



## PREVALENCE OF EXERCISE ADDICTION IN GYM USERS (FITNESS INDUSTRY) AT HAPUR, UTTAR PRADESH

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**ABSTRACT** Exercise is associated with the feeling of well-being. But it also leads to the manifestation of withdrawal symptoms on discontinuation. The present study has been done to explore the pattern of exercise behavior in the Indian context. 561 (288 males and 273 females) subjects in the age group of 18-50 years were approached for the administration of a sociodemographic data sheet, General Health Questionnaire and Exercise addiction inventory. 6.34 % were at risk category of exercise addiction and gender difference was present too. Psychiatric distress had a negative correlation with exercise addiction. 1.15% show the need for change in the exercise pattern. It has implications for enhancing the mental health professional understanding of exercise addiction.

**KEYWORDS** : exercise addiction, psychiatry, gym

### INTRODUCTION

Exercise is important for overall health and relaxation including mental well being. It contributes to improved cardiovascular health, muscle strength and overall functional capacity. Exercise has various forms including aerobic activities like running and swimming, flexibility activities like yoga, strength training with weights at gym. Gyms have a rich history dating back to ancient Greece, where they were called "gymnasia". In the 20<sup>th</sup> century gyms gained popularity, with the fitness boom of 1980s. Gyms gained popularity in India in 1980s and 1990s. However it was in the 21<sup>st</sup> century that fitness industry saw significant expansion with various local and international gym establishing in India. Due to increased use of gym due to social media influence and promotion by film industry, chances of exercise addiction with gym users have also increased. The effect of exercise deprivation on sleep pattern was seen among subjects who reported problems in managing day without doing any exercise for two consecutive days<sup>1</sup>. Later, it got popularized as positive addiction<sup>2</sup>. The exercising people reported the presence of withdrawals i.e. irritability and negative mood states whenever denied the opportunity to engage in exercise. 8% of gym users had exercise addiction<sup>3</sup>. Three percent of exercisers reported that they could not stop exercising<sup>4</sup>. Sometimes, release of endogenous morphine post exercise lead to a positive state and in some cases can lead to exercise addiction<sup>5</sup>. Psychologically endorphin hypothesis is commonly accepted for feeling good after exercise. There is a need to differentiate recreational use from the condition where the person started using exercise as a method of coping and other psychosocial consequences. Exercise addiction was seen as a loss of control in relation to exercise; no longer a rewarding activity; activity used to avoid withdrawals<sup>6</sup>.

### MATERIALS AND METHODS

An observational study aimed to study pattern of exercise behaviours. 561 subjects in the age of 18-65 years were approached from community gyms of Hapur, Uttar Pradesh for individual administration of Sociodemographic Data Sheet, Exercise Addiction Inventory<sup>7</sup>, General health Questionnaire -5<sup>8</sup> along with informed consent.

Subjects with inability to read and write English were excluded.

### Tools

Socio-demographic profile data sheet: It was prepared by the researcher for collecting socio-demographic information on psychosocial variables related exercise.

Exercise addiction Inventory (EAI): It's a six-item scale. It identifies

the people at risk for developing exercise addiction. It got good internal reliability & validity. The EAI has good internal reliability (Cronbach  $\alpha = .84$ ). Its concurrent validity with the Obligatory Exercise Inventory-5 was  $r = 0.80$ , and with the Exercise Dependence Scale was  $r = 0.81$ . Its test-retest reliability was  $r = 0.85$ . Individuals scoring above 24 on the EAI may be classified as "at risk" of exercise addiction. The other group are symptomatic group (13-23) and normal (less than 13)<sup>7</sup>

General health Questionnaire - 5. It is stage screening tool with validity of sensitivity of 86%, specificity of 89%. It has a cutoff point of 3 & above for indicating presence of psychiatric distress<sup>8</sup>.

### Procedure

561 (288 males and 273 females) subjects in the age group of 18-65 years, were approached from Urban localities of Hapur, Uttar Pradesh, India for individual administration of schedule (sociodemographic data sheet, General Health questionnaire, Exercise addiction inventory) using house to house survey. Subjects with inability to read & write English were excluded from the study. The profile of residents in these areas included wider representation of all economic classes. The attempt was made to include equal number of subject in each group (<30 years, >30 years). At least 3 attempts were made to establish contact with the residents before they were considered as dropouts.

