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The effect of psychobiotics on improving mental health in the elderly; evidence from review and clinical studies

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Graphical Abstract if available

Backgrounds

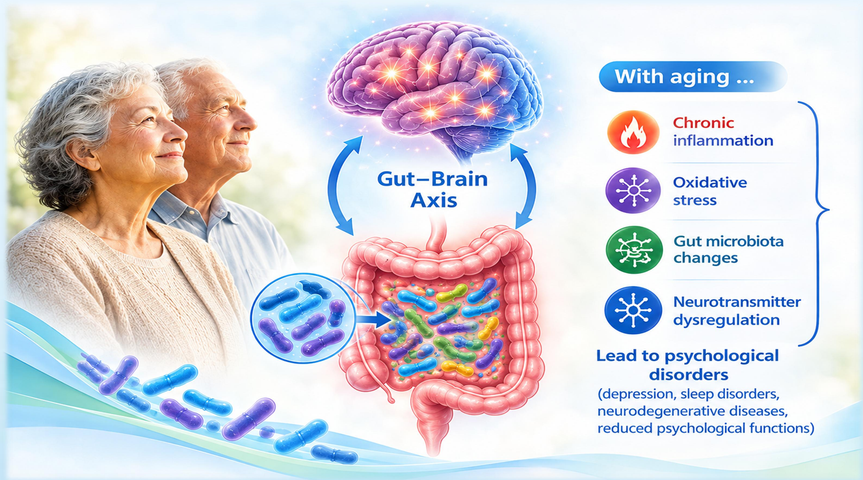
Psychobiotics, or psychobiological probiotics, have a significant impact on neurological and psychological functions. Recently, psychobiotics have become the focus of researchers as highly effective supplements for promoting and improving the mental health of the elderly. As people age, increased chronic inflammation, oxidative stress, changes in the gut microbiota of individuals, and disruption in the regulation of neurotransmitters all lead to the emergence of psychological disorders, including depression, sleep disorders, neurodegenerative diseases, and decreased psychological functions..

Methods

This study was a review based on the results of laboratory studies and clinical trials in the field of psychobiotics. In this study, the evidence related to the effect of different probiotic strains, especially Lactobacillus and Bifidobacterium species, on psychological function, mood, stress, and neurodegenerative diseases was evaluated

Findings

The results of the studies showed that the use of psychobiotic supplements led to improved cognitive functions, including memory, cognitive flexibility, attention and concentration, and improved sleep quality in elderly people. A number of studies have also shown an increase in the level of brain-derived neurotrophic factor (BDNF). In addition, probiotics play a significant role in improving the efficiency and mental health of the elderly by modulating the digestive microbiota, reducing oxidative stress and inflammation, and affecting neurotransmitters. There is also much evidence of improving some symptoms of diseases such as Parkinson's and Alzheimer's.



Conclusion

Psychobiotics are safe and promising nutritional supplements that are effective in maintaining mental health and improving psychological functioning, reducing depression, and improving symptoms of neurodegenerative diseases. However, determining more effective strains, appropriate dosage, and optimal duration of use requires larger and longer-term clinical studies.

References

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