

Relationships between diet and mental health: preliminary results from an umbrella review

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Introduction: Depression affects over 300 million individuals and is currently the leading cause of disability worldwide. In recent years, numerous (>150) systematic reviews and meta-analyses focusing on associations between various dietary variables and mental health issues (e.g., depression) have been published.

Objective: To provide the first detailed overview of currently available knowledge on this subject in the form of an umbrella review of systematic reviews and meta-analyses.

Methods: Medline, EMBASE, PsycINFO, Food Science and Technology Abstracts, and Cochrane Library databases were systematically searched (01/01/2005 to 19/11/2019). Non-duplicate articles were screened and evaluated for inclusion by two authors. Methodological quality was assessed using the AMSTAR tool. A summary of studies' characteristics and results was created.

Results: After title and abstract screening, 158/3,029 studies were considered potentially relevant. These studies were separated into categories based on the dietary variable of interest. Following full-text screening of 40/158 studies, 23 were deemed eligible for inclusion in this review. The first category, dietary patterns (e.g., Mediterranean diet) included 19 studies, while the second, foods and food groups (e.g., vegetables), included 4 studies.

Results suggest that unhealthy dietary patterns, characterized by high intakes of processed foods were associated with an increased risk of depression, while healthy dietary patterns, characterized by high intakes of fruits, vegetables, whole grains, mono- and poly-unsaturated fats could be associated with a lower risk of depression. The remaining 118/158 studies awaiting full text screening focused on micro-nutrients and dietary supplements.

Conclusion: Preliminary results suggest that unhealthy dietary patterns were associated with a higher risk of depression, while healthy dietary patterns could have a protective effect.

Significance: Upon completion, this umbrella review will serve as a key reference for researchers, as well as a resource for health professionals wishing to learn about the current state of scientific knowledge on diet and mental health.

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