

# “Relationship between Physical Activity and Mental Health among Chronic Psychiatric Patients“

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## **ABSTRACT**

*The present study was aimed to study relationship between physical activity and General mental health among chronic psychiatric patients. A sample of 200 chronic psychiatric patients (100 male patients and 100 female patients) was selected by non probability purposive sampling technique method. The sample taken were chronic psychiatric patients who attended psychiatric OPD and day care centre from, selected hospitals Pune. The patients who were diagnosed as mentally ill for more than 2 years were selected for the study. Their age was between 20 to 60 years. They responded to two tools International Physical Activity Questionnaire Scale by Craig, Marshall, Sjostrom, Bauman, Booth, Ainsworth & Oja et.al. (2003) and General Health Questionnaire by Goldberg & Williams (1970). The statistical tool Pearson's product moment correlation method was used to find the correlation between physical activity and general mental health among chronic psychiatric patients. Another statistics independent 't'-test was used to study the gender difference in physical activity and general mental health among chronic psychiatric patients. The results showed that there is negative correlation ( $r'=-0.606$ ) found between physical activity and general mental health among chronic psychiatric male and female patients at 0.01 level of significance. There is gender difference ( $t'=1.99$ ) found in physical activity among chronic psychiatric patients. There is gender difference ( $t'=3.27$ ) found in general mental health among chronic psychiatric patients. Although the differences is minimal. There is a moderate level of physical activities found in females and the general mental health of females is found higher than the males and also the negative correlation explains that the amount of physical activity is not related to the mental health of the psychiatric patients, as the chronic psychiatric patients physical activities are more of household, work related and transportation based and not recreational physical activity. Hence health personnel's have to plan the home based care with recreational activities to improve mental health of the patients at home.*

*Key words: General mental health, physical activity, chronic psychiatric patients, psychiatric OPD.*

### **Introduction**

Physical activity is very necessary in today's time as now people are mostly in work or profession where least physical exercise of the body is required. Along with it, the mental health is also important, which is very much related to physical activity. General Mental health includes an individual's abilities to enjoy life, and create a balance between life activities and efforts to achieve psychological resilience. Good mental health which allows one to flourish and fully enjoy life, but sometimes some factors affects mental health such as past history of mental disorders, physical ill-health, drug addictions, current life stressors, self-esteem, relationships, family break up, financial loss, abuse, brain chemistry, social support etc.

### **SIGNIFICANCE OF THE STUDY**

Physical activity should be viewed as a continuum ranging from virtually no movement at all such as sedentary behavior or sitting time through light physical activity (e.g., light ambulation) to moderate-to-vigorous physical activity (e.g., exercise, playing sports, cycling to work). In the expanding literature on physical activity and mental health, researchers have addressed the effects of both single bouts and programs of physical activity. In addition, a wide variety of psychological outcomes have been studied, including effects on mood, self-esteem, cognitive functioning and decline, depression, and quality of life. "Exercise makes you feel good" is a common assumption and refers to often-report psychological effects of single bouts of physical activity, such as walking or structured exercise

### **STATEMENT OF THE PROBLEM**

A correlational study to assess the relationship between physical activity and general mental health among chronic psychiatric patients at psychiatric OPD, Day-care, Pune.

### **OBJECTIVES OF THE STUDY**

1. To assess the physical activity among chronic psychiatric patients.
2. To assess the general mental health among chronic psychiatric patients.
3. To assess the gender difference between physical activity and mental health among chronic psychiatric patients.
4. To find correlation between physical activity and general mental health among chronic psychiatric patients.

### **METHODOLOGY**

**Sample:** 200 chronic psychiatric patients (100 male patients and 100 female patients).

**Sampling technique:** non probability purposive sampling technique

**Setting:** selected psychiatric OPD and Day care centers of Pune

**Inclusion criteria:**

1. Age between 20 to 60 years.
2. Patients diagnosed as mentally ill more than 2 years.
3. Samples who are willing to participate in the study.

