INTRODUCTION

Craniofacial growth is a complex and beautiful phenomenon. Growth has been described in so many terms. Todd defines growth as “increase in size”. Meredith defines growth as the entire series of anatomic and physiologic changes taking place between the beginning of prenatal life and the close of senility. Growth is quantitative, i.e., it is measureable aspect of biologic life. The units of growth are inches per year or grams per day. Characteristically growth is equated with enlargement. But sometimes there are instances in which there is decrease in size during growth, e.g. thymus gland after puberty. Growth highlights the normal dimensional changes over period of time. Growth might cause change in form of proportion, increase or decrease in size, change in texture, complexity. In simple words, growth is change or difference in quantity.\textsuperscript{1-3}

There is a marked age related changes occur, in craniofacial morphology from 7 to 14 years of age in both genders. An understanding of the timing, magnitude, and direction of facial growth enables to plan the treatment of skeletal discrepancies in an attempt to achieve a more stable and pleasing result.

Physical growth and development of children are determined by endogenous factors (genetic) is modified by numerous exogenic ones (nutrition, environment). This affects differentiation of growth in individual children. In order to estimate the individual growth pattern and changes in growth rate as well as differences in growth of boys and girls one must observe the process of growth of the same children over a period of many years.

There are numerous scientific reports in the literature describing and classifying the various components of the craniofacial complex in terms of their linear dimensions and angular relationships. Many of these measurements have been subsequently used in diagnosis and treatment planning of dentofacial malrelationships. Most of the studies were cross-sectional in nature and provided a large number of cephalometric standards for males and females at different ages and for various ethnic groups. In contrast, only a limited number of longitudinal or semi-longitudinal studies have been reported in which measurements were obtained on most subjects from early childhood to adulthood. Such a scarcity is not surprising.
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since longitudinal studies are, by their nature, lengthy, costly and dependent upon the continuous cooperation of the subjects.

A Rural residential Free school at Suttur, were all the inmates are provided a similar nutrition and they share same environment provide an ideal place to do a longitudinal or semilongitudinal study. The results obtained from such study provide information regarding growth changes.

Cephalometry is a radiographic technique for abstracting the human head into a geometric shape. The measurement of the head from the shadows of the bony and soft tissue landmarks on the radiographic image is known as roentgenographic Cephalometry. Cephalometric radiographs enable the clinician to quantify facial and dental relationships. Cephalograms is used to elucidate the skeletal, dental and soft tissue relationships of the craniofacial region. Assessment of growth of facial skeleton is possible through serial cephalograms.\(^1\)\(^-\)\(^3\)

Cephalometric analysis has proved to be a useful tool in diagnosis, evaluation and treatment planning of patients undergoing orthodontic treatment or orthognathic surgery and for evaluation of treatment progress and results. For orthodontic and other diagnostic procedures, therefore, it is advantage to have cephalometric standards for different populations, gender and age groups. The present study attempts to describe the Craniofacial changes in Rural Residential school children of Suttur between 7 to 14 years of age using lateral cephalograms.

Variations in craniofacial Morphology exist between different ethnic and racial groups. The cephalometric standards developed for one ethnic group need not apply to other ethnic groups; the racial groups must be dealt according to their own characteristics. Hence the cephalometric standards established for western population cannot be applied to Indian population. There is a lack of studies on cephalometric standard values for Indian School children. Thus the present study was designed to describe the Craniofacial dimensions of rural residential Free school children of Suttur of 7 years and 11 years of age.