.04385	7.6689	157.0	160.5	162.3	166.9	169.7	174.9	180.1	182.8	187.5	189.3	192.7
16:11	**203**	1	175.0301	0.04375	7.6576	157.2	160.6	162.4	167.1	169.9	175.0	180.2	183.0	187.6	189.4	192.8
17: 0	**204**	1	175.1609	0.04364	7.6440	157.4	160.8	162.6	167.2	170.0	175.2	180.3	183.1	187.7	189.5	192.9
17: 1	**205**	1	175.2824	0.04353	7.6300	157.5	160.9	162.7	167.4	170.1	175.3	180.4	183.2	187.8	189.6	193.0
17: 2	**206**	1	175.3951	0.04343	7.6174	157.7	161.1	162.9	167.5	170.3	175.4	180.5	183.3	187.9	189.7	193.1
17: 3	**207**	1	175.4995	0.04332	7.6026	157.8	161.2	163.0	167.6	170.4	175.5	180.6	183.4	188.0	189.8	193.2
17: 4	**208**	1	175.5959	0.04322	7.5893	157.9	161.3	163.1	167.7	170.5	175.6	180.7	183.5	188.1	189.9	193.3
17: 5	**209**	1	175.6850	0.04311	7.5738	158.1	161.4	163.2	167.8	170.6	175.7	180.8	183.5	188.1	189.9	193.3
17: 6	**210**	1	175.7672	0.04301	7.5597	158.2	161.5	163.3	167.9	170.7	175.8	180.9	183.6	188.2	190.0	193.4
17: 7	**211**	1	175.8432	0.04291	7.5454	158.3	161.7	163.4	168.0	170.8	175.8	180.9	183.7	188.3	190.0	193.4
17: 8	**212**	1	175.9133	0.04281	7.5308	158.4	161.7	163.5	168.1	170.8	175.9	181.0	183.7	188.3	190.1	193.4
17: 9	**213**	1	175.9781	0.04271	7.5160	158.5	161.8	163.6	168.2	170.9	176.0	181.0	183.8	188.3	190.1	193.5
17:10	**214**	1	176.0380	0.04261	7.5010	158.6	161.9	163.7	168.3	171.0	176.0	181.1	183.8	188.4	190.1	193.5
17:11	**215**	1	176.0935	0.04251	7.4857	158.7	162.0	163.8	168.3	171.0	176.1	181.1	183.9	188.4	190.2	193.5
18: 0	**216**	1	176.1449	0.04241	7.4703	158.8	162.1	163.9	168.4	171.1	176.1	181.2	183.9	188.4	190.2	193.5
18: 1	**217**	1	176.1925	0.04232	7.4565	158.8	162.2	163.9	168.5	171.2	176.2	181.2	183.9	188.5	190.2	193.5
18: 2	**218**	1	176.2368	0.04222	7.4407	158.9	162.2	164.0	168.5	171.2	176.2	181.3	183.9	188.5	190.2	193.5
18: 3	**219**	1	176.2779	0.04213	7.4266	159.0	162.3	164.1	168.6	171.3	176.3	181.3	184.0	188.5	190.2	193.6
18: 4	**220**	1	176.3162	0.04204	7.4123	159.1	162.4	164.1	168.6	171.3	176.3	181.3	184.0	188.5	190.3	193.6
18: 5	**221**	1	176.3518	0.04195	7.3980	159.1	162.4	164.2	168.7	171.4	176.4	181.3	184.0	188.5	190.3	193.6
18: 6	**222**	1	176.3851	0.04185	7.3817	159.2	162.5	164.2	168.7	171.4	176.4	181.4	184.0	188.5	190.3	193.6

18: 7	**223**	1	176.4162	0.04177	7.3689	159.3	162.6	164.3	168.8	171.4	176.4	181.4	184.1	188.5	190.3	193.6
18: 8	**224**	1	176.4453	0.04168	7.3542	159.3	162.6	164.3	168.8	171.5	176.4	181.4	184.1	188.5	190.3	193.6
18: 9	**225**	1	176.4724	0.04159	7.3395	159.4	162.7	164.4	168.9	171.5	176.5	181.4	184.1	188.5	190.3	193.5
18:10	**226**	1	176.4976	0.04150	7.3247	159.5	162.7	164.5	168.9	171.6	176.5	181.4	184.1	188.5	190.3	193.5
18:11	**227**	1	176.5211	0.04142	7.3115	159.5	162.8	164.5	168.9	171.6	176.5	181.5	184.1	188.5	190.3	193.5
19: 0	**228**	1	176.5432	0.04134	7.2983	159.6	162.8	164.5	169.0	171.6	176.5	181.5	184.1	188.5	190.3	193.5

Height-for-age GIRLS

5 to 19 years (percentiles)

World Health Organization

						Percentiles (height in cm)										
Year: Month	**Month**	**L**	**M**	**S**	**SD**	**1st**	**3rd**	**5th**	**15th**	**25th**	**50th**	**75th**	**85th**	**95th**	**97th**	**99th**
5: 1	**61**	1	109.6016	0.04355	4.7731	98.5	100.6	101.8	104.7	106.4	109.6	112.8	114.5	117.5	118.6	120.7
5: 2	**62**	1	110.1258	0.04364	4.8059	98.9	101.1	102.2	105.1	106.9	110.1	113.4	115.1	118.0	119.2	121.3
5: 3	**63**	1	110.6451	0.04373	4.8385	99.4	101.5	102.7	105.6	107.4	110.6	113.9	115.7	118.6	119.7	121.9
5: 4	**64**	1	111.1596	0.04382	4.8710	99.8	102.0	103.1	106.1	107.9	111.2	114.4	116.2	119.2	120.3	122.5
5: 5	**65**	1	111.6696	0.04390	4.9023	100.3	102.4	103.6	106.6	108.4	111.7	115.0	116.8	119.7	120.9	123.1
5: 6	**66**	1	112.1753	0.04399	4.9346	100.7	102.9	104.1	107.1	108.8	112.2	115.5	117.3	120.3	121.5	123.7
5: 7	**67**	1	112.6767	0.04407	4.9657	101.1	103.3	104.5	107.5	109.3	112.7	116.0	117.8	120.8	122.0	124.2
5: 8	**68**	1	113.1740	0.04415	4.9966	101.6	103.8	105.0	108.0	109.8	113.2	116.5	118.4	121.4	122.6	124.8
5: 9	**69**	1	113.6672	0.04423	5.0275	102.0	104.2	105.4	108.5	110.3	113.7	117.1	118.9	121.9	123.1	125.4
5:10	**70**	1	114.1565	0.04431	5.0583	102.4	104.6	105.8	108.9	110.7	114.2	117.6	119.4	122.5	123.7	125.9
5:11	**71**	1	114.6421	0.04439	5.0890	102.8	105.1	106.3	109.4	111.2	114.6	118.1	119.9	123.0	124.2	126.5
6: 0	**72**	1	115.1244	0.04447	5.1196	103.2	105.5	106.7	109.8	111.7	115.1	118.6	120.4	123.5	124.8	127.0
6: 1	**73**	1	115.6039	0.04454	5.1490	103.6	105.9	107.1	110.3	112.1	115.6	119.1	120.9	124.1	125.3	127.6
6: 2	**74**	1	116.0812	0.04461	5.1784	104.0	106.3	107.6	110.7	112.6	116.1	119.6	121.4	124.6	125.8	128.1
6: 3	**75**	1	116.5568	0.04469	5.2089	104.4	106.8	108.0	111.2	113.0	116.6	120.1	122.0	125.1	126.4	128.7
6: 4	**76**	1	117.0311	0.04475	5.2371	104.8	107.2	108.4	111.6	113.5	117.0	120.6	122.5	125.6	126.9	129.2
6: 5	**77**	1	117.5044	0.04482	5.2665	105.3	107.6	108.8	112.0	114.0	117.5	121.1	123.0	126.2	127.4	129.8
6: 6	**78**	1	117.9769	0.04489	5.2960	105.7	108.0	109.3	112.5	114.4	118.0	121.5	123.5	126.7	127.9	130.3
6: 7	**79**	1	118.4489	0.04495	5.3243	106.1	108.4	109.7	112.9	114.9	118.4	122.0	124.0	127.2	128.5	130.8
6: 8	**80**	1	118.9208	0.04502	5.3538	106.5	108.9	110.1	113.4	115.3	118.9	122.5	124.5	127.7	129.0	131.4
6: 9	**81**	1	119.3926	0.04508	5.3822	106.9	109.3	110.5	113.8	115.8	119.4	123.0	125.0	128.2	129.5	131.9
6:10	**82**	1	119.8648	0.04514	5.4107	107.3	109.7	111.0	114.3	116.2	119.9	123.5	125.5	128.8	130.0	132.5
6:11	**83**	1	120.3374	0.04520	5.4393	107.7	110.1	111.4	114.7	116.7	120.3	124.0	126.0	129.3	130.6	133.0
7: 0	**84**	1	120.8105	0.04525	5.4667	108.1	110.5	111.8	115.1	117.1	120.8	124.5	126.5	129.8	131.1	133.5
7: 1	**85**	1	121.2843	0.04531	5.4954	108.5	110.9	112.2	115.6	117.6	121.3	125.0	127.0	130.3	131.6	134.1
7: 2	**86**	1	121.7587	0.04536	5.5230	108.9	111.4	112.7	116.0	118.0	121.8	125.5	127.5	130.8	132.1	134.6
7: 3	**87**	1	122.2338	0.04542	5.5519	109.3	111.8	113.1	116.5	118.5	122.2	126.0	128.0	131.4	132.7	135.1
7: 4	**88**	1	122.7098	0.04547	5.5796	109.7	112.2	113.5	116.9	118.9	122.7	126.5	128.5	131.9	133.2	135.7
7: 5	**89**	1	123.1868	0.04551	5.6062	110.1	112.6	114.0	117.4	119.4	123.2	127.0	129.0	132.4	133.7	136.2
7: 6	**90**	1	123.6646	0.04556	5.6342	110.6	113.1	114.4	117.8	119.9	123.7	127.5	129.5	132.9	134.3	136.8
7: 7	**91**	1	124.1435	0.04561	5.6622	111.0	113.5	114.8	118.3	120.3	124.1	128.0	130.0	133.5	134.8	137.3
7: 8	**92**	1	124.6234	0.04565	5.6891	111.4	113.9	115.3	118.7	120.8	124.6	128.5	130.5	134.0	135.3	137.9
7: 9	**93**	1	125.1045	0.04569	5.7160	111.8	114.4	115.7	119.2	121.2	125.1	129.0	131.0	134.5	135.9	138.4
7:10	**94**	1	125.5869	0.04573	5.7431	112.2	114.8	116.1	119.6	121.7	125.6	129.5	131.5	135.0	136.4	138.9
7:11	**95**	1	126.0706	0.04577	5.7703	112.6	115.2	116.6	120.1	122.2	126.1	130.0	132.1	135.6	136.9	139.5
8: 0	**96**	1	126.5558	0.04581	5.7975	113.1	115.7	117.0	120.5	122.6	126.6	130.5	132.6	136.1	137.5	140.0
8: 1	**97**	1	127.0424	0.04585	5.8249	113.5	116.1	117.5	121.0	123.1	127.0	131.0	133.1	136.6	138.0	140.6
8: 2	**98**	1	127.5304	0.04588	5.8511	113.9	116.5	117.9	121.5	123.6	127.5	131.5	133.6	137.2	138.5	141.1
8: 3	**99**	1	128.0199	0.04591	5.8774	114.3	117.0	118.4	121.9	124.1	128.0	132.0	134.1	137.7	139.1	141.7
8: 4	**100**	1	128.5109	0.04594	5.9038	114.8	117.4	118.8	122.4	124.5	128.5	132.5	134.6	138.2	139.6	142.2
8: 5	**101**	1	129.0035	0.04597	5.9303	115.2	117.9	119.2	122.9	125.0	129.0	133.0	135.2	138.8	140.2	142.8
8: 6	**102**	1	129.4975	0.04600	5.9569	115.6	118.3	119.7	123.3	125.5	129.5	133.5	135.7	139.3	140.7	143.4
8: 7	**103**	1	129.9932	0.04602	5.9823	116.1	118.7	120.2	123.8	126.0	130.0	134.0	136.2	139.8	141.2	143.9
8: 8	**104**	1	130.4904	0.04604	6.0078	116.5	119.2	120.6	124.3	126.4	130.5	134.5	136.7	140.4	141.8	144.5
8: 9	**105**	1	130.9891	0.04607	6.0347	117.0	119.6	121.1	124.7	126.9	131.0	135.1	137.2	140.9	142.3	145.0
8:10	**106**	1	131.4895	0.04608	6.0590	117.4	120.1	121.5	125.2	127.4	131.5	135.6	137.8	141.5	142.9	145.6
8:11	**107**	1	131.9912	0.04610	6.0848	117.8	120.5	122.0	125.7	127.9	132.0	136.1	138.3	142.0	143.4	146.1
9: 0	**108**	1	132.4944	0.04612	6.1106	118.3	121.0	122.4	126.2	128.4	132.5	136.6	138.8	142.5	144.0	146.7
9: 1	**109**	1	132.9989	0.04613	6.1352	118.7	121.5	122.9	126.6	128.9	133.0	137.1	139.4	143.1	144.5	147.3
9: 2	**110**	1	133.5046	0.04614	6.1599	119.2	121.9	123.4	127.1	129.4	133.5	137.7	139.9	143.6	145.1	147.8
9: 3	**111**	1	134.0118	0.04615	6.1846	119.6	122.4	123.8	127.6	129.8	134.0	138.2	140.4	144.2	145.6	148.4
9: 4	**112**	1	134.5202	0.04616	6.2095	120.1	122.8	124.3	128.1	130.3	134.5	138.7	141.0	144.7	146.2	149.0
9: 5	**113**	1	135.0299	0.04616	6.2330	120.5	123.3	124.8	128.6	130.8	135.0	139.2	141.5	145.3	146.8	149.5
9: 6	**114**	1	135.5410	0.04617	6.2579	121.0	123.8	125.2	129.1	131.3	135.5	139.8	142.0	145.8	147.3	150.1
9: 7	**115**	1	136.0533	0.04617	6.2816	121.4	124.2	125.7	129.5	131.8	136.1	140.3	142.6	146.4	147.9	150.7
9: 8	**116**	1	136.5670	0.04616	6.3039	121.9	124.7	126.2	130.0	132.3	136.6	140.8	143.1	146.9	148.4	151.2
9: 9	**117**	1	137.0821	0.04616	6.3277	122.4	125.2	126.7	130.5	132.8	137.1	141.4	143.6	147.5	149.0	151.8
9:10	**118**	1	137.5987	0.04616	6.3516	122.8	125.7	127.2	131.0	133.3	137.6	141.9	144.2	148.0	149.5	152.4
9:11	**119**	1	138.1167	0.04615	6.3741	123.3	126.1	127.6	131.5	133.8	138.1	142.4	144.7	148.6	150.1	152.9
10: 0	**120**	1	138.6363	0.04614	6.3967	123.8	126.6	128.1	132.0	134.3	138.6	143.0	145.3	149.2	150.7	153.5
10: 1	**121**	1	139.1575	0.04612	6.4179	124.2	127.1	128.6	132.5	134.8	139.2	143.5	145.8	149.7	151.2	154.1