**Exclusion Criteria**

1. Patients who are deaf & dumb.
2. Patients who are physically and mentally Retarded/handicapped.
3. Samples with severe and acute mental morbidity.

**Research Design:** Non experimental correlational study.

**Data collection procedure:** The study protocol was sent to the Institutional Ethics Committee for approval. Prior permission from the concerned hospital authorities was taken. The sample chronic psychiatric patients were selected if they met inclusion and exclusion criteria from OPD and Day care of selected psychiatric hospital.

Personal data sheet and questionnaires were administered on all the chronic psychiatric patients selected for the study. Questions were asked from the two Questionnaires to the chronic psychiatric patients after Data was collected by non-probability purposive sampling technique method.

**Variables**

**Independent Variable** – Physical activity

**Dependent Variable-** General mental health

**TOOLS**

The variables in present study are physical activity and General mental health.

The following tools are used in the present study:

- 1) International Physical Activity Questionnaire Scale by Craig, Marshall, Sjostrom, Bauman, Booth, Ainsworth & Oja et.al. (2003)
- 2) The General Health Questionnaire by Goldberg & Williams (1970)

**Section A: Demographic data**

Age, gender, religion, education, socio-economic status, occupation, marital status, type of family, area of living etc.

**SECTION B:** International Physical Activity Questionnaire by Craig, Marshall, Sjöström, Bauman, Booth, Ainsworth & Oja (2003) is a standardized tool. The age range for questionnaire administration is from 15-69 years. IPAQ comprises a set of 27 questionnaires. Long 5 activity domains which is 1) Job-related physical activity, 2) Transportation physical activity, 3) Housework, house maintenance, and caring for family, 4) Recreation, sport, and leisure-time physical activity, 5) Time spent sitting asked independently. The reliability was observed by Spearman's correlation coefficient aggregates around 0.8.

**Section C: The General Health Questionnaire** by Goldberg and Williams (1970).GHQ-28 item scaled version which assesses somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. GHQ contains 28 items that, through factor analysis, have been divided into four sub-scales. The four sub-scales, each containing seven items, are as follows: A) Somatic symptoms (items 1-7), B) Anxiety and insomnia (items 8-14), C) Social dysfunction (items 15-21), D) Severe depression (items 22-28). There are no thresholds for individual sub-scales. Reliability is .95.

## RESULTS

Quantitative analysis was done and the data is organized in following sections

SECTION 1: Frequency and distribution table

SECTION 2: Levels of physical activity

SECTION 3: Levels of general mental health

SECTION 4: Correlation between physical activity and general mental health

SECTION 5: Gender difference in physical activity and general mental health among chronic psychiatric patients

### SECTION 1: Frequency and percentage distribution

Among 200 chronic psychiatric patients. Maximum patients are from age group of 31-40 and 41-50 years. The patients are majority Hindus and illiterate. 67 % patient's monthly income range from 10000-20000 Rs. Majority of patients are unemployed. Around 80 % patients are married. 81 % patients are from joint family. Around 93 % patients are from rural areas. Around 63 % patients suffer from illness since 10 years

