

Resilience in young people: the need of the hour

Abstract

Aim: As part of AACCI's project on 'Building Resilience', a study was conducted to understand resilience, self-esteem, social self-efficacy, self-regulation, and emotional intelligence among adolescents and young adults.

Methods: The current study aimed to determine the inter-relationships between the 5 scales: 1) Child and Youth Resilience Measure (CYRM-28), 2) Social Self-Efficacy Scale (SSES), 3) Schutte's Emotional Intelligence Scale (SEIS), 4) Adolescent Self-Regulation Inventory (ASRI) and 5) Rosenberg's Self-Esteem Scale (RSES). The 5 scales were administered to (n = 354) college girls from a women's college in Delhi. The data were analysed using the IBM SPSS Software Version 29.0.0. Correlation was conducted and Pearson's correlation co-efficient was obtained in these results.

Results: Results showed resilience was positively correlated with social self-efficacy ($r=0.48$, $p<0.001$), emotional intelligence ($r=0.37$, $p<0.001$) and self-regulation ($r=0.34$, $p<0.001$). Resilience was negatively correlated with self-esteem ($r=-0.15$, $p<0.20$). When we studied the interrelationships between variables, we found that self-regulation has a positive correlation with emotional intelligence ($r=0.47$, $p<0.001$) and with social self-efficacy ($r=0.42$, $p<0.001$). We also found that self-esteem has a negative correlation with social self-efficacy ($r=-0.18$, $p<0.004$).

Conclusion: We can conclude that to build resilience we must build social self-efficacy, emotional intelligence and self-regulation. More research can be done to study resilience and self-esteem, especially among females.

Keywords: resilience, social self-efficacy, self-esteem, self-regulation, emotional intelligence

Volume 15 Issue 3 - 2024

Swati Y Bhave,¹ Meghana P,² Srushti Adsul,³
Anuradha Sovani,⁴ Jill Mota,⁵ Yashwant Bhav⁶

¹Executive Director, AACCI, India²Research Assistant, AACCI, India³Research Assistant, AACCI, India⁴Advisor, Association of Adolescent and Child Care in India⁵Research Assistant, AACCI, India⁶Research Assistant, AACCI, India

Correspondence: Swati Bhav, Executive Director, AACCI,
601 Alliance Shanti, Shantisheela Co-operative society Near FTII,
Law College Road, Erandawane, Pune 411 004, Maharashtra,
India, Email sybhav@gmail.com

Received: May 07, 2024 | **Published:** June 03, 2024

Introduction

Resilience can be defined with three critical conditions in mind: (a) growing up in an adverse environment (always subjective); (b) availability of protective factors (both internal and external); and (c) managing to adapt positively despite the experience of adversity. Thus, this positive outcome is seen as an adaptability to overcome risk. For students, resilience can be defined as "the capacity to spring back, rebound, successfully adapt in the face of adversity and develop social, academic and develop social, academic and vocational competence despite exposure to severe stress or simply to the stress that is inherent in today's world."¹ Ungar described resilience from an ecological and culturally sensitive perspective and he emphasized on the individual and collective capacities to negotiate for resources of well-being to be provided in culturally meaningful ways.² In the past, work in resilience was done in different sub domains. First, it was focused on understanding what protective factors (internal and external) play a role in traumatic experiences. Second, it focused on how protective and risk factors interact in the realm of resilience. Third, the focus was on fostering resilience in populations who grew up in adverse environments. Now, resilience studies focus on individual strengths and how they can be developed.³ One of the most recent examples when we were tested for their resilience was during the COVID-19 pandemic in 2020, where we were put in many adverse scenarios that took a toll on our mental health. A number of studies focused on resilience during that period. For instance, in one study, a significant correlation between hope, resilience, and fear of COVID-19 in young people was found. In this study, it was found that the variables hope and resilience explain 81% (R^2 adjusted) of the fear of COVID-19 (F test = 21.53; $p < 0.01$) i.e. hope and resilience are protective factors that have a positive impact when facing the fear of COVID-19.¹ In another study, the role of social and emotional skills (SEL) and

resilience were explored during the pandemic. In this study, SEL and resilience skills were positively and significantly associated with each other. More importantly, resilience fully mediated the relationship between SEL skills and internalizing problems, partially mediated the relationship between SEL skills and externalizing problems and did not mediate the relationship between SEL skills and prosocial behaviour.⁴ Founded in 2007, AACCI (Association of Adolescent and Child Care in India) is a civil society/NGO in several parts of India. It works with children and youth via parents and teachers in schools and colleges. One of its main aims is the project on 'Building Resilience' for adolescents. Through this project, AACCI aims to prevent lifestyle disorders and promote mental health. In this study, the primary focus was to study resilience in the context of different variables that could potentially play a role when adolescents have to function in adverse environments: self-regulation, self-esteem, social self-efficacy and emotional intelligence.

