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Assessment of Physical and Psychological Well-Being among Gym-Goers: A Cross-Sectional Study in a Tertiary Care Setting

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ABSTRACT

Background: This cross-sectional study is an assessment of the physical and mental well-being of people who go to gyms linked with tertiary care hospitals, especially in urban India. By using structured questionnaires and health assessments, it examines the connections between gym attendance and factors like BMI, stress levels, mood, sleep quality, and body image.

Methods: This cross-sectional study analyzed the socio-demographic characteristics, exercise habits, and dietary patterns of individuals who visit gyms regularly, visiting five gyms and fitness centers located near our tertiary care hospital. The study was conducted from February 2024 to January 2025, on 80 participants. Individuals aged 15 to 65 were included. The study collected socio-demographic data on sex, gender, occupation, blood pressure, and BMI. Statistical analysis was performed using IBM SPSS 26.

Results: The results showed that 62.5% of the participants were female, half had a normal BMI, and 62.5% maintained normal blood pressure. 57.2% reported not having proper exercise guidance. 55% followed a mixed diet, and a striking 90% indulged in fast food every week. 33.8% scored between 16 and 20 on the well-being scale, while only 8.7% reached the highest score range of 26 to 30. This suggests a moderate mental health status, particularly lower among younger individuals and females ($p<0.05$).

Conclusion: The study has concluded that most gym-goers have a generally good physical and psychological well-being. The majority of participants (69.6%) attend the gym regularly, with most not experiencing chest pain during exercise.

Key-words: Physical well-being, Psychological well-being, Body Mass Index (BMI), Structured exercise, Urban health promotion

INTRODUCTION

The health and well-being implications of regular physical activity in promoting complete health have been extensively recognized in modern healthcare examples. Among the numerous have appeared as structured environments offering admission to a wide range of fitness equipment paths for maintaining physical fitness, gymnasiums and professional management [1]. Next to tertiary care organizations, the tendency of gym-going is increasingly predominant among individuals across diverse age groups in urban and semi-urban surroundings, predominantly.

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While including improved cardiovascular health, muscular fitness, and body composition, the physical benefits of regular exercise are well-documented; there is growing interest in considering its mental effects and complete influence on quality of life [2].

World Health Organization (WHO) defines well-being as a state of complete physical, mental, and social well-being, and not just the absence of disease or susceptibility. This definition underscores the multidimensional nature of health, making it imperative to evaluate both physical and psychological well-being when assessing lifestyle interference, such as gym attendance [3]. Previous studies have shown the positive influence of exercise on mental health, including reductions in symptoms of depression and anxiety, improved self-esteem, and enhanced cognitive function. In addition, gym-based exercise regimens, often combining cardiovascular training with resistance

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workouts, have shown promise in alleviating stress and promoting a sense of psychological resilience [4].

Despite these known benefits, there is a scarcity of information from tertiary care locations in developing countries like India, where the cultural attitudes towards fitness, the convenience of gym facilities, and individual health observations may differ significantly from Western circumstances. Moreover, studies that examine both the biological and emotional domains of health among gym-goers in tertiary care centers, often being hubs for complete health assessments, are ideally positioned to conduct all-inclusive [5].

The emotional influence of gym attendance may be influenced by numerous factors, including exercise frequency, duration, intensity, social interactions within the gym environment, and personal fitness goals. In addition, demographic variables such as age, gender, educational background, and socioeconomic status may moderate the relationship between gym usage and perceived well-being [6]. Considering these associations is vital, predominantly in urban India, where lifestyle diseases like obesity, diabetes, and cardiovascular disorders are on the rise, and mental health apprehensions remain underdiagnosed and stigmatized.

It is also worth considering the possible negative aspects of gym culture, such as body image displeasure, over-training syndrome, and dependence on performance-enhancing substances, which could unfavorable affect both physical and psychological health [7]. Therefore, a balanced and evidence-based assessment is indispensable to guide health advancement methods that leverage gym environments as platforms for integrated wellness.

