

A STUDY OF MENTAL HEALTH OF MALE AND FEMALE WITH CHOLESTEROL AND WITHOUT CHOLESTEROL

¹PROF. FALGUNI R. PANCHAL, ²DR. NITA H. SHAH

¹ Assistant Professor, Department of Home Science , B.D. Arts College, Ahmedabad

² Associate Professor , Department of Home Science,, Shreee R.P. Arts; K. B. Comm and
Smt. B.C.J. Science college, Khambhat, (Gujarat University)

ABSTRACT : Modern age been characterized as an age of Anxiety. Modern science and technology has enriched man's life with a great many facilities and comforts of life. But at the same time increased industrialization, globalization, privatization, competition, stress, anxiety, depression, frustration, conflict etc. has significantly increased. This has led to many psycho-somatic diseases like diabetes, cholesterol, blood pressure etc. In present paper the Mental Health of males and females with cholesterol and without cholesterol is analysed. Srivastav's MHI will be used and the data will be analysed through ANOVA.

Introduction:

The economic situation of countries and the global competition in almost all facets of human endeavour call attention of psychologists, social workers, educators and researchers generally, to the need to continuously search for active variables that can enhance human resource development. For this purpose a person should be healthy because health is an indispensable quality in human being. Health indicates psychosomatic well-being. The preamble of the World Health Organization's character defined health as a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity (Monopolis and Sarles, 1977). Thus, health is a broader concept including physical, social and mental health. Mental Health has been reported as an important factor influencing individual's various behaviours, activities, happiness and performance.

Cholesterol is not chemically a fat; it exists not only as a free compound but also in combination with fatty acids as esters. It occurs in all animal fats and is an essential constituent of all cells and fluids of the body, is a major component of brain and nerve tissue, is found in many foods, and is made by the body. Cholesterol may have some relation to fat transport in the body, and deposition of fat is increased by feeding large amounts of cholesterol. A high level of blood fat is accompanied by a high cholesterol level. Abnormal deposits of cholesterol in the tissues are associated with several conditions, including atherosclerosis, hypertension and diabetes. Cholesterol metabolism is known to involve such nutrients as choline, other B vitamins and some amino acids; and various nutritional deficiencies offset the deposition. The physiologic and metabolic relationships among body fat, cholesterol, phospholipids, unsaturated fatty acids and arteriosclerosis are complex and not completely understood, but are the object of much present – day medical research. Cholesterol contained in the diet is utilized except when fed in excess, but plant sterols of the diet are not converted to cholesterol, and are not absorbed. It is found in the lipid fraction of all organs, especially the brain and spinal cord, and in gallstones. Cholesterol is structurally related to the bile acids, sex hormones, and vitamin D.

More often than not when we are addressing problems related to cholesterol we are referring to its affects on heart health. Cholesterol, for one, is important for maintaining the structure of our cells. It is also the precursor for our steroid hormones, serves as a major role in our inflammatory response, and allows us to convert sunlight into vitamin D. One factor which is often overlooked is how it affects our mental health. Approximately 25% of the cholesterol in our body is made in our brain. The blood-brain barrier even has a protection mechanism to stop this locally produced cholesterol from being exchanged with the lipoproteins in the blood (Bjorkhem,2004). The cholesterol is actually used to help build the myelin sheath that surrounds the axon of our neurons. Statin drugs and cholesterol lowering diets are widely prescribed to people, is this coming at a cost to our mental health? Cholesterol is an important factor in the receptor sites of the cells binding with the appropriate neurotransmitter, in particular acetylcholine and serotonin. Research has suggested that cholesterol is the facilitator of the attachment between the neurotransmitter and the cell membrane, as well as their delivery to specific protein receptors (Fantini, 2009). Another study goes a step further and hypothesizes that this mechanism actually causes inhibition of

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neurotransmitter release due to the low levels of cholesterol (Shin, 2009). Long term use of statins showed significant changes in the structure and function of serotonin cell receptors (Shrivastava, 2010). Serotonin is responsible for fighting off depression and anxiety. Having improper structure and function at these sites will lead to depression in a high number of cases..

The studies discussed above revealed that mental health is a very important factor which is likely to be affected by number of variables like cholesterol. Review of literature reveals that this is an area that has been explored less and scientific correlation need to be studied between mental health and cholesterol of males and females. Therefore, justification of the study is derived from the limitation of earlier studies which suggests a need for this research.

OBJECTIVES:

1. To study and compare different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health between with cholesterol and without cholesterol participants.
2. To study and compare different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health between male and female participants.
3. To study interaction effect between type of participants and gender with regards to different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health.

