



AGRI MAGAZINE

(International E-Magazine for Agricultural Articles)

Volume: 03, Issue: 03 (March, 2026)

Available online at <http://www.agrimagazine.in>

© Agri Magazine, ISSN: 3048-8656

Mental Health and Diet

*Meenakshi V, T Siva Sakthi and Kouslaya M S

Dept. of Food Science and Nutrition, CSC & RI, TNAU, Madurai, India

*Corresponding Author's email: meenakshi.v@tnau.ac.in

Mental health is essential for overall well-being and is influenced by various factors including socioeconomic status, genetics, lifestyle, and chronic diseases. Mental disorders are a major cause of disability globally, with a significant burden in India. Diet is a key modifiable factor affecting mental health. Nutrient-rich diets support brain function and reduce the risk of disorders like depression and anxiety, while poor dietary habits increase vulnerability. Thus, improving diet can serve as an effective strategy for promoting mental well-being and reducing the burden of mental disorders.

Introduction

Mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community. Mental/ Psychological disorders are commonly defined as disease that cause disturbance in an individuals thought processes and feelings, or that cause behavioral changes which inhibit him/her from coping with daily routine. (2016 Mental Health Policy and Service Development Project. WHO, Geneva.)

Mental disorders are one of the leading causes of disability. Suicide is the fourth leading cause of death among 15-29-year-olds. People with severe mental health conditions die prematurely – as much as two decades early – due to preventable physical conditions. As per the Global Burden of Disease report, mental disorders accounts for 13 % of total disability –adjusted life years (DALYs) lost for years lived with disability (YLD) with depression being the leading cause. As per mental health survey of India, it is estimated that excluding tobacco use disorders, mental morbidity of individuals above the age of 18 years currently is 10.6%. 150 million Indians need active interventions.

Social and financial circumstances, biological factors, persecuted ethnic group and lifestyle choices can all shape a person's mental health. Everyone has some risk of developing a mental health disorder, no matter their age, sex, income, or ethnicity. The NIMH suggest that genetic family history can increase the likelihood of mental health conditions, as certain genes and gene variants. Mental health conditions may also develop due to underlying, life-changing physical health problems, such as cancer, diabetes, and chronic pain. (Adam Felman , 2020). It was found that being female increased the risk of low mental health status by 3.96 times. People with a “weak economic status” also scored highest for mental health conditions in a study carried out by Meysam Behzadifar *et al*, 2015). Mental health problems that can be modifiable are known as modifiable factors, which can change over time, and nonmodifiable factors, which are permanent plays a key role.

Modifiable factors for mental health disorders include:

- Socio-economic conditions, such whether work is available in the local area
- Occupation
- A person's level of social involvement
- Education
- Housing quality

Non modifiable factors include:

- Gender
- Age
- Ethnicity

Classification of mental disorders

There are more than 200 classification of mental disorders. of which the most common are depression - dementia, schiaforenia and anxiety.

a. Anxiety disorders

According to the Anxiety and Depression Association of America, anxiety disorders are the most common type of mental illness.

Generalized anxiety disorder (GAD)

The American Psychiatric Association defined GAD as disproportionate worry that disrupts everyday living. People might also experience physical symptoms, including

- Restlessness
- Fatigue
- Tense muscles
- Interrupted sleep

They may experience excessive anxiety on encountering everyday situations that do not present a direct danger, such as chores or keeping appointments. A person with GAD may sometimes feel anxiety with no trigger at all. (*Dillon Browne, 2020*)

b. Panic disorders

People with a panic disorder experience regular panic attacks, which involve sudden, overwhelming terror or a sense of imminent disaster and death.

c. Phobias

There are different types of phobia:

Simple phobias: These might involve a disproportionate fear of specific objects, scenarios, or animals. A fear of spiders is a common example.

Social phobia: Sometimes known as social anxiety, this is a fear of being subject to the judgment of others. People with social phobia often restrict their exposure to social environments.

Agoraphobia: This term refers to a fear of situations in which getting away may be difficult, such as being in an elevator or moving train. Many people misunderstand this phobia as a fear of being outside.

Phobias are deeply personal, and doctors do not know every type. There could be thousands of phobias, and what might seem unusual to one person may be a severe problem that dominates daily life for another.

d. Obsessive-compulsive disorder (OCD)

People with OCD have obsessions and compulsions. In other words, they experience constant, stressful thoughts and a powerful urge to perform repetitive acts, such as hand washing.

e. Post-traumatic stress disorder (PTSD)

PTSD can occur after a person experiences or witnesses a deeply stressful or traumatic event. During this type of event, the person thinks that their life or other people's lives are in danger. They may feel afraid or that they have no control over what is happening. These sensations of trauma and fear may then contribute to PTSD.

f. Mood disorders

People may also refer to mood disorders as affective disorders or depressive disorders. People with these conditions have significant changes in mood, generally involving either mania, which is a period of high energy and elation, or depression. Examples of mood disorders include:

Major depression: An individual with major depression experiences a constant low mood and loses interest in activities and events that they previously enjoyed. They can feel prolonged periods of sadness or extreme sadness.

