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Impact Of Gym Attendance on Self-Esteem in Adolescent Males

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Abstract:
Impact of Gym Attendance on Self-esteem in Adolescent Males
Introduction *Self-esteem plays a crucial role in the development of adolescents, affecting their mental health, behavior, and social interactions, and it is influenced by various factors. This research aimed to investigate the effect of gym attendance on self-esteem among male adolescents.*
Methods *A cross-sectional study was conducted involving 329 randomly selected Egyptian adolescent males (mean age = 15.8). Demographic data was gathered, including questions about gym attendance and the motivations behind it. The Rosenberg Self-Esteem Scale (RSES) was utilized to assess levels of self-esteem.*
Results *Elevated levels of self-esteem were notably observed among students who regularly attended the gym. The primary motivation for attending the gym was to achieve an ideal body shape, closely followed by an enhancement in self-confidence.*
Conclusion *Regular participation in gym activities may have a beneficial effect on the self-esteem of adolescent males, resulting in improved levels of self-esteem.*
Keywords *Self-esteem, RSES, Gym, Adolescents.*

1. INTRODUCTION

Adolescence is a stage of life characterized by rapid and significant developmental changes and it represents a critical phase for sociocultural processing, with experiences significantly impacting adolescents' capacity to adapt and acquire knowledge from their social environments **(Cheng et al., 2024)**. Self-esteem is an individual's self-perception, reflecting both positive and negative attitudes toward oneself. During adolescence, self-esteem often declines from childhood levels but tends to rise progressively throughout adolescence and into young adulthood **(Carlen et al., 2023)**.

Physical inactivity is the fourth leading cause of death worldwide, increasing the risk of mortality and many chronic diseases. Regular physical activity helps to prevent and manage these chronic illnesses and improves overall health and appearance **(Ahsan et al., 2025)**.

Engaging in physical activity is broadly acknowledged for its positive effects on both physical and mental well-being, with self-esteem serving as a significant psychological outcome. It seems that physical activity contributes to the enhancement of self-esteem especially in adolescents by fostering improvements in physical self-concept and body image **(Wright et al., 2023)**.

This research investigates how regular attendance at the gym can influence the self-esteem levels of adolescent males.

2. METHODS

Participants and sampling technique

A total of 329 male students, aged between 14 and 17 years old, were randomly chosen from three secondary schools for boys located in Minia, Egypt, participated in the study conducted from October 2023 to March 2024, achieving a response rate of 97.1%. The criteria for inclusion required participants to express a willingness to participate in the study.

The sample size was calculated using Epi Info™ version 7.2.6.0 software for "survey studies sample size calculation" with an anticipated low self-esteem prevalence of 65.7% **(Chiha et al., 2023)**, a student

population of 5,885, a Confidence interval (CI): 95%, and a margin of error of ±2, resulting in a necessary sample size of 327. The final sample size of the study included 329 students.

Measures

Socio-demographic data: Students were asked about (age, academic grade, and gym attendance).

Rosenberg Self-esteem Scale (RSES): (Rosenberg, 1965) . The RSES is a ten-item scale assessing self-esteem, rated on a four-point scale from (strongly disagree) to (strongly agree) with five items reverse scored. Total scores range from 10 to 40, with higher scores indicating greater self-esteem: low (10–25), moderate (26–29), and high (30–40) **(Rezgui et al., 2023) .** The validated Arabic version was used in this study and has been applied in earlier research **(Abdel-Khalek et al., 2012; Rezgui et al., 2023)**.

Data collection and analysis

Data collection

Data was collected from students during their school day, especially in their free periods. After a brief explanation, students completed self-administered questionnaires. They received support and oversight from both the researcher and the class teacher while filling out the questionnaires.

Statistical analysis

The collected data were presented by tables and graphs, computerized and statistically analyzed using Statistical Package of Social Science version 26 (SPSS). Serial numbers were assigned to all of the data collected. Data was entered and checked for mistakes. Data was presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, while means and standard deviations for quantitative variables. The relation of each variable to outcome categories was separately tested by the appropriate statistical tests. Statistical significance was considered at p-value <0.05.