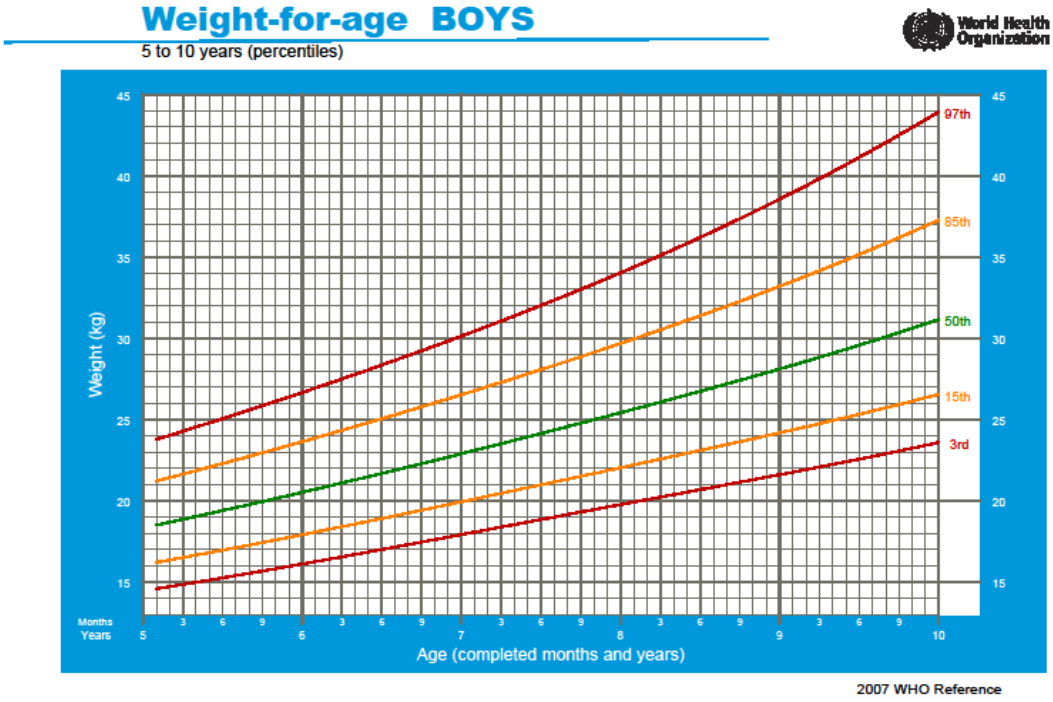
10: 2	**122**	1	139.6803	0.04611	6.4407	124.7	127.6	129.1	133.0	135.3	139.7	144.0	146.4	150.3	151.8	154.7
10: 3	**123**	1	140.2049	0.04609	6.4620	125.2	128.1	129.6	133.5	135.8	140.2	144.6	146.9	150.8	152.4	155.2
10: 4	**124**	1	140.7313	0.04607	6.4835	125.6	128.5	130.1	134.0	136.4	140.7	145.1	147.5	151.4	152.9	155.8
10: 5	**125**	1	141.2594	0.04605	6.5050	126.1	129.0	130.6	134.5	136.9	141.3	145.6	148.0	152.0	153.5	156.4
10: 6	**126**	1	141.7892	0.04603	6.5266	126.6	129.5	131.1	135.0	137.4	141.8	146.2	148.6	152.5	154.1	157.0
10: 7	**127**	1	142.3206	0.04600	6.5467	127.1	130.0	131.6	135.5	137.9	142.3	146.7	149.1	153.1	154.6	157.6
10: 8	**128**	1	142.8534	0.04597	6.5670	127.6	130.5	132.1	136.0	138.4	142.9	147.3	149.7	153.7	155.2	158.1
10: 9	**129**	1	143.3874	0.04594	6.5872	128.1	131.0	132.6	136.6	138.9	143.4	147.8	150.2	154.2	155.8	158.7
10:10	**130**	1	143.9222	0.04591	6.6075	128.6	131.5	133.1	137.1	139.5	143.9	148.4	150.8	154.8	156.3	159.3
10:11	**131**	1	144.4575	0.04588	6.6277	129.0	132.0	133.6	137.6	140.0	144.5	148.9	151.3	155.4	156.9	159.9
11: 0	**132**	1	144.9929	0.04584	6.6465	129.5	132.5	134.1	138.1	140.5	145.0	149.5	151.9	155.9	157.5	160.5
11: 1	**133**	1	145.5280	0.04580	6.6652	130.0	133.0	134.6	138.6	141.0	145.5	150.0	152.4	156.5	158.1	161.0
11: 2	**134**	1	146.0622	0.04576	6.6838	130.5	133.5	135.1	139.1	141.6	146.1	150.6	153.0	157.1	158.6	161.6
11: 3	**135**	1	146.5951	0.04571	6.7009	131.0	134.0	135.6	139.7	142.1	146.6	151.1	153.5	157.6	159.2	162.2
11: 4	**136**	1	147.1262	0.04567	6.7193	131.5	134.5	136.1	140.2	142.6	147.1	151.7	154.1	158.2	159.8	162.8
11: 5	**137**	1	147.6548	0.04562	6.7360	132.0	135.0	136.6	140.7	143.1	147.7	152.2	154.6	158.7	160.3	163.3
11: 6	**138**	1	148.1804	0.04557	6.7526	132.5	135.5	137.1	141.2	143.6	148.2	152.7	155.2	159.3	160.9	163.9
11: 7	**139**	1	148.7023	0.04552	6.7689	133.0	136.0	137.6	141.7	144.1	148.7	153.3	155.7	159.8	161.4	164.4
11: 8	**140**	1	149.2197	0.04546	6.7835	133.4	136.5	138.1	142.2	144.6	149.2	153.8	156.3	160.4	162.0	165.0
11: 9	**141**	1	149.7322	0.04541	6.7993	133.9	136.9	138.5	142.7	145.1	149.7	154.3	156.8	160.9	162.5	165.6
11:10	**142**	1	150.2390	0.04535	6.8133	134.4	137.4	139.0	143.2	145.6	150.2	154.8	157.3	161.4	163.1	166.1
11:11	**143**	1	150.7394	0.04529	6.8270	134.9	137.9	139.5	143.7	146.1	150.7	155.3	157.8	162.0	163.6	166.6
12: 0	**144**	1	151.2327	0.04523	6.8403	135.3	138.4	140.0	144.1	146.6	151.2	155.8	158.3	162.5	164.1	167.1
12: 1	**145**	1	151.7182	0.04516	6.8516	135.8	138.8	140.4	144.6	147.1	151.7	156.3	158.8	163.0	164.6	167.7
12: 2	**146**	1	152.1951	0.04510	6.8640	136.2	139.3	140.9	145.1	147.6	152.2	156.8	159.3	163.5	165.1	168.2
12: 3	**147**	1	152.6628	0.04503	6.8744	136.7	139.7	141.4	145.5	148.0	152.7	157.3	159.8	164.0	165.6	168.7
12: 4	**148**	1	153.1206	0.04497	6.8858	137.1	140.2	141.8	146.0	148.5	153.1	157.8	160.3	164.4	166.1	169.1
12: 5	**149**	1	153.5678	0.04490	6.8952	137.5	140.6	142.2	146.4	148.9	153.6	158.2	160.7	164.9	166.5	169.6
12: 6	**150**	1	154.0041	0.04483	6.9040	137.9	141.0	142.6	146.8	149.3	154.0	158.7	161.2	165.4	167.0	170.1
12: 7	**151**	1	154.4290	0.04476	6.9122	138.3	141.4	143.1	147.3	149.8	154.4	159.1	161.6	165.8	167.4	170.5
12: 8	**152**	1	154.8423	0.04468	6.9184	138.7	141.8	143.5	147.7	150.2	154.8	159.5	162.0	166.2	167.9	170.9
12: 9	**153**	1	155.2437	0.04461	6.9254	139.1	142.2	143.9	148.1	150.6	155.2	159.9	162.4	166.6	168.3	171.4
12:10	**154**	1	155.6330	0.04454	6.9319	139.5	142.6	144.2	148.4	151.0	155.6	160.3	162.8	167.0	168.7	171.8
12:11	**155**	1	156.0101	0.04446	6.9362	139.9	143.0	144.6	148.8	151.3	156.0	160.7	163.2	167.4	169.1	172.1
13: 0	**156**	1	156.3748	0.04439	6.9415	140.2	143.3	145.0	149.2	151.7	156.4	161.1	163.6	167.8	169.4	172.5
13: 1	**157**	1	156.7269	0.04431	6.9446	140.6	143.7	145.3	149.5	152.0	156.7	161.4	163.9	168.2	169.8	172.9
13: 2	**158**	1	157.0666	0.04423	6.9471	140.9	144.0	145.6	149.9	152.4	157.1	161.8	164.3	168.5	170.1	173.2
13: 3	**159**	1	157.3936	0.04415	6.9489	141.2	144.3	146.0	150.2	152.7	157.4	162.1	164.6	168.8	170.5	173.6
13: 4	**160**	1	157.7082	0.04408	6.9518	141.5	144.6	146.3	150.5	153.0	157.7	162.4	164.9	169.1	170.8	173.9
13: 5	**161**	1	158.0102	0.04400	6.9524	141.8	144.9	146.6	150.8	153.3	158.0	162.7	165.2	169.4	171.1	174.2
13: 6	**162**	1	158.2997	0.04392	6.9525	142.1	145.2	146.9	151.1	153.6	158.3	163.0	165.5	169.7	171.4	174.5
13: 7	**163**	1	158.5771	0.04384	6.9520	142.4	145.5	147.1	151.4	153.9	158.6	163.3	165.8	170.0	171.7	174.8
13: 8	**164**	1	158.8425	0.04376	6.9509	142.7	145.8	147.4	151.6	154.2	158.8	163.5	166.0	170.3	171.9	175.0
13: 9	**165**	1	159.0961	0.04369	6.9509	142.9	146.0	147.7	151.9	154.4	159.1	163.8	166.3	170.5	172.2	175.3
13:10	**166**	1	159.3382	0.04361	6.9487	143.2	146.3	147.9	152.1	154.7	159.3	164.0	166.5	170.8	172.4	175.5
13:11	**167**	1	159.5691	0.04353	6.9460	143.4	146.5	148.1	152.4	154.9	159.6	164.3	166.8	171.0	172.6	175.7
14: 0	**168**	1	159.7890	0.04345	6.9428	143.6	146.7	148.4	152.6	155.1	159.8	164.5	167.0	171.2	172.8	175.9
14: 1	**169**	1	159.9983	0.04337	6.9391	143.9	146.9	148.6	152.8	155.3	160.0	164.7	167.2	171.4	173.0	176.1
14: 2	**170**	1	160.1971	0.04330	6.9365	144.1	147.2	148.8	153.0	155.5	160.2	164.9	167.4	171.6	173.2	176.3
14: 3	**171**	1	160.3857	0.04322	6.9319	144.3	147.3	149.0	153.2	155.7	160.4	165.1	167.6	171.8	173.4	176.5
14: 4	**172**	1	160.5643	0.04314	6.9267	144.5	147.5	149.2	153.4	155.9	160.6	165.2	167.7	172.0	173.6	176.7
14: 5	**173**	1	160.7332	0.04307	6.9228	144.6	147.7	149.3	153.6	156.1	160.7	165.4	167.9	172.1	173.8	176.8
14: 6	**174**	1	160.8927	0.04299	6.9168	144.8	147.9	149.5	153.7	156.2	160.9	165.6	168.1	172.3	173.9	177.0
14: 7	**175**	1	161.0430	0.04292	6.9120	145.0	148.0	149.7	153.9	156.4	161.0	165.7	168.2	172.4	174.0	177.1
14: 8	**176**	1	161.1845	0.04284	6.9051	145.1	148.2	149.8	154.0	156.5	161.2	165.8	168.3	172.5	174.2	177.2
14: 9	**177**	1	161.3176	0.04277	6.8996	145.3	148.3	150.0	154.2	156.7	161.3	166.0	168.5	172.7	174.3	177.4
14:10	**178**	1	161.4425	0.04270	6.8936	145.4	148.5	150.1	154.3	156.8	161.4	166.1	168.6	172.8	174.4	177.5
14:11	**179**	1	161.5596	0.04263	6.8873	145.5	148.6	150.2	154.4	156.9	161.6	166.2	168.7	172.9	174.5	177.6
15: 0	**180**	1	161.6692	0.04255	6.8790	145.7	148.7	150.4	154.5	157.0	161.7	166.3	168.8	173.0	174.6	177.7
15: 1	**181**	1	161.7717	0.04248	6.8721	145.8	148.8	150.5	154.6	157.1	161.8	166.4	168.9	173.1	174.7	177.8
15: 2	**182**	1	161.8673	0.04241	6.8648	145.9	149.0	150.6	154.8	157.2	161.9	166.5	169.0	173.2	174.8	177.8
15: 3	**183**	1	161.9564	0.04235	6.8589	146.0	149.1	150.7	154.8	157.3	162.0	166.6	169.1	173.2	174.9	177.9
15: 4	**184**	1	162.0393	0.04228	6.8510	146.1	149.2	150.8	154.9	157.4	162.0	166.7	169.1	173.3	174.9	178.0
15: 5	**185**	1	162.1164	0.04221	6.8429	146.2	149.2	150.9	155.0	157.5	162.1	166.7	169.2	173.4	175.0	178.0
15: 6	**186**	1	162.1880	0.04214	6.8346	146.3	149.3	150.9	155.1	157.6	162.2	166.8	169.3	173.4	175.0	178.1
15: 7	**187**	1	162.2542	0.04208	6.8277	146.4	149.4	151.0	155.2	157.6	162.3	166.9	169.3	173.5	175.1	178.1
15: 8	**188**	1	162.3154	0.04201	6.8189	146.5	149.5	151.1	155.2	157.7	162.3	166.9	169.4	173.5	175.1	178.2
15: 9	**189**	1	162.3719	0.04195	6.8115	146.5	149.6	151.2	155.3	157.8	162.4	167.0	169.4	173.6	175.2	178.2
15:10	**190**	1	162.4239	0.04189	6.8039	146.6	149.6	151.2	155.4	157.8	162.4	167.0	169.5	173.6	175.2	178.3
15:11	**191**	1	162.4717	0.04182	6.7946	146.7	149.7	151.3	155.4	157.9	162.5	167.1	169.5	173.6	175.3	178.3
16: 0	**192**	1	162.5156	0.04176	6.7867	146.7	149.8	151.4	155.5	157.9	162.5	167.1	169.6	173.7	175.3	178.3
16: 1	**193**	1	162.5560	0.04170	6.7786	146.8	149.8	151.4	155.5	158.0	162.6	167.1	169.6	173.7	175.3	178.3
16: 2	**194**	1	162.5933	0.04164	6.7704	146.8	149.9	151.5	155.6	158.0	162.6	167.2	169.6	173.7	175.3	178.3
16: 3	**195**	1	162.6276	0.04158	6.7621	146.9	149.9	151.5	155.6	158.1	162.6	167.2	169.6	173.8	175.3	178.4
16: 4	**196**	1	162.6594	0.04152	6.7536	146.9	150.0	151.6	155.7	158.1	162.7	167.2	169.7	173.8	175.4	178.4
16: 5	**197**	1	162.6890	0.04147	6.7467	147.0	150.0	151.6	155.7	158.1	162.7	167.2	169.7	173.8	175.4	178.4
16: 6	**198**	1	162.7165	0.04141	6.7381	147.0	150.0	151.6	155.7	158.2	162.7	167.3	169.7	173.8	175.4	178.4
16: 7	**199**	1	162.7425	0.04136	6.7310	147.1	150.1	151.7	155.8	158.2	162.7	167.3	169.7	173.8	175.4	178.4
16: 8	**200**	1	162.7670	0.04130	6.7223	147.1	150.1	151.7	155.8	158.2	162.8	167.3	169.7	173.8	175.4	178.4
16: 9	**201**	1	162.7904	0.04125	6.7151	147.2	150.2	151.7	155.8	158.3	162.8	167.3	169.8	173.8	175.4	178.4
16:10	**202**	1	162.8126	0.04119	6.7063	147.2	150.2	151.8	155.9	158.3	162.8	167.3	169.8	173.8	175.4	178.4
16:11	**203**	1	162.8340	0.04114	6.6990	147.3	150.2	151.8	155.9	158.3	162.8	167.4	169.8	173.9	175.4	178.4
17: 0	**204**	1	162.8545	0.04109	6.6917	147.3	150.3	151.8	155.9	158.3	162.9	167.4	169.8	173.9	175.4	178.4
17: 1	**205**	1	162.8743	0.04104	6.6844	147.3	150.3	151.9	155.9	158.4	162.9	167.4	169.8	173.9	175.4	178.4
17: 2	**206**	1	162.8935	0.04099	6.6770	147.4	150.3	151.9	156.0	158.4	162.9	167.4	169.8	173.9	175.5	178.4
17: 3	**207**	1	162.9120	0.04094	6.6696	147.4	150.4	151.9	156.0	158.4	162.9	167.4	169.8	173.9	175.5	178.4
17: 4	**208**	1	162.9300	0.04089	6.6622	147.4	150.4	152.0	156.0	158.4	162.9	167.4	169.8	173.9	175.5	178.4
17: 5	**209**	1	162.9476	0.04084	6.6548	147.5	150.4	152.0	156.1	158.5	162.9	167.4	169.8	173.9	175.5	178.4

