Reliability of Patient Surveys for Assessment of Dental Condition and Correlation to a Dental Health Examination

Abstract

Background: Traditional clinical dental examinations are resource intensive, creating a need for efficient screening tools, especially in large populations. This study retrospectively evaluates the reliability of a self assessment questionnaire aiming to identify individuals with high dental morbidity and assess the urgency of dental care.

Methods: As part of a limited time project, a questionnaire focusing on reported symptoms and medical history was administered to 121 female soldiers aged 18-21 via mobile devices. Based on their responses, participants were categorized into "low" or "high" severity risk groups. All individuals identified as high risk were invited for clinical dental examinations, along with low risk participants who requested a dental examination. In this study, we retrospectively analysed the data collected during the project by comparing the severity levels predicted by the questionnaire with the findings from the clinical assessments.

Results: We found a significant correlation between predicted and actual severity levels according to the Chi-Square Pearson test. While clinically 78.5% of the patients had a low severity dental condition, 73% of actual high severity cases were correctly predicted, enhancing the efficiency of prioritizing high risk patients. Also, examining patients with predicted high severity levels is shown to increase the chances of treating a patient with high severity conditions. Analysis of individual questions revealed varying effectiveness, with some questions showing higher predictive value for high severity conditions.

Conclusions: The questionnaire shows promise for initial triage in large-scale screenings, and it can effectively predict dental health severity, particularly in identifying high risk cases. Hence this tool can help improve treatment effectiveness and resource allocation in dental care. Combining self assessments with clinical evaluations remains crucial for accurate diagnosis and treatment planning.

Keywords: Dental Risk, Training, Preventing Medicine, Dental Examination.

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