Developing A User Guide for OHRAVI

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Objectives

This study aims to develop a user guide with photos accompanying the Oral Health Risk Assessment Value Index (OHRAVI). OHRAVI was previously studied in dental and other healthcare settings, resulting in a high inter-rater reliability index score. An OHRAVI User Guide could transform the existing tool into a universal index to assist all healthcare professionals. The goal is to have photographs accompany each assessment section to visually represent various oral conditions. In the effort to prioritize patient privacy, including images generated by the artificial intelligence (AI) software Midjourney could lessen the utilization of photographs of actual patients in the clinic.

Experimental Methods

Various reference photos were inputted into *Midjourney*. Images depicting similar conditions were "blended" by *Midjourney* to create four, unique AI versions. Upon generation, various modifications were made to ensure each photo was a clinically accurate representation of the condition in mind. Photos deemed suitable and accurate were then included in the guide.

Results

A comprehensive OHRAVI user guide was created, including an overview of OHRAVI, a breakdown of the eight assessment categories with photos, a guidance section, and an interpretation of collected OHRAVI scores. Many photos for the first edition of the user guide were taken from public domains. Only 6 of the 36 photos (16%) included in the user guide were AI-generated and accurately descriptive of the condition designated.

Conclusion

Replacing real patient photos with AI-generated photos will improve patient privacy and reduce the risk of potential misuse of clinical images. However, utilizing AI to generate clinically accurate images is a new technology and requires a great degree of improvement. The OHRAVI user guide could be implemented in dental or non-dental settings, enabling clinicians to assess the patient's oral health as it was originally designed.