



"TYPE OF DIET CONSUMED AND LEVEL OF DEPRESSION IN INDIAN INDIVIDUALS"

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ABSTRACT:

M.F.K Fisher once said. "First we eat, then we do everything else." This holds quite true is an integral part of not just our physical survival but also our social and cultural world every culture, every community, every different geographical region has a different way of consuming food. They cook it differently, garish it in unique ways and consume it differently, at different times and in different ways. So, when it is said. "You are what you eat" there is an extension to it that needs to be acknowledged, "How and when you eat it"



KEY-WORDS: Chromone, drug, scaffolds, biological cycles, Biological Activity.

INTRODUCTION:

The older cultures believed food as a mode of improving not just muscles and physical appearance of the body but also the mental health and performance of the individual. This sentiment is somewhat forgotten over the past century as food has become a necessary chore for some, a mode of lifestyle for oilier and something unattainable for a stratum of the society who go hungry and malnourished]n India, food has always been a social and a significant affair. With the importance given to the community and culture in India, in ancient times food was prescribed based on In addition, there may be a loss of energy; a change in appetite, sleeping more or less; anxiety reduced concentration indecisiveness, restlessness, feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or even committing suicide.

AYURVEDIC CONCEPT OF ILLNESS AND TREATMENT

Ayurveda derives its roots from Atharvaveda and it is one of the ancient science which means science Though principles of Ayurveds find a mention in vedantic treatise also, the classic written ocuments are Chirak Samhita (1400 BC) and Sushrut Samhita (1500 BC)

These two classics describe mental disorders, personality types according to trigunas - the satva, raj and tan and tridoshas the three humours in the body vat, pitta, kapha

The chapter on manaog describes hetu the causative factors for mental disorders.

1. **Darbal Sattya** - people who have weak sattva characteristics have increased raja and tama characteristics which leads to emotions like anger and uncontrolled emotions which leads to mental disorder
2. **Durbal Sharir** -Nutritional deficiencies leading to weak physical structure can lead to mental

1. Nijinanas rog has been further divided into:

- (a) Manas Dosh Janya caused by psychological factors and (b) Sharir Doshanubandh Janya caused by physical illnesses.
- (b) Manas dosh janya illnesses arising out of psychological factors are those due to pragyaparadh eg Kam, Krodh, Lobh, Moh, Irshya, Man, Mad, Shok, Chinta, Chittodvaig, Bluya etc.

PURPOSE OF LITERATURE REVIEW

Research summaries reported in textbooks, magazines, and newspapers are considered secondary ves. They typically provide global descriptions of results with few details on the methodology Other examples of secondary sources include biographies and critical studies of an author's work **literature lationship between diet and depression**

Villegaz and Gonzalez, 2013: conducted research on the role of diet in prevention of depression They stated that the research in this field is very scarce. However, there is evidence that suggests psion shares mechanisms of cardiovascular disease. They highlight three elements that should be considered in studying diet and depression:

1. Information is collected through questionnaines and it could risk misclassification bias.
 2. Adequate control of confounding factors in observational studies is mandatory
- Analyses cohort studies have yielded the similar results to those obtained for the role of day and cardiovascular disease. They suggest a rood for longitudinal states with improved methodology and large randomized primary prevent trials, with inventions based on changes in the all food pattern, that include participants athigh risk of metal.

RESEARCH METHODOLOGY

Definition:

V Redman and A. V. H. Mory:

Research is a systematized effort to gain knowledge
In a normal systematic research, the following system is adopted

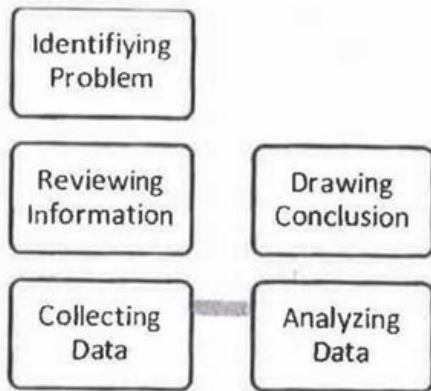


Figure & Graphical Representation of the Research Methodology Followed

Validity and Reliability of Beck Depression Inventory:

Validity High concurrent validity ratings are given between the BDI and other depression instruments as The BDI test is widely known and has been tested for content, concurrent, and construct the Minnesota Multiphasic Personality Inventory and the Hamilton Depression Scale; 0.77 correlation rating was calculated when compared with inventory and psychiatric ratings The BDI has also showed high construct validity with the medical symptoms it measures Beck's study reported a coefficient alpha rating of 0.92 for out patients and 0.93 for college student samples.

