

Impact of Probiotics on mood elevation and gut health

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0309



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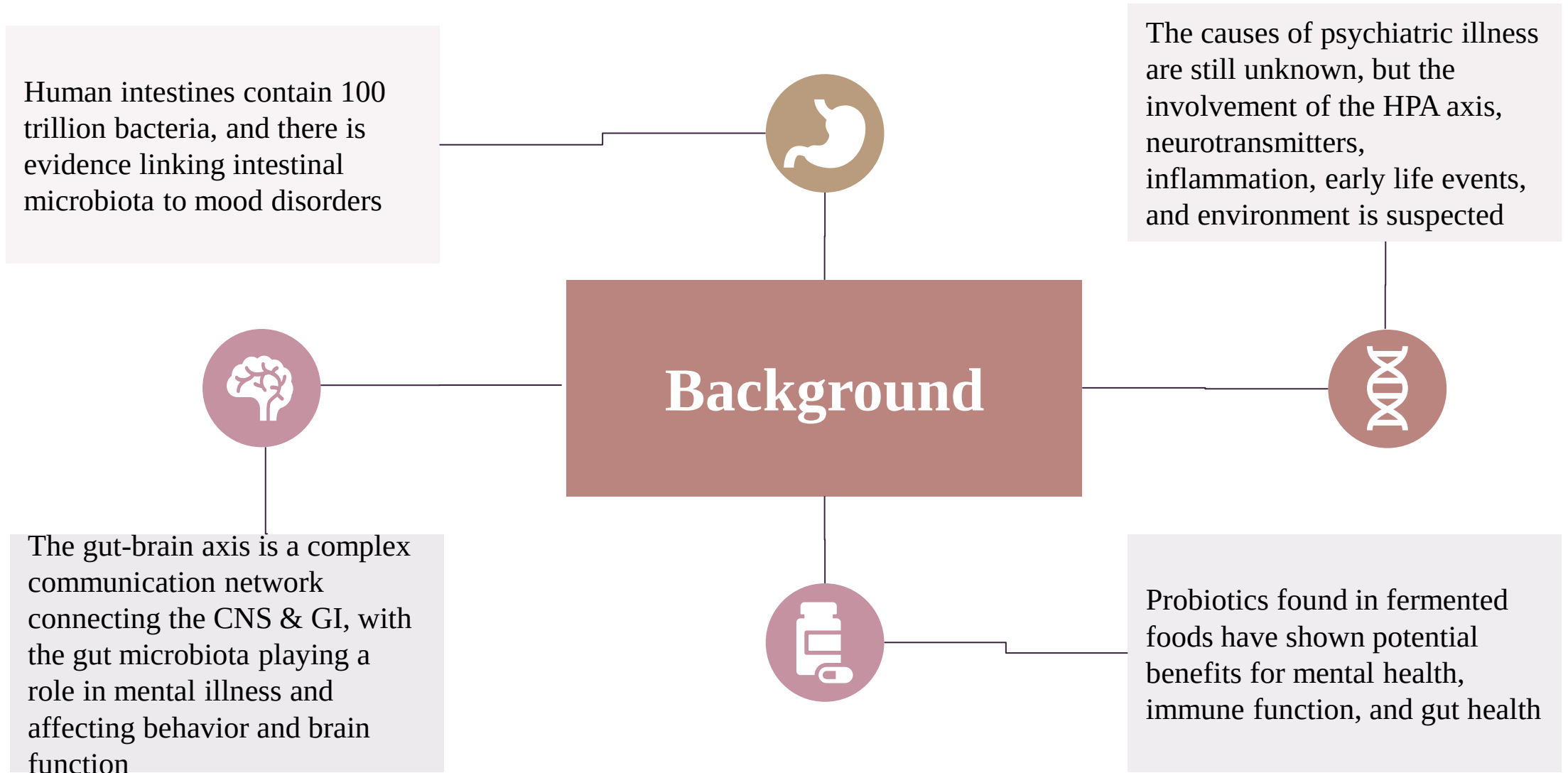
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Introduction