### RESULTS

A total of 561 people were approached for the study purpose. 21 males and 20 females were excluded from the study as they were not fulfilling the inclusion criteria. Finally 520 (267 males, 253 females) were studied. The demographic details are as follows. 51.34% of the participants were males, 48.65% of them were females. 28.64 years was the mean age of the sample. 25.1% were graduates, 12.7% were postgraduates, 45.2% were in secondary education, and 8.9% were in primary educational background. 5.8% of the sample were having technical/ITI education, whereas 2.2% were illiterate.

7.5% of the sample were single; 66.7% were married, 5.1% were widowed & divorced or separated category constitutes 0.6%.

9.87% of unmarried people had exercise addiction, 3.98% of married people reported to have exercise addiction and 12.5% of widowers and divorcees were also reported to be positive for exercise addiction. 1.15% show the need for change in the exercise pattern. The subjects did not report history of substance use or met the current or life criteria

for dependence

Table 1 indicates 520 participants reported to be doing exercise regularly. 33 participants come under at risk for exercise addiction (6.34%), 309 individuals belong to symptomatic group (59.42%) and 178 (34.23%) were in normal exercise group.

Table 2 indicate the significant gender difference in relation to exercise addiction.

Table 3 showed the exercise addiction with respect to marital status.

**DISCUSSION**

The present study document the presence of 6.34 % having exercise addiction among 520 subjects in the age range from 18-65 years. It was more among divorced/separated group and unmarried subjects. All the three group of exercise addiction inventory showed the presence of psychiatric distress.

It was 6.34 % in the at risk for addiction group. The obtained percentage of at risk for exercise addiction was comparable to international studies in this area. It was estimated from 3% to 5% of the U.S. college youth population<sup>9</sup>. The prevalence in the general population was close to 3%<sup>10</sup>. It was found to be higher among certain groups such as runners<sup>11</sup>. Whereas other studies among college youth report prevalence as high as 21.8–25.6%<sup>12,13</sup>. 42% of the members at a Parisian fitness club met criteria for exercise addiction<sup>14</sup>. The varying percentage could be due to variation in sampling frame used for the respective study. The exercise was reported to be inversely related to anxiety and depression<sup>15,16</sup>. A study done at NIMHANS by Sharma et al reported prevalence of 5.8% risk for exercise addiction.<sup>17</sup>

**Limitation and Strength:** The present study has limitations in form of not having qualitative data to understand the process of addictive use of exercise as well as user knowledge about the addictive potential of exercise. The present study did not have information about the time spent on exercise as well as type of exercise (with supervision and without supervision) they used.

**Limitations-**The sampling was convenient so it does not represent a homogenous population. The study only includes subjects able to read and write English language. The present study did not have information about the time spent on exercise as well as type of exercise.

**Future Studies**

The present study has implications for enhancing the mental health professional understanding of exercise addiction and its association with psychosocial variables. It also implies the enhancing community awareness for addictive potential of exercise. There is a need to build up empirical literature in this area to understand the etiology/ conceptualization of exercise addiction.

**Table 1. Showing Frequency Of Exercise Addiction**

Exercise addiction Score range	Participants doing exercise regularly	Frequency	Percentage
0-12 (normal)	520	178	34.23 %
13- 3(symptomatic)		309	59.42 %
24-30 (at risk for addiction)		33	6.34 %

**Table 2. Relationship Of Exercise Addiction With Gender**

Variables	Female			Male			X <sup>2</sup>	Odds Ratio
	Positive	Mean	N	Positive	Mean	N		
Exercise addiction	7	0.028	253	26	0.097	267	1.311	13.155

**Table 3. Correlation Of Exercise Addiction With Marital Status**

Marital Status	Data	Percentage of exercise addiction
1.	Single	9.87 % (n=16)
2.	Married	3.98 % (n=13)
3.	Divorced/ Widowed/ Separated	12.5 % (n=4)
4.	TOTAL	100 % (n=33)

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**Compliance with Ethical Standard:** There was no conflict of interest

in relation to present work as well as informed consent of the human subjects had been taken prior to inclusion in the study.

**Conflict of Interest:** Authors of the paper did not have any conflict of interest.

**Research Involving Human Participants and/or Animals:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/ or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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