HYPOTHESES:

1. There will be no significant difference between with cholesterol and without cholesterol participants with regards to different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health.
2. There will be no significant difference between male and female participants with regards to different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health.
3. There will be no significant interaction effect between type of participants and gender with regards to different components of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health.

SAMPLE:

In present research total 120 participants (30 male with cholesterol, 30 male without cholesterol, 30 female with cholesterol, 30 female without cholesterol) were selected from Ahmadabad city. Age of participants was 40 to 60 years.

VARIABLES:

In present research gender of participants and type of participants were considered as independent variable. Scores of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes and environmental mastery and over all mental health of participants was considered as dependent variable.

TOOL:

In present research mental health inventory by Dr. Jagdish and Dr. A.K. Shrivastava were used for data collection.

(1) Mental health inventory

Reliability:

The reliability of the inventory was determined by split-half method using odd-even procedure. The Table gives the reliability coefficients of different dimensions mental health and over all.

Table showing reliability coefficients

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Dimensions of M.H.	Reliability index
1. Positive self evaluation	.75
2. Perception of reality	.71
3. Integration of personality	.72
4. Autonomy	.72
5. Group oriented attitude	.74
6. Environmental competence	.71
Over all	.73

Validity:

Construct validity of the inventory is determined by finding coefficient of correlation between scores on mental health inventory and general health questionnaire (Gold berg, 1978). It was found to be .54. It is note worthy here that high score on the general health questionnaire indicates poor mental health.

PROCEDURE:

Mental health inventory was administered in small manageable group of participants, before this rapport was establish with each participants. After completion the data collection responses of each participants of inventory was scored by the scoring key of inventory.

STATISTICAL ANALYSIS:

In present research obtained data was analyzed by two way analysis of variance.

Results and Discussion

Results of summery of ANOVA of various dimensions of mental health of different group,

Source of Variation	df	F value						
		Dimensions of Mental Health						
		A	B	C	D	E	F	OVER ALL
A	1	2.49	.94	.01	.04	.36	.25	.44
B	1	5.17*	4.19*	12.07**	6.40*	3.27	5.05*	9.55**
AXB	1	3.01	2.94	1.52	.77	2.53	3.66	3.75
Error	116							

*significant at .05

**significant at .01

Above table shows the summery results of ANOVA of various dimension of mental health. F ratio for type of participants (Ass) is 2.49 which is not significant. It means significant difference do not existed between with cholesterol and without cholesterol participants on mental health dimension A – positive self evaluation. By the same point of view mean scores of with cholesterol participants on mental health dimension A – positive self evaluation is 30.52 and mean scores of without cholesterol participants on mental health dimension A – positive self evaluation is 28.85. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on mental health dimension A – positive self evaluation.

F ratio for gender (Bss) is 5.17 which is significant at .05 level. It means significant difference is existed between male and female participants on mental health dimension A – positive self evaluation. By the same point of view mean scores of male participants on mental health dimension A – positive self evaluation is 28.48 and mean scores of female participants on mental health dimension A – positive self evaluation is 30.88. It is clearly said that significant dimension is existed between male and female participants on mental health dimension A – positive self evaluation.

F ratio for type of participants and gender (AxB) is 3.01 which is not significant. It means significant difference is not existed between type of participants and gender on mental health dimension A – positive self evaluation. By the same point of view mean scores of with cholesterol male participants on mental health dimension A – positive self evaluation is 28.40 and mean scores of with cholesterol female participants on mental health dimension A – positive self evaluation is 32.63, mean scores of without cholesterol male participants on mental health dimension A – positive self evaluation is 28.57 and mean scores of without cholesterol female participants on mental health

dimension A – positive self evaluation is 29.13. It is clearly said that significant interaction effect is not existed between type of participants and gender participants on mental health dimension A – positive self evaluation.

F ratio for type of participants (Ass) is .94 which is not significant. It means significant difference is not existed between with cholesterol and without cholesterol participants on mental health dimension B -perception of reality. By the same point of view mean scores of with cholesterol participants on mental health dimension B -perception of reality is 23.15 and mean scores of without cholesterol participants on mental health dimension B -perception of reality is 22.37. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on mental health dimension B -perception of reality.

F ratio for gender (Bss) is 5.39 4.18 which is significant at .05 level. It means significant difference is existed between male and female participants on mental health dimension B -perception of reality. By the same point of view mean scores of male participants on mental health dimension B -perception of reality is 21.93 and mean scores of female participants on mental health dimension B -perception of reality is 23.58. It is clearly said that significant dimension is existed between male and female participants on mental health B -perception of reality.