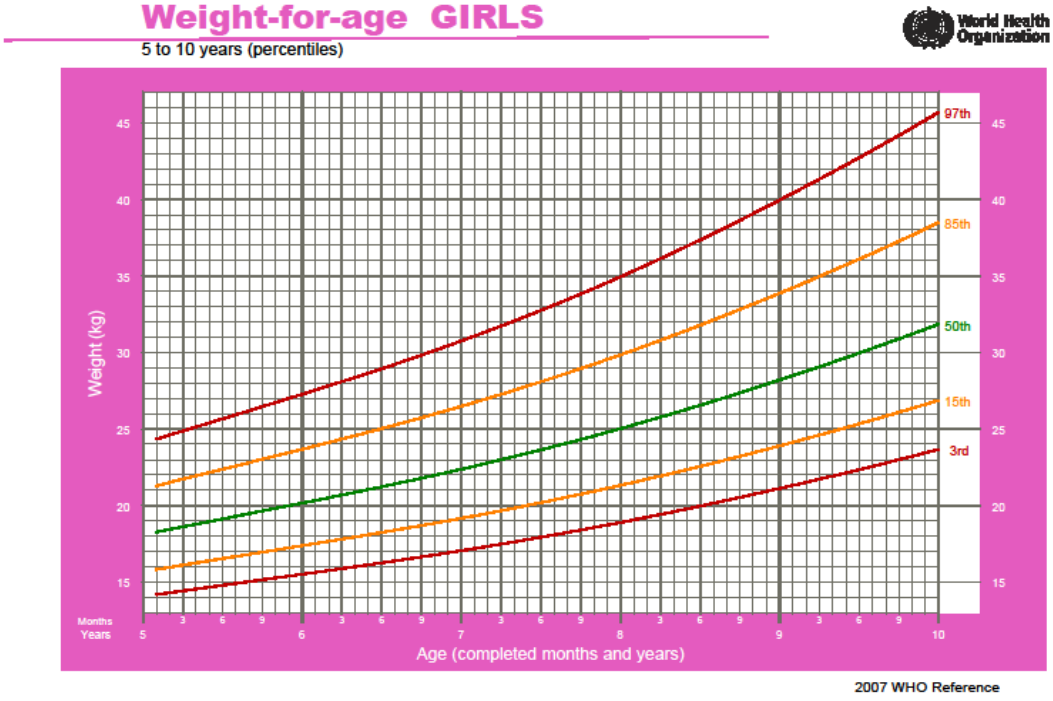
17: 6	**210**	1	162.9649	0.04080	6.6490	147.5	150.5	152.0	156.1	158.5	163.0	167.5	169.9	173.9	175.5	178.4
17: 7	**211**	1	162.9817	0.04075	6.6415	147.5	150.5	152.1	156.1	158.5	163.0	167.5	169.9	173.9	175.5	178.4
17: 8	**212**	1	162.9983	0.04071	6.6357	147.6	150.5	152.1	156.1	158.5	163.0	167.5	169.9	173.9	175.5	178.4
17: 9	**213**	1	163.0144	0.04066	6.6282	147.6	150.5	152.1	156.1	158.5	163.0	167.5	169.9	173.9	175.5	178.4
17:10	**214**	1	163.0300	0.04062	6.6223	147.6	150.6	152.1	156.2	158.6	163.0	167.5	169.9	173.9	175.5	178.4
17:11	**215**	1	163.0451	0.04058	6.6164	147.7	150.6	152.2	156.2	158.6	163.0	167.5	169.9	173.9	175.5	178.4
18: 0	**216**	1	163.0595	0.04053	6.6088	147.7	150.6	152.2	156.2	158.6	163.1	167.5	169.9	173.9	175.5	178.4
18: 1	**217**	1	163.0733	0.04049	6.6028	147.7	150.7	152.2	156.2	158.6	163.1	167.5	169.9	173.9	175.5	178.4
18: 2	**218**	1	163.0862	0.04045	6.5968	147.7	150.7	152.2	156.2	158.6	163.1	167.5	169.9	173.9	175.5	178.4
18: 3	**219**	1	163.0982	0.04041	6.5908	147.8	150.7	152.3	156.3	158.7	163.1	167.5	169.9	173.9	175.5	178.4
18: 4	**220**	1	163.1092	0.04037	6.5847	147.8	150.7	152.3	156.3	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18: 5	**221**	1	163.1192	0.04034	6.5802	147.8	150.7	152.3	156.3	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18: 6	**222**	1	163.1279	0.04030	6.5741	147.8	150.8	152.3	156.3	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18: 7	**223**	1	163.1355	0.04026	6.5678	147.9	150.8	152.3	156.3	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18: 8	**224**	1	163.1418	0.04023	6.5632	147.9	150.8	152.3	156.3	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18: 9	**225**	1	163.1469	0.04019	6.5569	147.9	150.8	152.4	156.4	158.7	163.1	167.6	169.9	173.9	175.5	178.4
18:10	**226**	1	163.1508	0.04016	6.5521	147.9	150.8	152.4	156.4	158.7	163.2	167.6	169.9	173.9	175.5	178.4
18:11	**227**	1	163.1534	0.04012	6.5457	147.9	150.8	152.4	156.4	158.7	163.2	167.6	169.9	173.9	175.5	178.4
19: 0	**228**	1	163.1548	0.04009	6.5409	147.9	150.9	152.4	156.4	158.7	163.2	167.6	169.9	173.9	175.5	178.4

2007 WHO Reference

Source: http://www.who.int/growthref/who2007_height_for_age/en/index.html

Annexure – 1.5
WEIGHT-FOR-AGE: WHO STANDARDS





Weight-for-age BOYS

5 to 10 years (percentiles)

World Health Organization

					Percentiles (weight in kg)											
Year: Month	Month	L	M	S	1st	3rd	5th	15th	25th	50th	75th	85th	95th	97th	99th	
5: 1	61	-0.2026	18.5057	0.12988	13.8	14.6	15.0	16.2	17.0	18.5	20.2	21.2	23.0	23.8	25.3	
5: 2	62	-0.2130	18.6802	0.13028	13.9	14.7	15.1	16.4	17.1	18.7	20.4	21.4	23.3	24.0	25.6	
5: 3	63	-0.2234	18.8563	0.13067	14.1	14.8	15.3	16.5	17.3	18.9	20.6	21.6	23.5	24.3	25.8	
5: 4	64	-0.2338	19.0340	0.13105	14.2	15.0	15.4	16.7	17.4	19.0	20.8	21.9	23.7	24.5	26.1	
5: 5	65	-0.2443	19.2132	0.13142	14.3	15.1	15.6	16.8	17.6	19.2	21.0	22.1	24.0	24.8	26.4	
5: 6	66	-0.2548	19.3940	0.13178	14.4	15.3	15.7	17.0	17.8	19.4	21.2	22.3	24.2	25.1	26.7	
5: 7	67	-0.2653	19.5765	0.13213	14.6	15.4	15.8	17.1	17.9	19.6	21.4	22.5	24.5	25.3	27.0	
5: 8	68	-0.2758	19.7607	0.13246	14.7	15.5	16.0	17.3	18.1	19.8	21.6	22.7	24.7	25.6	27.3	
5: 9	69	-0.2864	19.9468	0.13279	14.8	15.7	16.1	17.4	18.3	19.9	21.8	23.0	25.0	25.8	27.6	
5:10	70	-0.2969	20.1344	0.13311	15.0	15.8	16.3	17.6	18.4	20.1	22.1	23.2	25.3	26.1	27.9	
5:11	71	-0.3075	20.3235	0.13342	15.1	16.0	16.4	17.7	18.6	20.3	22.3	23.4	25.5	26.4	28.2	
6: 0	72	-0.3180	20.5137	0.13372	15.2	16.1	16.6	17.9	18.8	20.5	22.5	23.6	25.8	26.7	28.5	
6: 1	73	-0.3285	20.7052	0.13402	15.4	16.3	16.7	18.1	18.9	20.7	22.7	23.9	26.0	26.9	28.8	
6: 2	74	-0.3390	20.8979	0.13432	15.5	16.4	16.9	18.2	19.1	20.9	22.9	24.1	26.3	27.2	29.1	
6: 3	75	-0.3494	21.0918	0.13462	15.7	16.5	17.0	18.4	19.3	21.1	23.1	24.3	26.6	27.5	29.4	
6: 4	76	-0.3598	21.2870	0.13493	15.8	16.7	17.2	18.6	19.5	21.3	23.4	24.6	26.8	27.8	29.7	
6: 5	77	-0.3701	21.4833	0.13523	16.0	16.8	17.3	18.7	19.6	21.5	23.6	24.8	27.1	28.1	30.0	
6: 6	78	-0.3804	21.6810	0.13554	16.1	17.0	17.5	18.9	19.8	21.7	23.8	25.0	27.4	28.3	30.3	
6: 7	79	-0.3906	21.8799	0.13586	16.2	17.2	17.7	19.1	20.0	21.9	24.0	25.3	27.6	28.6	30.7	
6: 8	80	-0.4007	22.0800	0.13618	16.4	17.3	17.8	19.2	20.2	22.1	24.2	25.5	27.9	28.9	31.0	
6: 9	81	-0.4107	22.2813	0.13652	16.5	17.5	18.0	19.4	20.4	22.3	24.5	25.8	28.2	29.2	31.3	
6:10	82	-0.4207	22.4837	0.13686	16.7	17.6	18.1	19.6	20.5	22.5	24.7	26.0	28.5	29.5	31.6	
6:11	83	-0.4305	22.6872	0.13722	16.8	17.8	18.3	19.8	20.7	22.7	24.9	26.3	28.8	29.8	32.0	
7: 0	84	-0.4402	22.8915	0.13759	17.0	17.9	18.4	19.9	20.9	22.9	25.2	26.5	29.1	30.1	32.3	
7: 1	85	-0.4499	23.0968	0.13797	17.1	18.1	18.6	20.1	21.1	23.1	25.4	26.8	29.3	30.4	32.7	
7: 2	86	-0.4594	23.3029	0.13838	17.3	18.2	18.8	20.3	21.3	23.3	25.6	27.0	29.6	30.7	33.0	
7: 3	87	-0.4688	23.5101	0.13880	17.4	18.4	18.9	20.5	21.5	23.5	25.9	27.3	29.9	31.1	33.4	
7: 4	88	-0.4781	23.7182	0.13923	17.6	18.5	19.1	20.6	21.6	23.7	26.1	27.5	30.2	31.4	33.7	
7: 5	89	-0.4873	23.9272	0.13969	17.7	18.7	19.2	20.8	21.8	23.9	26.4	27.8	30.5	31.7	34.1	
7: 6	90	-0.4964	24.1371	0.14016	17.8	18.8	19.4	21.0	22.0	24.1	26.6	28.1	30.8	32.0	34.4	
7: 7	91	-0.5053	24.3479	0.14065	18.0	19.0	19.6	21.2	22.2	24.3	26.8	28.3	31.1	32.3	34.8	
7: 8	92	-0.5142	24.5595	0.14117	18.1	19.1	19.7	21.3	22.4	24.6	27.1	28.6	31.4	32.7	35.2	
7: 9	93	-0.5229	24.7722	0.14170	18.3	19.3	19.9	21.5	22.6	24.8	27.3	28.9	31.8	33.0	35.6	
7:10	94	-0.5315	24.9858	0.14226	18.4	19.5	20.0	21.7	22.8	25.0	27.6	29.1	32.1	33.3	36.0	
7:11	95	-0.5399	25.2005	0.14284	18.6	19.6	20.2	21.9	22.9	25.2	27.8	29.4	32.4	33.7	36.3	
8: 0	96	-0.5482	25.4163	0.14344	18.7	19.8	20.4	22.0	23.1	25.4	28.1	29.7	32.7	34.0	36.7	
8: 1	97	-0.5564	25.6332	0.14407	18.9	19.9	20.5	22.2	23.3	25.6	28.3	30.0	33.1	34.4	37.1	
8: 2	98	-0.5644	25.8513	0.14472	19.0	20.1	20.7	22.4	23.5	25.9	28.6	30.2	33.4	34.7	37.6	
8: 3	99	-0.5722	26.0706	0.14539	19.1	20.2	20.8	22.6	23.7	26.1	28.8	30.5	33.7	35.1	38.0	
8: 4	100	-0.5799	26.2911	0.14608	19.3	20.4	21.0	22.7	23.9	26.3	29.1	30.8	34.1	35.5	38.4	
8: 5	101	-0.5873	26.5128	0.14679	19.4	20.5	21.2	22.9	24.1	26.5	29.4	31.1	34.4	35.8	38.8	
8: 6	102	-0.5946	26.7358	0.14752	19.6	20.7	21.3	23.1	24.3	26.7	29.6	31.4	34.7	36.2	39.2	
8: 7	103	-0.6017	26.9602	0.14828	19.7	20.8	21.5	23.3	24.5	27.0	29.9	31.7	35.1	36.6	39.7	
8: 8	104	-0.6085	27.1861	0.14905	19.8	21.0	21.6	23.5	24.7	27.2	30.2	32.0	35.5	37.0	40.1	
8: 9	105	-0.6152	27.4137	0.14984	20.0	21.1	21.8	23.6	24.9	27.4	30.4	32.3	35.8	37.4	40.6	
8:10	106	-0.6216	27.6432	0.15066	20.1	21.3	22.0	23.8	25.0	27.6	30.7	32.6	36.2	37.8	41.0	
8:11	107	-0.6278	27.8750	0.15149	20.3	21.4	22.1	24.0	25.2	27.9	31.0	32.9	36.6	38.2	41.5	
9: 0	108	-0.6337	28.1092	0.15233	20.4	21.6	22.3	24.2	25.4	28.1	31.3	33.2	36.9	38.6	42.0	
9: 1	109	-0.6393	28.3459	0.15319	20.6	21.8	22.4	24.4	25.6	28.3	31.5	33.5	37.3	39.0	42.5	
9: 2	110	-0.6446	28.5854	0.15406	20.7	21.9	22.6	24.6	25.9	28.6	31.8	33.8	37.7	39.4	43.0	
9: 3	111	-0.6496	28.8277	0.15493	20.9	22.1	22.8	24.7	26.1	28.8	32.1	34.2	38.1	39.8	43.5	
9: 4	112	-0.6543	29.0731	0.15581	21.0	22.2	22.9	24.9	26.3	29.1	32.4	34.5	38.5	40.3	44.0	
9: 5	113	-0.6585	29.3217	0.15670	21.1	22.4	23.1	25.1	26.5	29.3	32.7	34.8	38.9	40.7	44.5	
9: 6	114	-0.6624	29.5736	0.15760	21.3	22.6	23.3	25.3	26.7	29.6	33.0	35.2	39.3	41.1	45.0	
9: 7	115	-0.6659	29.8289	0.15850	21.5	22.7	23.5	25.5	26.9	29.8	33.3	35.5	39.7	41.6	45.5	
9: 8	116	-0.6689	30.0877	0.15940	21.6	22.9	23.6	25.7	27.1	30.1	33.6	35.8	40.1	42.0	46.1	
9: 9	117	-0.6714	30.3501	0.16031	21.8	23.1	23.8	25.9	27.3	30.4	34.0	36.2	40.6	42.5	46.6	
9:10	118	-0.6735	30.6160	0.16122	21.9	23.2	24.0	26.1	27.6	30.6	34.3	36.6	41.0	43.0	47.2	
9:11	119	-0.6752	30.8854	0.16213	22.1	23.4	24.2	26.3	27.8	30.9	34.6	36.9	41.4	43.5	47.7	
10: 0	120	-0.6764	31.1586	0.16305	22.2	23.6	24.4	26.6	28.0	31.2	34.9	37.3	41.9	43.9	48.3	

