

INPLASY PROTOCOL

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**Review Stage at time of this
submission:** Preliminary
searches.

Conflicts of interest:
None declared.

Prevalence of Musculoskeletal Disorders (MSD) among Dental health care workers

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Review question / Objective: What is the prevalence of
Musculoskeletal Disorders (MSD) Dentist health care
workers?

Condition being studied: MSD are identified as injuries to the
human support system of muscles, ligaments, tendons,
nerves, blood vessels, bones and joints, and can occur from a
single event or cumulative trauma. MSD can cause pain or
discomfort in the neck, shoulder, arm, wrist, hands, upper and
lower back, hips, knees and feet.

Information sources: The following electronic databases
would be searched: Pubmed, SCOPUS, EMBASE, CINAHL,
Web of Sciences, Dentistry and Oral Science Source. Search
terms are (dentist OR dental hygienist OR dental personnel
OR dental student) AND (musculoskeletal disease OR
musculoskeletal disorder OR occupational disease OR work-
related musculoskeletal disorder).

INPLASY registration number: This protocol was registered with
the International Platform of Registered Systematic Review and
Meta-Analysis Protocols (INPLASY) on 28 May 2021 and was last
updated on 28 May 2021 (registration number
INPLASY202150100).

INTRODUCTION

Review question / Objective: What is the
prevalence of Musculoskeletal Disorders
(MSD) Dentist health care workers?

Rationale: Musculoskeletal pain or
discomfort can be an occupational health
problem for dental health care workers

who sit in static postures using precision
hand and wrist movements. Globally, the
prevalence of MSD generally was found to
be high from the several studies and
systematic reviews. However, pooled
prevalence of MSD is not reported.

Condition being studied: MSD are identified
as injuries to the human support system of

muscles, ligaments, tendons, nerves, blood vessels, bones and joints, and can occur from a single event or cumulative trauma. MSD can cause pain or discomfort in the neck, shoulder, arm, wrist, hands, upper and lower back, hips, knees and feet.

METHODS

Search strategy: The following databases would be searched: Pubmed, SCOPUS, EMBASE, CINAHL, Web of Sciences, Dentistry and Oral Science Source Search terms are (dentist OR dental hygienist OR dental personnel OR dental student) AND (musculoskeletal disease OR musculoskeletal disorder OR occupational disease OR work-related musculoskeletal disorder).

Participant or population: dentist OR dental hygienist OR dental personnel OR dental student.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: Cross-sectional studies, Cohort studies or studies which report prevalence or from which prevalence could be calculated will be included.

Eligibility criteria: Observational studies on dental health care personnel will be included. Only papers that are published in English language will be included. Studies published as letters, commentaries, short reports will be excluded.

Information sources: The following electronic databases would be searched: Pubmed, SCOPUS, EMBASE, CINAHL, Web of Sciences, Dentistry and Oral Science Source. Search terms are (dentist OR dental hygienist OR dental personnel OR dental student) AND (musculoskeletal disease OR musculoskeletal disorder OR occupational disease OR work-related musculoskeletal disorder).

Main outcome(s): Prevalence of musculoskeletal disorders.

Additional outcome(s): Site-specific prevalence (Neck, shoulder, hands, back, thighs, knees etc); Prevalence as per Geographic distribution; Prevalence as per dentists, dental hygienist, students etc.

Data management: Studies obtained through the search will be subjected to title and abstract screening followed by full-text screening by two review authors. The data extraction would be done in a special proforma by two review authors.

Quality assessment / Risk of bias analysis: Risk of bias will be done with the use of 9 itemed questionnaire developed by Hoy et al for prevalence studies by two review authors. Based on this questionnaire, studies will be identified as low, moderate or high risk.

Strategy of data synthesis: If sufficient number of studies are available, data will be subjected to meta-analysis of prevalence estimates using Open Meta software.

Subgroup analysis: Sub-group analysis would be done based on the Site-specific prevalence, Geographic distribution, type of dental health care workers.

Sensitivity analysis: Studies with a high risk of bias will be excluded to see if there is variation in the pooled prevalence estimates.

Language: English.

Country(ies) involved: India.

Keywords: Prevalence, Musculoskeletal disorders, dentists, dental hygienist, dental students.

Contributions of each author:

Author 1 - Kalyana Pentapati - Concept, search, full-text screening, analysis, initial and final draft.

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