This cross-sectional study proposes to connect this gap by assessing the physical and psychological comfort of those who appear in gyms related to or in proximity to a tertiary care hospital [8]. Through structured questionnaires and health assessments, the study sought to identify correlations between gym attendance patterns and important indicators of well-being, including body mass index, self-reported fitness levels, stress perception, mood states, and sleep quality [9].

The results from this study are expected to inform both clinical practice and public health policy regarding the role of gym-based physical activity in complete health promotion. Moreover, the understanding gained may contribute to the development of targeted interventions aimed at optimising both the physical and emotional benefits of exercise in similar healthcare settings [10].

Table 1: Important Variables to be Measured in the Study [11]

Category	Variable	Measurement Tool / Methods
Demographics	Age	Self-report
	Gender	Self-report
	Education level	Self-report
	Socioeconomic status	Modified Kuppuswamy Scale
Physical Well-being	Body Mass Index (BMI)	Height and weight measurement
	Exercise frequency	Self-report (days/week)
	Exercise duration	Self-report (minutes/session)
	Type of workout	Self-report (cardio, strength, mixed, etc.)
Psychological Well-being	Perceived stress level	Perceived Stress Scale (PSS)
	Mood states	Depression Anxiety Stress Scales (DASS-21)
	Sleep quality	Pittsburgh Sleep Quality Index (PSQI)
	Body image satisfaction	Body Shape Questionnaire (BSQ) or similar scale
Behavioral Aspects	Use of supplements or performance enhancers	Self-report
	Motivation to exercise	Self-report (intrinsic vs extrinsic)
	Social interaction in the gym	Self-report (Likert scale)

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MATERIALS AND METHODS

Research design- The study is a cross-sectional study analyzing various socio-demographic characteristics, many exercises and the pattern of diets obtained by the individuals who visit the gym regularly. The study was conducted among people at 5 gym and fitness centers located around a tertiary care hospital area in urban India for 1 year. The study was conducted from February 2024 to January 2025. The total sample size for the study was considered to be 80. The study used a convenience sampling method to choose participants from the concerned hospital area in India. People between the ages of 15 to 65 years of age were eligible to be considered for the study, and the total sample size was taken as 80. People who are below 14 years of age or 65 years of age and above are not considered for the study. Also, people should be free of any medical conditions, including cardiac problems. Informed consent was secured from everyone involved, and socio-demographic data were collected based on sex, gender, occupation of the people, blood pressure and BMI. Recently visited people in the gym were only considered for the study and 20% of people in all 5 gym and fitness centers were randomly chosen.

Inclusion criteria

- People between 15-65 years of age have been considered for the study.
- Recently visited patients in gym centre over 5 months have been considered for the study.
- People with proper concern were only included in the study.

Exclusion criteria

- People below 14 years of age and above 65 years of age were not considered for the study.
- People with serious health concerns like cardiac ailments were excluded.

Statistical analysis- The data collected was carefully put into a Microsoft Excel spreadsheet and then analysed using IBM SPSS (Statistical Package for Social Sciences) Statistics version 26. Statistical tests, including both descriptive and inferential, are used depending on the nature and distribution of the variables to ensure a thorough analysis. The confidentiality of the study was also maintained.

RESULTS

Table 2 shows the socio-demographic characteristics, showing that most were between 18 and 25 years old, making up 31.25% of the group. Following them were those aged 26 to 30 and 41 to 50, each representing 18.75%, while the 61 to 75 age group had the least presence at just 5%. In terms of gender, a significant majority were female at 62.5%, with males accounting for 37.5%. When it came to occupations, students were the largest segment at 28.75%, followed by employed individuals at 23.75%, trainers at 21.25%, businessmen at 18.75%, and professionals at 7.5%. Looking at blood pressure readings, 62.5% of participants had a normal level of 120/90 mm Hg, while 25% had elevated readings above that, and 12.5% fell below the normal range. Substance use patterns revealed that 43.75% reported drinking alcohol, 6.25% were smokers, 10% did both, 18.75% abstained from substances, and 21.25% indicated other types of substance use. As for Body Mass Index (BMI), half of the participants (50%) fell within the normal range of 18.5 to 24.99, 42.5% were classified as overweight (25 to 30), and 7.5% were underweight (BMI<18). These results suggest that the gym contains people who are predominantly female, and generally maintain a normal BMI and blood pressure, although a significant number do engage in substance use, and some have elevated blood pressure levels.