2007 WHO Reference

Weight-for-age GIRLS

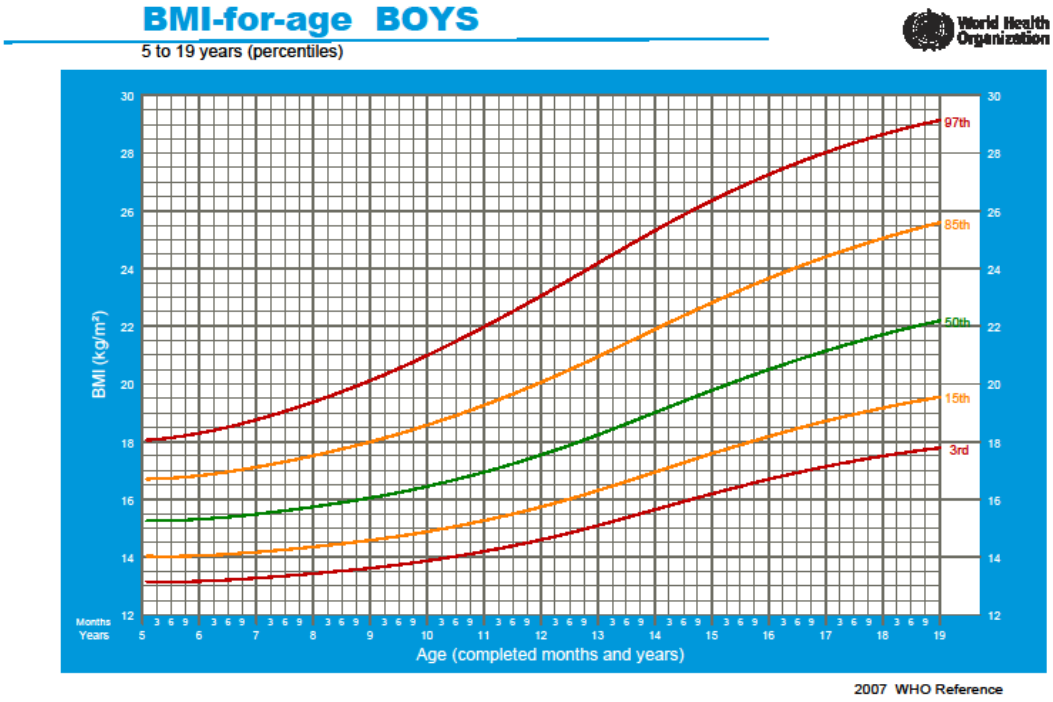
5 to 10 years (percentiles)

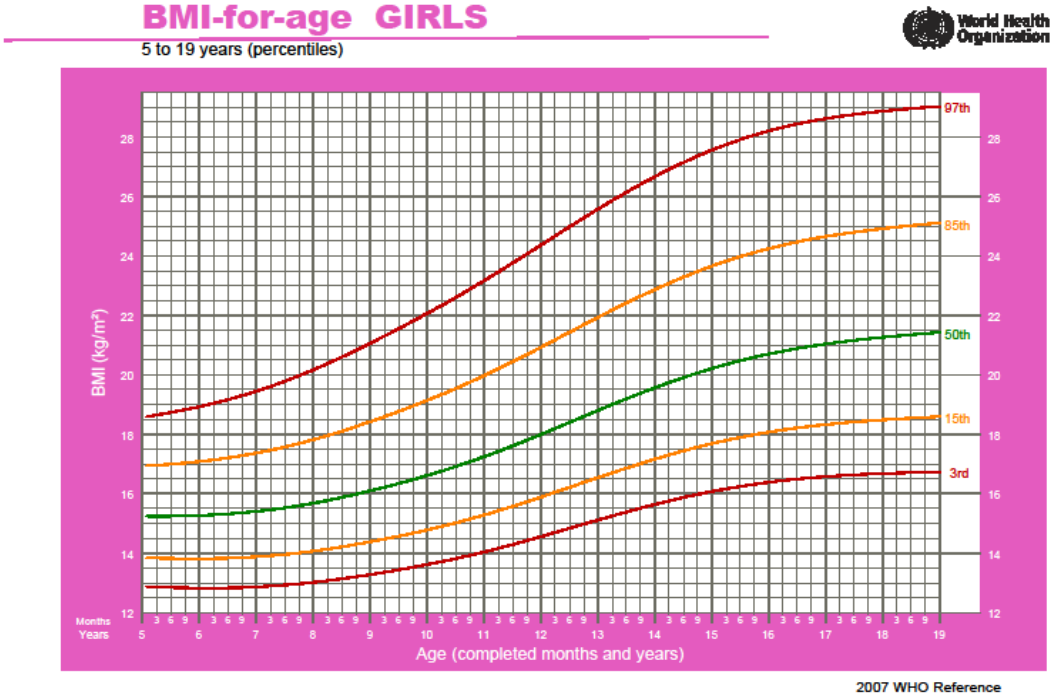
Year: Month	Month	L	M	S	Percentiles (weight in kg) 1st	3rd	5th	15th	25th	50th	75th	85th	95th	97th	99th
5: 1	61	-0.4681	18.2579	0.14295	13.4	14.2	14.6	15.8	16.6	18.3	20.2	21.3	23.4	24.3	26.2
5: 2	62	-0.4711	18.4329	0.14350	13.5	14.3	14.7	16.0	16.8	18.4	20.4	21.5	23.7	24.6	26.5
5: 3	63	-0.4742	18.6073	0.14404	13.6	14.4	14.9	16.1	16.9	18.6	20.6	21.7	23.9	24.9	26.8
5: 4	64	-0.4773	18.7811	0.14459	13.7	14.5	15.0	16.3	17.1	18.8	20.8	21.9	24.2	25.1	27.1
5: 5	65	-0.4803	18.9545	0.14514	13.9	14.7	15.1	16.4	17.2	19.0	21.0	22.2	24.4	25.4	27.4
5: 6	66	-0.4834	19.1276	0.14569	14.0	14.8	15.2	16.5	17.4	19.1	21.2	22.4	24.7	25.7	27.7
5: 7	67	-0.4864	19.3004	0.14624	14.1	14.9	15.4	16.7	17.5	19.3	21.4	22.6	24.9	25.9	28.0
5: 8	68	-0.4894	19.4730	0.14679	14.2	15.0	15.5	16.8	17.7	19.5	21.6	22.8	25.2	26.2	28.3
5: 9	69	-0.4924	19.6455	0.14735	14.3	15.2	15.6	17.0	17.8	19.6	21.8	23.0	25.4	26.5	28.6
5:10	70	-0.4954	19.8180	0.14790	14.4	15.3	15.8	17.1	18.0	19.8	22.0	23.2	25.7	26.7	28.9
5:11	71	-0.4984	19.9908	0.14845	14.5	15.4	15.9	17.2	18.1	20.0	22.2	23.5	25.9	27.0	29.2
6: 0	72	-0.5013	20.1639	0.14900	14.6	15.5	16.0	17.4	18.3	20.2	22.4	23.7	26.2	27.3	29.5
6: 1	73	-0.5043	20.3377	0.14955	14.8	15.6	16.1	17.5	18.4	20.3	22.6	23.9	26.4	27.5	29.8
6: 2	74	-0.5072	20.5124	0.15010	14.9	15.8	16.3	17.7	18.6	20.5	22.8	24.1	26.7	27.8	30.1
6: 3	75	-0.5100	20.6885	0.15065	15.0	15.9	16.4	17.8	18.7	20.7	23.0	24.3	27.0	28.1	30.4
6: 4	76	-0.5129	20.8661	0.15120	15.1	16.0	16.5	17.9	18.9	20.9	23.2	24.6	27.2	28.4	30.8
6: 5	77	-0.5157	21.0457	0.15175	15.2	16.1	16.6	18.1	19.0	21.0	23.4	24.8	27.5	28.7	31.1
6: 6	78	-0.5185	21.2274	0.15230	15.3	16.3	16.8	18.2	19.2	21.2	23.6	25.0	27.8	28.9	31.4
6: 7	79	-0.5213	21.4113	0.15284	15.5	16.4	16.9	18.4	19.4	21.4	23.8	25.3	28.0	29.2	31.7
6: 8	80	-0.5240	21.5979	0.15339	15.6	16.5	17.0	18.5	19.5	21.6	24.0	25.5	28.3	29.5	32.1
6: 9	81	-0.5268	21.7872	0.15393	15.7	16.6	17.2	18.7	19.7	21.8	24.2	25.7	28.6	29.8	32.4
6:10	82	-0.5294	21.9795	0.15448	15.8	16.8	17.3	18.8	19.9	22.0	24.5	26.0	28.9	30.1	32.7
6:11	83	-0.5321	22.1751	0.15502	15.9	16.9	17.5	19.0	20.0	22.2	24.7	26.2	29.2	30.4	33.1
7: 0	84	-0.5347	22.3740	0.15556	16.1	17.0	17.6	19.2	20.2	22.4	24.9	26.5	29.5	30.8	33.5
7: 1	85	-0.5372	22.5762	0.15610	16.2	17.2	17.8	19.3	20.4	22.6	25.2	26.7	29.8	31.1	33.8
7: 2	86	-0.5398	22.7816	0.15663	16.3	17.3	17.9	19.5	20.6	22.8	25.4	27.0	30.1	31.4	34.2
7: 3	87	-0.5423	22.9904	0.15717	16.5	17.5	18.1	19.7	20.7	23.0	25.6	27.3	30.4	31.7	34.6
7: 4	88	-0.5447	23.2025	0.15770	16.6	17.6	18.2	19.8	20.9	23.2	25.9	27.5	30.7	32.1	34.9
7: 5	89	-0.5471	23.4180	0.15823	16.7	17.8	18.4	20.0	21.1	23.4	26.1	27.8	31.0	32.4	35.3
7: 6	90	-0.5495	23.6369	0.15876	16.9	17.9	18.5	20.2	21.3	23.6	26.4	28.1	31.3	32.8	35.7
7: 7	91	-0.5518	23.8593	0.15928	17.0	18.1	18.7	20.4	21.5	23.9	26.7	28.4	31.7	33.1	36.1
7: 8	92	-0.5541	24.0853	0.15980	17.2	18.2	18.8	20.6	21.7	24.1	26.9	28.7	32.0	33.5	36.5
7: 9	93	-0.5563	24.3149	0.16032	17.3	18.4	19.0	20.7	21.9	24.3	27.2	28.9	32.3	33.8	36.9
7:10	94	-0.5585	24.5482	0.16084	17.5	18.6	19.2	20.9	22.1	24.5	27.5	29.2	32.7	34.2	37.4
7:11	95	-0.5606	24.7853	0.16135	17.6	18.7	19.4	21.1	22.3	24.8	27.7	29.5	33.0	34.6	37.8
8: 0	96	-0.5627	25.0262	0.16186	17.8	18.9	19.5	21.3	22.5	25.0	28.0	29.8	33.4	34.9	38.2
8: 1	97	-0.5647	25.2710	0.16237	17.9	19.1	19.7	21.5	22.7	25.3	28.3	30.2	33.8	35.3	38.6
8: 2	98	-0.5667	25.5197	0.16287	18.1	19.2	19.9	21.7	22.9	25.5	28.6	30.5	34.1	35.7	39.1
8: 3	99	-0.5686	25.7721	0.16337	18.3	19.4	20.1	21.9	23.2	25.8	28.9	30.8	34.5	36.1	39.5
8: 4	100	-0.5704	26.0284	0.16386	18.4	19.6	20.3	22.1	23.4	26.0	29.2	31.1	34.9	36.5	40.0
8: 5	101	-0.5722	26.2883	0.16435	18.6	19.8	20.4	22.3	23.6	26.3	29.5	31.4	35.3	36.9	40.5
8: 6	102	-0.5740	26.5519	0.16483	18.8	20.0	20.6	22.6	23.8	26.6	29.8	31.8	35.7	37.4	40.9
8: 7	103	-0.5757	26.8190	0.16532	18.9	20.1	20.8	22.8	24.1	26.8	30.1	32.1	36.0	37.8	41.4
8: 8	104	-0.5773	27.0896	0.16579	19.1	20.3	21.0	23.0	24.3	27.1	30.4	32.5	36.4	38.2	41.9
8: 9	105	-0.5789	27.3635	0.16626	19.3	20.5	21.2	23.2	24.5	27.4	30.7	32.8	36.9	38.6	42.4
8:10	106	-0.5804	27.6406	0.16673	19.5	20.7	21.4	23.4	24.8	27.6	31.0	33.2	37.3	39.1	42.9
8:11	107	-0.5819	27.9208	0.16719	19.7	20.9	21.6	23.7	25.0	27.9	31.4	33.5	37.7	39.5	43.4
9: 0	108	-0.5833	28.2040	0.16764	19.8	21.1	21.8	23.9	25.3	28.2	31.7	33.9	38.1	40.0	43.9
9: 1	109	-0.5847	28.4901	0.16809	20.0	21.3	22.0	24.1	25.5	28.5	32.0	34.2	38.5	40.4	44.4
9: 2	110	-0.5859	28.7791	0.16854	20.2	21.5	22.3	24.4	25.8	28.8	32.4	34.6	38.9	40.9	44.9
9: 3	111	-0.5872	29.0711	0.16897	20.4	21.7	22.5	24.6	26.0	29.1	32.7	35.0	39.4	41.3	45.5
9: 4	112	-0.5883	29.3663	0.16941	20.6	21.9	22.7	24.8	26.3	29.4	33.1	35.3	39.8	41.8	46.0
9: 5	113	-0.5895	29.6646	0.16983	20.8	22.1	22.9	25.1	26.6	29.7	33.4	35.7	40.3	42.3	46.5
9: 6	114	-0.5905	29.9663	0.17025	21.0	22.3	23.1	25.3	26.8	30.0	33.8	36.1	40.7	42.7	47.1
9: 7	115	-0.5915	30.2715	0.17066	21.2	22.6	23.3	25.6	27.1	30.3	34.1	36.5	41.1	43.2	47.6
9: 8	116	-0.5925	30.5805	0.17107	21.4	22.8	23.6	25.8	27.4	30.6	34.5	36.9	41.6	43.7	48.1
9: 9	117	-0.5934	30.8934	0.17146	21.6	23.0	23.8	26.1	27.6	30.9	34.8	37.3	42.1	44.2	48.7
9:10	118	-0.5942	31.2105	0.17186	21.8	23.2	24.0	26.3	27.9	31.2	35.2	37.7	42.5	44.7	49.3
9:11	119	-0.5950	31.5319	0.17224	22.0	23.4	24.3	26.6	28.2	31.5	35.6	38.1	43.0	45.2	49.8
10: 0	120	-0.5958	31.8578	0.17262	22.2	23.7	24.5	26.9	28.5	31.9	35.9	38.5	43.5	45.7	50.4

