



# **“DIGITAL ASSESSMENT OF DENTINAL TRANSLUCENCY FOR AGE ESTIMATION”**

by

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## ABSTRACT

It has for long been accepted that teeth are an important source for estimating age of human remains and unidentified individuals. Age assessment is one of the important aspects in postmortem identification and a vital step in the triad of dental profiling. Gustafson proposed several parameters for age estimation using the dentition of which translucency was one. This parameter is considered to be least affected by external stimuli and most suited for age estimation when used alone. Bang and Ramm developed an elaborate method of assessing age using only dentinal translucency. The present study has ventured to test the efficacy of using Bang and Ramm's method to estimate age on Indian samples.

To fulfil this objective, a sample constituting one hundred teeth was obtained and sectioned to measure root dentine translucency as per the method suggested by Bang and Ramm. A digital approach was employed for the measurements. Since the age estimation of the sections was relatively less accurate as compared to the original results of Bang and Ramm, the translucency measurements obtained were subjected to regression analysis. The Indian formulas thus derived were used to estimate age on a control sample and compared to estimates obtained from Bang and Ramm's formulas on the same control. It was observed that Indian formulas estimated age more reliably, validating the use of population-specific formulas in forensic age estimation.

**Keywords:** Age estimation; root dentin translucency; racial variations; digital method.