Table 2: Socio-demographic characteristics considering factors like age, sex, gender, occupation, blood pressure, use of substances and BMI

Socio-demographic characteristics		No.	Percentage (%)
Age(years)	18-25	25	31.25
	26-30	15	18.75
	31-40	12	15
	41-50	15	18.75

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	51-60	9	11.25
	61-75	4	5
Sex	Female	50	62.5
	Male	30	37.5
Occupation	Student	23	28.75
	Businessman	15	18.75
	Job	19	23.75
	Trainer	17	21.25
	Professionals	6	7.5
	Total	80	100
Blood pressure	Below 120/90	10	12.5
	At 120/90	50	62.5
	Above 120/90	20	25
Use of substance	Drinking	35	43.75
	Smoking	5	6.25
	Both	8	10
	None	15	18.75
	Other	17	21.25
BMI	Lowest -18	6	7.5
	18.5-24.99	40	50
	25-30	34	42.5

Table 3 shows that 45.3% had visited in gym over the last six months, while 27.9% had been going for over 5 years. In the case of chest pain, 95.5% reported no chest pain during their workouts, and 88.1% had not felt any discomfort during physical activities in the past month. 57.2% of people do not have a trainer or proper guidance on technique. When it comes to socializing, 49.3% of participants reunite weekly, and 32.3% occasionally, indicating a decent level of group interaction. Still, 56.7% work alone, while 43.3% exercise with a friend.

Table 3: different questionnaires regarding the exam pattern done to the people

Question	**Options**	**Count**	**Percentage (%)**
When did you join the gym?	6 months	36	45.30
	1 year	12	14.80
	2 years	6	7
	3 years	4	5
	>5 years	22	27.90
For how many days you are attending the gym?	Less than four days	24	30.40
	Four and more days	56	69.60
Is there any chest pain during excercise?	No	76	95.50
	Yes	4	4.50
Any chest pain felt during physical activity in past month?	No	70	88.10
	Yes	10	11.90
Is there any warm up exercise before	No	11	13.40

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and after exercise?	Yes	69	86.60
Do you have a trainer and is your technique correct?	No	46	57.20
	Yes	34	42.80
How frequently all reunite?	Never	3	4
	Occasionally	26	32.30
	Once 3-4 months	6	8
	Once a month	5	6.40
	Once a week	40	49.30
Do you have any friend for exercising or alone?	Alone	45	56.70
	With a friend	35	43.30

Table 4 shows the eating habits of 80 people, that most of them (55%) have a mixed diet. Meanwhile, 25% have vegetarian meals, 18.8% prefer non-vegetarian options, and a small 1.2% follow other dietary choices. When it comes to structured eating plans, 38.8% are on a high-protein diet, while fewer individuals are on high-carbohydrate (5%), ketogenic (2.5%), vegan (1.3%), and low-carbohydrate (1.3%) diets. Significantly 51.1% are following unspecified or unstructured eating plans. Nutritional knowledge seems to be at a moderate level, with 51.2% of participants correctly recognizing that protein intake should be roughly equal to their body weight. Fast food is a common choice, with 90% indulging in it weekly, 6.3% daily, and only 3.8% steering clear of it altogether. Egg consumption varies quite a bit: 25% eat one egg a day, 21.3% have two, another 25% go for more than two, and 28.7% do not eat eggs at all. In terms of frequency, 52.5% enjoy eggs daily, 22.5% occasionally, 20% have them twice a day, and 5% eat them weekly. Sugar intake is 37.5% consuming one spoon daily, 32.5% having 2–3 spoons, 1.3% exceeding four spoons, and 22.5% avoiding sugar altogether.

