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Reporting quality of systematic review abstracts in leading oral implantology journals

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ABSTRACT

Objectives: Abstracts of systematic reviews are of critical importance, as consumers of research often do not access the full text. This study aimed to assess the reporting quality of systematic review (SR) abstracts in leading oral implantology journals.
Methods: Six specialty journals were screened for SRs between 2008 and 2012. A 16-item checklist, based on the PRISMA statement, was used to examine the completeness of abstract reporting.
Results: Ninety-three SR abstracts were included in this study. The majority were published in Clinical Oral Implants Research (43%). The mean overall reporting quality score was 72.5% (95% CI: 70.8–74.2). Most abstracts were structured (97.9%), adequately reporting objectives (97.9%) and conclusions (93.6%). Conversely, inadequate reporting of methods of the study, background (79.6%), appraisal (65.6%), and data synthesis (65.6%) were observed. Registration of reviews was not reported in any of the included abstracts. Multivariate analysis revealed no difference in reporting quality with respect to continent, number of authors, or meta-analysis conduct.
Conclusions: The results of this study suggest that the reporting quality of systematic review abstracts in implantology journals requires further improvement.
Clinical significance: Better reporting of SR abstracts is particularly important in ensuring the reliability of research findings, ultimately promoting the practice of evidence-based dentistry. Optimal reporting of SR abstracts should be encouraged, preferably by endorsing the PRISMA for abstracts guidelines.

1. Introduction

Clinical decision-making requires judicious appraisal of research studies and occasionally reconciliation of conflicting primary studies on identical research questions.[1] Furthermore, the findings from even highly-cited reports may be challenged and indeed refuted over time.[2] Systematic reviews have gained prominence allowing evidence-based decision-making, as they attempt to appraise critically, and summarise

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the published evidence relating to a particular problem in an unbiased manner.[3–7] It is commonly accepted that using evidence from reliable research to inform healthcare decisions has the potential to ensure best practice and improve consistency in healthcare delivery.

SRs aim to inform and facilitate this process through synthesis of findings from multiple studies, enabling access to evidence in an assimilated form. Consequently, healthcare consumers, stakeholders, clinicians, managers and policy makers can evaluate existing or new technologies and practices efficiently and adjudicate based on the totality of available evidence.[8]

The ability to grade the methodology of a systematic review is contingent on examination of its report.[9] The reporting quality of SRs is known to vary, limiting the ability to assess the strengths and weaknesses of those reviews.[10] The QUOROM statement and its successor, the PRISMA statement, were developed in order to address the suboptimal reporting of SRs and meta-analyses.[11,12] However, despite their inception the quality of reporting of abstracts of SRs remained suboptimal.[13] PRISMA for Abstracts was developed recently as an extension to the PRISMA statement, with the expressed aim of providing more focused guidance on writing abstracts for systematic reviews.[14]

The reliance on information found in the abstract of clinical studies and systematic reviews to make integral healthcare decisions in everyday clinical practice is remarkable.[15,16] Abstracts of systematic reviews can be particularly useful in assessing the study validity, and facilitating the peer-reviewing process.[14,17,18] Thus, there is an onus on researchers to provide information in this part of the article as readers typically lack either sufficient time or other resources to permit detailed inspection of the full text.[19]

Aim: The primary aim of this paper was to estimate the completeness of SR abstract reporting of systematic reviews published in leading oral implantology journals. Factors associated with improved abstract reporting were also to be identified.

2. Materials and methods

Leading English language oral implantology journals with the highest impact factor in 2011 were selected for this study: The International Journal of Oral and Maxillofacial Implants (JOMI), Clinical Implant Dentistry and Related Research (CIDRR), Clinical Oral Implants Research (COIR), European Journal of Oral Implantology (EJOI) and Implant Dentistry (IDE). These journals were screened in order to identify systematic reviews published between 2008 and 2012, with or without a meta-analysis.

Electronic searching, with supplementary hand searching where needed, was conducted. Studies were selected based on predetermined eligibility criteria: English language, human participants, interventions related to health care, and the phrase ''Systematic review/meta-analysis'' in the title or abstract. Conference abstracts, *in vitro* studies or studies in animals were excluded from the present research. Screening and selection of studies were conducted by the same author (J.K.). This author was calibrated by performing analysis of 20 articles with a second author (N.P.); specific differences were discussed and reconciled. In addition, 20% of the sample was screened independently by a second author (N.P.).

The assessment of the abstracts was based on the 16-item checklist for SR abstracts proposed by Seehra et al.[20] (Table 1). This item was developed in line with PRISMA recommendations and has been used in previous research.[20] Each item on the list received a score ranging from 1 to 3, with 1 representing ''no description'', a score of 2 ''inadequate description'' and 3 corresponding to ''adequate description''. For example, ''inadequate description'' may be given for Item 4 (description of data sources) if the use of electronic searching is referred to but specific databases are not described; clarification of specific electronic databases would constitute ''adequate description'', while no reference to search techniques would result in a ''no description'' grade. With respect to the item concerning level of statistical significance (*P* value), a score of 1 was given when the *P*-value was not reported and

Table 1 – SR Abstracts checklist developed by Seehra et al.[20]

Item	Description
1. Structure	Provide a structured summary
2. Background	Describe the rationale for the review
3. Objectives	Specific objective or hypothesis
4. Data sources	Describe all information sources (databases) included in the search
5. Eligibility criteria	State the process of selecting studies (screening or inclusion criteria)
6. Participants	Eligibility criteria for participants and the settings where the data were collected
7. Interventions	Interventions intended for each group
8. Appraisal	Screening and assessment by independent reviewers
9. Synthesis method	Description of data synthesis and synthesis methods
10. Results	Present main results of the review
11. Effect size	Description of effect size where applicable
12. Level of statistical significance	Indication of statistical significance
13. Confidence intervals	Reporting of confidence intervals, where applicable
14. Limitations	Discuss limitations at study and outcome level
15. Conclusions	Provide a general interpretation of the results
16. Registration number	Registration number and name of SR register