Bipolar disorder: A person with bipolar disorder experiences unusual changes in their mood, energy levels, levels of activity, and ability to continue with daily life. Periods of high mood are known as manic phases, while depressive phases bring on low mood. Read more about the different types of bipolar here.

Seasonal affective disorder (SAD): Reduced daylight triggers during the fall, winter, and early spring months trigger this type of major depression. It is most common in countries far from the equator.

g.Schizophrenia disorders

Mental health authorities are still trying to determine whether schizophrenia is a single disorder or a group of related illnesses. It is a highly complex condition and signs develop between the ages of 16 and 30 years, according to the NIMH. Schizophrenia has negative and positive symptoms. Positive symptoms include delusions, thought disorders, and hallucinations. Negative symptoms include withdrawal, lack of motivation, and a flat or inappropriate mood. There is no physical test or scan that reliably indicates whether a person has developed a mental illness. However, people should look out for the following as possible signs of a mental health disorder (Johnstone and Lawrie SM., 2010):

- withdrawing from friends, family, and colleagues
- avoiding activities that they would normally enjoy
- sleeping too much or too little
- eating too much or too little
- feeling hopeless
- having consistently low energy
- using mood-altering substances, including alcohol and nicotine,
- more frequently displaying negative emotions
- being confused
- being unable to complete daily tasks, such as getting to work or
- cooking a meal
- having persistent thoughts or memories that reappear regularly
- thinking of causing physical harm to themselves or others
- hearing voices
- experiencing delusions

Managing Mental Disorder by Diet :

Considering the increasing number of Mental health issues WHO declared 10th October every year to be observed as world mental health day. In 2019, WHO launched the WHO Special Initiative for Mental Health (2019-2023): Universal Health Coverage for Mental Health to ensure access to quality and affordable care for mental health conditions in 12 priority countries to 100 million more people.

Human brain is always "on." It takes care of thoughts and movements, breathing and heartbeat, senses — it works hard 24/7, even while when we are asleep. This means human brain requires a constant supply of fuel. That "fuel" comes from the foods we eat — and what's in that fuel makes all the difference. In other terms what we eat directly affects the structure and functions of brain and, ultimately, the mood.

Diet is an extremely important prerequisite for good mental health. What you eat affects you both physically and mentally. People who include loads of junk and comfort foods in their diet tend to have poorer mental health as compared to the ones who follow a healthy and balanced diet. The relationship between food intake and depression defined calorie restriction as a 30–40% decrease in calorie intake while retaining protein, vitamin, mineral, and water intake to maintain proper nutrition. According to this definition, a person who usually eats 2,000 calories per day would eat between 1,200 and 1,400 calories instead.

Healthy people who reduced their calorie intake by 25% for 6 months also had reduced depressive symptoms. Yifan Zhang *et al.*, (2015). It is also important not to restrict calories or follow a low calorie diet in the long term, as this can damage neurons and make depressive symptoms worse.

Foods that Boost Mental Health

1. Salmon

Salmon a “fatty” fish, containing high amounts of omega-3 fatty acids, which have been linked to a reduction in mental disorders such as depression. Omega-3s have been shown to boost learning and memory as well. Salmon also has a naturally high-occurring amount of vitamin D, which is often added to foods and has been linked to lower rates of depression. Other types of fish with high Omega-3 counts include tuna, mackerel, and herring.

2. Chicken

Chicken, like turkey, is a delicious lean-protein choice containing the amino acid tryptophan. It helps body produce serotonin — which is vital in helping your brain manage your mood, fight depression and help maintain strong memory.

3. Whole Grains: Foods classified as whole grains contain complex carbohydrates, which leads to glucose being produced more slowly, as a more even and consistent source of energy. Also, whole grains help the brain absorb tryptophan, which means that when eaten in conjunction with foods like chicken and turkey, you can further reduce symptoms of depression and anxiety while boosting brain function.

4. Avocados

Avocados are full of vitamin K and folate, which help protect your brain against stroke. and boost memory and concentration. Avocados serve up a high dose of lutein, too, which studies have linked to improved brain function.

5. Spinach

Spinach and other leafy greens provide brain with solid amounts of folic acid, which has been shown to be a great deterrent to depression. It also helps fight off insomnia, which is heavily linked to mental impairments and can help reduce dementia in older adults.

6. Yogurt

Yogurt and other products containing active cultures are excellent sources of probiotics and play a role in reducing stress and anxiety. Yogurt is a good source of potassium and magnesium, which helps oxygen reach the brain, further improving its ability to function.

7. Nuts

Like salmon, nuts are an excellent source of omega-3 fatty acids, helping to fight depression. Cashews, for example, help provide oxygen to the brain with a dose of magnesium. Almonds contain a compound called phenylalanine, which is shown to help the brain produce dopamine and other neurotransmitters that boost up mood. Phenylalanine has also been linked to a reduction in the symptoms of Parkinson’s Disease.