2007 WHO Reference

Source: http://www.who.int/growthref/who2007_weight_for_age/en/index.html

Annexure – 1.6
BMI-FOR-HEIGHT: WHO STANDARDS





BMI-for-age BOYS

5 to 19 years (percentiles)

World Health Organization

					Percentiles (BMI in kg/m^2)										
Year: Month	Month	L	M	S	1st	3rd	5th	15th	25th	50th	75th	85th	95th	97th	99th
5: 1	61	-0.7387	15.2641	0.08390	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	18.8
5: 2	62	-0.7621	15.2616	0.08414	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	18.9
5: 3	63	-0.7856	15.2604	0.08439	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	18.9
5: 4	64	-0.8089	15.2605	0.08464	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	18.9
5: 5	65	-0.8322	15.2619	0.08490	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	18.9
5: 6	66	-0.8554	15.2645	0.08516	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.1	19.0
5: 7	67	-0.8785	15.2684	0.08543	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.7	17.7	18.2	19.0
5: 8	68	-0.9015	15.2737	0.08570	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.8	17.8	18.2	19.0
5: 9	69	-0.9243	15.2801	0.08597	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.8	17.8	18.2	19.1
5:10	70	-0.9471	15.2877	0.08625	12.7	13.1	13.4	14.0	14.4	15.3	16.2	16.8	17.8	18.2	19.1
5:11	71	-0.9697	15.2965	0.08653	12.7	13.2	13.4	14.0	14.5	15.3	16.2	16.8	17.8	18.3	19.1
6: 0	72	-0.9921	15.3062	0.08682	12.7	13.2	13.4	14.0	14.5	15.3	16.3	16.8	17.9	18.3	19.2
6: 1	73	-1.0144	15.3169	0.08711	12.7	13.2	13.4	14.0	14.5	15.3	16.3	16.8	17.9	18.3	19.2
6: 2	74	-1.0365	15.3285	0.08741	12.7	13.2	13.4	14.1	14.5	15.3	16.3	16.9	17.9	18.4	19.3
6: 3	75	-1.0584	15.3408	0.08771	12.8	13.2	13.4	14.1	14.5	15.3	16.3	16.9	17.9	18.4	19.3
6: 4	76	-1.0801	15.3540	0.08802	12.8	13.2	13.4	14.1	14.5	15.4	16.3	16.9	18.0	18.4	19.4
6: 5	77	-1.1017	15.3679	0.08833	12.8	13.2	13.4	14.1	14.5	15.4	16.3	16.9	18.0	18.5	19.4
6: 6	78	-1.1230	15.3825	0.08865	12.8	13.2	13.4	14.1	14.5	15.4	16.4	16.9	18.0	18.5	19.4
6: 7	79	-1.1441	15.3978	0.08898	12.8	13.2	13.4	14.1	14.5	15.4	16.4	17.0	18.1	18.5	19.5
6: 8	80	-1.1649	15.4137	0.08931	12.8	13.2	13.5	14.1	14.5	15.4	16.4	17.0	18.1	18.6	19.6
6: 9	81	-1.1856	15.4302	0.08964	12.8	13.2	13.5	14.1	14.6	15.4	16.4	17.0	18.1	18.6	19.6
6:10	82	-1.2060	15.4473	0.08998	12.8	13.2	13.5	14.1	14.6	15.4	16.5	17.1	18.2	18.7	19.7
6:11	83	-1.2261	15.4650	0.09033	12.8	13.3	13.5	14.2	14.6	15.5	16.5	17.1	18.2	18.7	19.7
7: 0	84	-1.2460	15.4832	0.09068	12.8	13.3	13.5	14.2	14.6	15.5	16.5	17.1	18.3	18.8	19.8
7: 1	85	-1.2656	15.5019	0.09103	12.9	13.3	13.5	14.2	14.6	15.5	16.5	17.1	18.3	18.8	19.8
7: 2	86	-1.2849	15.5210	0.09139	12.9	13.3	13.5	14.2	14.6	15.5	16.6	17.2	18.3	18.8	19.9
7: 3	87	-1.3040	15.5407	0.09176	12.9	13.3	13.5	14.2	14.6	15.5	16.6	17.2	18.4	18.9	20.0
7: 4	88	-1.3228	15.5608	0.09213	12.9	13.3	13.6	14.2	14.7	15.6	16.6	17.2	18.4	18.9	20.0
7: 5	89	-1.3414	15.5814	0.09251	12.9	13.3	13.6	14.2	14.7	15.6	16.6	17.3	18.5	19.0	20.1
7: 6	90	-1.3596	15.6023	0.09289	12.9	13.3	13.6	14.3	14.7	15.6	16.7	17.3	18.5	19.0	20.2
7: 7	91	-1.3776	15.6237	0.09327	12.9	13.4	13.6	14.3	14.7	15.6	16.7	17.3	18.6	19.1	20.2
7: 8	92	-1.3953	15.6455	0.09366	12.9	13.4	13.6	14.3	14.7	15.6	16.7	17.4	18.6	19.2	20.3
7: 9	93	-1.4126	15.6677	0.09406	12.9	13.4	13.6	14.3	14.7	15.7	16.7	17.4	18.7	19.2	20.4
7:10	94	-1.4297	15.6903	0.09445	13.0	13.4	13.6	14.3	14.8	15.7	16.8	17.4	18.7	19.3	20.4
7:11	95	-1.4464	15.7133	0.09486	13.0	13.4	13.7	14.3	14.8	15.7	16.8	17.5	18.8	19.3	20.5
8: 0	96	-1.4629	15.7368	0.09526	13.0	13.4	13.7	14.4	14.8	15.7	16.8	17.5	18.8	19.4	20.6
8: 1	97	-1.4790	15.7606	0.09567	13.0	13.4	13.7	14.4	14.8	15.8	16.9	17.5	18.9	19.4	20.6
8: 2	98	-1.4947	15.7848	0.09609	13.0	13.5	13.7	14.4	14.8	15.8	16.9	17.6	18.9	19.5	20.7
8: 3	99	-1.5101	15.8094	0.09651	13.0	13.5	13.7	14.4	14.9	15.8	16.9	17.6	19.0	19.5	20.8
8: 4	100	-1.5252	15.8344	0.09693	13.0	13.5	13.7	14.4	14.9	15.8	17.0	17.7	19.0	19.6	20.9
8: 5	101	-1.5399	15.8597	0.09735	13.1	13.5	13.7	14.4	14.9	15.9	17.0	17.7	19.1	19.7	21.0
8: 6	102	-1.5542	15.8855	0.09778	13.1	13.5	13.8	14.5	14.9	15.9	17.0	17.7	19.1	19.7	21.0
8: 7	103	-1.5681	15.9116	0.09821	13.1	13.5	13.8	14.5	14.9	15.9	17.1	17.8	19.2	19.8	21.1
8: 8	104	-1.5817	15.9381	0.09864	13.1	13.5	13.8	14.5	15.0	15.9	17.1	17.8	19.2	19.9	21.2
8: 9	105	-1.5948	15.9651	0.09907	13.1	13.6	13.8	14.5	15.0	16.0	17.1	17.9	19.3	19.9	21.3
8:10	106	-1.6076	15.9925	0.09951	13.1	13.6	13.8	14.5	15.0	16.0	17.2	17.9	19.3	20.0	21.4
8:11	107	-1.6199	16.0205	0.09994	13.2	13.6	13.8	14.6	15.0	16.0	17.2	17.9	19.4	20.0	21.4
9: 0	108	-1.6318	16.0490	0.10038	13.2	13.6	13.9	14.6	15.1	16.0	17.2	18.0	19.5	20.1	21.5
9: 1	109	-1.6433	16.0781	0.10082	13.2	13.6	13.9	14.6	15.1	16.1	17.3	18.0	19.5	20.2	21.6
9: 2	110	-1.6544	16.1078	0.10126	13.2	13.7	13.9	14.6	15.1	16.1	17.3	18.1	19.6	20.2	21.7
9: 3	111	-1.6651	16.1381	0.10170	13.2	13.7	13.9	14.6	15.1	16.1	17.4	18.1	19.6	20.3	21.8
9: 4	112	-1.6753	16.1692	0.10214	13.2	13.7	13.9	14.7	15.1	16.2	17.4	18.2	19.7	20.4	21.9
9: 5	113	-1.6851	16.2009	0.10259	13.3	13.7	14.0	14.7	15.2	16.2	17.4	18.2	19.8	20.5	22.0
9: 6	114	-1.6944	16.2333	0.10303	13.3	13.7	14.0	14.7	15.2	16.2	17.5	18.3	19.8	20.5	22.1
9: 7	115	-1.7032	16.2665	0.10347	13.3	13.8	14.0	14.7	15.2	16.3	17.5	18.3	19.9	20.6	22.2
9: 8	116	-1.7116	16.3004	0.10391	13.3	13.8	14.0	14.8	15.3	16.3	17.6	18.4	20.0	20.7	22.3
9: 9	117	-1.7196	16.3351	0.10435	13.3	13.8	14.1	14.8	15.3	16.3	17.6	18.4	20.0	20.8	22.4
9:10	118	-1.7271	16.3704	0.10478	13.4	13.8	14.1	14.8	15.3	16.4	17.7	18.5	20.1	20.8	22.5
9:11	119	-1.7341	16.4065	0.10522	13.4	13.8	14.1	14.8	15.3	16.4	17.7	18.5	20.2	20.9	22.6
10: 0	120	-1.7407	16.4433	0.10566	13.4	13.9	14.1	14.9	15.4	16.4	17.7	18.6	20.2	21.0	22.7
10: 1	121	-1.7468	16.4807	0.10609	13.4	13.9	14.2	14.9	15.4	16.5	17.8	18.6	20.3	21.1	22.8
10: 2	122	-1.7525	16.5189	0.10652	13.4	13.9	14.2	14.9	15.4	16.5	17.8	18.7	20.4	21.1	22.9
10: 3	123	-1.7578	16.5578	0.10695	13.5	13.9	14.2	15.0	15.5	16.6	17.9	18.7	20.4	21.2	23.0
10: 4	124	-1.7626	16.5974	0.10738	13.5	14.0	14.2	15.0	15.5	16.6	17.9	18.8	20.5	21.3	23.1
10: 5	125	-1.7670	16.6376	0.10780	13.5	14.0	14.3	15.0	15.5	16.6	18.0	18.8	20.6	21.4	23.2
10: 6	126	-1.7710	16.6786	0.10823	13.5	14.0	14.3	15.1	15.6	16.7	18.0	18.9	20.7	21.5	23.3
10: 7	127	-1.7745	16.7203	0.10865	13.6	14.0	14.3	15.1	15.6	16.7	18.1	19.0	20.7	21.6	23.4
10: 8	128	-1.7777	16.7628	0.10906	13.6	14.1	14.3	15.1	15.6	16.8	18.1	19.0	20.8	21.6	23.5
10: 9	129	-1.7804	16.8059	0.10948	13.6	14.1	14.4	15.2	15.7	16.8	18.2	19.1	20.9	21.7	23.6
10:10	130	-1.7828	16.8497	0.10989	13.6	14.1	14.4	15.2	15.7	16.9	18.2	19.1	21.0	21.8	23.7
10:11	131	-1.7847	16.8941	0.11030	13.7	14.2	14.4	15.2	15.8	16.9	18.3	19.2	21.0	21.9	23.8
11: 0	132	-1.7862	16.9392	0.11070	13.7	14.2	14.5	15.3	15.8	16.9	18.4	19.3	21.1	22.0	23.9
11: 1	133	-1.7873	16.9850	0.11110	13.7	14.2	14.5	15.3	15.8	17.0	18.4	19.3	21.2	22.1	24.0