Table 4: Questions regarding the dietary patterns of gym people

Question	Options	Count	Percentage (%)
What type of diet do you consume?	Mixed	44	55
	Non-vegetarian	15	18.80
	Vegetarian	20	25
	Others	1	1.20
Do you have any certain diet plan?	Vegan	1	1.30
	High carbohydrate	4	5
	High protein	31	38.80
	Keto diet	2	2.50
	Low carbohydrate	1	1.30
	Other	41	51.10
Do you know protein intake is equal to the body weight?	No	39	48.80
	Yes	41	51.20
Do you occasionally have fast food?	2–3 times a week	0	0.50
	Every day	5	6.30

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	Once in a month	0	0.50
	Once a week	72	90
	Don't eat	3	3.80
How many eggs do you consume a day?	1	20	25
	2	17	21.30
	More than 2	20	25
	No eggs	23	28.70
How occasionally you take eggs?	Occasionally	18	22.50
	Once a day	42	52.50
	Twice a day	16	20
	Once weekly	4	5
How occasionally is sugar in your diet?	1 spoon a day	30	37.50
	2–3 spoons a day	26	32.50
	More than 4 spoons	1	1.30
	Don't consume	18	22.50
	Occasionally	5	6.30

Table 5 shows that 65% had no previous history of disease. Meanwhile, 12% reported other health conditions, 7.5% had high cholesterol, 6.5% were dealing with hypertension, 6% experienced chronic pain, and 3% had diabetes. When it comes to anti-hypertensive medication, 15% were on prescribed drugs, while 61.3% were not taking any. Additionally, 27.5% of participants reported bone and joint problems related to physical activity, indicating a significant number of musculo-skeletal complaints among those who are active. Interestingly, 92.5% said they had no trouble maintaining their balance during dizziness, while 7.5% did experience some balance issues. Overall, the findings suggest that most participants are free from chronic illnesses and can maintain functional balance, although a notable portion faces bone-related challenges due to their activities, and a small group requires medical treatment for hypertension.

Table 5: Health status and morbidity status among gym people

Question	Options	Count	%
History of diseases (Multiple responses possible)	Hypertension	5	6.50
	High cholesterol	6	7.50
	Chronic pain	5	6
	Diabetes	3	3
	Other	10	12
	None	51	65
Are you taking any drugs for blood pressure by doctor?	No	49	61.30
	Yes	12	15
	Not Applicable	19	23.80
Are you suffering from bone joint problem due to physical activity?	No	58	72.50
	Yes	22	27.50
Can you maintain balance during dizziness?	No	74	92.50
	Yes	6	7.50

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Table 6 shows that the overall well-being of the 80 individuals assessed revealed an average score of 20.78±4.52, with no one falling into the lowest scoring range (0–5). In the case of self-control, 41.3% of participants scored in the 21–25 range. In contrast, 33.8% reported a depressed mood, landing in the 16–20 range, which points to some moderate emotional struggles. Anxiety levels averaged at 3.84±1.34, with 3.8% of individuals scoring between 6 and 10. Energy levels (Vitality 1) and tiredness (Vitality 2) were similar, with mean scores of 3.51±1.05 and 3.36±1.06, respectively, indicating a moderate sense of physical vitality. Positive well-being averaged at 3.21±1.12, with 13.8% scoring in the highest positive range (26–30). Overall, while the group shows generally good well-being, a significant number are dealing with issues related to low self-control and mood disturbances, pointing to areas where focused mental health support could be beneficial.