3. Results

Table 1: Demographic characteristics of the sample (N= 329):

Demographic data			Total N = 329 (100%)
Age (years)		Mean ± SD	15.8 ± 0.6
Grades:	1st 2nd 3rd	N (%)	101 (30.7%) 203 (61.7%) 25 (7.6%)
Gym attendance:	Yes No	N (%)	144 (43.8%) 185 (56.2%)
Self-esteem levels:	High Middle Low	N (%)	180 (54.7%) 91 (27.7%) 58 (17.6%)
RSES score		Mean ± SD	29.7 ± 4.6

(Table 1) showed the demographic characteristics of the adolescent males who participated in the study (N = 329). The average age of the students was (15.8 ± 0.6) years. The sample included all grades of secondary school, with a higher representation in the 2nd grade (61.7%). Additionally, (43.8%) of the students were gym attendants. As regard of self-esteem, the overall (mean ± SD) RSES score was (29.7 ± 4.6), with (54.7%) classified as having high level self-esteem, (27.7%) as middle, and (17.6%) as low.

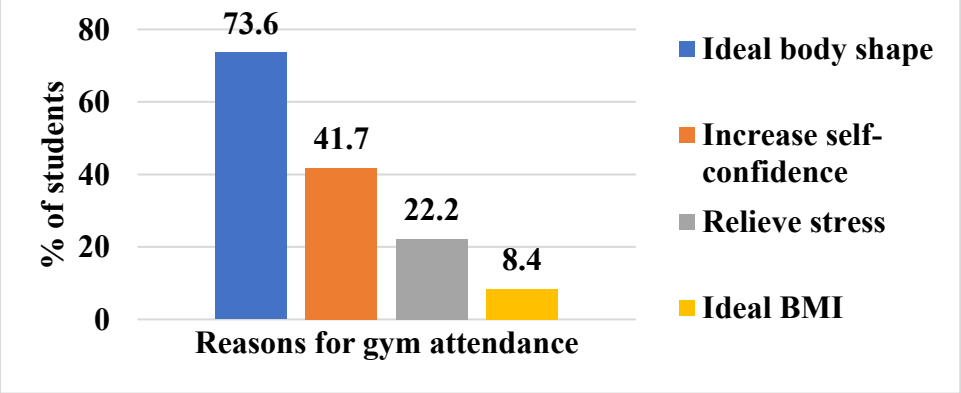
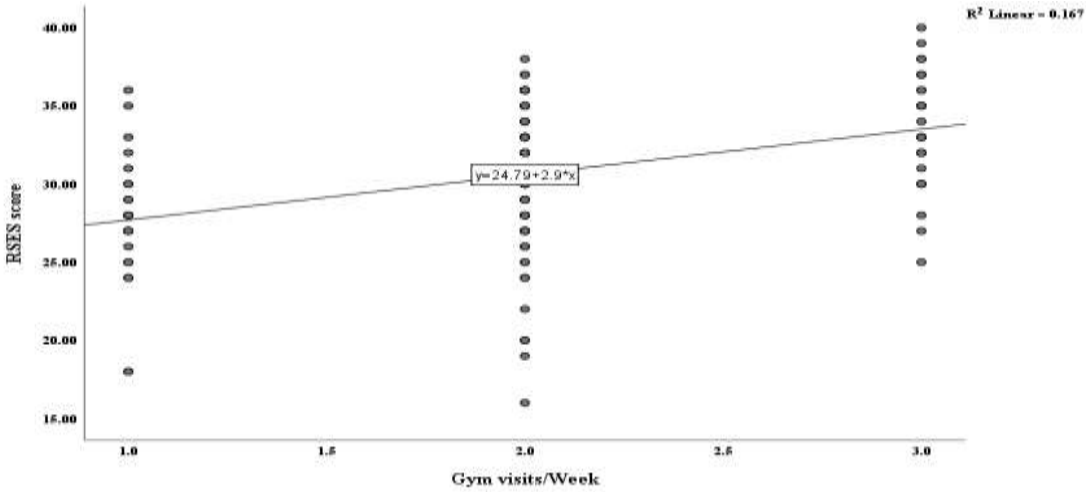


Figure 1: Reasons for gym attendance of the students who attended the gym in the sample (N= 144).

(Figure 1) illustrated the motivations for gym attendance among students who utilized the gym facilities, (73.6%) reported attending the gym to achieve an ideal body shape. However, (41.7%) indicated that their purpose was to enhance self-confidence, moreover (22.2%) attended to relieve psychological stress and improve mood. Lastly, for the least of the students (8.4%) aimed to attain an ideal Body Mass Index (BMI).