F ratio for type of participants and gender (AxB) is 2.94 which is significant at .05 level. It means significant difference is existed between type of participants and gender on mental health B -perception of reality. By the same point of view mean scores of with cholesterol male participants on mental health dimension B -perception of reality is 21.63 and mean scores of with cholesterol female participants on mental health dimension B -perception of reality is 24.67, mean scores of without cholesterol male participants on mental health dimension B -perception of reality is 22.23 and mean scores of without cholesterol female participants on mental health dimension B -perception of reality is 22.50. It is clearly said that significant interaction effect is existed between type of participants and gender participants on mental health B -perception of reality.

F ratio for type of participants (Ass) is .01 which is not significant. It means significant difference do not existed between with cholesterol and without cholesterol participants on mental health dimension C -integration of personality. By the same point of view mean scores of with cholesterol participants on mental health dimension C -integration of personality is 32.73 and mean scores of with cholesterol participants on mental health dimension C -integration of personality is 32.63. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participantson mental health dimension C -integration of personality.

F ratio for gender (Bss) is 12.07 which is significant at .01 level. It means significant difference is existed between male and female participants on mental health dimension C -integration of personality. By the same point of view mean scores of male participants on mental health dimension C -integration of personality is 30.67 and mean scores of female participants on mental health dimension C -integration of personality is 34.70. It is clearly said that significant dimension is existed between male and female adolescent on mental health dimension C -integration of personality.

F ratio for type of participants and gender (AxB) is 1.52 which is not significant. It means significant difference is not existed between type of participants and gender on mental health dimension C -integration of personality. By the same point of view mean scores of with cholesterol male participants on mental health dimension C -integration of personality is 30.00 and mean scores of with cholesterol female participants on mental health dimension C -integration of personality is 35.47, mean scores of without cholesterol male participants on mental health dimension C -integration of personality is 31.33 and mean scores of without cholesterol female participants on mental health dimension C -integration of personality is 33.93. It is clearly said that significant interaction effect is not existed between type of participants and gender participants on mental health dimension C -integration of personality.

F ratio for type of participants (Ass) is .04 which is not significant. It means significant difference is not existed between with cholesterol and without cholesterol participants on mental health dimension D – autonomy. By the same point of view mean scores of with cholesterol participants on mental health dimension D – autonomy is 17.13 and mean scores of without cholesterol participants on mental health dimension D - autonomy is 17.02. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on mental health dimension D – autonomy.

F ratio for gender (Bss) is 6.40 which is significant at .05 level. It means significant difference is existed between male and female participants on mental health dimension D – autonomy. By the same point of view mean scores of male participants on mental health dimension D - autonomy is 16.33 and mean scores of female participants on mental health dimension D - autonomy is 17.82. It is clearly said that significant dimension is existed between male and female participants on mental health dimension D – autonomy.

F ratio for type of participants and gender (AxB) is .78 which is not significant. It means significant difference is not existed between type of participants and gender on mental health dimension D – autonomy. By the same point of view mean scores of with cholesterol male participants on mental health dimension D - autonomy is 16.13 and mean scores of with cholesterol female participants on mental health dimension D - autonomy is 18.13, mean scores

of without cholesterol male participants on mental health dimension D - autonomy is 16.53 and mean scores of without cholesterol female participants on mental health dimension D - autonomy is 17.50. It is clearly said that significant interaction effect is not existed between type of participants and gender participants on mental health dimension D – autonomy.

F ratio for type of participants (Ass) is .36 which is not significant. It means significant difference is not existed between with cholesterol and without cholesterol participants on mental health dimension E- group-oriented attitudes. By the same point of view mean scores of with cholesterol participants on mental health dimension E- group-oriented attitudes is 27.78 and mean scores of without cholesterol participants on mental health dimension E- group-oriented attitudes is 28.25. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on mental health dimension E- group-oriented attitudes.

F ratio for gender (Bss) is 3.27 which is not significant. It means significant difference is not existed between male and female participants on mental health dimension E- group-oriented attitudes. By the same point of view mean scores of male participants on mental health dimension E- group-oriented attitudes is 27.32 and mean scores of female participants on mental health dimension E- group-oriented attitudes is 28.72. It is clearly said that significant dimension is not existed between male and female participants on mental health dimension E- group-oriented attitudes.

F ratio for type of participants and gender (AxB) is 2.54 which is not significant. It means significant difference is not existed between type of participants and gender on mental health dimension E- group-oriented attitudes. By the same point of view mean scores of with cholesterol male participants on mental health dimension E- group-oriented attitudes is 26.47 and mean scores of with cholesterol female participants on mental health dimension E- group-oriented attitudes is 29.10, mean scores of without cholesterol male participants on mental health dimension E- group-oriented attitudes is 28.17 and mean scores of without cholesterol female participants on mental health dimension E- group-oriented attitudes is 28.33. It is clearly said that significant interaction effect is not existed between type of participants and gender participants on mental health dimension E- group-oriented attitudes.

