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## **FEASIBILITY STUDY OF VITAMIN B COMPLEX INFLUENCE TO THE MENTAL HEALTH**

### ***Introduction***

Mental disorders among the population are having a global concern due to multiple factors including genetics, life experiences, physical environment, socioeconomic status, social interactions, lifestyle habits and a balance diet. Every factors cannot control but some can control for improve mental health. The Mental disorders can manifest as depression, anxiety or other disorders. Various factors can cause mental disorders, including dietary intake, which has an important role in psychological development. Many studies have assessed the relationship between B-vitamin intake and mental health.

B vitamins, specially vitamins B1, B6, B9 and B12, is associated with mood disorders that eventually cause stress or depression due to neurotransmitter disorders and increased homocysteine in the blood. The leading cause of deficiency in B vitamins is the result of inadequate consumption. Some people get adequate amount of vitamin B in their diet.

Vitamin deficiencies can be caused by poor nutrition, vegetarianism, chronic alcoholism's-gastrectomy surgery, pregnancy and certain medications. Vitamin B12 and other B vitamins play a role in producing brain chemicals that affect mood and other brain functions. Low level of B12 and other B vitamins such as vitamin B6 and folate may be linked to depression.

Low levels of vitamins can result from eating a poor diet or not being able to absorb the consume vitamins. Older adults, vegetarians and people with digestive disorders such as celiac disease or Crohn's disease may have trouble getting enough B 12.

Good sources for getting vitamin B includes meats (specially beef liver, lamb, pork), seafood (tuna & cod), poultry & eggs, dairy & soy products (milk, cheese, curd and yougurt), legumes (beans, lentils), oats, dark leafy greens (spinach, broccoli), seeds (sunflower), nuts(almonds), wholegrains (brown rice, barley, millet ) & cereal products enriched with vitamin B12 and some fruits (banana, citrus fruits, avocado). Although the list of sources of vitamin B is seemingly long, it still might be not enough during period of intense life and various diseases (especially digestive system disorders).Lot of research reveals that there is a significant effect to the mental health and well-being by vitamin B.

### ***Goal***

The aim of this study was to examine the relationship between intake of vitamin B with mental disorders such as depression and anxiety among students and working people above 20 years old.

### ***Material and methods of research***

This analysis and generalization of modern medical scientific literature on this topic and a cross – section online survey was used to measuring levels depression, anxiety, stress and associated factors and dietary patterns. This survey tagged students and working people above 20 years old.

The study includes three questionnaires. Demographic questionnaire – participants including age, sex and status. The second one is based on frequency of food intake including vitamin B and using food frequency questionnaire developed by researchers. Questionnaires for Depression and anxiety developed by The National Health Service in UK (NHS).

***The results of the research and their discussion***

The results of this study are presented according to the main categories of questions starting from demographic analysis, food frequency analysis, mood assessment analysis within each sub-section of this main result section.

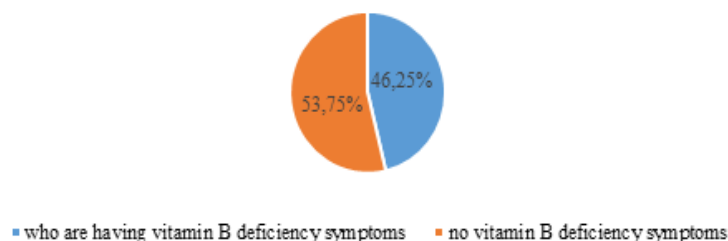
Overall, 80 participants completed the questionnaire and provided written consent to participate in the study. Table 1 describes the characteristics of the study sample. The sample contained 37 males (46.3 %) and 43 female (53.8 %). The majority of the participants were studying 75 % and 25 % percent were working.

Table 1 – Demographic analysis

Gender	Number	Percentage
Male	37	46.3 %
Female	43	53.8 %
Status	Number	Percentage
Studying	60	75 %
working	20	25 %

According to the food preference majority of respondents are non – vegetarians 87.5 % and other 12.5 % are vegetarians. Most of respondents did not consume B-vitamin supplements (76.3 %) and most of them lacked intake foods containing vitamin B (55.10 %). According to mood analysis assessment majority of students shown mild and moderate depressive symptoms (56.4 %) and some symptoms in anxiety (50.3 %). Figure 1 shows the participants who are having vitamin B deficiency symptoms.

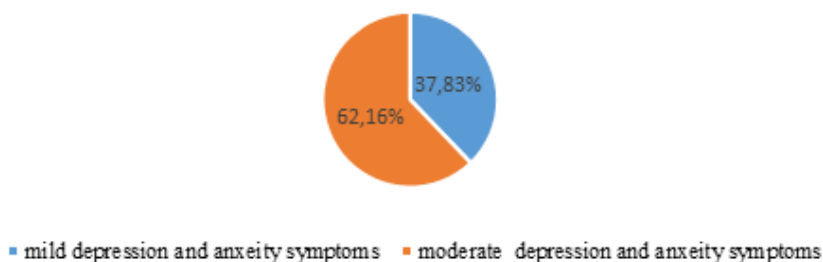
**vitamin B deficiency symptoms present participants**



**Figure 1 – Participants who are having vitamin B deficiency symptoms**

According to figure 1, 37 (46.25 %) participants are suffering from vitamin B deficiency symptoms and 43 (53.75 %) participants haven’t any symptoms. Figure 2 shows the participants who are having moderate & mild symptoms of depression and anxiety among the participants of who are having vitamin B deficiency symptoms.

**depression and anxiety symptoms present among vitamin B deficient participants**



**Figure 2 – Participants who are having moderate & mild symptoms of depression**

According to the figure 2, among the respondents of having vitamin B deficiency symptoms, 23 (62.16 %) participants are having moderate symptoms of depression and anxiety. 14 (37.83 %) participants are having mild symptoms of depression and anxiety.

### **Conclusion**

Almost half of the participants experienced moderate and mild depressive & anxiety conditions. Almost half of the participants lacked intake of foods containing vitamin B. The mental disorders such as anxiety and depression have a statistically significant relationship with vitamin B intake. Therefore, the intake of vitamin B complex needs to be considered to reduce the opportunity of experiencing mental disorders either with food intake or additional supplements.

### **LITERATURE**

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**УДК 37.091.33:[616.89-008.47:616-008.61]-053.5**

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## **PREVALENCE OF PREDOMINANT LEARNING DISABILITIES IN CHILDREN AND ADOLESCENTS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER IN SRI LANKA**

### **Introduction**

ADHD is one of the most common neurodevelopmental disorders of childhood. According to ICD-10, ADHD is a chronic neurobehavioral disorder and often associated with serious areas of impairment and comorbidities over a life span. A mean worldwide prevalence of ADHD has been estimated in children and adolescents (< 18 years) to be 8.8 %. It is commonly first diagnosed in childhood and often lasts into adulthood [1].

The causes and risk factors for ADHD are unknown, but current research shows that genetic factors play an important role. Recent studies have linked genetics with ADHD. Other than genetics, other possible causes and risk factors including: brain injury, exposure to environmental risks (e.g., lead) during pregnancy or at a young age, alcohol and tobacco use during pregnancy, premature delivery and low birth weight. Children with ADHD may show a trouble paying attention, controlling impulsive behaviors or be overly active. A child with ADHD might also, daydream a lot, forget or lose things a lot, squirm or fidget, talks too much,