Social self-efficacy

Social self-efficacy is defined as an individual's confidence in his/her ability to engage in social interactions necessary to initiate and maintain relationships.⁵ Social self-efficacy also helps the individual in assessing his/her success in social relationships i.e. social self-efficacy includes social confidence, social competence, and social skills. Four factors contribute to the development of self-efficacy: mastery of experiences, emotional arousal, social persuasion, and encouragement. Also, self-efficacy is not merely self-confidence, but it entails the belief in the controllability of circumstances and actions taken, i.e. the locus of control. A high internal locus of control is related to high self-efficacy. Hence, individuals with high social self-efficacy typically expect social success with the social experiences they engage in.⁶ According to Graham and Weiner, perceived self-

efficacy is a more consistent predictor of behavioural outcomes than any other motivational construct. Perceived self-efficacy refers to “beliefs in one’s capabilities to organize and execute the courses of action required managing prospective situations, such social confidence helps to play an active role in every area of life of an adolescent like academic achievement, extra-curricular achievement and interpersonal relationships.⁷ It is important to note that positive social self-efficacy beliefs make adolescents have a fair understanding of their strengths and their weaknesses. Social self-efficacy is one of the important constructs for children with good mental health whereby these beliefs expand social relationships with peers, leads to satisfaction, and prepares one to cope with social challenges and interpersonal incompatibilities.⁸

Emotional intelligence

Emotional intelligence, as a concept, was popularized by the book titled, “Emotional Intelligence: Why It Can Matter More Than IQ.” In this book, the Daniel Goleman talks about how IQ and EQ are not opposing competencies but separate ones. This model emphasised five competencies that encompass emotional intelligence: self-awareness, self-regulation, motivation, empathy, and social skills. Emotional intelligence is considered a type of intelligence in that it uses reasoning, ‘emotion-related’ vocabulary, and other cognitive processes to enhance our thought processes in the understanding of our world.⁹ Emotions play a role in adaptation i.e. they facilitate adaptation by optimizing sensory intake, threatening stimuli, readying behavioural responses, assisting decision making, enhancing memory for important events and guiding interpersonal interactions.⁵ Having greater emotional intelligence means better interpersonal and intrapersonal awareness as well as the ability to adapt to emotional triggers. Having these competencies at a moderate to high level ensures that we can persist in the face of frustration, reason effectively and empathically when faced with emotionally laden situations, and control impulses and delay gratification, resolve conflicts and maintain positive relationship.⁹

Self-regulation

Self-regulation involves the ability to monitor one’s behaviour, emotions, cognitive processes and social interactions.¹⁰ It can mean focus on how individuals manage stress and recover from five domains: biological, emotional, cognitive, social and prosocial.¹¹ For learners, self-regulated learning focuses on how a learner plans for their learning, uses various strategies and engages in ongoing efforts to meet their desired goals.¹² Cognitively, “self-regulation involves attention skills, working memory, and cognitive flexibility- qualities that provide the underpinning for essential skills needed throughout life, such as planning and problem-solving skills.”¹²

Self-esteem

Self-esteem refers to a person’s positive or negative evaluation of the self; that is, the extent to which an individual views the self as worthwhile and competent. Self-esteem can be conceptualized as both a mostly stable trait that develops over time and a fluid state that is responsive to daily events and contexts, it can also be heavily dependent on success and failure.¹³ It is viewed solely as being an affective quality, “feeling good” about oneself whether one has merited such feelings by behaviour or not.” It is authentic when a person exhibits a positive level of competence and a congruent, positive feeling of worthiness. Defensive self-esteem, which occurs when there is a lack of congruence between competency and feelings of worthiness, is distinguished from authentic self-esteem.¹⁴

Interrelationship between social self-efficacy, self-esteem, emotional intelligence and self-regulation

While self-regulation can be defined as the process by which learners set and maintain cognitions, affects, and behaviours in motion, which are thoroughly geared towards achieving their goals,¹⁵ emotional intelligence can be defined as the ability to have intrapersonal and interpersonal emotional awareness and make the most of it positively in difficult situations.¹⁶ The inter-correlations among self-efficacy, self-regulation and emotional intelligence have been variously shown. Self-efficacy has been shown to be directly related to self-regulation i.e. people regulate their level and distribution of effort in accordance with the effects they expect their actions to have. That is why, their behaviour is better predicted from their beliefs than from the actual consequences of their actions. Here, students self-regulate depending on their capabilities with respect to a given task and in effect compare those capabilities against a set of standards they maintain for themselves. In one study that examined the mediating effects of self-efficacy on the relationship between emotional intelligence and self-regulation, findings showed a significant and full mediating effect of self-efficacy i.e. self-efficacy was a mediator for the relationship between emotional intelligence and self-regulation. Therefore, in addition to a student’s emotional intelligence, his/her self-regulation and belief in his/her ability i.e. higher self-efficacy helped to regulate themselves. Part of successful learning is also being able to delay gratification i.e. self-regulation.¹⁷