11: 2	**134**	-1.7881	17.0314	0.11150	13.8	14.3	14.5	15.3	15.9	17.0	18.5	19.4	21.3	22.2	24.1
11: 3	**135**	-1.7884	17.0784	0.11189	13.8	14.3	14.6	15.4	15.9	17.1	18.5	19.4	21.4	22.2	24.2
11: 4	**136**	-1.7884	17.1262	0.11228	13.8	14.3	14.6	15.4	16.0	17.1	18.6	19.5	21.4	22.3	24.4
11: 5	**137**	-1.7880	17.1746	0.11266	13.9	14.4	14.6	15.4	16.0	17.2	18.6	19.6	21.5	22.4	24.5
11: 6	**138**	-1.7873	17.2236	0.11304	13.9	14.4	14.7	15.5	16.0	17.2	18.7	19.6	21.6	22.5	24.6
11: 7	**139**	-1.7861	17.2734	0.11342	13.9	14.4	14.7	15.5	16.1	17.3	18.8	19.7	21.7	22.6	24.7
11: 8	**140**	-1.7846	17.3240	0.11379	13.9	14.5	14.7	15.6	16.1	17.3	18.8	19.8	21.8	22.7	24.8
11: 9	**141**	-1.7828	17.3752	0.11415	14.0	14.5	14.8	15.6	16.2	17.4	18.9	19.8	21.8	22.8	24.9
11:10	**142**	-1.7806	17.4272	0.11451	14.0	14.5	14.8	15.6	16.2	17.4	18.9	19.9	21.9	22.9	25.0
11:11	**143**	-1.7780	17.4799	0.11487	14.0	14.6	14.9	15.7	16.3	17.5	19.0	20.0	22.0	23.0	25.1
12: 0	**144**	-1.7751	17.5334	0.11522	14.1	14.6	14.9	15.7	16.3	17.5	19.1	20.1	22.1	23.1	25.2
12: 1	**145**	-1.7719	17.5877	0.11556	14.1	14.6	14.9	15.8	16.3	17.6	19.1	20.1	22.2	23.1	25.3
12: 2	**146**	-1.7684	17.6427	0.11590	14.2	14.7	15.0	15.8	16.4	17.6	19.2	20.2	22.3	23.2	25.4
12: 3	**147**	-1.7645	17.6985	0.11623	14.2	14.7	15.0	15.9	16.4	17.7	19.3	20.3	22.3	23.3	25.6
12: 4	**148**	-1.7604	17.7551	0.11656	14.2	14.8	15.1	15.9	16.5	17.8	19.3	20.3	22.4	23.4	25.7
12: 5	**149**	-1.7559	17.8124	0.11688	14.3	14.8	15.1	16.0	16.5	17.8	19.4	20.4	22.5	23.5	25.8
12: 6	**150**	-1.7511	17.8704	0.11720	14.3	14.8	15.1	16.0	16.6	17.9	19.5	20.5	22.6	23.6	25.9
12: 7	**151**	-1.7461	17.9292	0.11751	14.3	14.9	15.2	16.1	16.6	17.9	19.5	20.6	22.7	23.7	26.0
12: 8	**152**	-1.7408	17.9887	0.11781	14.4	14.9	15.2	16.1	16.7	18.0	19.6	20.6	22.8	23.8	26.1
12: 9	**153**	-1.7352	18.0488	0.11811	14.4	15.0	15.3	16.2	16.8	18.0	19.7	20.7	22.9	23.9	26.2
12:10	**154**	-1.7293	18.1096	0.11841	14.5	15.0	15.3	16.2	16.8	18.1	19.7	20.8	23.0	24.0	26.3
12:11	**155**	-1.7232	18.1710	0.11869	14.5	15.0	15.4	16.3	16.9	18.2	19.8	20.9	23.1	24.1	26.4
13: 0	**156**	-1.7168	18.2330	0.11898	14.5	15.1	15.4	16.3	16.9	18.2	19.9	20.9	23.1	24.2	26.5
13: 1	**157**	-1.7102	18.2955	0.11925	14.6	15.1	15.4	16.4	17.0	18.3	19.9	21.0	23.2	24.3	26.7
13: 2	**158**	-1.7033	18.3586	0.11952	14.6	15.2	15.5	16.4	17.0	18.4	20.0	21.1	23.3	24.4	26.8
13: 3	**159**	-1.6962	18.4221	0.11979	14.7	15.2	15.5	16.5	17.1	18.4	20.1	21.2	23.4	24.5	26.9
13: 4	**160**	-1.6888	18.4860	0.12005	14.7	15.3	15.6	16.5	17.1	18.5	20.2	21.3	23.5	24.6	27.0
13: 5	**161**	-1.6811	18.5502	0.12030	14.7	15.3	15.6	16.6	17.2	18.6	20.2	21.3	23.6	24.7	27.1
13: 6	**162**	-1.6732	18.6148	0.12055	14.8	15.4	15.7	16.6	17.2	18.6	20.3	21.4	23.7	24.8	27.2
13: 7	**163**	-1.6651	18.6795	0.12079	14.8	15.4	15.7	16.7	17.3	18.7	20.4	21.5	23.8	24.9	27.3
13: 8	**164**	-1.6568	18.7445	0.12102	14.9	15.5	15.8	16.7	17.4	18.7	20.5	21.6	23.9	24.9	27.4
13: 9	**165**	-1.6482	18.8095	0.12125	14.9	15.5	15.8	16.8	17.4	18.8	20.5	21.7	24.0	25.0	27.5
13:10	**166**	-1.6394	18.8746	0.12148	15.0	15.5	15.9	16.8	17.5	18.9	20.6	21.7	24.0	25.1	27.6
13:11	**167**	-1.6304	18.9398	0.12170	15.0	15.6	15.9	16.9	17.5	18.9	20.7	21.8	24.1	25.2	27.7
14: 0	**168**	-1.6211	19.0050	0.12191	15.1	15.6	16.0	16.9	17.6	19.0	20.8	21.9	24.2	25.3	27.8
14: 1	**169**	-1.6116	19.0701	0.12212	15.1	15.7	16.0	17.0	17.7	19.1	20.8	22.0	24.3	25.4	27.9
14: 2	**170**	-1.6020	19.1351	0.12233	15.1	15.7	16.1	17.0	17.7	19.1	20.9	22.0	24.4	25.5	28.0
14: 3	**171**	-1.5921	19.2000	0.12253	15.2	15.8	16.1	17.1	17.8	19.2	21.0	22.1	24.5	25.6	28.1
14: 4	**172**	-1.5821	19.2648	0.12272	15.2	15.8	16.2	17.2	17.8	19.3	21.1	22.2	24.6	25.7	28.2
14: 5	**173**	-1.5719	19.3294	0.12291	15.3	15.9	16.2	17.2	17.9	19.3	21.1	22.3	24.7	25.8	28.3
14: 6	**174**	-1.5615	19.3937	0.12310	15.3	15.9	16.3	17.3	17.9	19.4	21.2	22.4	24.7	25.8	28.3
14: 7	**175**	-1.5510	19.4578	0.12328	15.3	16.0	16.3	17.3	18.0	19.5	21.3	22.4	24.8	25.9	28.4
14: 8	**176**	-1.5403	19.5217	0.12346	15.4	16.0	16.4	17.4	18.1	19.5	21.3	22.5	24.9	26.0	28.5
14: 9	**177**	-1.5294	19.5853	0.12363	15.4	16.1	16.4	17.4	18.1	19.6	21.4	22.6	25.0	26.1	28.6
14:10	**178**	-1.5185	19.6486	0.12380	15.5	16.1	16.5	17.5	18.2	19.6	21.5	22.7	25.1	26.2	28.7
14:11	**179**	-1.5074	19.7117	0.12396	15.5	16.1	16.5	17.5	18.2	19.7	21.6	22.7	25.1	26.3	28.8
15: 0	**180**	-1.4961	19.7744	0.12412	15.6	16.2	16.5	17.6	18.3	19.8	21.6	22.8	25.2	26.4	28.9
15: 1	**181**	-1.4848	19.8367	0.12428	15.6	16.2	16.6	17.6	18.3	19.8	21.7	22.9	25.3	26.4	28.9
15: 2	**182**	-1.4733	19.8987	0.12443	15.6	16.3	16.6	17.7	18.4	19.9	21.8	23.0	25.4	26.5	29.0
15: 3	**183**	-1.4617	19.9603	0.12458	15.7	16.3	16.7	17.7	18.4	20.0	21.8	23.0	25.5	26.6	29.1
15: 4	**184**	-1.4500	20.0215	0.12473	15.7	16.4	16.7	17.8	18.5	20.0	21.9	23.1	25.5	26.7	29.2
15: 5	**185**	-1.4382	20.0823	0.12487	15.8	16.4	16.8	17.8	18.5	20.1	22.0	23.2	25.6	26.7	29.3
15: 6	**186**	-1.4263	20.1427	0.12501	15.8	16.4	16.8	17.9	18.6	20.1	22.0	23.2	25.7	26.8	29.3
15: 7	**187**	-1.4143	20.2026	0.12514	15.8	16.5	16.9	17.9	18.7	20.2	22.1	23.3	25.8	26.9	29.4
15: 8	**188**	-1.4022	20.2621	0.12528	15.9	16.5	16.9	18.0	18.7	20.3	22.2	23.4	25.8	27.0	29.5
15: 9	**189**	-1.3900	20.3211	0.12541	15.9	16.6	17.0	18.0	18.8	20.3	22.2	23.5	25.9	27.0	29.5
15:10	**190**	-1.3777	20.3796	0.12554	15.9	16.6	17.0	18.1	18.8	20.4	22.3	23.5	26.0	27.1	29.6
15:11	**191**	-1.3653	20.4376	0.12567	16.0	16.7	17.0	18.1	18.9	20.4	22.4	23.6	26.1	27.2	29.7
16: 0	**192**	-1.3529	20.4951	0.12579	16.0	16.7	17.1	18.2	18.9	20.5	22.4	23.7	26.1	27.3	29.7
16: 1	**193**	-1.3403	20.5521	0.12591	16.1	16.7	17.1	18.2	19.0	20.6	22.5	23.7	26.2	27.3	29.8
16: 2	**194**	-1.3277	20.6085	0.12603	16.1	16.8	17.2	18.3	19.0	20.6	22.6	23.8	26.3	27.4	29.9
16: 3	**195**	-1.3149	20.6644	0.12615	16.1	16.8	17.2	18.3	19.1	20.7	22.6	23.9	26.3	27.5	29.9
16: 4	**196**	-1.3021	20.7197	0.12627	16.2	16.8	17.2	18.4	19.1	20.7	22.7	23.9	26.4	27.5	30.0
16: 5	**197**	-1.2892	20.7745	0.12638	16.2	16.9	17.3	18.4	19.2	20.8	22.7	24.0	26.5	27.6	30.1
16: 6	**198**	-1.2762	20.8287	0.12650	16.2	16.9	17.3	18.5	19.2	20.8	22.8	24.0	26.5	27.7	30.1
16: 7	**199**	-1.2631	20.8824	0.12661	16.3	17.0	17.4	18.5	19.3	20.9	22.9	24.1	26.6	27.7	30.2
16: 8	**200**	-1.2499	20.9355	0.12672	16.3	17.0	17.4	18.5	19.3	20.9	22.9	24.2	26.7	27.8	30.2
16: 9	**201**	-1.2366	20.9881	0.12683	16.3	17.0	17.4	18.6	19.3	21.0	23.0	24.2	26.7	27.8	30.3
16:10	**202**	-1.2233	21.0400	0.12694	16.4	17.1	17.5	18.6	19.4	21.0	23.0	24.3	26.8	27.9	30.4
16:11	**203**	-1.2098	21.0914	0.12704	16.4	17.1	17.5	18.7	19.4	21.1	23.1	24.3	26.8	28.0	30.4
17: 0	**204**	-1.1962	21.1423	0.12715	16.4	17.1	17.5	18.7	19.5	21.1	23.1	24.4	26.9	28.0	30.5
17: 1	**205**	-1.1826	21.1925	0.12726	16.4	17.2	17.6	18.7	19.5	21.2	23.2	24.5	27.0	28.1	30.5
17: 2	**206**	-1.1688	21.2423	0.12736	16.5	17.2	17.6	18.8	19.6	21.2	23.3	24.5	27.0	28.1	30.6
17: 3	**207**	-1.1550	21.2914	0.12746	16.5	17.2	17.6	18.8	19.6	21.3	23.3	24.6	27.1	28.2	30.6
17: 4	**208**	-1.1410	21.3400	0.12756	16.5	17.3	17.7	18.9	19.7	21.3	23.4	24.6	27.1	28.2	30.7
17: 5	**209**	-1.1270	21.3880	0.12767	16.6	17.3	17.7	18.9	19.7	21.4	23.4	24.7	27.2	28.3	30.7
17: 6	**210**	-1.1129	21.4354	0.12777	16.6	17.3	17.7	18.9	19.7	21.4	23.5	24.7	27.2	28.4	30.8
17: 7	**211**	-1.0986	21.4822	0.12787	16.6	17.4	17.8	19.0	19.8	21.5	23.5	24.8	27.3	28.4	30.8
17: 8	**212**	-1.0843	21.5285	0.12797	16.6	17.4	17.8	19.0	19.8	21.5	23.6	24.8	27.3	28.5	30.8
17: 9	**213**	-1.0699	21.5742	0.12807	16.7	17.4	17.8	19.1	19.9	21.6	23.6	24.9	27.4	28.5	30.9
17:10	**214**	-1.0553	21.6193	0.12816	16.7	17.4	17.9	19.1	19.9	21.6	23.7	24.9	27.4	28.6	30.9
17:11	**215**	-1.0407	21.6638	0.12826	16.7	17.5	17.9	19.1	19.9	21.7	23.7	25.0	27.5	28.6	31.0
18: 0	**216**	-1.0260	21.7077	0.12836	16.7	17.5	17.9	19.2	20.0	21.7	23.8	25.0	27.5	28.6	31.0
18: 1	**217**	-1.0112	21.7510	0.12845	16.8	17.5	18.0	19.2	20.0	21.8	23.8	25.1	27.6	28.7	31.0
18: 2	**218**	-0.9962	21.7937	0.12855	16.8	17.5	18.0	19.2	20.1	21.8	23.9	25.1	27.6	28.7	31.1
18: 3	**219**	-0.9812	21.8358	0.12864	16.8	17.6	18.0	19.3	20.1	21.8	23.9	25.2	27.7	28.8	31.1
18: 4	**220**	-0.9661	21.8773	0.12874	16.8	17.6	18.0	19.3	20.1	21.9	24.0	25.2	27.7	28.8	31.2
18: 5	**221**	-0.9509	21.9182	0.12883	16.8	17.6	18.1	19.3	20.2	21.9	24.0	25.3	27.8	28.9	31.2

18: 6	**222**	-0.9356	21.9585	0.12893	16.9	17.6	18.1	19.4	20.2	22.0	24.0	25.3	27.8	28.9	31.2
18: 7	**223**	-0.9202	21.9982	0.12902	16.9	17.7	18.1	19.4	20.2	22.0	24.1	25.4	27.9	29.0	31.3
18: 8	**224**	-0.9048	22.0374	0.12911	16.9	17.7	18.1	19.4	20.3	22.0	24.1	25.4	27.9	29.0	31.3
18: 9	**225**	-0.8892	22.0760	0.12920	16.9	17.7	18.2	19.5	20.3	22.1	24.2	25.5	27.9	29.0	31.3
18:10	**226**	-0.8735	22.1140	0.12930	16.9	17.7	18.2	19.5	20.3	22.1	24.2	25.5	28.0	29.1	31.3
18:11	**227**	-0.8578	22.1514	0.12939	16.9	17.8	18.2	19.5	20.4	22.2	24.3	25.5	28.0	29.1	31.4
19: 0	**228**	-0.8419	22.1883	0.12948	17.0	17.8	18.2	19.5	20.4	22.2	24.3	25.6	28.1	29.1	31.4

2007 WHO Reference

BMI-for-age GIRLS

5 to 19 years (percentiles)

