

# Management of Risk Factors Associated With Chronic Diseases in Old Age

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## Abstract

The community-based mental health studies in India have revealed that the point prevalence of depressive disorders in elderly Indian population varies between 13% and 25% (B. Ankur et.al.2011). According to WHO, factors increasing depression risk in older adults include genetic susceptibility, chronic disease and disability, pain, frustration with limitations in activities of daily living, personality traits (dependent, anxious or avoidant), adverse life events such as separation, divorce, bereavement, poverty, and social isolation and lack of adequate social support. Geriatric populations with depression are at a higher risk for chronic diseases like coronary heart disease (CHD), cancer, diabetes mellitus and hypertension.

One of the best therapies to protect a person from stress, anxiety and depression is yoga therapy as it creates a balance in nervous and endocrine system which directly influences all other systems and organs of the body. Yoga helps in gaining control over the mind and body and improves the muscle strength, immune stability, memory, and emotional stability, which are all the indicators of positive physical and mental health.

The present study was undertaken to find out the impact of yoga on stress, anxiety and depression especially in old age. A total of 60 old persons were included in the sample by using purposive sampling technique. Out of 60 old persons included in the sample, 30 were old persons doing yoga since last 6 months and rest of the 30 old person were those who were not doing yoga. The data was collected by using the tool DASS.

The findings of the study show that the level of depression, anxiety and stress among old persons not doing yoga is almost double than the level found in old persons doing yoga. A significant difference was found in the level of depression, anxiety and stress of old persons with respect to gender. Among the old persons not doing yoga the level of stress anxiety and depression was found more in men as compared to women.

Key Words: Risk Factor, Depression, Anxiety, stress, old age

## Introduction

The community-based mental health studies in India have revealed that the point prevalence of depressive disorders in elderly Indian population varies between 13% and 25% (B. Ankur et.al.2011). According to WHO, factors increasing depression risk in older adults include genetic susceptibility, chronic disease and disability, pain, frustration with limitations in activities of daily living, personality traits (dependent, anxious or avoidant), adverse life events such as separation, divorce, bereavement, poverty, and social isolation and lack of adequate social

support. Geriatric populations with depression are at a higher risk for chronic diseases like coronary heart disease (CHD), cancer, diabetes mellitus and hypertension.

So a person suffering from depression, anxiety and stress are more prone towards chronic diseases like cancer, hypertension and diabetes. The occurrence of these diseases can be minimized by managing the level of stress and anxiety among old persons. It can be done by making simple changes in the way people live their lives or simply by changing our lifestyle.

The stress and anxiety can be managed through proper nutrition, physical exercise, and meditation. These help in promoting a positive mindset and develop a feeling of well being in a person. One of the best therapies to protect a person from stress, anxiety and depression is yoga therapy as it creates a balance in nervous and endocrine system which directly influences all other systems and organs of the body. Yoga helps in gaining control over the mind and body and improves the muscle strength, immune stability, memory, and emotional stability, which are all the indicators of positive physical and mental health.

Regular physical exercise reduces symptoms of anxiety and depression (Camacho et al., 1991; Ross & Hayes, 1988). Yoga training helps in reducing persons' perception of stress (Latha & Kaliappan, 1992) and reactivity to stress (Patel, 1975). It has been found that person doing yoga regularly have lower levels of stress hormone cortisol in their saliva (Watanabe et.al., 2002), blood glucose ( Khatri. D et.al. 2007, Gokal R, Shillito L, 2007) as well as plasma rennin levels, and 24-h urine nor-epinephrine and epinephrine levels (Selvamurthy W et.al,1998) as compared to persons not doing yoga regularly. Yoga significantly decreases heart rate and systolic and diastolic blood pressures.

The present study was taken to find out the impact of yoga on level of depression, anxiety and stress among old age persons.

### **Objectives:**

1. To find out the difference in level of depression, anxiety and stress in old person doing yoga and not doing yoga.
2. To understand the difference in level of depression, anxiety and stress among old persons not doing yoga with respect to gender.
3. To understand the difference in level of depression, anxiety and stress among old persons doing yoga with respect to gender.

**Population :** Old persons (60 years or above) of Jaipur city.

### **Sample and sampling technique:**

In the present study a total of 60 old person (60 years or above), are included in the sample by using purposive sampling technique. Out of 60 old persons included in the sample 30 old persons who were doing yoga were selected based on the inclusion criteria. The inclusion criteria were that they should be doing yoga regularly from last six month and that should be of 60 or above 60 yrs old. Rest of the 30 old person were those who are not doing

yoga .Out of 30 old person doing yoga 15 were male and 15 were females. Similarly among 30 old persons doing yoga 15 were males and 15 were females.

### Tool

To measure Depression, Anxiety and Stress among old persons, (DASS) developed by researchers of University of New South Wales (Australia). It is made up of 42 self-report items. The sum of the relevant 14 items for each scale, constitute the participants' scores for each of Depression, Anxiety and Stress. The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation and lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient.

### Data Collection

30 old persons doing yoga regularly were approached by the researcher in yoga centre for old persons in Banasthali university campus and yoga classes regularly held at one park of Mansarovar area of Jaipur. Incharge of yoga centre as well as the subjects included in the sample were contacted to obtain permission and explained the nature of research. The detail procedure of filling the tool was explained to them after building a rapport with them. Finally the tool was administered one by one by the researcher. Same procedure was followed for collecting data from old persons not doing yoga. All the data obtained was tabulated and then analysed by the researcher.