One reason could be that there is a mismatch between what one believes they are good at and what one actually is good at. Bandura¹⁸ points out that “self-liking does not necessarily beget performance attainments”. Self-efficacy, is not global; rather, it is domain or content specific i.e. one can have self-efficacy for one thing, but not another. Sometimes, student’s self-efficacy does not reflect his or her capability i.e. students reported themselves to have high self-efficacy in all academic endeavours, though, using objective measures such as standardized tests, that was not the case. This global self-efficacy may suggest the confusion students had between determining their overall feeling about their self-worth (self-esteem) as opposed to their perception of their actual capability. Self-efficacy; a more domain specific concept and self-esteem; a more global concept rooted in success or failure- represent different ways of thinking about one’s self. Perceived self-efficacy is concerned with judgments of personal capability, whereas self-esteem is concerned with judgments of self-worth.¹⁹

Rationale & aim

Adolescence is a time of many complexities; a time for exploration, rebellion and developing a sense of self in the context of home, school and peer relationships. The main focus of this study was to understand resilience in this cohort and to understand the different aspects that affect student life like self-esteem, social self-efficacy, emotional intelligence and self-regulation in the overall context of resilience. In our study, resilience is being studied from the point of view of understanding what internal factors within individuals play a role in its development. For instance, self-regulation would be an internal factor i.e. an individual’s ability to regulate learning- monitor, plan, persevere and inhibit when necessary.¹ Similarly, beliefs about social self-efficacy which are internal, wherein positive beliefs about competencies in different domains and positive beliefs about persevering in adversity also play a role in resilience.²⁰ Bandura (1992) writes, “The stronger the perceived self-efficacy, the higher the goals people set for themselves and the firmer the commitment to them”²¹ Furthermore, emotional intelligence which is also an internal

factor can dictate 'who' makes the most of their emotions while remaining empathic and aware of others' emotions thereby fostering relationships.²⁰ Self-esteem refers to a person's positive or negative evaluation of the self; that is, the extent to which an individual views the self as worthwhile and competent; therefore, it is also an internal factor.²¹

Methodology

As part of its multi-centric studies on youth behaviour in India, AACCI designed and administered a survey questionnaire, which focused on collecting socio-demographic data in addition to the following five psychometric tools to gauge the participants' stratum of resilience, self-efficacy, emotional intelligence, self-regulation, and self-esteem. The current paper discusses the analysis of results pertaining to how the 5 scales relate to each other and the strength of these inter-relationships. AACCI designed and administered a survey questionnaire, which focused on collecting socio-demographic data in addition to the following five psychometric tools to gauge the participants' stratum of resilience, self-efficacy, emotional intelligence, self-regulation, and self-esteem. Five psychometric scales were administered to college girls from a women's college in Delhi.^{2,9,22–24}

Study design: A cross-sectional study was conducted using convenience sampling.

Study duration: The study spanned a three-month period from July to September 2018

In 2017, the Association of Adolescent and Child Care in India (AACCI) initiated the project on "Building Resilience" among school and college students in India. The current study aimed to determine the inter-relationships between the 5 scales. The 5 scales were administered to (n = 354) college girls from a women's college in Delhi.

Sample characteristics: Participants included 354 women (n = 354; age range: 17- 21 yrs., M age = 18.63 yrs., SD = 1.06 yrs.) pursuing B.A., B.Com or BSc.

Sample selection: Participants were selected via convenience sampling. AACCI conducted an awareness program at this all women's college in North India and requested students to participate in their survey. Participants filled out the online survey questionnaire under the supervision of their college professor and a team of student volunteers trained by AACCI.

Exclusion and inclusion criteria: There were no exclusion criteria, and all the students who volunteered to participate in the survey were included in the study.

Procedures

As part of this multi-centric study, the following tools were used:

Child and youth resilience measure (CYRM-28)

The CYRM-28 is a self-report tool to measure resilience from a socioecological perspective. It is suitable for individuals between 10-23 years of age. The scale includes 28 items to which individuals responded on a 5-point Likert scale ranging from 1 indicating "not at all" to 5 indicating "a lot". It has three subscales reflecting subcategories of resilience- individual, relational and contextual. Internal reliability was found to be acceptable with Cronbach's α ranging from 0.65 to 0.91.²

Social self-efficacy scale (SSES)

Social Self-efficacy was measured by using Connolly's (1989) SSES – Social Self-Efficacy Scale.³¹ This 25-item, 5-point Likert scale with responses ranging from 1 ("Impossible to do") to 5 ("Extremely easy to do") is used for measuring social self-efficacy. A high score on the scale indicates high social self-efficacy. This instrument includes descriptions of common social scenarios that include social assertiveness, participation in social or group activity, social behaviour, and giving and receiving help. The scale has robust reliability as past research demonstrates a Cronbach's alpha of .90 to .95.²²

Schutte's emotional intelligence scale (SEIS)

The SEIS is based on the Four Branch Model of emotional intelligence. The scale contains 33 items rated on a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The total scale scores range from 33 to 165. The SEIS can be administered to individuals above the age of 16. Internal consistency coefficients were found to be between 0.87 and 0.90. Test-retest reliability was reported as 0.78.⁹