The BDL-11 positively correlated with the on Depression Rating scale, r=0.71 had a one week test retest reliability of r -0.93 and an stency a.91.

Statistical Techniques used in the Present Study:

In this research study the researcher used Mean, One Way ANOVA, Two Way ANOVA, Correlation and Regression techniques of statistical analysis for data analysis and testing the hypotheses.

Mean:

Mean is used as a measure of central tendency. Mean of the scores of levels of depression of all the pones was calculated using the formula:

$$M = \frac{\sum fx}{N} \times 1$$

AN OVA (Analysis of Variance)

- Within-groups variances must be approximately equal.
- The individuals being observed should be distributed randomly in the groups

As this study has more than two sample means, the z or t tests were not applicable. Thus, analysis of variance was used to simultaneously gain the difference between means are significant or not.

Between Group Variation

The variation due to the interaction between the samples is $\sum (x - \bar{X}_x)^2$ denoted SS(B) for Sum of Squares Between groups. If the sample means are close to each other (and therefore the Grand Mean) this will be small. There are k samples involved with one data value for each sample (the sample mean), so there are k-1 degrees of freedom.

The variance due to the interaction between the samples is denoted MS(B) for Mean Square Between groups. This is the between group variation divided by its degrees of freedom. It is also denoted by

Within Group Variation

The variation due to differences within individual samples, denoted SS(W) for Sum of Squares Within groups. Each sample is considered independently, no interaction between samples is involved. The degrees of freedom is equal to the sum of the individual degrees of freedom for each sample. Since each sample has degrees of freedom equal to one less than their sample sizes, and there are k samples, the total degrees of freedom is k less than the total sample size: $df = N - k$

The variance due to the differences within individual samples is denoted MS(W) for Mean Square Within groups. This is the within group variation divided by its degrees of freedom. It is also denoted by $MS(W) = \frac{SS(W)}{df}$. It is the weighted average of the variances (weighted with the degrees of freedom)

Recall that a F variable is the ratio of two independent chi-square variables divided by their respective degrees of freedom. Also recall that the F test statistic is the ratio of two F = $\frac{MS(B)}{MS(W)}$ variances, well, it turns out that's exactly what we have here. The F test statistic is found by dividing the between group variance by the within group variance. The degrees of freedom for the numerator are the degrees of freedom for the between group (k-1) and the degrees of freedom for the denominator are the degrees of freedom for the within group (N-K)

	SS	Df	MS	F
Between	ss(B)	k-1	ss(B)	ms(B)
			----- k- 1	----- ms(W)
Within	ss(W)	k-k	ms(B)	
			----- N-k	
Total	ss(W) + ss(B)	N -1		

Table 2: Summary table explaining the method of evaluating ANOVA ANOVA is used for multiple things in this study:

1. Two Way ANOVA is used to evaluate the significance of variance between the types of diets and levels of depression
2. One Way ANOVA is used to evaluate whether there is a significant difference between consumption of Rajasic Diet-Tamasic Diet and level of depression. Tamasic Dict-Sattvic Diet and level of depression and Sattvic Diel-Rajasic Diet and level of depression.
3. One Way ANOVA is also used to evaluate whether there is a significant difference between level of depression and having a family member with a history of mental health

FINDINGS, IMPLICATIONS AND CONCLUSIONS

Findings

Oftentimes, it is quoted that you are what you eat. Not just Ancient Indian culture but all ancient civilizations, like Egypt, China, Middle East, etc. based on what could be gleaned from their text have given a great significance to their dietary intake.

Indian culture has had a rather interesting approach where the diet one consumes was based on the occupation with the idea - eat for giving your optimal performance for your role in this world. Additionally, all the medical models obtained based on these ancient systems have used diet as a method to treat illnessesphysical or spiritual,

The present research was undertaken in order to see how relevant the ancient concepts are in context to modern people and the ever-increasing problem of depression. Based on the data collected by administering the Beck's Depression Inventory on a sample of 60 people, from which, 20 consumed a Rajasic Diet, 20 consumed a Tamasic Diet and 20 a Sattvic Diet and the statistical analysis certain findings were obtained.

