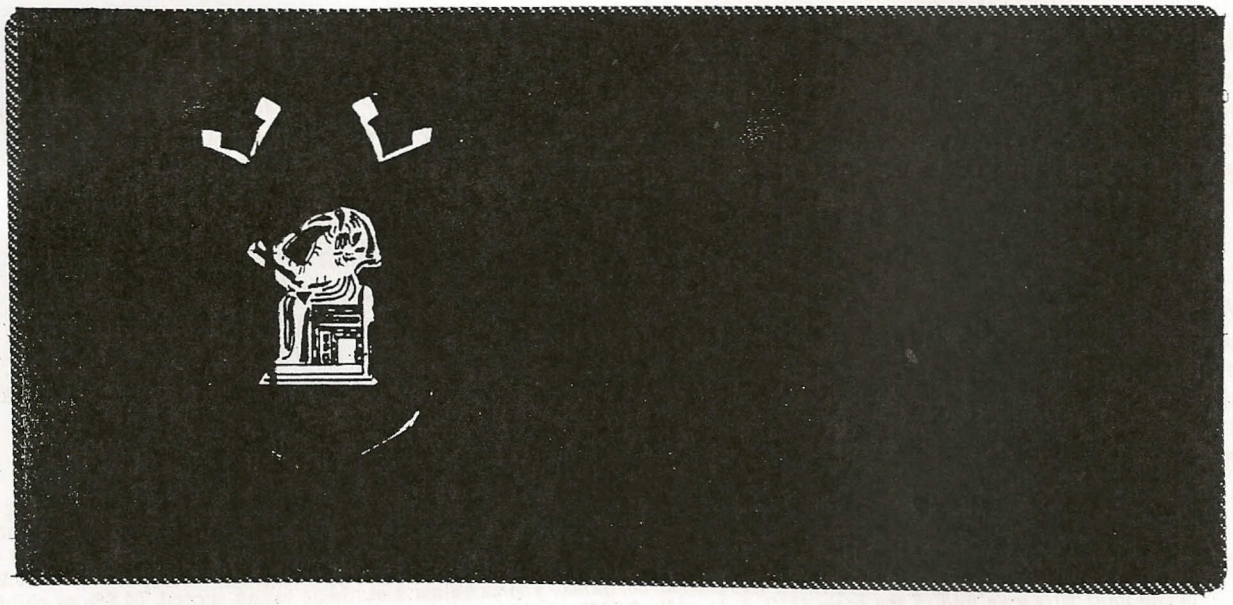

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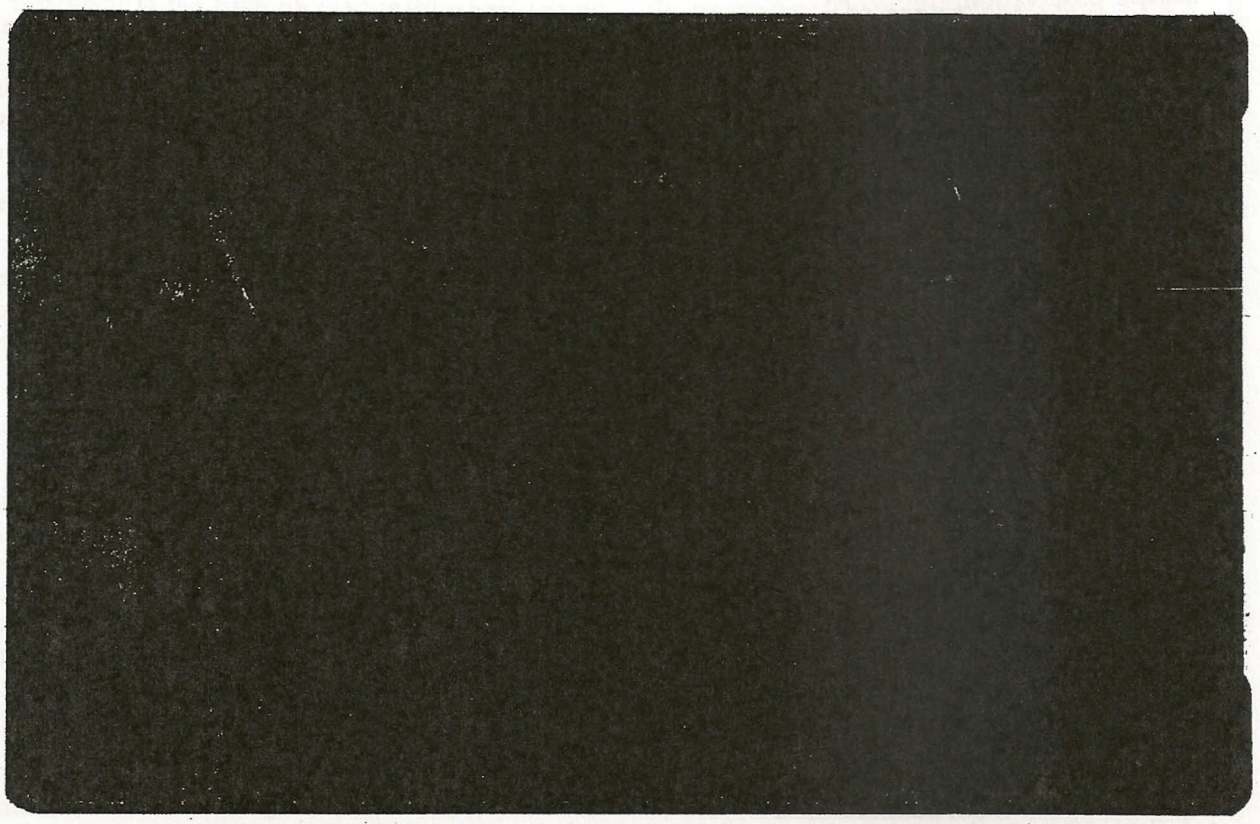