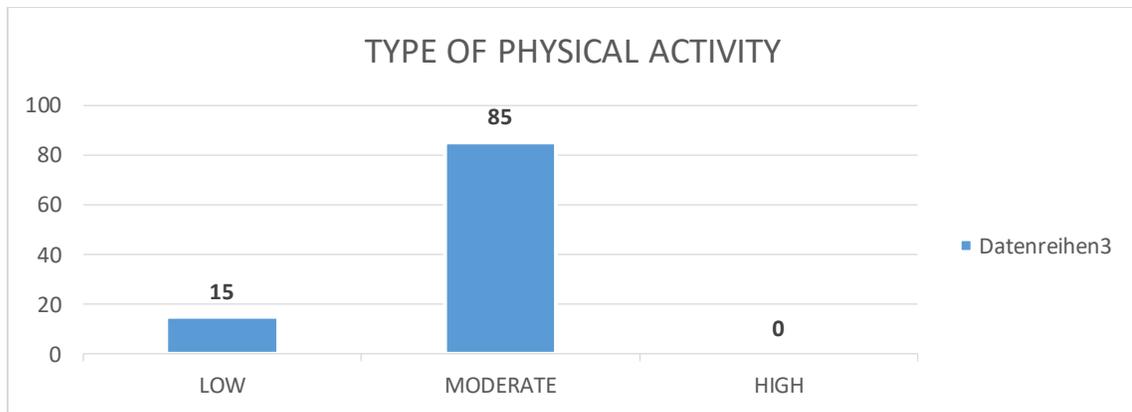
### SECTION 2: Level of physical activity

n=200

S.NO	Level of physical activity	Number	%
1	LOW	30	15
2	MODERATE	170	85
3	HIGH	00	00

**Table 1: Level of physical activity**

The above **Table 1** shows that about 85% patients were having moderate physical activity and 30 % have low or nil physical activity.



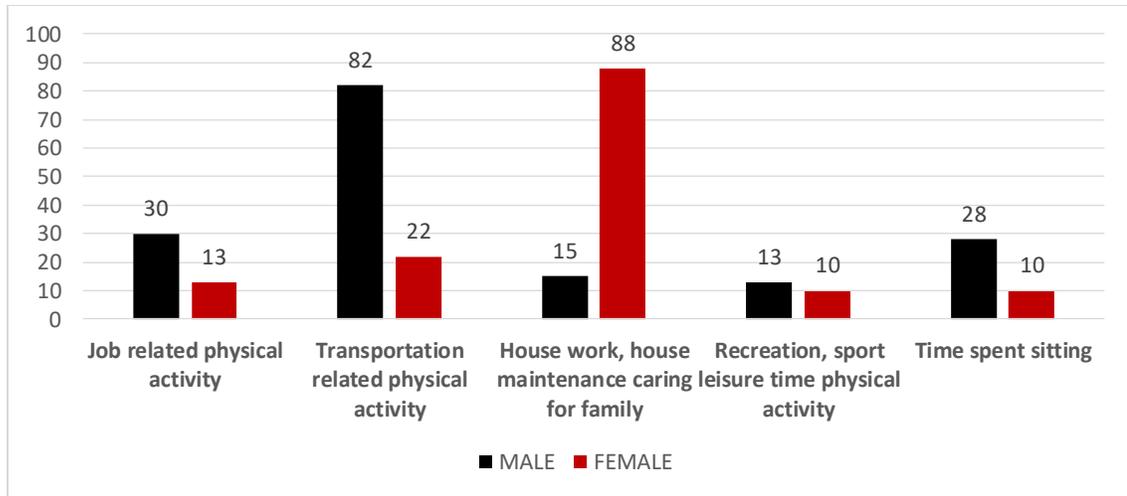
**Table 1/Figure 1: Level of physical activity done by chronic psychiatric patient**

**Type of Physical activity of chronic psychiatric patients**

s.no	Physical activity	Males %	Females %
1	Job related physical activity	30	13
2	Transportation related physical activity	82	22
3	House work, house maintenance caring for family	15	88
4	Recreation, sport leisure time physical activity	13	10
5	Time spent sitting	28	10

**Table 2: Type of physical activity by chronic psychiatric patients.**

The **Table 2** shows that majority of chronic psychiatric males are involved in transportation and walking for at least 30 min per day for at least more than 5 days a week and females are more involved in house hold chores like moping , cleaning, washing and other household activities.