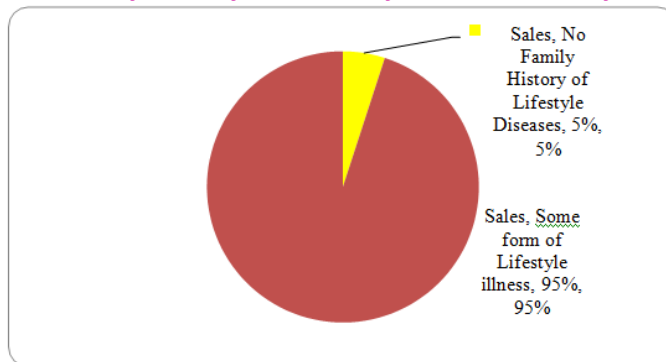
1. There is no significant difference found in gender and the levels of depression: the same ANOVA showed that there was no significant difference between the levels of depression in males and females in the current sample. So, while the diet significantly affiated the depression level, gender did not have the same effect.
2. A significant difference was found between levels of depression in Sattvic Diet consumers and Tamasic Diet consumers: levels of depression were considerably higher in tamasic diet consumers as compared to people who take Sattvic diet.

The correlation between these stress levels and depression was moderately positive(414) and on evaluating the regression it was found that the correlation was significant. Based on age- wise distribution, there is a significant difference between the levels of depression of the people ranging from the age of 25-40 as comparedto the people ranging from the apt poup of 41-60.

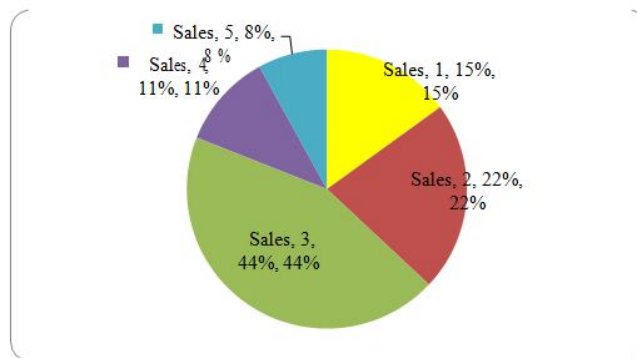
There is a significant difference between levels of depression of people with family history of mental illnesses and the people without family history of mental illnesses of the 91 people sampled, only

5 people had no kin suffering from any form of lifestyle disease. Other 86 people suffered from one or more form of lifestyle illnesses.

Family History with Lifestyle Disease Family



Self Reported Stress Level



Implications:

The present research was conducted to find the effect diet has on people in the hope of furthering it to something that could be applied in everyday life for better mental and physical health. In this context, what implications and conclusions can be drawn from the data analysis is very important. Here are the implications of the research:

Tamasic Diet is not advised. Contains high fat fried foods, rich in salt, sugar, spices, chillies, meats from big tamed animals, butter and liquor. This diet makes one dull, anger and criminal tendency and impedes spiritual progress. Life expectancy was much lower. Bad for health. The current "fast-food" and "take-out" culture has actually increased the consumption of this type of diet. However, it is highly discouraged to consume this diet or your physical health and mental health. Additionally, this diet also corresponds to high level of depression and higher level of stress.

There was a significant difference in levels of depression amongst the three types of diet that were under study. We can infer that the depression and diet are related from this. Thus, what you eat affects at least the development or showing of symptoms of depression. However, as the confounding variables are not very well controlled in this study there is no direct causation established.

CONCLUSION:

"A study of the relationship between type of diet consumed and level of depression" was conducted. For this study the format of Indian Vedic Diets- Rajasic, Tamasic and Sattvic were taken into consideration as prescribed in the Malia-aanarany Upanishad. This type of diet was particularly classified according to the psychological and effect the consumption has along with effect on longevity,

which is linked with one's mental health according to the Vedas. The diet was compared to the levels of depression in the consumer using the Beck's Depression Inventory.

Based on the data obtained and statistical analysis applied, it can be concluded that the Rajasic and the Sattvic diet correspond with lower levels of depression, meanwhile, Tamasic diet corresponds to high levels of depression, in addition, there was a significant difference in the levels of depression depending upon the diet people consumed. There was no significant difference in the gender and the levels of depression.

This research study gives proof of the fact that what we eat affects our levels of depression, but as this is a study on a very small scale and with small samples, the concept needs further investigation with better management of confounding variables. With better methodology and a larger study, this could be a groundbreaking study in the field of depression. As depression is one of the most prevalent illnesses affecting 450 million, or as WHO estimates 1 in 4 people around the globe, a diet plan that could help manage the symptoms of depression or perhaps prevent it will be very significant in the field of depression management.

As Sattvic and Rajasic diets are also good for physical health and body composition, adopting these diets will not just improve the mental health but also provide a mode to combat obesity and malnutrition problems, especially in India.

The study gives a guideline for further investigation in regards to Vedic diets or Rajasic, Tamasic and Sattvic diets and the overall mental, physical and spiritual health of a person. Thus, in conclusion, a further in depth research is required to form a concrete basis of diet affecting the levels of depression and further, other mental illnesses like anxiety and stress in an individual.

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