INPLASY

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The Utilisation of Teledentistry in Australia: A Systematic Review and Meta-analysis

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ADMINISTRATIVE INFORMATION

INTRODUCTION

Review question / Objective This systematic review and meta-analysis aimed to determine teledentistry utilisation in Australia. How is teledentistry utilised in Australia.

Condition being studied Poor oral health can lead to infections and abscesses which could cause potential hospitalisations. Therefore, early screening for caries is extremely important. However, many people, particularly those living in regional, rural and remote areas, find it difficult to access timely dental care. Teledentistry can be utilised to increase access to all patients improving the availability and accessibility of dental care. This could lead to improved oral health and potentially decreasing hospitalisation rates due to dental infections.

METHODS

Search strategy The databases PubMed, OVID, Google Scholar and Web of Science were systematically searched from inception to August-2023. The terms "Dental" AND "Telehealth" AND "Australia" as well as "Teledentistry" AND "Australia" were used. Two authors completed the study selection and data extraction. Quality assessment was conducted using the Joanna Briggs Institute Critical Appraisal Tools.

Participant or population Australians utilising teledental services.

Intervention Utilising teledentistry to provide care such as prescriptions, consultations, emergency triage and examinations.

Comparator In-person consultations, examinations and treatment.

Study designs to be included All study designs were included in this review if they met the inclusion criteria.

Eligibility criteria Studies conducted on the utilisation of teledentistry in Australia.

Information sources The databases PubMed, OVID, Google Scholar and Web of Science were systematically searched.

Main outcome(s) The outcomes measured were the accuracy, acceptability, utilisation and reliability of teledentistry.

Quality assessment / Risk of bias analysis The risk of bias and quality was assessed using the Joana Brigs Institute critical appraisal tool (JBI) by two authors (JL and BF). This tool was chosen as qualitative, quantitative, and mixed method studies that could be analysed. Each study was evaluated, and a score was assigned based on the criteria that were met for each study design; for example, a study met 60% of the criteria if it met 6 out of 10 criteria.

Strategy of data synthesis Duplicate data was removed using EndnoteX9, after which two authors (JL and BF) independently analysed the title, abstracts and dull texts. Any differences were discussed with a third author (JSP). Relevant data was then extracted with both qualitative and quantitative data being extracted. Duplicate data was removed using EndnoteX9, after which two authors (JL and BF) independently analysed the title, abstracts and dull texts. Any differences were discussed with a third author (JSP).
A meta-analysis was conducted to calculate the specificity and sensitivity of diagnosing dental caries using extra-oral photographs. The average was calculated, and the median value was used when a range was given. Furthermore, sensitivity and specificity were charted and a linear regression analysis conducted to calculate the r score.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Language restriction Only English literature will be analysed.

Country(ies) involved Australia.

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