World Health Organization

					Percentiles (BMI in kg/m^2)										
Year: Month	**Month**	**L**	**M**	**S**	**1st**	**3rd**	**5th**	**15th**	**25th**	**50th**	**75th**	**85th**	**95th**	**97th**	**99th**
5: 1	**61**	-0.8886	15.2441	0.09692	12.4	12.9	13.1	13.8	14.3	15.2	16.3	16.9	18.1	18.6	19.6
5: 2	**62**	-0.9068	15.2434	0.09738	12.4	12.9	13.1	13.8	14.3	15.2	16.3	16.9	18.1	18.6	19.6
5: 3	**63**	-0.9248	15.2433	0.09783	12.4	12.9	13.1	13.8	14.3	15.2	16.3	17.0	18.1	18.7	19.7
5: 4	**64**	-0.9427	15.2438	0.09829	12.4	12.9	13.1	13.8	14.3	15.2	16.3	17.0	18.2	18.7	19.7
5: 5	**65**	-0.9605	15.2448	0.09875	12.4	12.9	13.1	13.8	14.3	15.2	16.3	17.0	18.2	18.7	19.8
5: 6	**66**	-0.9780	15.2464	0.09920	12.4	12.8	13.1	13.8	14.3	15.2	16.3	17.0	18.2	18.7	19.8
5: 7	**67**	-0.9954	15.2487	0.09966	12.4	12.8	13.1	13.8	14.3	15.2	16.3	17.0	18.2	18.8	19.8
5: 8	**68**	-1.0126	15.2516	0.10012	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.0	18.3	18.8	19.9
5: 9	**69**	-1.0296	15.2551	0.10058	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.0	18.3	18.8	19.9
5:10	**70**	-1.0464	15.2592	0.10104	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.0	18.3	18.9	20.0
5:11	**71**	-1.0630	15.2641	0.10149	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.1	18.3	18.9	20.0
6: 0	**72**	-1.0794	15.2697	0.10195	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.1	18.4	18.9	20.1
6: 1	**73**	-1.0956	15.2760	0.10241	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.1	18.4	19.0	20.1
6: 2	**74**	-1.1115	15.2831	0.10287	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.1	18.4	19.0	20.2
6: 3	**75**	-1.1272	15.2911	0.10333	12.4	12.8	13.1	13.8	14.3	15.3	16.4	17.1	18.5	19.0	20.2
6: 4	**76**	-1.1427	15.2998	0.10379	12.4	12.8	13.1	13.8	14.3	15.3	16.5	17.2	18.5	19.1	20.3
6: 5	**77**	-1.1579	15.3095	0.10425	12.4	12.8	13.1	13.8	14.3	15.3	16.5	17.2	18.5	19.1	20.4
6: 6	**78**	-1.1728	15.3200	0.10471	12.4	12.8	13.1	13.8	14.3	15.3	16.5	17.2	18.6	19.2	20.4
6: 7	**79**	-1.1875	15.3314	0.10517	12.4	12.8	13.1	13.8	14.3	15.3	16.5	17.2	18.6	19.2	20.5
6: 8	**80**	-1.2019	15.3439	0.10562	12.4	12.8	13.1	13.8	14.3	15.3	16.5	17.3	18.6	19.3	20.5
6: 9	**81**	-1.2160	15.3572	0.10608	12.4	12.8	13.1	13.9	14.3	15.4	16.6	17.3	18.7	19.3	20.6
6:10	**82**	-1.2298	15.3717	0.10654	12.4	12.9	13.1	13.9	14.3	15.4	16.6	17.3	18.7	19.3	20.7
6:11	**83**	-1.2433	15.3871	0.10700	12.4	12.9	13.1	13.9	14.4	15.4	16.6	17.3	18.8	19.4	20.7
7: 0	**84**	-1.2565	15.4036	0.10746	12.4	12.9	13.1	13.9	14.4	15.4	16.6	17.4	18.8	19.4	20.8
7: 1	**85**	-1.2693	15.4211	0.10792	12.4	12.9	13.1	13.9	14.4	15.4	16.6	17.4	18.9	19.5	20.9
7: 2	**86**	-1.2819	15.4397	0.10837	12.4	12.9	13.2	13.9	14.4	15.4	16.7	17.4	18.9	19.6	20.9
7: 3	**87**	-1.2941	15.4593	0.10883	12.4	12.9	13.2	13.9	14.4	15.5	16.7	17.5	19.0	19.6	21.0
7: 4	**88**	-1.3060	15.4798	0.10929	12.4	12.9	13.2	13.9	14.4	15.5	16.7	17.5	19.0	19.7	21.1
7: 5	**89**	-1.3175	15.5014	0.10974	12.4	12.9	13.2	13.9	14.4	15.5	16.8	17.5	19.1	19.7	21.2
7: 6	**90**	-1.3287	15.5240	0.11020	12.5	12.9	13.2	14.0	14.5	15.5	16.8	17.6	19.1	19.8	21.2
7: 7	**91**	-1.3395	15.5476	0.11065	12.5	12.9	13.2	14.0	14.5	15.5	16.8	17.6	19.2	19.8	21.3
7: 8	**92**	-1.3499	15.5723	0.11110	12.5	13.0	13.2	14.0	14.5	15.6	16.9	17.6	19.2	19.9	21.4
7: 9	**93**	-1.3600	15.5979	0.11156	12.5	13.0	13.2	14.0	14.5	15.6	16.9	17.7	19.3	20.0	21.5
7:10	**94**	-1.3697	15.6246	0.11201	12.5	13.0	13.3	14.0	14.5	15.6	16.9	17.7	19.3	20.0	21.6
7:11	**95**	-1.3790	15.6523	0.11246	12.5	13.0	13.3	14.0	14.6	15.7	17.0	17.8	19.4	20.1	21.7
8: 0	**96**	-1.3880	15.6810	0.11291	12.5	13.0	13.3	14.1	14.6	15.7	17.0	17.8	19.4	20.2	21.7
8: 1	**97**	-1.3966	15.7107	0.11335	12.6	13.0	13.3	14.1	14.6	15.7	17.0	17.9	19.5	20.2	21.8
8: 2	**98**	-1.4047	15.7415	0.11380	12.6	13.1	13.3	14.1	14.6	15.7	17.1	17.9	19.6	20.3	21.9
8: 3	**99**	-1.4125	15.7732	0.11424	12.6	13.1	13.4	14.1	14.7	15.8	17.1	18.0	19.6	20.4	22.0
8: 4	**100**	-1.4199	15.8058	0.11469	12.6	13.1	13.4	14.2	14.7	15.8	17.2	18.0	19.7	20.4	22.1
8: 5	**101**	-1.4270	15.8394	0.11513	12.6	13.1	13.4	14.2	14.7	15.8	17.2	18.1	19.8	20.5	22.2
8: 6	**102**	-1.4336	15.8738	0.11557	12.6	13.1	13.4	14.2	14.7	15.9	17.2	18.1	19.8	20.6	22.3
8: 7	**103**	-1.4398	15.9090	0.11601	12.7	13.2	13.4	14.2	14.8	15.9	17.3	18.2	19.9	20.7	22.4
8: 8	**104**	-1.4456	15.9451	0.11644	12.7	13.2	13.5	14.3	14.8	15.9	17.3	18.2	20.0	20.7	22.5
8: 9	**105**	-1.4511	15.9818	0.11688	12.7	13.2	13.5	14.3	14.8	16.0	17.4	18.3	20.0	20.8	22.6
8:10	**106**	-1.4561	16.0194	0.11731	12.7	13.2	13.5	14.3	14.9	16.0	17.4	18.3	20.1	20.9	22.7
8:11	**107**	-1.4607	16.0575	0.11774	12.8	13.3	13.5	14.4	14.9	16.1	17.5	18.4	20.2	21.0	22.8
9: 0	**108**	-1.4650	16.0964	0.11816	12.8	13.3	13.6	14.4	14.9	16.1	17.5	18.4	20.2	21.1	22.9
9: 1	**109**	-1.4688	16.1358	0.11859	12.8	13.3	13.6	14.4	15.0	16.1	17.6	18.5	20.3	21.1	23.0
9: 2	**110**	-1.4723	16.1759	0.11901	12.8	13.3	13.6	14.4	15.0	16.2	17.6	18.5	20.4	21.2	23.1
9: 3	**111**	-1.4753	16.2166	0.11943	12.8	13.4	13.6	14.5	15.0	16.2	17.7	18.6	20.5	21.3	23.2
9: 4	**112**	-1.4780	16.2580	0.11985	12.9	13.4	13.7	14.5	15.1	16.3	17.7	18.7	20.5	21.4	23.3
9: 5	**113**	-1.4803	16.2999	0.12026	12.9	13.4	13.7	14.5	15.1	16.3	17.8	18.7	20.6	21.5	23.4
9: 6	**114**	-1.4823	16.3425	0.12067	12.9	13.4	13.7	14.6	15.1	16.3	17.8	18.8	20.7	21.6	23.5
9: 7	**115**	-1.4838	16.3858	0.12108	13.0	13.5	13.8	14.6	15.2	16.4	17.9	18.8	20.7	21.6	23.6
9: 8	**116**	-1.4850	16.4298	0.12148	13.0	13.5	13.8	14.6	15.2	16.4	17.9	18.9	20.8	21.7	23.7
9: 9	**117**	-1.4859	16.4746	0.12188	13.0	13.5	13.8	14.7	15.2	16.5	18.0	18.9	20.9	21.8	23.8
9:10	**118**	-1.4864	16.5200	0.12228	13.0	13.6	13.9	14.7	15.3	16.5	18.0	19.0	21.0	21.9	23.9
9:11	**119**	-1.4866	16.5663	0.12268	13.1	13.6	13.9	14.7	15.3	16.6	18.1	19.1	21.1	22.0	24.0

