Introduction

In 1931, cephalometric radiography was introduced in the field of orthodontics when the cephalograms of the head were presented through the authentic works of Broadbent in United States and Hofrath in Germany. Since its inception, cephalometry holds a critical parameter for diagnosis, treatment planning, assessment of treatment results and forecast of development. The institutionalization of scientific strategies prompted the cephalometric radiography as a fundamental diagnostic tool. A legitimate rule to clinicians through the accessibility of the cephalometric norms amid diagnosis and treatment arranging improved the outcome of facial and cephalometric characteristics in which the ethnic background of the patient is of prime consideration. Norms thus define the facial traits and establish the range of values that optimize the facial attractiveness.

Failure of the reference parameters of orthodontics in defining treatment plan prompted the development of another estimation called “beta angle” by Baik and Ververidou. Certain facial features such as prominent nose, cheek bone, and chins that best suit the patient in terms of size and arrangement must be evaluated; as these features represent the characteristics of the family or ethnicity. It has been recognized that various ethnic groups represent significant variations in craniofacial morphology and soft tissues. This justifies the need to study and develop the norms for population with unique facial morphology. Hence, the purpose of this study was to create the norms of beta angle for Uttarakhand subjects and its comparison with Caucasian standards.

Materials and Method

The study included a total of 100 subjects including 50 males and 50 females belonging to the Uttarakhand ethnicity of the age ranging between 18-30 years. The samples were selected by conducting the camps in various areas of Uttarakhand and screening was done at the out-patient department. Subjects possessing Class I molar and canine relationship, straight facial profile were included in the study along with the parameters such as no previous history of orthodontic treatment, minimal rotations, no spacing, and well aligned arches. The subjects were selected by the panel of judges consisted of orthodontists, prosthodontists and laymen. Informed consent was obtained from the participants to take lateral cephalogram. Radiographs were analyzed and fed in Dolphin imaging software 11.8 (Figure 1). The gender and ethnic variations were tested statistically using chi square test.
REFERENCES