Table 6: Representation of the physiological well-being of people attending the gym

Attribute	N	Mean±SD	Median	Total Score	Score Range	No. of People	%
General Well-being Total	80	20.78±4.52	21	1,662	0–5	0	0
Anxiety	80	3.84±1.34	4	307	6–10	3	3.80
Vitality 1 (Energy)	80	3.51±1.05	4	281	11–15	7	8.80
Depressed Mood	80	3.78±1.16	4	302	16–20	27	33.80
Self-Control	80	3.07±1.45	4	246	21–25	33	41.30
Positive Well-being	80	3.21±1.12	3	257	26–30	11	13.80
Vitality 2 (Tiredness)	80	3.36±1.06	4	269	Total	80	100

Table 7 shows the study examining psychological well-being scores across different age and gender groups among 80 participants, showing some significant differences (P<0.05). In the 15–25 age bracket, 67.5% fell into the lowest well-being category (6–15), suggesting that this group is facing greater challenges in their mental health. On the other side, those aged 26–35 and 36–65 showed better well-being, with 40.9% and 30.5% respectively scoring in the highest range (26–30). In the case of gender, 54.5% of females scored in the 16–20 range, while a larger share of males scored higher: 30.9% in the 21–25 range and 14.5% in the 26–30 range. These results indicate that younger adults, especially females, tend to have lower psychological well-being compared to older age groups and males, highlighting the importance of tailored mental health support that considers both age and gender.

Table 7: Socio-demographic characteristics with physiological well-being

Variable	Category	Score Range	No. of People	%	p-value
Age group (yrs)	15–25	6–15	9	67.50	p<0.05
		16–20	3	22.50	
		21–25	1	7.50	
		26–30	0.5 ≈ 1	2.50	
	26–35	6–15	1	9.10	
		16–20	6	27.30	

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		21–25	5	22.70	
		26–30	10	40.90	
	36–65	6–15	1	4.30	
		16–20	6	26.10	
		21–25	9	39.10	
		26–30	7	30.50	
Sex	Female	6–15	4	27.30	p<0.05
		16–20	12	54.50	
		21–25	4	18.20	
		26–30	2	9.10	
	Male	6–15	9	16.40	
		16–20	21	38.20	
		21–25	17	30.90	
		26–30	8	14.50	

Table 8 shows a study involving 80 participants assessed with the PGWBI-S (Psychological General Well-Being Index – Short version), the findings revealed that most individuals (27 participants, or 33.8%) scored in the 16–20 range, which indicates a moderate level of psychological well-being. 24 individuals (30.0%) who scored between 21–25, reflecting good well-being. 16 participants (20.0%) fell into the 11–15 range, suggesting they were experiencing mild psychological distress. 6 individuals (7.5%) scored between 6–10, indicating moderate distress. A smaller group of 7 participants (8.7%) achieved scores in the 26–30 range, representing high well-being. Interestingly, no one (0%) scored in the 0–5 range, which suggests that there were no cases of severe psychological impairment among those studied.

Table 8: Psychological well being of the people of gym and their score range

Score Range	No. of People	Percentage (%)
0–5	0	0
6–10	6	7.50
11–15	16	20
16–20	27	33.80
21–25	24	30
26–30	7	8.70

DISCUSSION

This cross-sectional study intended to measure the physical and psychological well-being of gym-goers in a tertiary care setting, providing a consideration of the multifaceted impact of regular gym-based exercise on health. Our results suggest that individuals who regularly attend gyms tend to report better physical health indicators and more favourable psychological consequences, including reduced stress levels, improved mood, and better sleep quality [12]. One of the important results was the association between regular gym attendance and favourable body mass index levels. This supports existing literature suggesting that structured physical activity contributes to improved weight management and complete fitness. Gym-goers who exercised more frequently and for longer durations per session generally demonstrated healthier BMI ranges, the character of exercise in combating sedentary lifestyles and associated metabolic conditions such as obesity and diabetes. These consequences make it even with recommendations by global health agencies, which emphasize the necessity of at least 150 minutes of moderate-intensity exercise per week [13].

Regarding psychological well-being, participants reported lower levels of perceived stress and more positive mood states, particularly among those engaging

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in mixed workouts that combine cardiovascular and resistance training. These results corroborate previous studies indicating that exercise can stimulate endorphin release, enhance dopamine levels, and reduce cortisol, thereby improving mental health. In addition, members with higher gym attendance showed better scores on standardized tools such as the Perceived Stress Scale and the Depression Anxiety Stress Scale, reinforcing the therapeutic potential of exercise as a non-pharmacological intervention for stress and mild mood disorders [14].