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ASSESSMENT OF ORTHODONTIC TREATMENT NEEDS FOR SCHOOL CHILDREN IN JEDDAH, SAUDI ARABIA, USING THE INDEX OF ORTHODONTIC TREATMENT NEED (IOTN)

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Key words: Index of Orthodontic Treatment Need (IOTN), orthodontics, treatment needs, survey, 12-year-old-females.

ABSTRACT

The purpose of this study was to assess orthodontic treatment needs among 12-year-old female children in Jeddah using the Index of Orthodontic Treatment Need (IOTN). A total of 505 twelve-year old female children were examined in 8 schools which were randomly selected from 79 preparatory public schools in Jeddah. Combining the Dental Health Component and Aesthetic Component the results indicated that 59.9% of children had "very little" orthodontic treatment need and 40.1% of children had "great to moderate need" for orthodontic treatment. The examiner's aesthetic rating scored 74.8% of children in the most attractive end of the scale (1, 2, 3, 4) while 94.3% of children scored themselves on this end of the scale. The most common deviant occlusal traits contributing to the Dental Health Component were found to be: crowding followed by crossbite and increased overjet.

INTRODUCTION

Very few investigations have been published on the prevalence of malocclusion and the need for orthodontic treatment in Saudi Arabia. Nashashibi et al.[18] found that 57.7% of the children in Riyadh required some orthodontic treatment. The findings of Al-Emran et al.[1] were similar in that 54.9% needed treatment and 5.2% needed observation.

The World Health Organization[23] published a baseline data for 13- and 14-year-olds in 10 industrialized countries which revealed orthodontic treatment need ranging between 21% and 64%. Assessment of treatment need has been mainly subjective rather than qualitative[12]. This is reflected in the many indices that have been developed for recording prevalence of malocclusion and orthodontic treatment need epidemiologically and clinically[3,11,21]. This must have been responsible for the wide variations in the percentage of subjects assessed as requiring orthodontic treatment[8].

The design and monitoring of orthodontic care programs at the community level is very difficult without a suitable index for the quantitative expression of dentofacial anomalies and dysfunction[17]. Recently two indices have been developed by two research teams to reduce the subjectivity in the assessment of orthodontic treatment need and for comparative purposes of populations. Both indices contain aesthetic as well as clinical criteria. These indices are Index of Orthodontic Treatment Need (IOTN) developed by Brook and Shaw[4], and Dental Aesthetic Index (DAI) developed by Cons et al.[7]. The index of orthodontic treatment need (IOTN) has been designed to assess treatment need. The IOTN was describe by Brook and Shaw[4] and modified by Richmond et al.[19]. It was based on the index of the Swedish Medical Health Board[16].

Presently, the IOTN has been validated against a broad spectrum opinion[20] and has been used successfully for estimating the prevalence of orthodontic treatment need in local populations in the United Kingdom and elsewhere[2,5,6,13,14,22]. The aims of this study include the assessment of the severity of malocclusion, the occlusal features contributing to malocclusion and the orthodontic treatment need in the school children population in the city of Jeddah.

SUBJECTS AND METHOD

The study was undertaken using the Index of Orthodontic Treatment Need (IOTN)[4]. This index ranks malocclusion in terms of the significance of various occlusal traits for the individual's dental health and perceived aesthetic impairment. It does identify those individuals who would most likely benefit from orthodontic treatment. The index incorporates a Dental Health Component (DHC) and the Aesthetic

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