Dental Caries in Sudan: a systematic review

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Objective: To conduct a systematic review of the scope, nature and outcomes of dental caries research in Sudan.

Method: A comprehensive online search on PubMed, Medline, google scholar, google and University of Khartoum online library was run in Dec 2015 using the keywords ‘dental caries’, ‘tooth decay’, ‘Sudan’ and ‘Khartoum’. Published articles and master and PhD abstracts were included.

Results: Almost all reviewed research (68 studies) comprised of cross-sectional studies, with one qualitative and one case control study. Most research was carried out in Khartoum, with a few in Gezira state and some rural areas. Most studies were on healthy children. Studies that explored dental caries in special needs populations mostly focused on children with mental disabilities. Almost all studies used the WHO diagnostic tool for caries examination (DMFT/dmft), with the exception of a study on Sudanese refugees in the US. Caries severity seemed to be on the decline, although high caries experience remained as a challenge. Impact on quality of life was measured in 4 studies using C-OIDP and OHIP-14. Four studies explored the micro-biological determinants of caries, while most explored associations of dental caries with socio demographic determinants and risk behaviour. Few studies explored the oral health system and services.

Conclusion: No interventions on dental caries have been reported in Sudan. There is a huge gap in evidence on oral health care delivery in Sudan.