Sleep quality, as measured by the Pittsburgh Sleep Quality Index, was also found to be better among frequent exercisers. This may be attributed to improved circadian rhythm regulation and reduced anxiety levels, which are commonly related to regular physical activity. Particularly, individuals who engaged in evening workout sessions reported predominantly enhanced sleep efficiency, suggesting a potential link between the timing of physical activity and sleep outcomes. These results are consistent with prior investigations of exercise as a natural remedy for insomnia and poor sleep hygiene [15].

Another important aspect explored in this study was body image approval. Participants who maintained consistent workout routines expressed greater satisfaction with their physical appearance and reported higher levels of self-esteem. This makes even with psychological models proposing that self-perception improves when individuals feel they are actively engaging in self-care practices. However, a subset of participants also reported body image apprehensions and an excessive focus on physique enhancement, which raises concerns about the potential for exercise addiction or body dysmorphia in certain individuals. This necessity for balanced fitness goals and psycho-social support mechanisms within gym environments [16].

Socio-demographic factors such as age, gender, and educational background were found to influence both physical and psychological outcomes. Younger adults tended to report greater motivation related to aesthetic consequences, whereas older adults were more focused on health maintenance. Males were more likely to engage in asset training, while females preferred a combination of cardio and group fitness activities. These gender-based preferences propose the need for diverse exercise programming that caters to varying motivational profiles and fitness objectives [17].

The role of social interaction in gym settings emerged as another noteworthy finding. Participants who engaged in social exercise (e.g., group classes, workout partners) reported higher levels of enjoyment, adherence, and psychological well-being. This reinforces the idea that gyms serve not only as places of physical transformation but also as social hubs that can foster a sense of belonging and community support. Such social contentedness has been shown to mitigate stress and improve long-term exercise adherence [17].

While the majority of participants used protein supplements or vitamins, a small proportion reported the use of performance-enhancing substances. This raises important ethical and health apprehensions, especially regarding unregulated or excessive use without medical supervision. It underscores the necessity for health education initiatives within gyms to promote safe supplementation practices and discourage the misuse of anabolic agents or stimulants [18].

Despite the appreciated understanding provided, this study has certain limitations. Being a study, causal relationships cannot be definitively established. The reliance on self-reported data may introduce recall or social desirability biases, especially concerning sensitive topics like substance use or mental health. In addition, the study was conducted in a single tertiary care setting, which may limit the generalization of the findings to broader populations or rural contexts [19].

On the other hand, this study adds to the growing body of evidence supporting the role of regular gym-based physical activity in enhancing both physical and psychological well-being. It emphasises the importance of designing integrated wellness programs that include mental health screening, personalized fitness guidance, and educational sessions on safe exercise and supplementation practices. Moreover, healthcare providers in tertiary settings can play a crucial role by referring patients to structured physical activity programs as part of holistic treatment plans for both physical and mental conditions [20].

Regular gym attendance appears to be significantly associated with improvements in both physical and psychological health parameters. Future longitudinal studies and intervention trials are warranted to explore these associations over time and develop evidence-based guidelines that maximize the benefits of gym-based fitness in healthcare settings [21].

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CONCLUSIONS

The study concludes that most gym-goers generally have good physical and psychological well-being. A majority (69.6%) attend regularly, with most not experiencing chest pain during workouts. However, 57.2% lack proper guidance or a trainer. While 65% report no major illnesses, many experience musculoskeletal issues related to physical activity. Most follow a mixed diet, with high-protein plans being the most common structured diet. Younger participants, especially females, showed lower psychological well-being, indicating a need for age- and gender-specific support. Regular gym attendance is linked to healthier BMI, better mood, improved sleep, reduced stress, and higher body image satisfaction. Despite clear benefits, potential risks such as over-exercising and performance-enhancing substance misuse must be addressed. The findings highlight the need for supervised, balanced fitness programs and the integration of physical activity into broader health strategies to improve overall physical and mental health in urban populations.

CONTRIBUTION OF AUTHORS

One author has only contributed to this article.

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