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### An Audit of Orthodontic Retention Protocol in a Tertiary Health Institution: A 3-Year Retrospective Study

*Un Audit du Protocole de Rétention Orthodontique Dans Un Établissement de Santé Tertiaire:  
Une Étude Rétrospective de 3 Ans*

O. D. Umeh\*†, I. L. Utomi†, A. L. Ben-Okoye‡, A. S. Eniola§

#### ABSTRACT

**BACKGROUND:** The aim of this study was to determine the retention practices following orthodontic treatment in a tertiary health institution in Nigeria.

**METHODS:** A retrospective study conducted in the Orthodontic Clinic of the Lagos University Teaching Hospital over a 3-year-period. Data on the type of retainers used and the retention practices in the upper and lower arches were obtained from case files of patients who had completed orthodontic treatment in the institution. Statistical analysis was performed using IBM SPSS software version 23.

**RESULTS:** The demographic variables comprised of 136 subjects; 93 females (68.4%) and 43 males (31.6%). Their ages ranged from 9–44 years with a mean age of  $18.96 \pm 6.75$ . Class I malocclusion was the most common malocclusion pattern (84.6%), followed by Class II (10.3%) and Class III (5.1%). Removable retainers were more commonly used and accounted for retention carried out in 85.3% of the study population. There was a preference for the use of removable retainers in the upper arch; the Hawley retainer being the most used (79.4%). In the lower arch however, no form of retention was carried out for majority of the patients after orthodontic treatment (86.8%). However, when done, the fixed lingual retainer was the most frequently used (13.2%).

**CONCLUSION:** The Hawley retainer was the predominant retainer in this study. The fixed lingual retainer was the most frequently used in the lower arch. Longitudinal studies are required to determine efficacy of different types of retention following orthodontic treatment. *WAJM* 2021; 38(3): 201–205.

**Keywords:** Retention, Orthodontic Treatment, Orthodontics, Retainers.

#### ABSTRAIT

**CONTEXTE:** Le but de cette étude était de déterminer les pratiques de rétention suite à un traitement orthodontique dans un établissement de santé tertiaire au Nigeria.

**MÉTHODES:** Une étude rétrospective exécutée à la clinique d'orthodontie de l'hôpital universitaire de Lagos sur une période de 3 ans. Données sur le type de rétention utilisé et les pratiques de rétention dans les arcades supérieures et inférieures ont été obtenues à partir des dossiers de patients ayant terminé un traitement orthodontique dans l'établissement. analyses statistiques a été réalisée à l'aide du logiciel IBM SPSS version 23.

**RÉSULTATS:** Les variables démographiques comprenaient 136 sujets; 93 femmes (68,4%) et 43 hommes (31,6%). Leur âge variait de 9 à 44 ans avec un âge moyen de  $18,96 \pm 6,75$  ans. La malocclusion de classe I était le modèle de malocclusion le plus courant (84,6%), suivie de la classe II (10,3%) et de la classe III (5,1%). Les dispositifs de retenue amovibles étaient plus couramment utilisés et représentaient la rétention effectuée dans 85,3% de la population étudiée. Il y avait une préférence pour l'utilisation de dispositifs de retenue amovibles dans l'arcade supérieure; le dispositif de retenue Hawley étant le plus utilisé (79,4%). Dans l'arcade inférieure cependant, aucune forme de rétention n'a été réalisée pour la majorité des patients après un traitement orthodontique (86,8%). Cependant, une fois terminé, le dispositif de retenue lingual fixe était le plus fréquemment utilisé (13,2%).

**CONCLUSION:** Le dispositif de retenue Hawley était le dispositif de retenue prédominant dans cette étude. Le dispositif de retenue lingual fixe était le plus fréquemment utilisé dans l'arcade inférieure. Des études longitudinales sont nécessaires pour déterminer l'efficacité des différents types de rétention après un traitement orthodontique. *WAJM* 2021; 38(3): 201–205.

**Mots clés:** Rétention, traitement orthodontique, orthodontie, rétention.

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Abbreviations: VFR, Vacuum Formed Retainer;