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Gender differences in self-efficacy of the adolescents

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Abstract

The study aimed to assess gender differences in the self-efficacy of adolescents. A total of 200 adolescents (100 boys and 100 girls) were selected from 12 high schools across six zones of Hyderabad city, Telangana, through purposive random sampling. Data was collected using the Self-Efficacy Scale developed by Mathur and Bhatnagar (2004), which consists of 23 items spanning eight dimensions: self-regulatory skills, self-influence, self-confidence, social achievement, self-valuing, self-evaluation, self-esteem, and self-cognition. A t-test analysis revealed a highly significant gender difference in mean self-efficacy scores. Boys scored a mean of 70.46, while girls scored 81.43, with a t-value of 8.338, significant at the 0.01 level. The higher mean score among girls indicated stronger overall self-efficacy. Girls with greater self-efficacy demonstrated balanced self-perception, strong self-awareness, and clear goal orientation, enhancing their resilience and confidence. These findings highlight the importance of fostering self-efficacy in adolescents and suggest that targeted interventions could further strengthen these traits, particularly among boys.

Keywords: Self-efficacy, adolescents and school students

Introduction

Adolescence is the transitional phase of life that bridges childhood and adulthood, covering the age span from 10 to 19 years (WHO, 2025). It marks a crucial phase in human development characterized by remarkable physical maturation, cognitive expansion, emotional variability, and evolving social relationships. During this stage, adolescents actively explore their identity, independence, and sense of purpose. A nurturing environment both at home and in school enables adolescents to channel their energy, curiosity, and creativity toward positive growth. With appropriate guidance, adolescents can confidently overcome the challenges of their developmental stage and emerge as capable, self-assured, and well-adjusted individuals prepared to face future demands and opportunities.

Self-efficacy, as defined by Bandura (1977) ^[1], is an individual's belief in their capacity to organize and execute actions necessary to manage situations or achieve specific goals. In adolescents, high self-efficacy fosters perseverance, self-regulation, and optimism when facing challenges, while low self-efficacy leads to self-doubt and a tendency to give up easily. According to Bandura's Self-Efficacy Theory, motivation and performance are largely determined by the perceived effectiveness in attaining desired outcomes.

The findings from Purwanti *et al.* (2020) ^[7], highlights notable gender differences in adolescent self-efficacy. Boys often report greater confidence in mathematics, science, and

sports, whereas girls exhibit stronger efficacy in language, social domains, and self-regulated learning. Generally, girls tend to excel in self-reflection and mastery-oriented goals, while boys demonstrate more confidence in problem-solving and persistence.

Review of literature

Khurram *et al.* (2025) ^[6] looked at self-efficacy, learning techniques, science values, accomplishment goals, and the learning environment in order to determine how motivated secondary pupils were to learn science in Haripur, Khyber Pakhtunkhwa. The results showed that female students were more motivated overall, with the exception of performance goals.

Raja *et al.* (2025) ^[9] studied fifth-grade students at Frater Bakti Luhur Elementary School and found that students had low self-efficacy but moderate motivation and literacy levels. The results showed that self-efficacy directly and indirectly improved literacy skills, and achievement motivation also played an important role in enhancing learning outcomes.

Borah and Nisanth (2024) ^[2] investigated self-efficacy among the secondary students. Findings revealed that majority of the secondary students exhibited average level of self-efficacy and female students demonstrated higher levels of self-efficacy compared to male students.

Sekhar and Suneela (2024) ^[13] evaluated the connection between teenage academic success and self-efficacy. The

results indicated that majority of the teenagers had high levels of self-efficacy, followed by medium and low levels. Gyanesh (2022) ^[3] studied 400 upper secondary students in Uttar Pradesh to examine the link between self-efficacy, achievement motivation, and family environment. The study found that 40.5 per cent of students showed moderate self-efficacy levels. The study also found a strong relationship between self-efficacy and parental involvement.

Khan *et al.* (2021) ^[5] conducted a study comparing the academic self-efficacy levels of secondary school students of rural and urban areas from Peshawar District. The results showed that students had very little awareness about their own self-efficacy. The study also revealed that their parents and teachers were not providing opportunities to learn more about themselves and their strengths and weaknesses.

Materials and Methods Location of the study

The present study was designed to assess gender differences in self-efficacy among adolescents. Hyderabad city in Telangana State was selected due to its ethnographic diversity, reflecting a varied demographic population from different regions of the state. The city was divided into six

zones and 12 high schools were randomly selected from these zones.

Sample size

A total of 200 adolescents, comprising 100 boys and 100 girls, were selected as a sample for the study.