Scope of the Project



Probiotics are live microorganisms that can be ingested or applied topically to improve overall health and support the digestive system



Probiotics are available in various forms such as powder, pills, and fermented foods, and they form a significant and growing global industry driven by consumer interest in functional foods



Prebiotics, on the other hand, are indigestible food ingredients that promote the growth and efficiency of beneficial microorganisms



The early colonization of the gut microbiota plays a crucial role in the development of the nervous and immune systems, as well as the regulation of intestinal physiology



Microbial colonization of the intestine can have significant effects on the host's neurophysiology, behavior, and nervous system function, potentially impacting neurological and behavioral disorders such as anxiety and depression



Importance of the Project

The gut-brain axis is a biochemical signaling pathway and the vagus nerve connection between the stomach and brain

01

Probiotics, such as lactobacilli, can positively affect the immune and nervous systems by producing beneficial compounds and regulating neurotransmitter synthesis

03



02

The stomach produces neurotransmitters that play a crucial role in mood regulation

04

The gut and brain communicate through neuronal, humoral, and immunological signaling pathways

Research Objective



To understand Probiotics and their uses in health management



To analyze how doctors perceive probiotics as their therapy line for a treatment or prevention



Ability to identify potential scope in the coming years in pharmaceutical and nutraceutical market



Understand how the gut-brain axis functions and how it relates to managing gut flora

Review of Literature

Article 1: Liu, L., & Zhu, G. (2018)¹

- Different gastrointestinal microbiota compositions can modify mood disorder symptoms, while mood disorders themselves can alter the microbiota composition.
- Administering prebiotics, probiotics, and appropriate antibiotics can alleviate symptoms of depression and anxiety, providing alternative treatment options for mood disorders.

Article 2: Slyepchenko, A., F. Carvalho, A., S. Cha, D., Kasper, S., & S. McIntyre, R. (2014)²

- Probiotic therapy and studies on microbiome development offer potential prevention and treatment approaches for anxiety and depression disorders.
- The gut microbiota communicates with the central nervous system through neuronal, endocrine, and immunological pathways, regulating stress response and CNS development

Article 3: Dinan, T. G., & Quigley, E. M. (2011)³

- The microbiota-gut-brain axis, which is the relationship between the gut microbiome and brain function, has been the subject of research in mood and anxiety disorders.
- Probiotic treatment and studies on microbiome improvement might offer potential treatments and preventive approaches for depression and anxiety disorders.

Article 4: Quigley, E. M. M. (2010)⁴

- Probiotics are living organisms that have been proven to provide health benefits in high-quality human trials.
- Probiotics have shown beneficial effects in various human disease states, including diarrheal illnesses, inflammatory bowel diseases, and certain infectious disorders.

Research Methodology

Objective

- The objective of the research is to investigate the role of probiotics in mood elevation and gut health..
- The research involves both primary and secondary research methods

Research Method

- The research method employed is a combination of exploratory and descriptive approaches.
- Qualitative research is conducted using a questionnaire filled out by doctors, including General Practitioners, BHMS, and Allopathy practitioners.
- The questionnaire consists of seven questions aimed at gathering insights and opinions from the doctors.

Primary Research

- The primary research involves the administration of the questionnaire to a sample of 30 doctors.
- The questions cover various aspects such as patient types, health maintenance recommendations, suggestions for mental health balance, and opinions on probiotics for gut health and mood elevation.
- The responses obtained are analyzed and interpreted to gain an understanding of the subject matter.

Sampling Method & Data Collection

- Stratified random sampling is used to select the sample of doctors.
- The data collection instrument is an organized poll with closed-ended questions, administered through Google Forms.
- The collected responses are stored in an excel sheet and statistically analyzed using Microsoft Office Excel.
- The findings are then presented in the research report.