### Analysis and Discussion

**TABLE 1 :Mean , SD and t table of overall level of depression, anxiety and stress among old person doing yoga and not doing yoga**

	MEAN	SD	t
YOGIC	51.5	1.92	2.01
NON-YOGIC	107.7	2.76	

The table signifies that the value of 't' is highly significant that means there is a difference found in level of depression, anxiety and stress among old people doing yoga and not doing yoga. So the hypothesis H0 1 which states that "there is no difference in level of depression, anxiety and stress among old people doing yoga and not doing yoga" is rejected. The mean value shows that the level of depression, anxiety and stress among old persons not doing yoga is almost double (mean= 107.7) than the level found in old persons doing yoga regularly (mean= 51.5).

**TABLE 2 : Difference in level of depression, anxiety and stress among old person doing yoga and not doing yoga**

	Non yogic		Yogic		t
	MEAN	SD	MEAN	SD	
<b>DEPRESSION</b>	37.2	3.00	18.23	0.3951	4.1495
<b>ANXIETY</b>	35.2	3.830	17.16	2.1184	3.1984
<b>STRESS</b>	36.26	7.0192	17.06	1.8740	4.964

The above table signifies that the value of t is highly significant for level of depression (t= 4.14), anxiety (t= 3.19) and stress (t=4.96) for old person doing yoga and not doing yoga. It can be explained from the result of above table that yoga helps in reducing the level of depression, anxiety and stress in old person. The mean value shown in the table also indicates that difference between old persons doing yoga and not doing yoga in all the cases of depression (yogic= 18.3 ,non-yogic=37.2 ), anxiety (yogic=17.16, non yogic=35.2) and stress (yogic=17.06, non yogic =36.26) is almost double .So, the HO2 which states that “there is no difference in level of depression, stress and anxiety in old age doing yoga and not doing yoga is rejected by the explanation of the table.

**TABLE 3: Mean , SD and t table of level of depression among yogic and non-yogic old person with respect to gender**

		MEAN	SD	t
<b>YOGA</b>	<b>Male</b>	90.85	2.13	2.76
	<b>Female</b>	94.85	3.27	
<b>NON YOGA</b>	<b>Male</b>	150.8	5.2	4.98
	<b>Female</b>	110.6	3.8137	

The table signifies that the value of t is different from each other in order to check out the level of yogic and non yogic old persons yogic(2.76) non yogic ,(4.98) .It can be explained from the result of above table that yoga has different levels in male and female accordingly that yoga helps in reducing the level of depression in old person .The mean value shown in the table also indicates that difference between old person doing yoga and not doing yoga in all levels of yoga (male =90.85 ,female =94.85 ) non yoga (male =150.8, female =110.6) is having a lots of difference . HO3 is rejected by no the table that there is difference in level of depression, stress and anxiety in old person doing yoga and not doing yoga with respect to gender .

**TABLE 4: Mean , SD and t value of level of anxiety among yogic and non yogic respect to gender****ANXIETY**

		MEAN	SD	t
<b>YOGA</b>	<b>Male</b>	65.90	2.27	1.98
	<b>Female</b>	64.24	2.21	
<b>NON YOGA</b>	<b>Male</b>	210.6	7.61	4.19
	<b>Female</b>	185.9	5.13	

The table signifies that the value of t has a major difference in the level of anxiety in yoga (1.98) and non yoga (4.19) in old persons. The person who are doing yoga has the major difference as on the other hand compared with the non yogic persons on the basis of gender of female and male the value tells that yoga ( male = 2.27 female = 2.21 ) non yogic ( male =7.61 , female = 5.13 ) it can explain that level of anxiety has been reduced the persons who are doing yoga and the persons who are not doing yoga in regular terms .HO4 is supported to the explanation that there is a difference in level of anxiety in old person doing yoga and not doing yoga with respect to gender .

**TABLE 5: Mean , SD and t value of level of stress among yogic and non yogic with respect to gender****STRESS**

		MEAN	SD	t
<b>YOGA</b>	<b>Male</b>	35.574	1.22	2.23
	<b>Female</b>	66.294	2.28	
<b>NON YOGA</b>	<b>Male</b>	225.97	7.79	4.76
	<b>Female</b>	65.654	2.26	

The table signifies that the value of t has a just double difference in the level of stress in yoga (2.23 ) and non yoga ( 4.76 ) in old persons .the difference is found in the person who are doing yoga and the person who are not doing yoga has compared with each other the value states that yoga ( male =1.22 , female = 2.28 ) non yoga (male = 7.9 ,female = 4.76 ) it states that level of stress has a lot of difference between the person doing yoga and not stress in old age with respect to gender .HO3 is rejected to this explanation .

**Conclusion** : Yoga appears to be a promising preventive and managing strategy for depression anxiety and stress. Old people face lot many problems such as loneliness, financial insecurity, frustration, which they find it very hard to face without any extra care taken or effort put forth. Hence in such times practice of yoga will be truly beneficial for the person to face the pressures that are experienced in life. It triggers neurohormonal mechanisms that bring about health benefits. It reduces stress and anxiety, improves autonomic and higher neural center functioning. However, there is a definite need for more directed research work to be carried out to elucidate the effects and the mechanisms of such effects of yoga on the human body in health and disease. Considering the findings of the study, it is fair to conclude that yoga can be beneficial in the prevention and cure of chronic diseases.

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