

INPLASY

COGNITIVE IMPAIRMENT AND INSOMNIA IN CELIAC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202410063

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 January 2024 and was last updated on 15 January 2024.

INTRODUCTION

Review question / Objective We aimed to explore the evolving landscape of CeD with a specific focus on neuro-cognitive dimensions, aiming to underscore the importance of recognizing and comprehensively addressing patterns of this autoimmune condition on cognitive function and sleep patterns.

Condition being studied Celiac Disease (CeD), Insomnia and Cognitive Impairment.

METHODS

Search strategy A systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines (PRISMA). Multiple databases including PubMed, MEDLINE (OVID), Cochrane, Embase,

Scopus, SciELO, PsycINFO and Web of Science were searched from inception to October 2023. We included all published studies that reported the presence of insomnia or any type of cognitive impairment in patients with CeD diagnosis. The search strategy was tailored by a medical librarian.

Participant or population Adults older than 18 years old.

Intervention Estimate the prevalence and association between Insomnia and Cognitive Impairment with Celiac Disease (CeD).

Comparator None.

Study designs to be included All published studies that reported the presence of insomnia or any type of cognitive impairment in patients with CeD diagnosis.

Eligibility criteria All published studies including adult population.

Information sources Multiple databases including PubMed, MEDLINE (OVID), Cochrane, Embase, Scopus, SciELO, PsycINFO and Web of Science were searched from inception to October 2023.

Main outcome(s) We aimed to conduct a systematic review and meta-analysis of the available evidence assessing the association of insomnia and cognitive impairment with CeD.

Quality assessment / Risk of bias analysis An independent researcher used the NIH Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies to assess the risk of bias in each study. Newcastle Ottawa.

Strategy of data synthesis Data was gathered in an Excel spreadsheet. Pooled prevalences and pooled odds ratios (OR) were calculated after Freeman-Tukey Double Arcsine Transformation. Heterogeneity was assessed using the Higgins I² index.

Subgroup analysis None.

Sensitivity analysis None.

Language restriction None.

Country(ies) involved United States.

Keywords Celiac disease, insomnia, cognitive impairment.

Contributions of each author

Author 1 - Renato Beas participated in study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

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