Tools used for the study

The study utilized the Self-Efficacy Scale standardized by Mathur and Bhatnagar (2004), which comprises 23 items spanning eight dimensions: self-regulatory skills, self-influence, self-confidence, social achievement, self-valuing, self-evaluation, self-esteem, and self-cognition. This tool was employed to assess self-efficacy among the participants.

Statistical Analysis

The SPSS 16.0 package program was used to analyze the data.

Results and Discussion

Table 1: Gender difference in self-efficacy of adolescents

S. No	Dimensions of Self- efficacy	Gender	Mean	S. D	t-value	p-value
1	Self-regulatory skills	Boys	5.22	1.74	2.753**	0.000
		Girls	8.37	1.55		
2	Self-influence	Boys	8.68	2.79	5.641**	0.000
		Girls	10.90	3.27		
3	Self confidence	Boys	8.72	2.24	5.453**	0.000
		Girls	10.25	2.10		
4	Social achievement	Boys	8.81	3.06	3.902**	0.000
		Girls	10.31	2.88		
5	Self-valuing skills	Boys	8.83	2.75	3.284**	0.001
		Girls	10.04	2.94		
6	Self-evaluation	Boys	8.86	2.87	4.103**	0.000
		Girls	10.29	2.48		
7	Self esteem	Boys	9.15	2.97	3.504**	0.001
		Girls	10.58	3.31		
8	Self- cognition	Boys	9.18	2.92	4.127**	0.000
		Girls	10.84	3.28		
	Overall self- efficacy	Boys	70.46	9.06	8.338**	0.000
		Girls	81.43	11.19		

**p=0.01 level of significance

Table 1 presents the details of gender differences in all components of self-efficacy among adolescents. The dimensions include self-regulatory skills, self-influence, self-confidence, social achievement, self-valuing skills, self-evaluation, self-esteem, and self-cognition, along with the overall self-efficacy score. Significant gender differences were found at the 0.01 level of probability across all dimensions. The results further indicated that girls consistently scored higher mean score than boys in all self-efficacy traits.

Self-regulatory Skills

In the self-regulatory component of self-efficacy, the table indicated highly significant differences between the mean scores of boys and girls. The mean score of boys was 5.22 and girls was 8.37, with a t-value of 2.753, which was significant at 0.01 level of probability. The higher mean score among girls indicated that girls possessed stronger

self-regulatory skills than boys. Girls with higher self-regulation demonstrated greater self-control, expressed satisfaction with their goals, and maintained consistency in their efforts irrespective of the outcomes. Their goal orientation, discipline, and emotional expressiveness enabled them to handle difficulties more effectively and stand higher levels of self-regulation compared to boys.

These findings were consistent with the study conducted by Santoro and Schmidt (2023) ^[10], which emphasized that girls demonstrated higher levels of self-regulation than boys. The study found that socialization processes and educational practices rewarding attentiveness, planning, and self-control have helped girls develop stronger self-regulatory skills than boys.

Self-influence

In self-influence dimension of self-efficacy, the table demonstrated a significant gender difference. Boys had a

mean score of 8.68, while girls had a mean score of 10.90, with a t-value of 5.641, which was statistically significant at the 0.01 level of probability. This indicated that girls scored higher on self-influence than boys, suggesting stronger abilities in this area. Girls were more likely to show self-awareness and accountability, often taking responsibility for their actions and learning from mistakes. Their tendency to value relationships and avoid causing distress to others may have strengthened their perseverance and sense of responsibility, leading to higher self-influence compared to boys.

These findings were on par with a study conducted by Schunk and DiBenedetto (2020) ^[12], emphasized that girls are more effective in exerting self-influence through metacognitive strategies, which directly impacts sustained achievement.

Self-confidence

In the self-confidence dimension of self-efficacy, the analysis of the table demonstrated a significant gender difference. The mean score for boys was 8.72, while for girls it was 10.25, with a t-value of 5.453, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they had greater self-confidence than boys. Girls were more likely to remain composed and focused during challenging situations, which reflected stronger emotional control. This ability to manage emotions and maintain stability in

These findings were consistent with the study by Putwain and Symes (2018) ^[8], which reported that girls with stronger emotional regulation exhibited higher levels of self-confidence in managing academic challenges compared to boys.

Social Achievement

With regard to the social achievement component of self-efficacy, the results revealed a noticeable gender difference. Boys had a mean score of 8.81, while girls scored 10.31, with a t-value of 3.902, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they had stronger social achievement than boys. Girls demonstrated a greater awareness of how their commitments and actions influenced others. This may be because girls are more likely to participate in social activities and develop their interaction skills, which in turn contribute to their social growth and the building of relationships.

The findings were consistent with the study of Santrock (2018) ^[11], who reported that female students consistently outperformed male students in social skills such as cooperation, empathy, and relationship management.