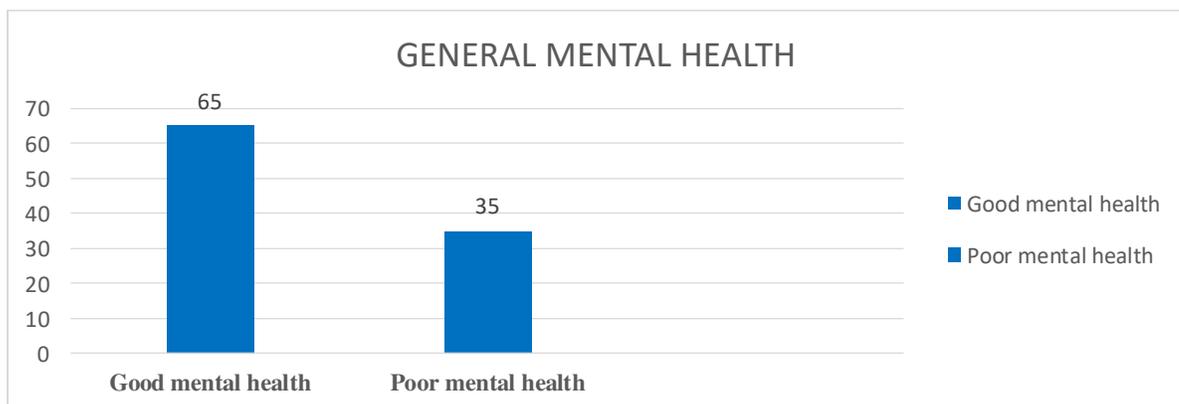
**Table 2/Figure 2:Gender Wise Distribution of type of Physical Activity**  
**SECTION 3: Level of General mental health**

n=200

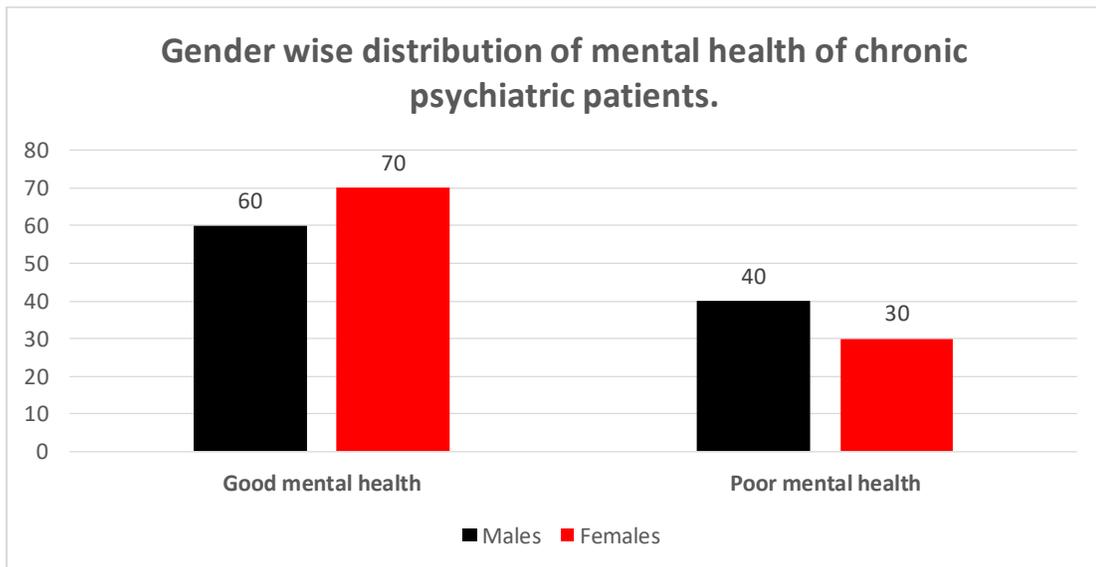
s.no	General mental health	Males 100	Females 100	Total %
1	Good mental health	60	70	65
2	Poor mental health	40	30	35

**Table 3:Level of General mental health**

The above table 3 shows that the general mental health of chronic psychiatric patients are 65 % of good mental health and 35 % of poor mental health.