Adolescent self-regulation inventory (ASRI)

This paper discusses the analysis of results pertaining to the Adolescent Self-Regulatory Inventory (ASRI) by K L. Moilanen which was used for this study. The ASRI is a questionnaire that assesses two aspects of self-regulation, short-term and long-term. The items of the self-report inventory cover, aspects of parenting behaviours, and psychological adjustment. The ASRI has a total of 28 items, measured on a 5-point Likert scale (Not at all true/Neither true nor untrue for me/ somewhat true for me/completely true for me). Internal consistency (alpha) for the ASRI was 0.75 for the short-term self-regulation scale and 0.80 for the long-term self-regulation scales.²³

Rosenberg's self-esteem scale (RSES)

In this study, the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) is a 10-item self-report instrument used to assess self-esteem among the participants in this study. The RSES measures a single dominant factor measuring global self-esteem. It is a 10-item instrument that measures different aspects of self-esteem. RSES scoring involves a method of combined ratings. Low self-esteem responses are "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. The scale can also be scored by a total of the individual 4-point items after reverse-scoring the negatively worded items. The RSES demonstrates a Guttman scale coefficient of reproducibility of 0.92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of 0.85 and 0.88, indicating excellent stability.²⁴

Statistical analysis

The data were analysed using the IBM SPSS Software Version 29.0.0. Correlation was conducted and Pearson's correlation coefficient was obtained in these results. A regression analysis was conducted to further understand the relationship between resilience and social self-efficacy, emotional intelligence, self-regulation and self-esteem.

Ethical clearance: Ethical clearance for this project was given by AACCI's Institutional Ethics Committee.

Permission: Permission for conducting the current study was procured from the college’s principal.

Informed assent: Informed assent/consent was obtained via the questionnaire. This was not a clinical trial, and the participants were not patients.

Results

The purpose of this paper is to understand the inter-relationship between these 5 variables in more detail (Table 1).

Discussion

Resilience and social self-efficacy

In our study, from Table 1 we can see that the strongest relationship was found between resilience and social self-efficacy. A strong positive correlation of 0.48 was found between the two variables significant at $p < 0.001$; i.e. increase in social self-efficacy beliefs increases resilience. Figure 1 suggests depicts a strong positive linear relationship between resilience and social self-efficacy. Several studies have identified a strong link between resilience and social self-efficacy. In one study, it was found that there was a positive correlation between self-esteem and resilience scores as well as a positive correlation between social self-efficacy and resilience. Both findings suggesting that self-esteem and social self-efficacy predict resilience in students.²⁵ In another study done in Iran, a pre and post a virtual resilience intervention was conducted with a group of school students. No significant difference was found between the two groups of intervention and control in the score of social self-efficacy before the intervention. However, the score of students in the intervention group improved immediately and one month after the intervention, and a significant difference was observed between the two groups ($p = .0001$). Virtual resilience training improved the social self-efficacy of elementary school girls, so resilience has a positive relationship with social self-efficacy.¹¹ Overall, these findings suggest that social self-efficacy can be taught to adolescents and greatly increases their ability to fully understand their strengths and weaknesses which affects other areas of their lives positively.



Figure 1 Scatterplot of resilience (QR) by Social self-efficacy (SSE).

Table 1 Interrelationship resilience (QR), Self-regulation (SR), Emotional regulation (EI), Self-esteem (SE) & Social self-efficacy (SSE)

Parameter	QR Total	Total SR	Total EI	Total SE	Total SSE
QR Total	1	0.336***	0.372***	-0.146*	0.479***
Total SR	0.336***	1	0.472***	-0.02	0.417***
Total EI	0.372***	0.472***	1	-0.1	0.431***
Total SE	-0.146*	-0.02	-0.1	1	-0.176**
Total SSE	0.479***	0.417***	0.431***	-0.176**	1

p-value adjustment method: Holm

Resilience and emotional intelligence

In our study, from Table 1 we can see that a positive correlation of 0.37 was found between resilience and emotional intelligence significant at $p < 0.001$. This relationship suggests that when emotional intelligence is high, resilience is also high. Figure 2 depicts a positive linear relationship between resilience and emotional intelligence. Studies have focused on the relationship between emotional intelligence and resilience. In one study that examined the relationship between emotional intelligence and the stress process, participants ($N = 126$) completed an ability-based measure of emotional intelligence and then engaged with two stressors. They found that emotional intelligence facets were related to lower threat appraisals, modest declines in positive affect, lowered negative affect and challenge physiological responses to stress. This study provides predictive validity that emotional intelligence facilitates stress resilience.²⁶ In another study related to academia, results show that emotional intelligence and resilience are positively associated with academic performance and negatively related to school burnout.²⁷ In yet another study where emotional intelligence and resilience were used as variables, where a total of 696 undergraduate students from two different universities participated, the findings suggested that university students with better emotional intelligence and resilience presented with lower perceived stress.²⁸ Overall, these findings suggest that adolescents with high scores on emotional intelligence are able to analyse threats, manage their emotions for the best possible outcome thereby increasing their ability to persist in the presence of adversity i.e. resilience.