F ratio for type of participants (Ass) is .25 which is not significant. It means significant difference do not existed between with cholesterol and without cholesterol participants on mental health dimension F- environmental mastery. By the same point of view mean scores of with cholesterol participants on mental health dimension F- environmental mastery is 27.13 and mean scores of without cholesterol participants on mental health dimension F- environmental mastery is 26.73. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on mental health dimension F- environmental mastery .

F ratio for gender (Bss) is .15.05 which is significant at .05 level. It means significant difference is existed between male and female participants on mental health dimension F- environmental mastery. By the same point of view mean scores of male participants on mental health dimension F- environmental mastery is 26.03 and mean scores of female participants on mental health dimension F- environmental mastery is 27.83. It is clearly said that significant dimension is existed between male and female participants on mental health dimension F- environmental mastery.

F ratio for type of participants and gender (AxB) is 3.66 which is not significant. It means significant difference is not existed between type of participants and gender on mental health dimension F- environmental mastery. By the same point of view mean scores of with cholesterol male participants on mental health dimension F- environmental mastery is 25.47 and mean scores of with cholesterol female participants on mental health dimension F- environmental mastery is 28.80, mean scores of without cholesterol male participants on mental health dimension F- environmental mastery is 26.60 and mean scores of without cholesterol female participants on mental health dimension F- environmental mastery is 26.87. It is clearly said that significant interaction effect is not existed between type of participants and gender adolescent on mental health dimension F- environmental mastery.

F ratio for type of participants (Ass) is .44 which is not significant. It means significant difference is not existed between with cholesterol and without cholesterol participants on over all mental health. By the same point of view mean scores of with cholesterol participants on over all mental health is 158.62 and mean scores of without cholesterol participants on over all mental health is 155.85. It is clearly said that significant dimension is not existed between with cholesterol and without cholesterol participants on over all mental health.

F ratio for gender (Bss) is 9.55 which is significant at .01 level. It means significant difference is existed between male and female participants on over all mental health. By the same point of view mean scores of male participants on over all mental health is 150.77 and mean scores of female participants on over all mental health is 163.70. It is clearly said that significant dimension is existed between male and female participants on over all mental health.

F ratio for type of participants and gender (AxB) is 3.75 which is not significant. It means significant difference is not existed between type of participants and gender on over all mental health. By the same point of view mean scores of with cholesterol male participants on over all mental health is 148.10 and mean scores of with cholesterol

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female participants on over all mental health is 169.13, mean scores of without cholesterol male participants on over all mental health is 153.43 and mean scores of without cholesterol female participants on over all mental health is 158.27. It is clearly said that significant interaction effect is not existed between type of participants and gender participants on over all mental health.

CONCLUSION:

1. Significant difference is existed between male and female participants on mental health dimension A – positive self evaluation.
2. Significant difference is existed between male and female participants on mental health dimension B - perception of reality.
3. Significant difference is existed between male and female participants on mental health dimension C - integration of personality.
4. Significant difference is existed between male and female participants on mental health dimension D – autonomy.
5. Significant difference is existed between male and female participants on mental health dimension F- environmental mastery.
6. Significant difference is existed between male and female participants on over all mental health.

REFERENCE:

- 01 Dr.Jagdish and Dr.A. k.Srivastav, The Mental Health Inventory (MHI), Dept of Psychology, ManovaigyanikParichhanSansthan
- 02 Goleman, D. (1995), Working with emotional intelligence, New York, Bantam
- 03 Monopolis, S. (1977), Health as a Human Value : Transnational Mental Health, Research Newsletter, 19, 5-9
- 04 WHO, (1995) Manual of World Health Organization, The Concept of Mental Health, 5, 29-32
- 05 Cann. Kevin. (2012), Cholesterol and Mental Health, Cholesterol and Mental Health-Robb Wolf, robb wolf.com/2012/11/01/cholesterol-mental-health/
- 06 Krause. Marie. (1961), Food, Nutrition and Diet Therapy, Third Edition, illustrated. W.B. Saunders Company, Philadelphia & London. 50
- 07 Jacobs Morris. (1951), The Chemistry and Technology of Food & Food Products, Second completely revised and augmented edition., Morris B. Jacobs Volume 1 Interscience Publishers, New Yourk, London. 128
- 08 Shah. Nita. (2014), Palm Oil Na Sathvare Cholesterol ne Control ma Rakho, First Edition, Published by AdarshPrakashan.