Data Analysis

01

Objective

02

Data Collection

03

Data Cleaning
and Preparation

04

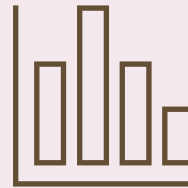
Data Analysis

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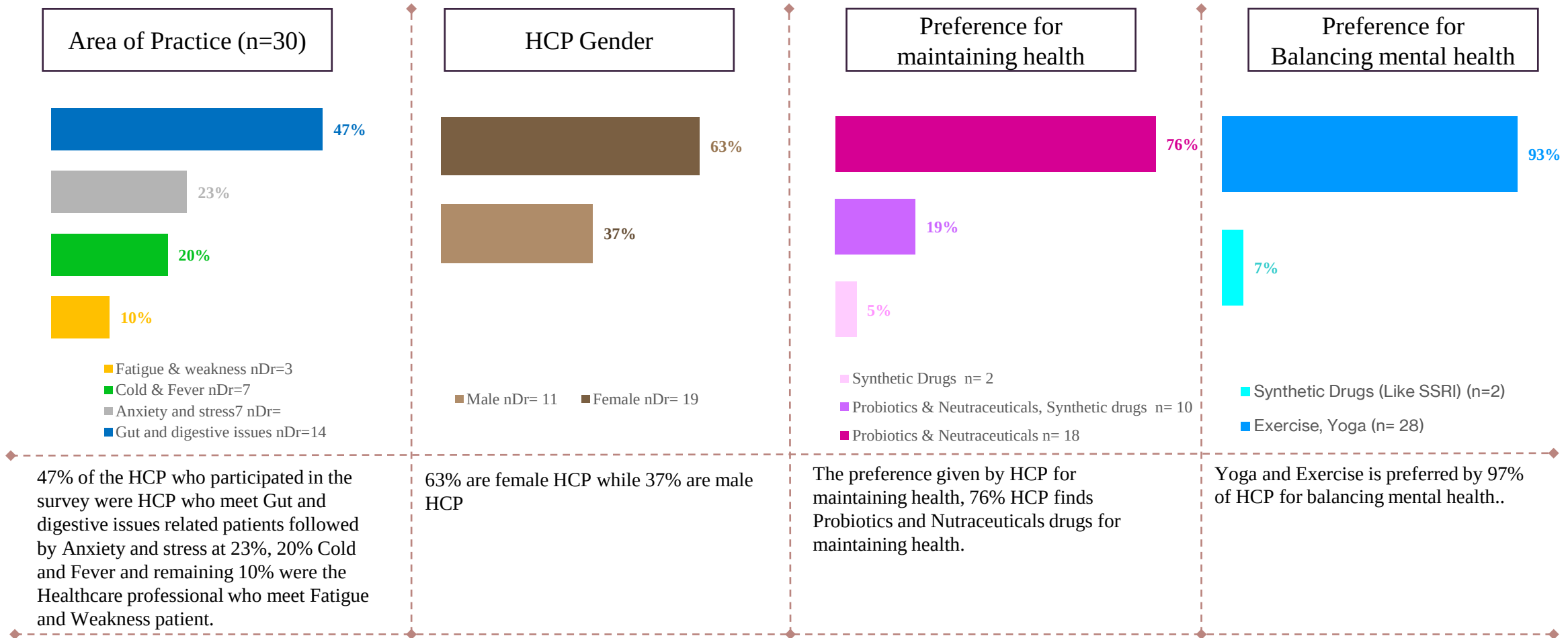
Statistical
Analysis