Table 2: Comparison of Rosenberg Self-esteem scores between gym attendees and non-attendees of the studied sample (N= 329)



		Total N= 329 (100%)		
		Gym attendants N= 144	Non-attendants N= 185	p value
Self-esteem levels: **High** **Middle** **Low**	**N (%)**	96 (66.7%) 32 (22.2%) 16 (11.1%)	84 (45.4%) 59 (31.9%) 42 (22.7%)	**<0.0001***
RSES score	**Mean ± SD**	30.8 ± 4.5	28.9 ± 4.6	**<0.0001***

- Chi-square test for qualitative data between the two groups.
- Independent samples t-test for parametric quantitative data between the two groups.
- *: significant level at p value <0.05

(Table 2) showed a statistically significant difference in self-esteem levels between students who utilized gym facilities and those who didn't. A greater percentage of gym participants reported high level self-esteem (66.7%) in comparison to non-participants (45.4%). Additionally, low level self-esteem was more commonly observed among non-participants (22.7%) than among gym users (11.1%). Furthermore, the average score on RSES was significantly higher for gym attendees, with a p-value of < 0.0001.

Figure 2: Relationship between weekly gym visit frequency and self-esteem scores in gym attendees (N= 144).

(Figure 2) illustrated a scatter plot that showed a moderate positive significant correlation between the frequency of weekly gym visits and self-esteem scores in gym attendees adolescent males (r= 0.41, p<0.001*).

DISCUSSION

Self-esteem of adolescents is fundamental in influencing mental health, social relationships, and overall future well-being. In the current study almost half of male adolescents (54.7%) exhibited a high level of self-esteem, which is in alignment with previous studies, it was noted that throughout the adolescent stage, self-esteem was found to be both heightened and consistent **(Carlen et al., 2023)**.

The present study revealed a significant positive association between gym attendance and self-esteem among adolescent males. Participants who consistently attended the gym exhibited elevated self-esteem scores in comparison to their peers who didn't attend. These results are consistent with earlier studies indicating that regular engagement in physical activity tends to improve self-esteem and emotional health **(Krupa-Kotara et al., 2023)**.

Additionally, the current study revealed a positive association between weekly gym visit frequency and self-esteem scores, aligning with prior research indicating that individuals who exercise more frequently tend to report higher levels of self-esteem compared to those who exercise less often **(Romero et al., 2022)**.
One potential reason for this association is that attending the gym can improve physical fitness and body composition, leading to greater satisfaction with appearance and higher self-esteem. The structured nature of gym workouts fosters achievement and self-efficacy, all vital for self-esteem. Additionally, social interactions and support from peers can enhance one's self-worth **(Appelqvist-Schmidlechner et al., 2021)**.
The present research found that the majority of participants (73.6%) attended the gym to achieve an ideal body shape, while 8.4% aimed to reach an ideal BMI. This is consistent with previous studies indicating that individuals often view gym attendance and exercise as beneficial for promoting positive health outcomes, such as increased physical strength, fat loss, and muscle gain **(Nguyen, 2023)**.
Additionally, 41.7% of participants reported that their goal was to boost self-confidence, whereas 22.2% attended the gym to relieve psychological stress and improve their mood. These findings also align with the prior research suggesting that regular exercise not only enhances overall health and physical appearance but also lower the risk of depressive symptoms, physical disability, and functional decline. It also triggers the release of endorphins hormones that promote a sense of well-being **(Teixeira et al., 2025)**.
Nevertheless, although the findings align with most previous research, it is crucial to recognize that the cross-sectional nature of this study restricts the capacity to draw causal inferences. It is still uncertain whether increased self-esteem drives adolescents to engage in gym activities, or if participation in the gym leads to enhancements in self-esteem. Longitudinal research is required to gain a clearer understanding of the dynamics of this relationship.
Furthermore, the current research focused exclusively on male adolescents, potentially restricting the generalizability of the results to different age demographics or to females. Future studies should investigate these associations across gender and consider possible moderating variables, including the type of exercise and its frequency.

CONCLUSIONS

The findings indicated a significant difference in self-esteem levels in relation to gym attendance, with gym attendees having higher self-esteem scores compared to non-attendees. This suggested that regular participation in physical exercise may play a beneficial role in enhancing self-perception and overall psychological well-being among adolescent males. These findings can guide the direction for the development of prevention strategies and targeted interventions within this population.

Author contributions

All authors contributed equally to the research, and all have read and approved the final manuscript.

Data availability

The datasets used and/or analyzed during the current study available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent

Ethical approval for the study was obtained from the Ethical Committee of the Faculty of Medicine, Minia University (Approval No. 974: 11/2023). Official permissions were also secured from the Directorate of Education in Minia Governorate. The headmaster's approval served as proxy consent on behalf of the students' guardians. The participants provided informed consent before participating and confidentiality was strictly maintained.

Conflict of Interest

The author declares they have no potential conflict of interest.

Competing Interests

The authors have no competing interests to declare that are relevant to the content of this article.

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