VALIDATION OF DUTCH PERIODONTAL SCREENING USING SELF-REPORTS IN PORTUGUESE PEOPLE

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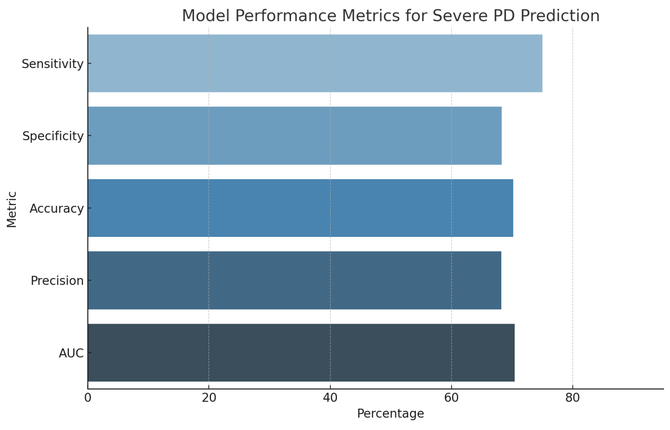
INTRODUCTION

Periodontitis (PD) is a prevalent chronic inflammatory disease that often remains undiagnosed. Validated screening tools that can be applied in non-dental healthcare settings are essential to promote early detection and intervention.

AIMS

This study aims to externally validate a Dutch screening model by Nijland et al. for severe periodontitis (PD) in a Portuguese population.



METHODS

A cross-sectional study was performed between February and October 2024. The eligible participants who were aged between 18 and 80 years old and possessed at least one natural tooth were consecutively recruited at a dental clinic (Almada, Egas Moniz School of Dental Medicine). Predictors included the questions in the validated self-reported oral health questionnaire (SROH) and demographic data. Outcome was severe PD, defined as code 4 of the Community Periodontal Index of Treatment Needs (CPITN), measured via full-mouth periodontal examination. A minimum number of 100 patients with severe PD (CPITN score 4) was required based on the sample size calculation. Performance of the model was assessed, in aspects of discrimination (i.e. area under the curve [AUC]), calibration (i.e. O/E [observed/exposed ratio]), sensitivity, specificity, accuracy, and precision.

This validated screening model offers a practical and accurate method for detecting severe periodontitis in the Portuguese population

RESULTS

A total of 201 participants were included (100 with severe PD and 101 without). This sample was evenly composed with men and women (50.8 % and 49,3%, respectively) with an average of 55 years old (±15.2). The model had AUC of 0.704 (95.0% CI: 0.632,0.776) and an O/E ratio of 0.91 (0.74,1.11) for predicting severe PD, indicating an acceptable discrimination and calibration. Additionally, the model had a sensitivity of 75.0% and a specificity of 68.3%, an accuracy of 70.2%, and a precision of 68.2%.

CONCLUSIONS

This prediction model showed adequate performance to be applied in Portuguese cohorts, demonstrating its potential as a valuable tool for early screening and risk stratification, aimed at disease prevention and management. Future studies should validate its applicability in diverse populations and explore its integration into routine healthcare practices.

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The authors thank FCT/MCTES for the financial support to CiiEM (10.54499/UIDB/04585/2020) through national funds