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Interpretation &
Inference



HCP profile

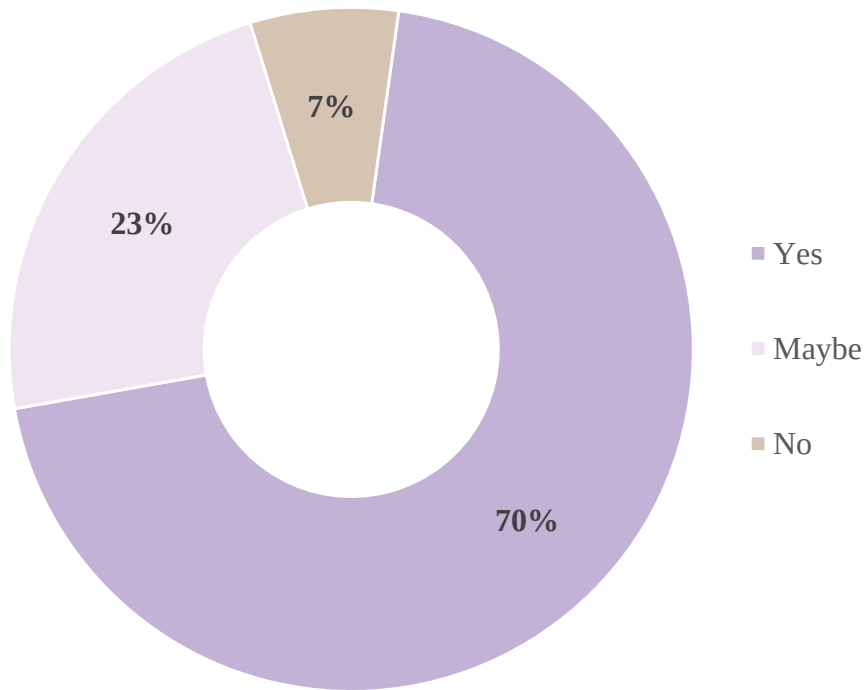


Source: Primary data

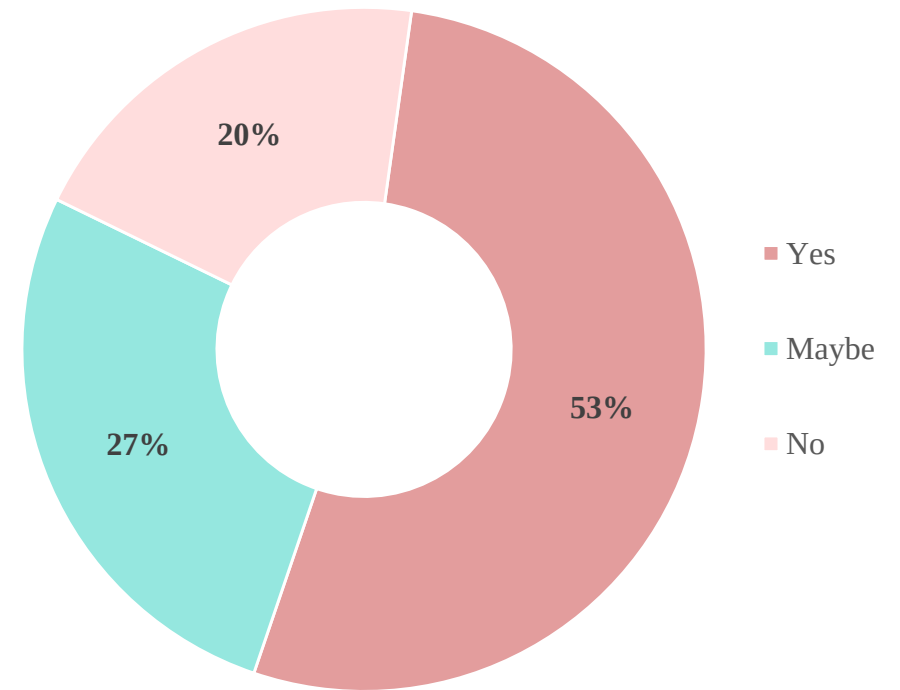
- Q1. Which type of patients do you meet frequently?
 Q2. HCP Gender
 Q3. Which do you prefer to patients for maintaining of health?
 Q4. What do you suggest for balancing mental health to your patients?