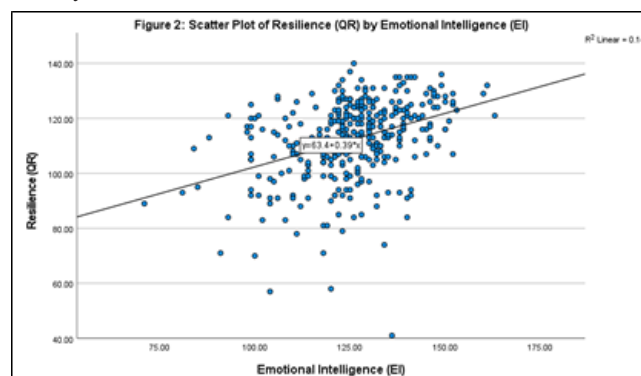


Figure 2 Scatter plot of resilience (QR) by Emotional intelligence (EI).

Resilience and self-regulation

In our study, from Table 1 we can see that a positive correlation of 0.34 was found between resilience and self-regulation significant at $p < 0.001$. This relationship suggests that when self-regulation is high, resilience is also likely to be high. Figure 3 suggests a positive linear relationship between resilience and self-regulation. Studies have found positive relationships between self-regulation and resilience. In one study, it was shown that learning from mistakes (self-regulation) was a significant predictor of coping and confidence, tenacity and adaptation, and tolerance to negative situations (resilience). Similarly, low-medium-high levels of self-regulation correlated with low-medium-high levels of scores on resilience factors. This concluded that, directing and modifying behaviour when mistakes are detected is a part of metacognition that is at the central to self-regulated behaviour.¹ In a study with football players, self-regulation was seen to be a robust predictor of resilience among college football players, resonating with existing findings. Here, resilience is understood to be related to cognitive and behavioural resources, especially locus of control related to adaptation in the face of difficulty and as cognitive

regulation strategies such as positive reappraisal of situations as a predictor of perceived resilience. Therefore, athletes who have better cognitive-behavioural self-regulated functions and have adaptive locus of control will be more resilient.²⁹ Emotional control and impulse control is also a major component of self-regulation. In another study using different variables, it was found that self-regulation serves as a resiliency factor in buffering youth from negative influences of peer deviance in middle to late adolescence.³⁰ In AACCI's paper on self-regulation, it was found that participants who self-perceived that they had control over their lives had higher scores for overall self-regulation, short-term and long-term self-regulation on the ASRI compared to those who were not sure and those who did not believe that they had any control over their lives.²³ In another AACCI study, comparatively analysis showed that those girls who participate in sports and other inter-collegiate competitions scored higher on social self-efficacy and self-regulation than non-participants.⁵ Overall, these findings suggest that adolescents with high scores on self-regulation are better able to identify and rectify their mistakes, are able to delay gratification and feel more in control of their situation, thereby leading to greater resilience.

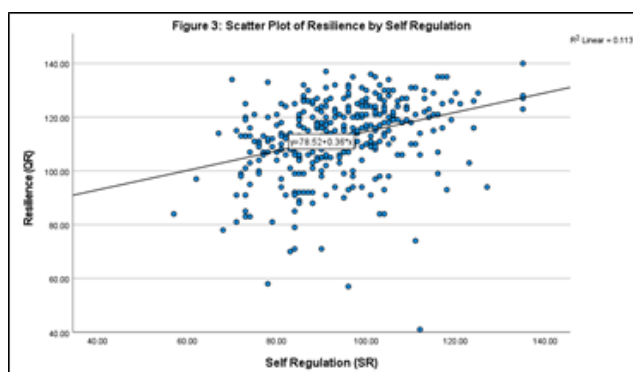


Figure 3 Scatter plot of resilience by self-regulation.

Resilience and self-esteem

In our study, from Table 1 we can see that a negative correlation of -0.15 was found between self-esteem and resilience with $p < 0.20$ which was not significant. Figure 4 shows that there is no clear relationship between resilience and self-esteem. In our study, we understand resilience in the context of self-esteem, social self-efficacy, emotional intelligence and self-regulation. If we look at resilience alone, gender differences have been a focus in the past. In one Japanese study of middle school students, results demonstrated that females had higher 'conscientiousness' (high levels of thoughtfulness) on the Big 5 Personality Factor than males. Stepwise regression analyses indicated that 'neuroticism' (emotional distress) was the most influential predictor of resilience in females, whereas 'extraversion' (sociability) was the most important predictor in males. Another study that examined gender differences in stress and coping found that women scored significantly higher than the men in chronic stress and minor daily stressors.³¹

Our cohort included only females so it is helpful to look at self-esteem among women. In one review related to self-esteem and body image, it was found that while self-confidence is a stereotypical male feature, the presentation of self-confidence by girls is considered a breach of traditional gender roles. Therefore, it is not surprising that boys report higher self-esteem than girls. Boys are more likely to be in situations that encourage competition, conflict, power, and excitement, whereas girls are more likely to encounter situations of intimacy, self-disclosure, support, and co-rumination.³² In another study, a highly

significant relation of family type with self-esteem in personal life of women was found i.e. significant differences are also found among women in joint, nuclear and extended families, concerning their self-esteem in family relations, career life, and overall self-esteem. Family income has also shown significant association with women's self-esteem in family relations.³³ Thus, many environmental factors can be involved in both resilience and self-esteem in females.