**Table 3/Figure 3: General mental health of chronic psychiatry patients**



**Table 3/Figure 4: Gender wise distribution of general mental health among chronic psychiatric patients**

Above Table 3/Figure 4 shows that female chronic psychiatric patients are having more good mental health than males.

**SECTION 4: Gender difference between physical activity and general mental health among chronic psychiatric patients.**

Variable	Gender	Mean	Standard Deviation	't' value	df
Physical activity	Male chronic patients	180	40	1.99*	198
	Female chronic patients	193	30		
General mental Health	Male chronic patients	2760	1451	3.27**	198
	Female chronic patients	2111	1111		

		.60	.13		
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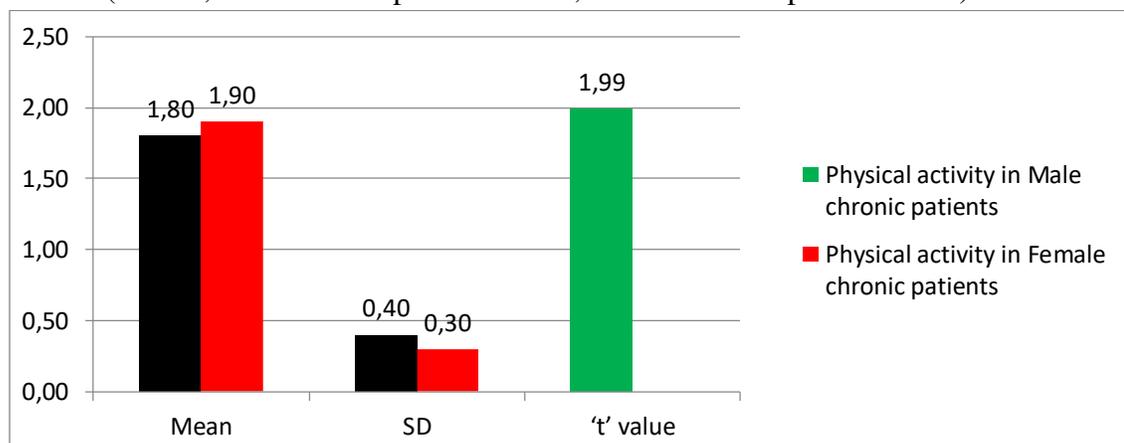
**Table 4: Mean, SD, ‘t’ value and df across the gender difference in physical activity and general health among chronic psychiatric patients.**

\* significant at 0.05 level of significance

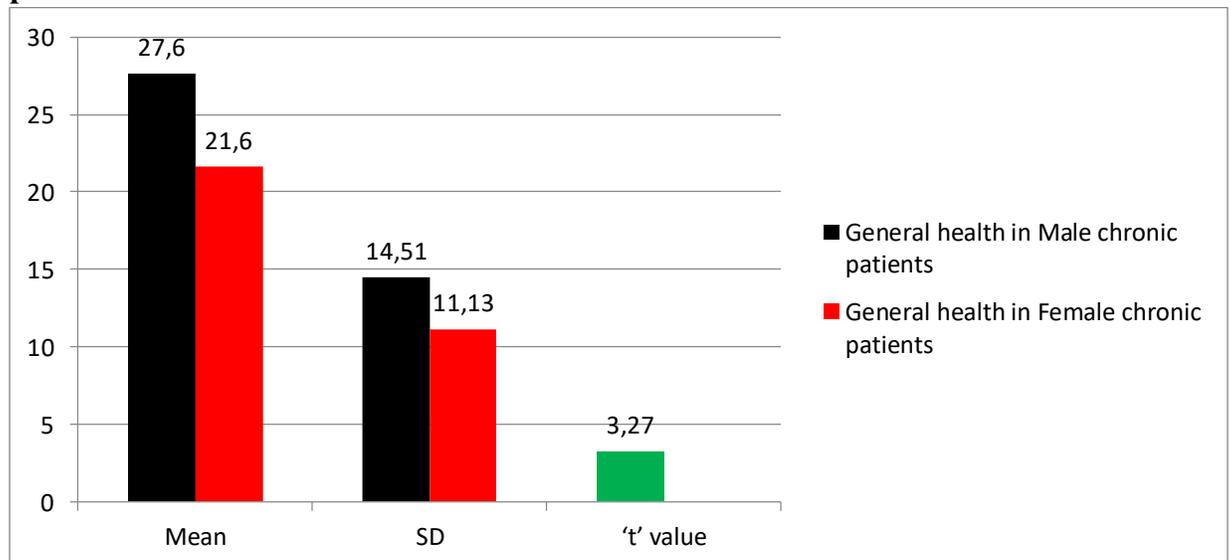
\*\* significant at 0.01 level of significance