8. Olive Oil

Pure, extra virgin olive oil has been quite popular as of late as a part of healthy Mediterranean-style diets. This type of oil contains polyphenols, which help to remove the effects of proteins linked to Alzheimer’s Disease. It can also help improve learning and memory

9. Tomatoes

The source of a tomato’s red hue, lycopene is classified as an all-around beneficial phytonutrient. One of the many health boosts it provides is in the fight against brain disease. It’s been shown to delay the onset and progression of Alzheimer’s Disease, fighting off cell damage. In addition, lycopene has been shown to help with memory, attention, logic and concentration.

10. Dark Chocolate

Dark chocolate is categorized as such due to its cocoa content, which you won’t find in milk chocolate. And the darker the better-85% cocoa or more is the most beneficial. Dark

chocolate contains high levels of flavonoids, a type of antioxidant. It has been shown to boost attention and memory, enhance mood and help fight cognitive decline in older adults. Just remember, chocolate should still be consumed in moderation. (Boyles,2018)

11. Bananas affect tryptophan - an amino acid which helps in production of serotonin. Tryptophan also helps in improving sleep and regulates intake of food. Potassium-rich bananas also contain good amount of Vitamin B-6 and fibre.

12. Sweet potatoes : Beta-carotene is an antioxidant which also helps in reducing oxidative stress on DNA - thus reducing risks of diseases like schizophrenia, anxiety and depression.

13. Turmeric: Curcumin is a compound in turmeric which can help in improving memory, ease depression and facilitate growth of new brain cells.

14.Vitamin C rich fruits : Vitamin C is a key nutrient which helps in preventing mental decline. Eating Vitamin C-rich foods regularly can help in preventing Alzheimer's disease as well. Fruits rich in Vitamin C include oranges, kiwi, tomatoes, strawberries and bell peppers.

15. Berries

Berries contain flavanols. These possess antioxidant and anti-inflammatory properties and, as a result, they can decrease and fix cell damage. They also contain anthocyanins, which slows down the process of ageing in brain cells, and improves memory.

Foods or diets to avoid

A 2010 study showed that women who ate unhealthful Western-style diets had more psychological symptoms. The foods that these participants were eating included: processed foods, fried foods, refined grains, such as white bread, sugary products and beer. Similar unhealthful dietary patterns that typically lead to obesity, diabetes, and other physical health problems can also contribute to poor mental health. (*Felice N Jacka et al,2010*)

Conclusion

Mental health is an important aspect of overall health. Many mental health conditions can be effectively treated at relatively low cost. Psychotherapy approaches and medications are standard first-line treatments suggested for clinical depression and general anxiety disorders. In addition, the emerging field of nutritional psychiatry suggests a relationship between diet quality and mental health and considers the use of dietary and nutraceutical interventions to address mental disorders and to potentially improve patient outcomes. Recent research suggests that while nutritional habits, dietary patterns, and diet quality may all impact overall mental wellness, they may also be modifiable risk factors for mental disorders. The burgeoning field of nutritional psychiatry is finding there are many consequences and correlations between not only what you eat, how you feel, and how you ultimately behave, but also the kinds of bacteria that live in your gut. Eating high-quality foods that contain lots of vitamins, minerals, and antioxidants nourishes the brain and protects it from oxidative stress. Hence practice clean" diet for two to three weeks — that means cutting out all processed foods and sugar and feeling of wellness in terms of physically and emotionally.

References

1. Adam Felman , 2020 Mental health: Definition, common disorders, early signs, and more., Medically reviewed by Timothy J. Legg, PhD. Medical News Today, page 1, April 13, 2020,
2. Boyles,2018,Foods that Boost Mental Health.
3. Chaudhury PK, Deka K, Chetia D. (2006). Disability associated with mental disorders. Indian J Psychiatry, 48(2): 95–101.
4. Felice N Jacka, Julie A Pasco, Arnstein Mykletun, Lana J Williams, Allison M Hodge, Sharleen Linette O'Reilly, Geoffrey C Nicholson, Mark A Kotowicz, Michael Berk. 2010. Association of Western and traditional diets with depression. Am J Psychiatry. Mar;167(3):305-11.
5. Jessica Caporuscio, Pharm.D., 2019, Best diet for mental health, Medically reviewed by Natalie Olsen, R.D., L.D.,

6. Eve Johnstone, David Cunningham Owens, Stephen Lawrie, Andrew McIntosh, Michael Sharpe. (2010). An introduction to psychiatry. In: Companion to Psychiatric Studies (Eighth Edition), 1-16.
7. Meysam Behzadifar et al, 2015, Economic factors influencing mental health using multiple regression model in Ilam province of Iran. Med J Islam Repub Iran. 2015; 29: 292.
8. WHO (World Health Organization).2016 Mental Health Policy and Service Development Project. WHO, Geneva. http://www.who.int/mental_health/policy/en/.
9. Yifan Zhang, Changhong Liu, Yinghao Zhao, Xingyi Zhang, Bingjin Li and Ranji Cui 2015. The Effects of Calorie Restriction in Depression and Potential Mechanisms. Curr Neuropharmacol. 2015 Jul; 13(4): 536–542.