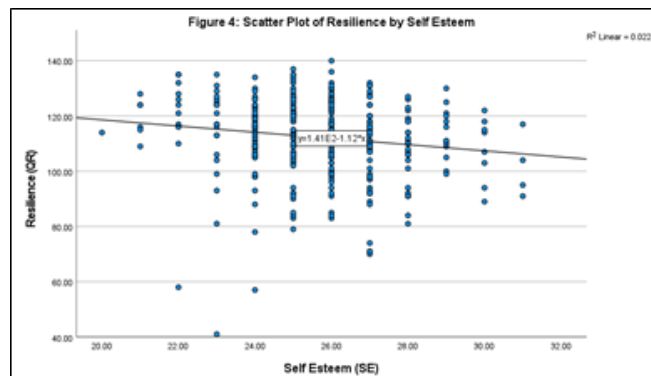


Figure 4 Scatter plot of resilience by self-esteem.

Interrelationship between social self-efficacy, self-esteem, emotional intelligence and self-regulation:

Emotional intelligence and self-regulation: In our study, from Table 1, we can see that the self-regulation has a strong positive correlation of 0.47 with emotional intelligence with significance of $p < 0.001$. This suggests that when self-regulation is high emotional intelligence is also high. In one of AACCI's studies, emotional intelligence was positively correlated with self-esteem, social self-efficacy; short term regulation and long term regulation.⁵ In another study that aimed to study the effect of self-regulation and emotional intelligence to character building found that while both self-regulation and emotional intelligence had a positive relationship with character building, individually, a positive relationship existed between self-regulation and emotional intelligence with character building. This suggests that when emotional intelligence is high, the individual recognizes, understands, and uses emotions better i.e. self-regulates better.³⁴ The relationship between emotional intelligence and self-regulation can be understood in a few different ways. One of them being up regulation and down regulation, in that having emotional awareness and being able to decrease negative emotions (down regulation) and being able to increase positive emotions (up regulation).³⁵ Another component of emotional awareness and regulation is effortful vs automatic regulation. When self-regulation and emotional awareness are performed routinely and consistently, like all other acquired skills, this also becomes automatic. Also, automatic emotional regulation processes are more easily accessible to conscious awareness in the face of pressures. Counter to this is the idea that if processes are very automatic at all times, it leaves little room for flexibility and therefore adaptability.³⁵ High trait EI people also report suppressing their emotions less and high trait EI individuals also have a negative relationship with verbal and physical aggression as also with substance use because they are able to diffuse their negative emotions through more balanced approaches.³⁵ All these findings along with our cohort, suggest a strong relationship between emotional intelligence and self-regulation.

Self-regulation and social self-efficacy: In our study, from Table 1, we can see that self-regulation has a strong positive correlation of 0.42 social self-efficacy with significance of $p < 0.001$. This suggests that when self-regulation is high social self-efficacy is also high.

In one study, the influence of self-efficacy on actual self-regulation during a verbal concept formation task of students was studied and findings were that irrespective of differences in school grade and in cognitive ability, self-efficacy exerted significant influence on various aspects of self-regulation, such as monitoring of working time, task persistence, and rejection of correct hypotheses, as well as on performance. Self-efficacy refers to one's perceived capabilities for learning or performing actions at designated levels.¹⁸ Researchers have explored the operation of self-efficacy in various domains (e.g., education, health, business) and among individuals differing in age, developmental level, and cultural background. The highest positive associations were with optimism, self-regulation, and self-esteem, whereas the highest negative associations emerged with depression and anxiety. Thus, perceived general self-efficacy appears to be a universal construct that yields meaningful relations with other psychological constructs like self-regulation.³⁶

Emotional intelligence and social self-efficacy: In our study, from Table 1 we can see that the emotional intelligence has a positive correlation of 0.43 with social self-efficacy with significance of $p < 0.001$. This suggests that when emotional intelligence is high then social self-efficacy is also high. In one study that studied emotional intelligence and self-efficacy, the findings of the study indicated that there is a significant relationship between EFL learners' emotional intelligence and their self-efficacy beliefs. Data analysis via regression revealed that among the components of emotional intelligence, self-actualization and stress tolerance are the positive predictors of the learners' self-efficacy.³⁷ In another study, it was found that emotional intelligence in students with high academic achievement explained 40% of self-efficacy score. Thus, students with high academic achievement obtain higher scores than those with low academic achievement in both variables of emotional intelligence and self-efficacy, as both variables are effective factors in academic achievement. Emotional intelligence and self-efficacy play an important role in achieving academic success and emotional intelligence can explain self-efficacy. Therefore, it is recommended to teach emotional intelligence skills to students with low academic achievement through training workshops. Emotional intelligence is an appropriate predictors of students' self-efficacy in case of students who have academic motivation, self-esteem, self-efficacy and academic achievement.³⁸

