**Background:** The estimation of the size of unerupted permanent teeth is an essential aspect in treatment planning in mixed dentition. The accuracy of regression equations or prediction tables could be questioned when applied to different racial groups or populations of different ethnic origin. **Purpose:** The aim of this investigation was to examine the accuracy of Moyers and Nourallah prediction tables in predicting the size of unerupted canines and premolars of the maxillary and mandibular quadrants in Arabian population at SMA Al-Irsyad in Surabaya. **Methods:** Dental casts of 28 Arabian subjects (13 males and 15 females) was obtained by a simple random sampling method where the patients were randomly selected according to a set inclusion criteria. The subject’s age ranged from 15 to 18 years, who presented with complete eruption of permanent mandibular incisors, all canines and premolars, and maxillary first molar permanent were measured using a digital caliper with a resolution of 0.01 mm. **Result:** The results showed that Moyers and Nourallah prediction tables were accurate in predicting unerupted canine and premolars tooth size in our sample. The combination of the sums of permanent mandibular incisors for Moyers method and the permanent lower central incisor and the upper first molar permanent for Nourallah method were the best predictor for canines and premolars in this sample. **Conclusion:** Moyers and Nourallah prediction tables were accurate when applied to an Arabian population at SMA Al-Irsyad in Surabaya.

**Keywords:** Tooth size prediction, Moyers prediction table, Nourallah prediction table