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The impact of sleep on quality of life outcomes for prostate cancer patients and caregivers: A systematic review protocol

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1

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ABSTRACT

Objective

To conduct a systematic review of research on sleep among patients with prostate cancer and/or their caregivers.

Methods

A systematic literature search will be conducted according to the Preferred Reporting Items for a Systematic Review and Meta-analysis guidelines. The databases will include PubMed/Medline, Embase, the Cochrane Library (encompassing the clinical trials registries), Biosis Citation Index (BCI), Cumulative Index to Nursing and Allied Health (CINAHL), Web of Science, Food Science & Technology Abstracts, and APA PsycINFO. To be eligible for this systematic review, studies will have to include: (1) patients diagnosed with prostate cancer and/or their caregivers; and (2) objective or subjective data on sleep.

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3 Background

Prostate cancer treatment introduces potential barriers to sleep health, such as nighttime bladder irritation, night sweats and anxiety. Another major issue is sleep apnea, which has high global prevalence [1] and is associated with a greater risk of nocturia [3] and erectile dysfunction [4]. Previous studies have examined the relationship between sleep disorders with cancer risk, including prostate cancer. Pooled results by Liu et al. found that neither short sleep nor long sleep was associated with the risk of prostate cancer [5]. A separate systematic review reported no significant

relationship between short or long sleep duration with prostate cancer-specific mortality [6].

Another important consideration is maximizing quality of life for cancer survivors. While studies have shown a higher prevalence of sleep disturbances among people with cancer, many have focused on breast cancer [7]. Less is known about the prevalence of sleep health problems among patients diagnosed with prostate cancer, or their family caregivers, and the relationship of sleep health with quality of life.

Objective

The objective of this review is to address the following questions: (1) What is the impact of prostate cancer on sleep for patients and caregivers? (2) Among adult men with prostate cancer and their caregivers, how does sleep impact such psychosocial and physical activity factors as quality of life, cognitive impairment, depression and anxiety?

Inclusion Criteria

Inclusion criteria include primary research studies and secondary analyses from larger studies that assess the impact of prostate cancer on sleep among patients with prostate cancer and/or their caregivers. To be eligible for this systematic review, studies will include: (1) patients diagnosed with prostate cancer or caregivers of patients with prostate cancer; and (2) subjective or objective measurement of sleep.

Exclusion Criteria

Studies will be excluded if they do not sleep data specifically for patients with prostate cancer or their caregivers (e.g., aggregate sleep responses among patients with a variety of cancer diagnoses, or caregivers of patients with a variety of cancer diagnoses), if only fatigue is measured instead of sleep, and if the paper is a conference abstract and not a full manuscript.

Outcomes of Interest

The primary outcomes of interest include subjective or objective measures of sleep among patients with prostate cancer and/or their caregivers. This includes data on sleep quality, sleep duration, sleep latency, and sleep disturbances.

Search Strategy

A systematic literature search will be conducted by a medical librarian according to the PRISMA guidelines. The databases will include PubMed/Medline, Embase, the Cochrane Library (encompassing the clinical trials registries), Biosis Citation Index (BCI), Cumulative Index to Nursing and Allied Health (CINAHL), Web of Science, Food Science & Technology Abstracts, and APA PsycINFO. No date or language limits will be applied. Bibliographies of included studies will be reviewed for additional references.

Electronic Searches

The search will be done using the following strategy: (prostatic neoplasms OR prostatic neoplasm OR prostate cancer OR prostate neoplasms) AND (sleep OR insomnia).

Data Screening

Records will be identified utilizing the search strategy outlined above. Two reviewers will independently screen all records based on titles and abstracts using Covidence. The full texts of potentially eligible articles will be independently reviewed using a standardized Google form. Disagreements will be resolved through consensus discussion with co-authors. Bibliographies of these selected articles will be analyzed for further eligible articles.

Quality Evaluation and Data Analysis

Eligible studies will be independently assessed for quality utilizing the Hawker et al. quality assessment checklist, with 9 items rated from 1-4.[8] Quality scores (range, 9-36) will be tabulated by summing the results.

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Conflicts of Interest: The authors have no related conflict of interest to disclose.

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