HCP preferences

Are probiotics healthy and better option for Gut Health



Intake of probiotics a healthy and better option for Gut Health

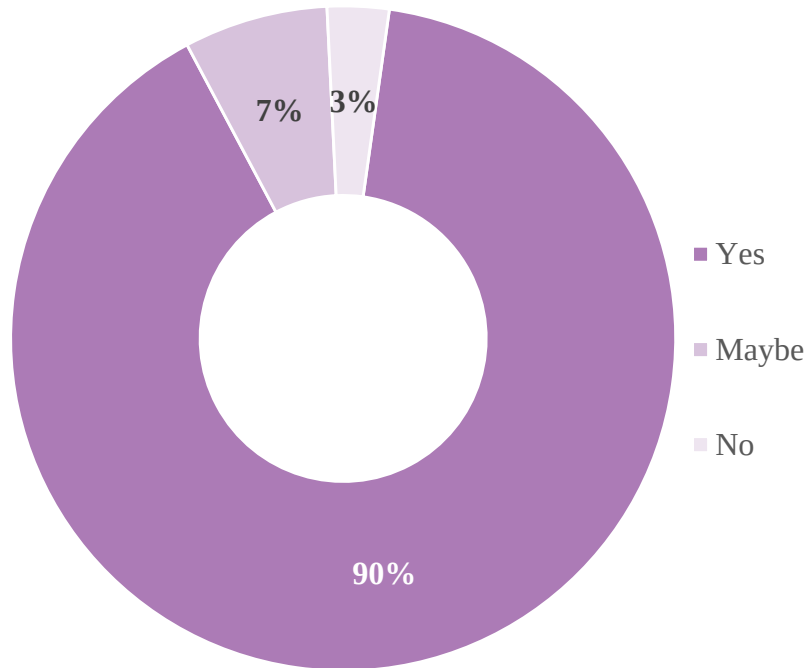


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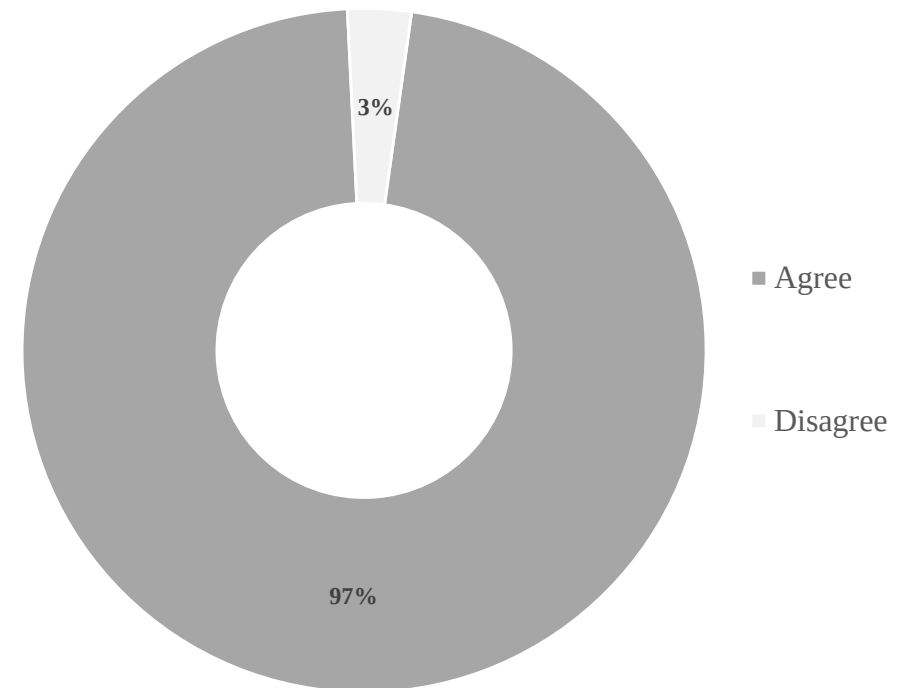
Q5. For Gut Health do you think probiotics are a healthy and better option?
Q6. Do you consider regular intake of probiotics help in healthy gut flora leading to mood elevation?

