INPLASY

INPLASY2024110127

doi: 10.37766/inplasy2024.11.0127

Received: 30 November 2024

Published: 30 November 2024

Detection Rate of Insomnia and Its Influencing Factors in Chinese Tumour Patients: a Meta-analysis

Bai, MY; Wang, HW; Wang, XY; Cao, Y; An, SB; Xie, YX.

Corresponding author:
Huawei Wang

aokayi@126.com

Author Affiliation:
Liaoning University Of Traditional Chinese Medicine.

ADMINISTRATIVE INFORMATION

Support - Supported by the Liaoning Provincial Natural Science Foundation (Grant Number: 20180550690),the Liaoning Provincial Natural Science Foundation (Grant Number: 2024-MSLH-320) and the Liaoning Provincial Xingliao Yingcai Program (Grant Number: XLYC1802008)..

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2024110127

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 November 2024 and was last updated on 5 March 2025.

INTRODUCTION

Review question / Objective To explore the prevalence and influencing factors of insomnia among Chinese cancer patients since the establishment of various databases, providing a reference for reducing the incidence of insomnia and developing effective prevention and control strategies for insomnia in cancer patients.

Condition being studied Insomnia is a common health problem among cancer patients, which is not only a physical problem but also a psychological problem. Insomnia is one of the most prominent complaints among patients with cancer.It is defined as difficulty falling asleep, trouble staying asleep, early awakening, or nonrestorative sleep. The prevalence of insomnia in patients with cancer varies from 30 to 60%, which is considerably higher than that in the general population . In addition, many cancer patients do not appear to report symptoms of insomnia, assuming them to be a minor problem compared to a cancer diagnosis or treatment despite its prevalence and clinical significance, which results in insomnia remaining untreated. Insomnia and subsequent sleep disturbances can lead to fatigue, psychological disorders, and immunosuppression, which can significantly impair the quality of life and even affect the course of the disease.

METHODS

Participant or population The study population was Chinese tumour patients (≥18 years of age).

Intervention Exposures are Risk Factors for insomnia.

Comparator There will be no comparator as this is descriptive study.

Study designs to be included The included study design is cross-sectional study.

Eligibility criteria
Inclusion Criteria:
(1) Study population comprising adult patients aged ≥18 years diagnosed with cancer in China;
(2) Study objectives explicitly focused on insomnia prevalence and/or its influencing factors;
(3) Outcome measures defined as insomnia detection based on validated sleep assessment tools (e.g., Pittsburgh Sleep Quality Index [PSQI]);
(4) Study design restricted to cross-sectional studies;
(5) Literature reporting calculable or convertible odds ratios (ORs) and 95% confidence intervals (CIs).
Exclusion Criteria:
(1) Non-Chinese/non-English publications;
(2) Studies with duplicated data or dissertations/theses;
(3) Irrelevant studies unrelated to the research objectives;
(4) Animal experiments, reviews, commentaries, or news articles.

Information sources PubMed,EmBase,Web of Science,Sinomed,Cochrane Library,CNKI,Wanfang Date and VIP.

Main outcome(s) Detection of insomnia in Chinese tumour patients.

Quality assessment / Risk of bias analysis The data were extracted and the literature quality was evaluated according to the cross-sectional study quality assessment criteria of Agency for Healthcare Research and Quality(AHRQ).
2 researchers used AHRQ to evaluate the included studies. In case of disagreement, a third researcher assisted in the judgement.The AHRQ has a total of 11 entries, and based on the total score the Studies were classified as low quality studies (0-3 points), medium quality studies (4-7 points) and high quality studies (8-11 points).

Strategy of data synthesis Statistical analyses were performed using STATA 18.0 software. Effect sizes were calculated as odds ratios (OR s) with 95% confidence intervals (CIs) to quantify the associations between specific factors and insomnia incidence in cancer patients. Heterogeneity across studies was evaluated using Cochrane's Q-test and the I^2 statistic. A fixed-effects model was applied in the absence of significant heterogeneity (Q-test $P \geq 0.1$ and $I^2 < 50\%$), while a random-effects model was employed when substantial heterogeneity was detected (Q-test $P < 0.1$ or $I^2 \geq 50\%$). Sensitivity analysis was performed by comparing pooled results between fixed- and random-effects models. Publication bias was assessed through funnel plots and Egger's regression test. A two-tailed $P < 0.05$ was considered statistically significant.

Subgroup analysis None.

Sensitivity analysis Sensitivity analyses were performed by comparing the differences between the fixed-effects model and the random-effects model combined.

Country(ies) involved China.

Keywords Insomnia; Tumour patients; Relevance ratio; Root cause analysis; Meta-analysis.

Contributions of each author
Author 1 - Mingyuan Bai.
Email: baimy0513@126.com
Author 2 - Huawei Wang.
Email: aokayi@126.com
Author 3 - Xinyu Wang.
Email: wang20001129@foxmail.com
Author 4 - Yun Cao.
Email: cy0219019@163.com
Author 5 - Sibo An.
Email: 1849408122@qq.com
Author 6 - Yuxin Xie.
Email: 1955896345@qq.com