Self-Esteem and social self-efficacy: In our study, from Table 1 we can see that the self-esteem has a negative correlation of -0.18 with social self-efficacy with significance of $p < 0.004$. This suggests that in our cohort, when self-esteem is high, social self-efficacy is low. One reason could be that there is a mismatch between what one believes they are good at and what one actually is good at. Bandura¹⁸ points out that "self-liking does not necessarily beget performance attainments". Self-efficacy, is not global; rather, it is domain or content specific i.e. one can have self-efficacy for one thing, but not another. Sometimes, student's self-efficacy does not reflect his or her capability i.e. students reported themselves to have high self-efficacy in all academic endeavours, though, using objective measures such as standardized tests, that was not the case. This global self-efficacy may suggest the confusion students had between determining their overall feeling about their self-worth (self-esteem) as opposed to their perception of their actual capability. Self-efficacy; a more domain specific concept and self-esteem; a more global concept rooted in success or failure-represent different ways of thinking about one's self. Perceived self-efficacy is concerned with judgments of personal capability, whereas self-esteem is concerned with judgments of self-worth.¹⁹

A number of studies have focused on gender differences in self-esteem and self-efficacy. In one study that studied self-efficacy, self-

esteem and intelligence, it was found that despite better academic achievement among 8th grade girls, they had lower levels of self-esteem, self-efficacy, and incremental views of intelligence than boys.³⁹ In yet another study that investigated gender differences on domains of stress, self-esteem and self-efficacy beliefs (academic, social and emotional) as well as the association between stress, self-esteem and self-efficacy using a sample of adolescents, it was found that girls scored significantly lower on self-esteem, and social self-efficacy (SSE), but higher on emotional self-efficacy.⁴⁰ As a result of gender-role socialization, which causes the internalization of traditional gender norms, women are often discouraged from viewing themselves as autonomous, self-determining and competent. When exposed to unmasked gender stereotypes, women are found to lack three empowering qualities, namely self-government (autonomy), a proactive approach to life (agency) and perceptions of a competent self (self-efficacy).⁴¹

Conclusion

In this 5-scale paper, we have compared the interrelationship between resilience, self-regulation, self-esteem, social self-efficacy and emotional intelligence. For this cohort, we summarized that;

1. Good inter-relationships were found between the resilience score and 3 scales:
 - a. The strongest correlation was found with social self-efficacy, suggesting that positive beliefs about social self-efficacy can lead to higher resilience.
 - b. Strong correlation was found with emotional intelligence suggesting higher the emotional intelligence, higher the resilience.
 - c. The relationship with self-regulation was also positive suggesting that students with better self-regulation skills are likely to have better resilience.
2. The self-regulation score had a strong positive relationship with both emotional intelligence and social self-efficacy.
3. Social self-efficacy and self-esteem were found to have a negative relationship. This was all girl cohort. Need further studies with a more diverse cohort, to understand the implications.

Acknowledgments

None.

Conflicts of interest

The authors declare that there is no conflict of interest.

Funding

None.

References

1. Artuch GR, González Torres MDC, Fuente J, et al. Relationship between resilience and self-regulation: a study of Spanish youth at risk of social exclusion. *Front Psychol*. 2017;8:612.
2. Bhave SY, Shivani A, Shrusti A, et al. Study of resilience in female college adolescents and young adults: tough times don't last, tough people do. *Indian Journal Of Clinical Practice*. 2024;34(8):20–33.
3. Javier A, David J, Gluder Q, et al. Hope and resilience related to fear of covid-19 in young people. *Int J Environ Res Public Health*. 2022;19(9):5004.
4. Grazzani I, Agliati A, Cavioni V, et al. Adolescents' resilience during