Self-valuing Skills

In the self-valuing skills dimension of self-efficacy, the table showed that boys had a mean score of 8.83, while girls had a higher mean score of 10.04, with a t-value of 3.284, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they possessed stronger self-valuing skills. Girls who possessed a strong sense of belonging demonstrated higher self-awareness and expressed greater satisfaction with their achievement. This may be because they were more likely to

receive emotional support from their social networks, particularly from family members, which enhanced their self-esteem and enabled them to recognize and internalize their achievements more effectively than boys.

These findings were in line with Shin and Kim (2020) ^[14], indicated that girls with higher self-awareness and self-assessment skills were closely associated with stronger self-valuing, which in turn fostered better academic engagement and personal growth.

Self-evaluation

In the self-evaluation dimension of self-efficacy, the table showed a significant gender differences in mean scores. Boys scored 8.86, while girls scored 10.29, with a t-value of 4.103, which was statistically significant at the 0.01 level of probability. Self-evaluation abilities were stronger in girls compared to boys. Girls with higher self-evaluation skills were more comfortable on tasks independently and they were better at assessing their progress and identifying areas for improvement. This may be because girls tend to organize their tasks more efficiently and adopt effective strategies, which enhanced their ability to evaluate themselves and their work more accurately.

These results were consistent with Vriens *et al.* (2018) ^[15], who found that adolescent girls demonstrated higher levels of self-assessment and reflective learning in school contexts, which enabled them to make more accurate judgments about their academic strengths and weaknesses.

Self-esteem

In the self-esteem component of self-efficacy, the table showed significant differences between the mean scores of boys and girls. Boys had a mean score of 9.15, while girls had a higher mean score of 10.58, with a t-value of 3.504, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they possessed stronger self-esteem. Girls with high self-esteem were more likely to accept themselves during difficult times, acknowledging both their strengths and weaknesses. This could be because girls often received greater emotional encouragement and reassurance from family and peers, which fostered a stronger sense of self-worth and confidence.

These results were on par with the study of Yildirim and Kaya (2020) ^[17], who found that girls demonstrated higher self-esteem than boys in both social and academic contexts. This was influenced by parental support and positive peer relationships.

Self-cognition

In the self-cognition dimension of self-efficacy, the table showed a significant gender differences in mean scores. Boys scored 9.18, while girls scored 10.84, with a t-value of 4.127, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they had stronger self-cognition. This was reflected in their ability to set higher goals and expectations for themselves, as well as in their commitment to completing homework and preparing for tests effectively. This might be because the girls were more inclined to internalize their experiences and achievements, while supportive feedback from family and teachers further enhanced their self-

awareness and confidence.

These findings were on par with a study conducted by Jegatheeswari and Sreelatha (2021) ^[4], studied adolescents' self-cognition differed by gender. The findings showed that female students had far greater levels of self-cognition in a variety of academic, social, and moral domains.

Overall Self-Efficacy

With regard to overall self-efficacy, the table demonstrated a significant gender difference in mean scores. Boys scored 70.46, while girls scored 81.43, with a t-value of 8.338, which was statistically significant at the 0.01 level of probability. The higher mean score among girls indicated that they had stronger overall self-efficacy. Girls with high self-efficacy frequently showed a balanced self-perception, strong self-awareness, and clear goal orientation, which enhanced their resilience and confidence. This may be because girls were more consistent in applying effective study habits and self-monitoring strategies, which strengthened their belief in their ability to achieve success.

The present findings were aligned with few studies, such as, Khurram *et al.* (2025) ^[6], stated that female students had more self-efficacy than boys in performance goals.

Conclusion

The present study clearly demonstrates significant gender differences across all dimensions of self-efficacy among adolescent students, with girls consistently scoring higher than boys. These findings suggest that girls possess stronger skills related to self-regulation, self-influence, confidence, social achievement, self-valuing, self-evaluation, self-esteem, and self-cognition. The enhanced self-efficacy in girls may be attributed to better emotional regulation, socialization patterns, and consistent use of effective study and self-monitoring strategies. Understanding these gender differences is crucial for educators and policymakers to adapt interventions that promote self-efficacy growth, especially focusing on supporting boys to achieve similar levels of confidence and resilience for academic and personal success.

Future scope

This study highlights clear gender differences in self-efficacy, with girls scoring higher across all dimensions. Future research should focus on designing and evaluating interventions that support the development of self-efficacy among adolescents, particularly targeting boys to reduce existing gender gaps. Longitudinal studies could explore how self-efficacy evolves through different educational stages and how sociocultural factors influence these changes. Additionally, investigating the role of teachers, family support, and peer influences in shaping self-efficacy can offer insights for creating effective gender-sensitive educational programs. Finally, more emphasis on STEM-related self-efficacy for girls could help promote gender equality in traditionally male-dominated fields.

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Conflict of Interest

None

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