

A study of mental health among people with vitamin B12 deficiency

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ABSTRACT

The aim of present investigation was to know the differential impact of level of B 12 and stages of development on mental health among people having vitamin B12 deficiency. Sample of 60 people with vitamin B12 deficiency were taken from laboratory and hospital of Bhavnagar city, Gujarat. Data were collected with the help of mental health scale made by **Dr. A. K. Shreevastav and Dr. Jagdish (1982)** and translated in to Gujarati by **Bhavana K. Thummar (2009)** collected data were statistically analysed with the help of ANOVA. The result showed significance mean difference between the < 150 pg / mL and 150 – 200 pg / mL level of B12 among people having vitamin B12 deficiency ($F = 61.20$). There is no significant mean difference between mental health of adolescents and young adults ($F = 1.16$). There is significant mean difference between level of B12 and stages of development

Keywords: *Vitamin B12 Deficiency, Mental Health*

Mental health is a burning question of the modern ear. At present people are facing many physical and mental problems. Much physical impairment can also affect mental health. Mental discomfort can also affect the body. Mental health and physical health are two sides of a same coin. Mental health is essential if humans want to live a healthy life. Mental health is the foundation for optimal development. It is said that “one whose mind is healthy his / her body is healthy” according to the WHO definition, “physical, mental, social and spiritual well-being and absence of disease or deformity only means health” According to a definition of world health organization (Panchal, D. and others-2018-19). A person who realizes his or her ability, usually faces a normal life, rick can do good thing if he or she can work. For his community called mental health. In this positive sense, mental health means good support for the individual and effective functioning for the community.

Mental health influencers

1. Education tasks
2. Productivity of work
3. Development of positive personal relationships

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More than 450 million people suffer from mental diseases world-wide. According to WHO depression will become the second largest disease in the world by 2020 (marray and lopez-1996). Vitamin B12 deficiency can endanger a personal's mental health. Vitamin B12 is an essential water-soluble vitamin. This is essential for the growth and development of the cells in our body. This vitamin is responsible for the growth of the central nervous system (brain and nervous system) and blood vessels. It also helps to make DNA. Vitamin B12 helps in recovery of megaloblastic anemia. That makes anemia a person weak and tired. Vitamin B12 deficiency causes symptoms such as depression, frustration, anxiety, psychosis, anger, insomnia, mental stress and Alzheimer's disease (Jani, s.-2019). So here is the study of mental health of people with vitamin B12 deficiency.

METHODOLOGY

Hypothesis

1. The following things of hypothesis have been formulated for the in investigation.
2. There is no significant difference of mental health among people having level of B12 < 150 pg/mL and 150 – 200 pg/mL.
3. There is no significant difference of mental health among adolescents and young adults.
4. There is no significant difference of mental health among level of B12 deficiency and stages of development.

Sample

Sample of 60 adolescents and young adults were purposive selected form laboratory and hospital of Bhavnagar city, Gujarat. The care was taken that level of B12 below 200 pg / mL of all subjects, Remains almost low B12 vitamin. All subjects are taken from age of 12 to 40 years.

Research design

2 X 2 factorial designs was used

A = level of B12 deficiency

A₁ = < 150 pg / mL B12 level

A₂ = 150-200 pg / mL B12 level

B = Stages of development

B₁ = adolescents

B₂ = young adults

Tools

For collecting the pertinent data, the following tools for used

Personal information schedule

The main parses of this schedule are to collect certain pertinent data regarding the various information such as level of B12 and stages of development age collected thru this schedule.

Mental health scale

The scale was developed by Dr. A. K. Shreevastav and Dr. Jagdish (1982). There is originally in Hindi but for the purpose of inverting use the scale translated in to Gujarati by Bhavna K. Thummar (2009). Here is the follow information about this scale.

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Reliability

The reliability coefficient and indices of reliability is as follows,

No	Method	N	Correlation
1	Test retest	100	0.77*
2	Split half	100	0.75*

*at significant level of 0.01

Validity

The coefficient of validity was determined by computing the coefficient of correlation between score a mental health scale and it was 0.68 which insignificant bay and the level of 0.01 level of confidence.

Procedure

The inventory of mental health scale consists 56 sentential. The scale is having four options (1) always (2) generally (3) sometime (4) never. Inventory has both positive and negative sentences. 31 sentences are positive and giving the score 1,2,3,4 and 25 sentences are negative and giving the score 4,3,2,1. Respectively the maximum possible score is 224 and minimum possible is 56 low score in to be. Interpreted as having score high score represent poor mental health and Low score represent good mental health. These scores were statistically threaded for ANOVA.

RESULTS

Table no:1 Showing the summary of all - "F" ratio of mental health among B12 deficiency

Sources of variation	Sum of squares	df	Mean sum of squares	"F" Ratio	Level of significant
A	5606.66	01	5606.66	61.20	0.01
B	106.66	01	106.66	1.16	N.S.
A × B	1771.29	01	1771.29	19.34	0.01
WSS	5130.12	56	91.61	-	-
TSS	12614.73	59	-	-	-

N.S. = Not Significant

DISCUSSION

The aim of present investigation was to know the differential impact of vitamin B12 level and stages of development on mental health among people having B12 deficiency. For overall and internal effect of ANOVA a stoical preferable measure results indicate that there is significant difference among aver all group as first hypothesis regarding level of B12 deficiency is rejected according to study done by **Durand and others (2003)** B12 deficiency was found to be the cause of mental illness in a 64-year-old woman. The proportion of B12 was found to be 52 pg / mL level. That is the level of B12 deficiency can lead to many mental problems such as depression, anxiety, frustration, insomnia, fatigue, stress and Alzheimer's disease (**Jani S.-2019**) this research has also shown the effect of level of B12 deficiency on mental health. Second hypothesis regarding stages of development is acceptable it means a stage does not affect mental health according to **Arora, H. and others (2016)** an analysis of the prevalence of vitamin B12 deficiency in their study groups showed that 35% of adolescents had vitamin B12 deficiency. Percentage increased with age with 82% being observed in young adults. There fare, the effect of development stages is not seen. The third hypothesis is also rejected regarding level of B12 deficiency and stages of

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development which significantly differs among people having vitamin B12 deficiency on mental health.

CONCLUSION

1. Mental health among people were found significant regarding there < 150 pg / mL and 150-200 pg / mL level of B12 deficiency.
2. Mental health among people were found not significant regarding stages of development.
3. Comparison of level of B12 deficiency and stages of development were found significant.

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Conflict of Interest

The author declared no conflict of interest.

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