HCP preferences

Increased Patient awareness for Prebiotics after COVID 19



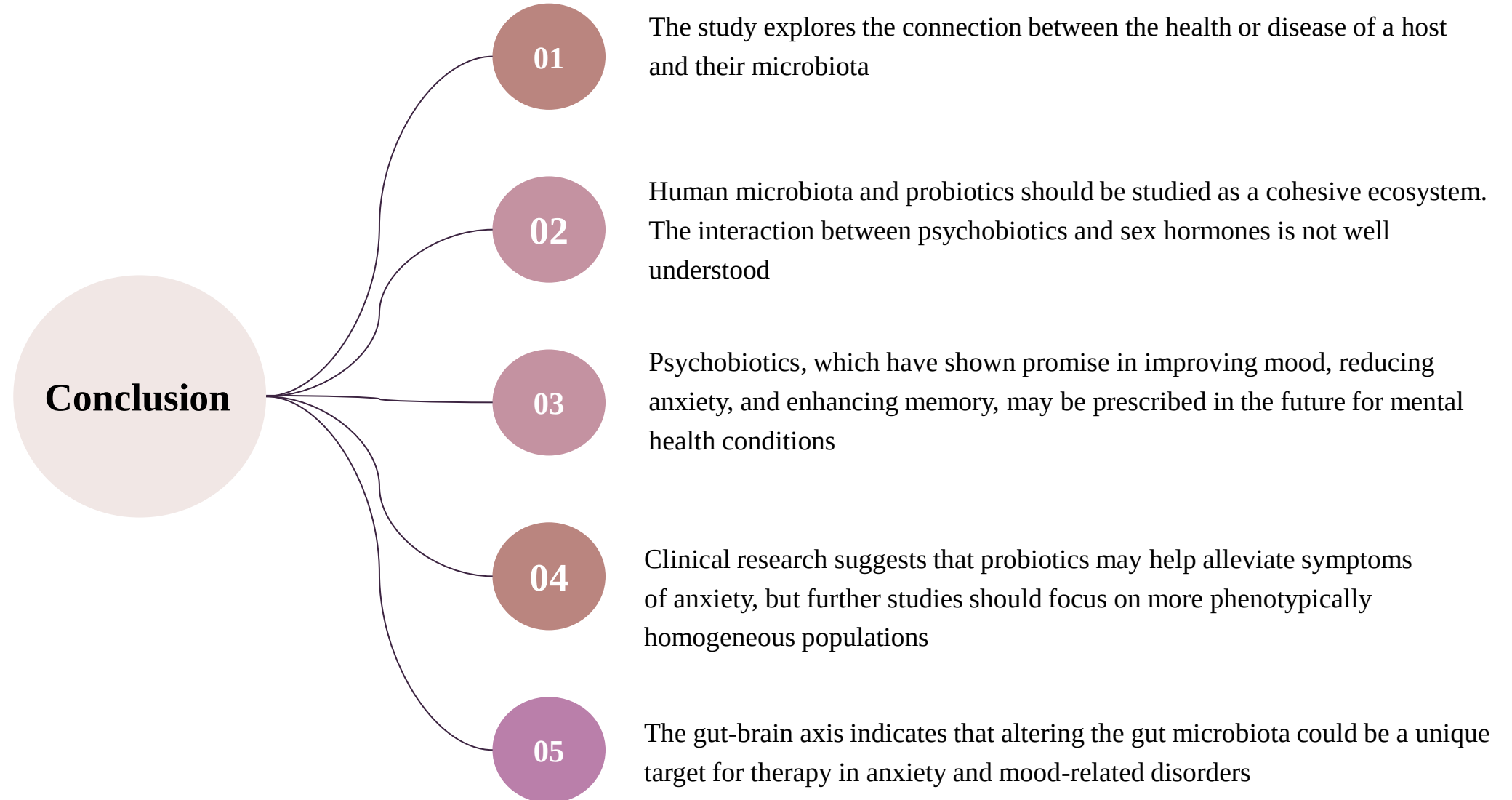
Probiotics are going to be a boon in the coming years.



Source: Primary data

Q7. Do you think after covid patient awareness has increased for probiotics?
Q8. Probiotics are going to be a boon in the coming years.

Conclusion



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Thank you!