The above Table 4 shows the data of male and female chronic psychiatric patients and their Mean score (M), Standard Deviation (SD) and the results of ‘t’ test in physical activity and general and mental health among chronic psychiatric patients.

(N=200, male chronic patients = 100, female chronic patients =100).



**Table 4 / Figure 5: Gender difference in physical activity in chronic psychiatric patients.**



**Table 4 / Figure 6: Gender difference in general mental health in chronic psychiatric patients.**

Above Table 4 / Figure 5 shows that physical activity mean of male chronic psychiatric patients is 1.80 and their SD is 0.40, while the mean of female chronic psychiatric patients is 1.90 and their SD is 0.30 respectively. The 't' value is 't'=1.99 which is significant at 0.05 level of significance. There is not much difference found in the mean value of physical activity among male and female chronic psychiatric patients but the mean score of female patients is more with some decimals than male patients. The obtained' value ('t'=1.99)is significant at 0.05 level.

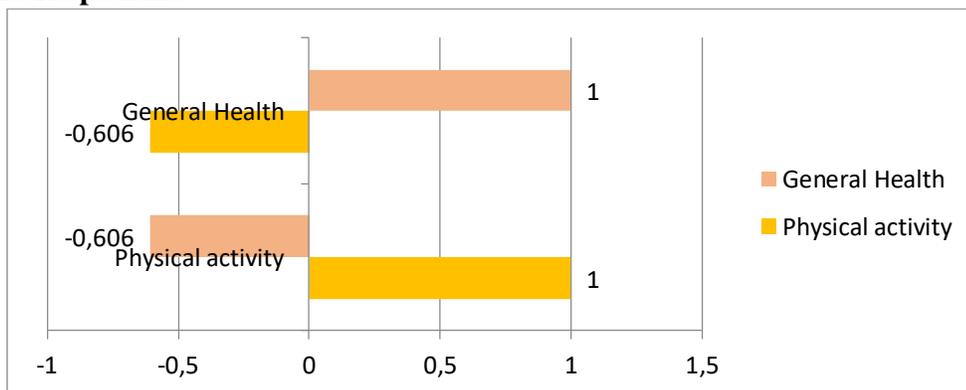
In Table 4 / Figure 6 general mental health the mean of male chronic psychiatric patients is 27.60 and their SD is 14.51, while the mean of female chronic psychiatric patients is 21.60 and their SD is 11.13 respectively. The't' value is't'=3.27 which is significant at 0.01 level of significance. There is gender difference found in the mean value of general mental health among chronic psychiatric patients. The mean score of male chronic psychiatric patients is more than female chronic psychiatric patient's in general mental health. The obtained' value ('t'=3.27) is significant at 0.01 level. The more score of general mental health the poor is the mental health. To have a good mental health the score of general health questionnaire should be between 0-28 hence the males are having high score so the mental health is poor than females chronic psychiatric patients.