10: 0	**120**	-1.4864	16.6133	0.12307	13.1	13.6	13.9	14.8	15.4	16.6	18.2	19.1	21.1	22.1	24.1
10: 1	**121**	-1.4859	16.6612	0.12346	13.1	13.6	14.0	14.8	15.4	16.7	18.2	19.2	21.2	22.2	24.2
10: 2	**122**	-1.4851	16.7100	0.12384	13.1	13.7	14.0	14.9	15.4	16.7	18.3	19.3	21.3	22.2	24.3
10: 3	**123**	-1.4839	16.7595	0.12422	13.2	13.7	14.0	14.9	15.5	16.8	18.3	19.3	21.4	22.3	24.4
10: 4	**124**	-1.4825	16.8100	0.12460	13.2	13.7	14.1	14.9	15.5	16.8	18.4	19.4	21.5	22.4	24.6
10: 5	**125**	-1.4807	16.8614	0.12497	13.2	13.8	14.1	15.0	15.6	16.9	18.5	19.5	21.5	22.5	24.7
10: 6	**126**	-1.4787	16.9136	0.12534	13.3	13.8	14.1	15.0	15.6	16.9	18.5	19.5	21.6	22.6	24.8
10: 7	**127**	-1.4763	16.9667	0.12571	13.3	13.9	14.2	15.1	15.7	17.0	18.6	19.6	21.7	22.7	24.9
10: 8	**128**	-1.4737	17.0208	0.12607	13.3	13.9	14.2	15.1	15.7	17.0	18.6	19.7	21.8	22.8	25.0
10: 9	**129**	-1.4708	17.0757	0.12643	13.4	13.9	14.2	15.1	15.8	17.1	18.7	19.8	21.9	22.9	25.1
10:10	**130**	-1.4677	17.1316	0.12678	13.4	14.0	14.3	15.2	15.8	17.1	18.8	19.8	22.0	23.0	25.2
10:11	**131**	-1.4642	17.1883	0.12713	13.4	14.0	14.3	15.2	15.9	17.2	18.8	19.9	22.1	23.1	25.3
11: 0	**132**	-1.4606	17.2459	0.12748	13.5	14.0	14.4	15.3	15.9	17.2	18.9	20.0	22.2	23.2	25.4
11: 1	**133**	-1.4567	17.3044	0.12782	13.5	14.1	14.4	15.3	16.0	17.3	19.0	20.0	22.2	23.3	25.6
11: 2	**134**	-1.4526	17.3637	0.12816	13.6	14.1	14.4	15.4	16.0	17.4	19.0	20.1	22.3	23.4	25.7
11: 3	**135**	-1.4482	17.4238	0.12849	13.6	14.2	14.5	15.4	16.1	17.4	19.1	20.2	22.4	23.5	25.8
11: 4	**136**	-1.4436	17.4847	0.12882	13.6	14.2	14.5	15.5	16.1	17.5	19.2	20.3	22.5	23.6	25.9
11: 5	**137**	-1.4389	17.5464	0.12914	13.7	14.2	14.6	15.5	16.2	17.5	19.3	20.4	22.6	23.7	26.0
11: 6	**138**	-1.4339	17.6088	0.12946	13.7	14.3	14.6	15.6	16.2	17.6	19.3	20.4	22.7	23.8	26.1
11: 7	**139**	-1.4288	17.6719	0.12978	13.7	14.3	14.7	15.6	16.3	17.7	19.4	20.5	22.8	23.9	26.2
11: 8	**140**	-1.4235	17.7357	0.13009	13.8	14.4	14.7	15.7	16.3	17.7	19.5	20.6	22.9	24.0	26.4
11: 9	**141**	-1.4180	17.8001	0.13040	13.8	14.4	14.8	15.7	16.4	17.8	19.6	20.7	23.0	24.1	26.5
11:10	**142**	-1.4123	17.8651	0.13070	13.9	14.5	14.8	15.8	16.4	17.9	19.6	20.8	23.1	24.2	26.6
11:11	**143**	-1.4065	17.9306	0.13099	13.9	14.5	14.9	15.8	16.5	17.9	19.7	20.8	23.2	24.3	26.7
12: 0	**144**	-1.4006	17.9966	0.13129	14.0	14.6	14.9	15.9	16.6	18.0	19.8	20.9	23.3	24.4	26.8
12: 1	**145**	-1.3945	18.0630	0.13158	14.0	14.6	15.0	15.9	16.6	18.1	19.9	21.0	23.4	24.5	26.9
12: 2	**146**	-1.3883	18.1297	0.13186	14.0	14.7	15.0	16.0	16.7	18.1	19.9	21.1	23.5	24.6	27.0
12: 3	**147**	-1.3819	18.1967	0.13214	14.1	14.7	15.0	16.1	16.7	18.2	20.0	21.2	23.6	24.7	27.2
12: 4	**148**	-1.3755	18.2639	0.13241	14.1	14.7	15.1	16.1	16.8	18.3	20.1	21.3	23.7	24.8	27.3
12: 5	**149**	-1.3689	18.3312	0.13268	14.2	14.8	15.1	16.2	16.8	18.3	20.2	21.3	23.8	24.9	27.4
12: 6	**150**	-1.3621	18.3986	0.13295	14.2	14.8	15.2	16.2	16.9	18.4	20.2	21.4	23.9	25.0	27.5
12: 7	**151**	-1.3553	18.4660	0.13321	14.3	14.9	15.2	16.3	17.0	18.5	20.3	21.5	23.9	25.1	27.6
12: 8	**152**	-1.3483	18.5333	0.13347	14.3	14.9	15.3	16.3	17.0	18.5	20.4	21.6	24.0	25.2	27.7
12: 9	**153**	-1.3413	18.6006	0.13372	14.3	15.0	15.3	16.4	17.1	18.6	20.5	21.7	24.1	25.3	27.8
12:10	**154**	-1.3341	18.6677	0.13397	14.4	15.0	15.4	16.4	17.1	18.7	20.6	21.8	24.2	25.4	27.9
12:11	**155**	-1.3269	18.7346	0.13421	14.4	15.1	15.4	16.5	17.2	18.7	20.6	21.8	24.3	25.5	28.0
13: 0	**156**	-1.3195	18.8012	0.13445	14.5	15.1	15.5	16.5	17.3	18.8	20.7	21.9	24.4	25.6	28.1
13: 1	**157**	-1.3121	18.8675	0.13469	14.5	15.2	15.5	16.6	17.3	18.9	20.8	22.0	24.5	25.7	28.2
13: 2	**158**	-1.3046	18.9335	0.13492	14.6	15.2	15.6	16.7	17.4	18.9	20.9	22.1	24.6	25.8	28.4
13: 3	**159**	-1.2970	18.9991	0.13514	14.6	15.3	15.6	16.7	17.4	19.0	20.9	22.2	24.7	25.9	28.5
13: 4	**160**	-1.2894	19.0642	0.13537	14.6	15.3	15.7	16.8	17.5	19.1	21.0	22.3	24.8	26.0	28.6
13: 5	**161**	-1.2816	19.1289	0.13559	14.7	15.3	15.7	16.8	17.5	19.1	21.1	22.3	24.9	26.1	28.7
13: 6	**162**	-1.2739	19.1931	0.13580	14.7	15.4	15.8	16.9	17.6	19.2	21.2	22.4	25.0	26.1	28.8
13: 7	**163**	-1.2661	19.2567	0.13601	14.8	15.4	15.8	16.9	17.7	19.3	21.2	22.5	25.1	26.2	28.9
13: 8	**164**	-1.2583	19.3197	0.13622	14.8	15.5	15.9	17.0	17.7	19.3	21.3	22.6	25.1	26.3	28.9
13: 9	**165**	-1.2504	19.3820	0.13642	14.8	15.5	15.9	17.0	17.8	19.4	21.4	22.6	25.2	26.4	29.0
13:10	**166**	-1.2425	19.4437	0.13662	14.9	15.6	15.9	17.1	17.8	19.4	21.4	22.7	25.3	26.5	29.1
13:11	**167**	-1.2345	19.5045	0.13681	14.9	15.6	16.0	17.1	17.9	19.5	21.5	22.8	25.4	26.6	29.2
14: 0	**168**	-1.2266	19.5647	0.13700	15.0	15.6	16.0	17.2	17.9	19.6	21.6	22.9	25.5	26.7	29.3
14: 1	**169**	-1.2186	19.6240	0.13719	15.0	15.7	16.1	17.2	18.0	19.6	21.6	22.9	25.6	26.8	29.4
14: 2	**170**	-1.2107	19.6824	0.13738	15.0	15.7	16.1	17.3	18.0	19.7	21.7	23.0	25.6	26.8	29.5
14: 3	**171**	-1.2027	19.7400	0.13756	15.1	15.8	16.2	17.3	18.1	19.7	21.8	23.1	25.7	26.9	29.6
14: 4	**172**	-1.1947	19.7966	0.13774	15.1	15.8	16.2	17.4	18.1	19.8	21.8	23.2	25.8	27.0	29.7
14: 5	**173**	-1.1867	19.8523	0.13791	15.1	15.8	16.2	17.4	18.2	19.9	21.9	23.2	25.9	27.1	29.7
14: 6	**174**	-1.1788	19.9070	0.13808	15.2	15.9	16.3	17.4	18.2	19.9	22.0	23.3	25.9	27.1	29.8
14: 7	**175**	-1.1708	19.9607	0.13825	15.2	15.9	16.3	17.5	18.3	20.0	22.0	23.4	26.0	27.2	29.9
14: 8	**176**	-1.1629	20.0133	0.13841	15.2	15.9	16.4	17.5	18.3	20.0	22.1	23.4	26.1	27.3	30.0
14: 9	**177**	-1.1549	20.0648	0.13858	15.3	16.0	16.4	17.6	18.4	20.1	22.2	23.5	26.1	27.4	30.0
14:10	**178**	-1.1470	20.1152	0.13873	15.3	16.0	16.4	17.6	18.4	20.1	22.2	23.5	26.2	27.4	30.1
14:11	**179**	-1.1390	20.1644	0.13889	15.3	16.0	16.5	17.6	18.4	20.2	22.3	23.6	26.3	27.5	30.2
15: 0	**180**	-1.1311	20.2125	0.13904	15.3	16.1	16.5	17.7	18.5	20.2	22.3	23.7	26.3	27.6	30.2
15: 1	**181**	-1.1232	20.2595	0.13920	15.4	16.1	16.5	17.7	18.5	20.3	22.4	23.7	26.4	27.6	30.3
15: 2	**182**	-1.1153	20.3053	0.13934	15.4	16.1	16.6	17.8	18.6	20.3	22.4	23.8	26.5	27.7	30.4
15: 3	**183**	-1.1074	20.3499	0.13949	15.4	16.2	16.6	17.8	18.6	20.4	22.5	23.8	26.5	27.7	30.4
15: 4	**184**	-1.0996	20.3934	0.13963	15.4	16.2	16.6	17.8	18.6	20.4	22.5	23.9	26.6	27.8	30.5
15: 5	**185**	-1.0917	20.4357	0.13977	15.5	16.2	16.6	17.9	18.7	20.4	22.6	23.9	26.6	27.9	30.5
15: 6	**186**	-1.0838	20.4769	0.13991	15.5	16.2	16.7	17.9	18.7	20.5	22.6	24.0	26.7	27.9	30.6
15: 7	**187**	-1.0760	20.5170	0.14005	15.5	16.3	16.7	17.9	18.8	20.5	22.7	24.0	26.7	28.0	30.6
15: 8	**188**	-1.0681	20.5560	0.14018	15.5	16.3	16.7	18.0	18.8	20.6	22.7	24.1	26.8	28.0	30.7
15: 9	**189**	-1.0603	20.5938	0.14031	15.6	16.3	16.8	18.0	18.8	20.6	22.8	24.1	26.8	28.1	30.7
15:10	**190**	-1.0525	20.6306	0.14044	15.6	16.3	16.8	18.0	18.8	20.6	22.8	24.2	26.9	28.1	30.8
15:11	**191**	-1.0447	20.6663	0.14057	15.6	16.4	16.8	18.0	18.9	20.7	22.8	24.2	26.9	28.2	30.8
16: 0	**192**	-1.0368	20.7008	0.14070	15.6	16.4	16.8	18.1	18.9	20.7	22.9	24.2	27.0	28.2	30.9
16: 1	**193**	-1.0290	20.7344	0.14082	15.6	16.4	16.8	18.1	18.9	20.7	22.9	24.3	27.0	28.2	30.9
16: 2	**194**	-1.0212	20.7668	0.14094	15.7	16.4	16.9	18.1	19.0	20.8	23.0	24.3	27.1	28.3	31.0
16: 3	**195**	-1.0134	20.7982	0.14106	15.7	16.4	16.9	18.1	19.0	20.8	23.0	24.4	27.1	28.3	31.0
16: 4	**196**	-1.0055	20.8286	0.14118	15.7	16.5	16.9	18.2	19.0	20.8	23.0	24.4	27.1	28.4	31.0
16: 5	**197**	-0.9977	20.8580	0.14130	15.7	16.5	16.9	18.2	19.0	20.9	23.1	24.4	27.2	28.4	31.1
16: 6	**198**	-0.9898	20.8863	0.14142	15.7	16.5	16.9	18.2	19.1	20.9	23.1	24.5	27.2	28.4	31.1
16: 7	**199**	-0.9819	20.9137	0.14153	15.7	16.5	17.0	18.2	19.1	20.9	23.1	24.5	27.2	28.5	31.1
16: 8	**200**	-0.9740	20.9401	0.14164	15.7	16.5	17.0	18.3	19.1	20.9	23.1	24.5	27.3	28.5	31.2
16: 9	**201**	-0.9661	20.9656	0.14176	15.7	16.5	17.0	18.3	19.1	21.0	23.2	24.6	27.3	28.5	31.2
16:10	**202**	-0.9582	20.9901	0.14187	15.8	16.6	17.0	18.3	19.2	21.0	23.2	24.6	27.3	28.6	31.2
16:11	**203**	-0.9503	21.0138	0.14198	15.8	16.6	17.0	18.3	19.2	21.0	23.2	24.6	27.4	28.6	31.2
17: 0	**204**	-0.9423	21.0367	0.14208	15.8	16.6	17.0	18.3	19.2	21.0	23.3	24.7	27.4	28.6	31.3
17: 1	**205**	-0.9344	21.0587	0.14219	15.8	16.6	17.0	18.3	19.2	21.1	23.3	24.7	27.4	28.6	31.3
17: 2	**206**	-0.9264	21.0801	0.14230	15.8	16.6	17.1	18.4	19.2	21.1	23.3	24.7	27.4	28.7	31.3
17: 3	**207**	-0.9184	21.1007	0.14240	15.8	16.6	17.1	18.4	19.2	21.1	23.3	24.7	27.5	28.7	31.3

17: 4	**208**	-0.9104	21.1206	0.14250	15.8	16.6	17.1	18.4	19.3	21.1	23.4	24.8	27.5	28.7	31.3
17: 5	**209**	-0.9024	21.1399	0.14261	15.8	16.6	17.1	18.4	19.3	21.1	23.4	24.8	27.5	28.7	31.4
17: 6	**210**	-0.8944	21.1586	0.14271	15.8	16.6	17.1	18.4	19.3	21.2	23.4	24.8	27.5	28.8	31.4
17: 7	**211**	-0.8863	21.1768	0.14281	15.8	16.6	17.1	18.4	19.3	21.2	23.4	24.8	27.6	28.8	31.4
17: 8	**212**	-0.8783	21.1944	0.14291	15.8	16.7	17.1	18.4	19.3	21.2	23.4	24.8	27.6	28.8	31.4
17: 9	**213**	-0.8703	21.2116	0.14301	15.8	16.7	17.1	18.5	19.3	21.2	23.5	24.9	27.6	28.8	31.4
17:10	**214**	-0.8623	21.2282	0.14311	15.8	16.7	17.1	18.5	19.3	21.2	23.5	24.9	27.6	28.8	31.4
17:11	**215**	-0.8542	21.2444	0.14320	15.8	16.7	17.1	18.5	19.4	21.2	23.5	24.9	27.6	28.9	31.4
18: 0	**216**	-0.8462	21.2603	0.14330	15.9	16.7	17.1	18.5	19.4	21.3	23.5	24.9	27.7	28.9	31.5
18: 1	**217**	-0.8382	21.2757	0.14340	15.9	16.7	17.2	18.5	19.4	21.3	23.5	24.9	27.7	28.9	31.5
18: 2	**218**	-0.8301	21.2908	0.14349	15.9	16.7	17.2	18.5	19.4	21.3	23.6	25.0	27.7	28.9	31.5
18: 3	**219**	-0.8221	21.3055	0.14359	15.9	16.7	17.2	18.5	19.4	21.3	23.6	25.0	27.7	28.9	31.5
18: 4	**220**	-0.8140	21.3200	0.14368	15.9	16.7	17.2	18.5	19.4	21.3	23.6	25.0	27.7	28.9	31.5
18: 5	**221**	-0.8060	21.3341	0.14377	15.9	16.7	17.2	18.5	19.4	21.3	23.6	25.0	27.7	28.9	31.5
18: 6	**222**	-0.7980	21.3480	0.14386	15.9	16.7	17.2	18.5	19.4	21.3	23.6	25.0	27.7	29.0	31.5
18: 7	**223**	-0.7899	21.3617	0.14396	15.9	16.7	17.2	18.6	19.5	21.4	23.6	25.0	27.8	29.0	31.5
18: 8	**224**	-0.7819	21.3752	0.14405	15.9	16.7	17.2	18.6	19.5	21.4	23.6	25.1	27.8	29.0	31.5
18: 9	**225**	-0.7738	21.3884	0.14414	15.9	16.7	17.2	18.6	19.5	21.4	23.7	25.1	27.8	29.0	31.5
18:10	**226**	-0.7658	21.4014	0.14423	15.9	16.7	17.2	18.6	19.5	21.4	23.7	25.1	27.8	29.0	31.5
18:11	**227**	-0.7577	21.4143	0.14432	15.9	16.7	17.2	18.6	19.5	21.4	23.7	25.1	27.8	29.0	31.5
19: 0	**228**	-0.7496	21.4269	0.14441	15.9	16.7	17.2	18.6	19.5	21.4	23.7	25.1	27.8	29.0	31.6

2007 WHO Reference

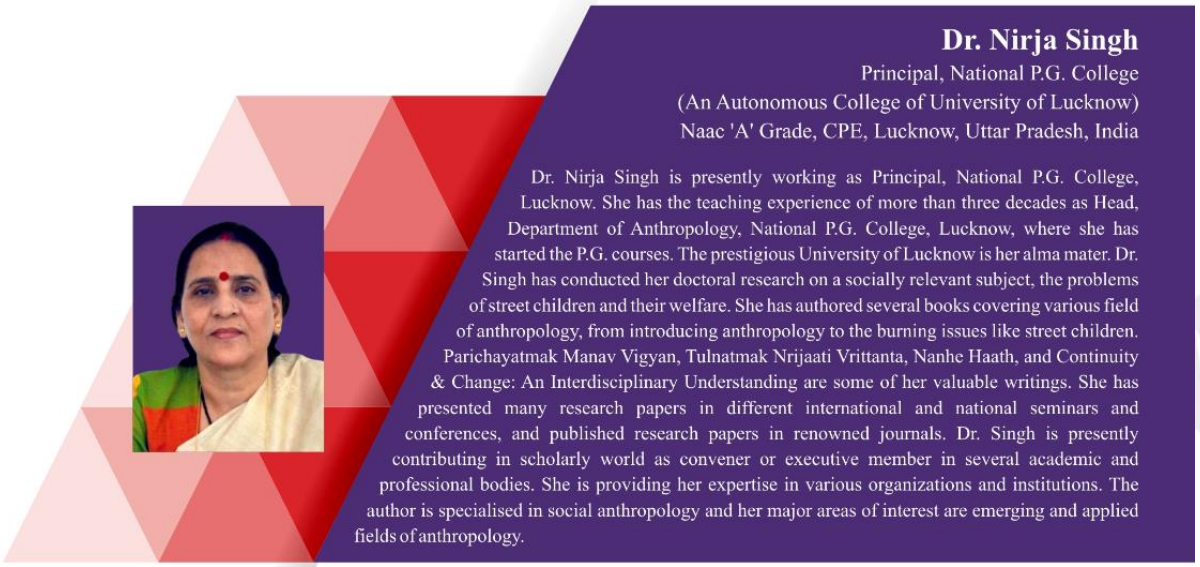
Source: http://www.who.int/growthref/who2007_bmi_for_age/en/index.html

ABOUT THE BOOK

The middle childhood years are a unique developmental time when children undergo critical physical, cognitive, and social changes. There are substantial health issues in middle childhood which need increased focus. The book is based on the research work done by Dr. Nirja Singh, Principal, National P.G. College, Lucknow (U.P.) India, independently for the Minor Research Project entitled, “Middle Childhood Health among the Pasi of Lucknow District: A Holistic Study”, under University Grants Commission aid. The research is the holistic study of middle childhood health among the Pasi Children of Lucknow. The Pasi are a scheduled caste of India. This study shall have important implications in the field of Anthropology, Nutrition and Growth, Medicine, Sociology, Social Work and Public Health. This research can play a critical role in response to global health challenges. The book shall help in understanding how access to health services can be improved and, more generally, how the supply of health care can be increased, as culture based interventions are known to have better success rate in improving access to and utlilization of health services.

NIRJA SINGH

THE AUTHOR



Dr. Nirja Singh is presently working as Principal, National P.G. College, Lucknow. She has the teaching experience of more than three decades as Head, Department of Anthropology, National P.G. College, Lucknow, where she has started the P.G. courses. The prestigious University of Lucknow is her alma mater. Dr. Singh has conducted her doctoral research on a socially relevant subject, **the problems of street children and their welfare**. She has authored several books covering various field of anthropology, from introducing anthropology to the burning issues like street children. ***Parichayatmak Manav Vigyan, Tulnatmak Nrijaati Vrittanta, Nanhe Haath,*** and **Continuity & Change: An Interdisciplinary Understanding** are some of her valuable writings. She has presented many research papers in different international and national seminars and conferences, and published research papers in renowned journals. Dr. Singh is presently contributing in scholarly world as convener or executive member in several academic and professional bodies. She is providing her expertise in various organizations and institutions. The author is specialised in social anthropology and her major areas of interest are emerging and applied fields of anthropology.