**SECTION 5: Correlation**

Variables	Physical activity	General Health
Physical activity	1	-0.606**
General Mental Health	-0.606**	1

\*\* significant at 0.01 level of significance

**Table 5: Correlation between physical activity and general health among chronic Psychiatric patients**



**Table 5/Figure 7: Correlation between Physical activity and General mental Health among chronic psychiatric patients.**

The above Table 5 / Figure 7 shows result of correlation between physical activity and general mental health among chronic psychiatric patients. It is seen that there is negative

correlation ( $r'=-0.606^{**}$ ) found between physical activity and general mental health among chronic male and female psychiatric patients at 0.01 level of significance.

## DISCUSSION

The study was done to assess the relation between physical activity and general mental health and results showed that there is negative correlation ( $r'=-0.606^{**}$ ) found between physical activity and general mental health among chronic male and female psychiatric patients at 0.01 level of significance. Hence the physical activity of the chronic psychiatric patients is not having any relationship with mental health of the psychiatric patients

Similar study was done by Legey et.al. (2017) on 'Relationship Among Physical Activity Level, Mood and Anxiety States and Quality of Life in Physical Education of students' and it reported that in relation to Mood State, a negative correlation was found between leisure-time physical activity LTPA and total mood disorder (TMD).<sup>1</sup>

The objective to assess the gender difference showed that there is a gender difference ( $t'=1.99^*$ ) found in physical activity and general mental health among chronic psychiatric patients.

Similar study done by Ferrand et.al. (2008) titled 'Motives for regular physical activity in women and men: a qualitative study in French adults with type 2 diabetes, belonging to a patients' association' reported that female participants indicated the importance of the sense of well-being and the positive body image related to regular physical activity, and male participants underlined the strength of the relationship between physical activity and health-promoting behaviors.<sup>2</sup>

Harris (2016) in the study 'Gender-related patterns and determinants of recent help-seeking for past-year affective, anxiety and substance use disorders: findings from a national epidemiological survey' reported that males with mental or substance use disorders had relatively lower odds than females of any health professional consultation.<sup>3</sup>

## LIMITATIONS

1. The sample is taken from selected hospitals in Pune city.
2. The sample is not taken from rural area.
3. The external factors such as nuclear or joint family type, socio-economic conditions, education and profession of parents, or family etc is not controlled.

## SUGGESTIONS FOR FURTHER RESEARCH

1. Same study can be conducted with comparison of other government mental hospitals, Private mental hospitals or private psychiatric clinics in Pune area and other cities of Maharashtra.
2. The same study can be conducted among psychiatric patients disease wise.

## CONCLUSION

1. There is a negative correlation between physical activity and general mental health of chronic psychiatric patients.
2. There is more physical activity found among female chronic psychiatric patients than male chronic psychiatric patients.
3. General mental health is found more among female chronic psychiatric patients than male chronic psychiatric patients.

## REFERENCE:

1. Legey.S.,Aquino.F. et al . Relationship Among Physical Activity Level, Mood and Anxiety States and Quality of Life in Physical Education Students. *Clinical Practice & Epidemiology in Mental Health*, 2017.Vol.13, 82-91. doi: 10.2174/1745017901713010082.
2. Ferrand.C., Perrin,C.&Nasarre.S. Motives for regular physical activity in women and men: a qualitative study in French adults with type 2 diabetes, belonging to a patients' association. *Health and Social Care*,2008.Vol.16 (5), 511-520. <https://doi.org/10.1111/j.1365-2524.2008.00773.x>
3. Harris.M.G.,Baxter.A.J., Reavley.N. &Diminic.S. (2016). Gender-related patterns and determinants of recent help-seeking for past-year affective, anxiety and substance use disorders: findings from a national epidemiological survey. *Epidemiology and Psychiatric Sciences*, 2016. Vol.25 (6), 548-561.DOI: <https://doi.org/10.1017/S2045796015000876>