- covid-19 pandemic and its mediating role in the association between self-efficacy and mental health. *Front Psychol.* 2022;13:801761.
5. Bhave SY, Mardhekar V, Mane S, et al. Study on socioemotional aspects of engineering girl students. *Journal of Indian Association for Child and Adolescent Mental Health.* 2020;16(2):90–105.
 6. Sagone, Elisabetta, Caroli De, et al. Locus of control and academic self-efficacy in university students: the effects of self-concepts. *Procedia - Social and Behavioral Sciences.* 2014;114:222–228.
 7. Riaz AZ, Yasien S, Ahmad R. Relationship between perceived social self-efficacy and depression in adolescents. *Iran J Psychiatry Behav Sci.* 2014;8(3):65–74.
 8. Gadari S, Farokhzadian J, shahrbabaki MP. Effectiveness of resilience training on social self-efficacy of the elementary school girls during COVID-19 outbreak. *Clin Child Psychol Psychiatry.* 2022;27(1):308–319.
 9. Swati B, Meghana P, Jill M, et al. Emotional intelligence and its relationship with different aspects of student life; *PG Jr Pediatric and Adolescent Medicine.*
 10. Zimmerman BJ. Attaining self-regulation: A social cognitive perspective. In: *Handbook of self-regulation.* 2000. pp. 13–39
 11. Shanker S. What you need to know. Self-Regulation: 5 domains of self-reg. *The MEHRIT Centre.* 2017.
 12. Braund, Heather, Kristy T. Operationalization of self-regulation in the early years: comparing policy with theoretical underpinnings. *International Journal of Child Care and Education Policy.* 2021;15:1–21
 13. Swati Y Bhave, Pradeep M, Mota J, et al. Self-esteem: A study on the relationship between self-esteem and factors affecting student life. *J Pediatr Neonatal Care.* 2024;14(1):22–28.
 14. Mruk, Christopher J. What Is authentic self-esteem and why does it matter?; *Feeling good by doing good: a guide to authentic self-esteem.* 2018.
 15. Zimmerman BJ, Schunk DH. *Handbook of self-regulation of learning and performance.* Routledge/Taylor & Francis Group. 2011.
 16. Bouffard BT, Parent S, Larivee S. Influence of self-efficacy on self-regulation and performance among junior and senior high-school age students. *International Journal of Behavioral Development.* 1991;14(2):153–164.
 17. Mabekoje S. Emotional intelligence and self-regulation among school-going adolescents: self-efficacy as a mediator. *Contemporary Humanities.* 2010;4:209–222.
 18. Bandura A, Freeman WH, Lightsey R. Exercise of personal agency through the self-efficacy mechanism. *American Psychological Association.* 1992. pp. 3–38.
 19. Hanor, Joan. Using reflective practice and self-directed learning to advance growth in educational technology. *International Journal of Self-Directed.* 2005.
 20. Cassidy S. Resilience building in students: The role of academic self-efficacy. *Front Psychol.* 2015;27:6:1781.
 21. Heatherton TF, Polivy J. Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology.* 1991;60(6):895–910.
 22. Swati B, Srushti A, Sarita N. I am enough! study of social self-efficacy in female AYA college students. *J Psychol Clin Psychiatry.* 2023;14(6):202–213.
 23. Bhave SY, Jacob JS, Soni N, et al. Learning self-regulation: an important soft skill for AYAs. *J Pediatr Neonatal Care.* 2023;13(3):264–274.
 24. Swati Y Bhave, Pradeep M, Mota J, et al. Self-esteem: A study on the relationship between self-esteem and factors affecting student life. *J Pediatr Neonatal Care.* 2024;14(1):22–28.
 25. Tras, Zeliha, Arslan Coskun, Hamarta, Erdal, et al. An examination of resilience in university students in terms of self-esteem and social self-efficacy. *International Journal of Academic Research.* 2013;5:323–328.
 26. Tamera R, Joseph SB, Lyons Steven Khazon. Emotional intelligence and resilience. *Personality and Individual Differences.* 2013;55(8):909–914.
 27. Collado SR, Trigueros R, Aguilar-Parra JM, et al. Emotional intelligence and resilience outcomes in adolescent period, is knowledge really strength? *Psychol Res Behav Manag.* 2023;16:1365–1378.
 28. Sarrionandia A, Ramos-Díaz E, Fernández-Lasarte O. Resilience as a mediator of emotional intelligence and perceived stress: a cross-country study. *Front Psychol.* 2018;9:2653.
 29. Gupta, Sahen NT. Grit, self-regulation, and resilience among college football players: A pilot study. *International Journal of Physiology, Nutrition and Physical Education.* 2019;4(1):843–848.
 30. Gardner TW, Dishion TJ, Connell AM. Adolescent self-regulation as resilience: resistance to antisocial behavior within the deviant peer context. *J Abnorm Child Psychol.* 2008;36(2):273–284.
 31. Iimura S, Taku K. Gender differences in relationship between resilience and big five personality traits in Japanese adolescents. *Psychological Reports.* 2018;121(5):920–931.
 32. Agam R, Tamir S, Golan M. Gender differences in respect to self-esteem and body image as well as response to adolescent's school-based prevention programs. *J Psychol Clin Psychiatry.* 2015;2(5):00092.
 33. Jan M, Ashraf A. An assessment of self-esteem among women. *Studies on Home and Community Science.* 2008;2(2):133–139.
 34. Siregar YE, Rachmadtullah P, et al. Self regulation, emotional intelligence with character building in elementary school. 2018.
 35. Sarrionandia PA, Mikolajczak M, Gross JJ. Integrating emotion regulation and emotional intelligence traditions: a meta-analysis. *Front Psychol.* 2015;6:160.
 36. Luszczynska A, Aleksandra, Gutiérrez D, et al. General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology.* 2005;40:80–89.
 37. Hashemi MR, Ghanizadeh A. Emotional intelligence and self-efficacy: A case of Iranian EFL university students. *International Journal of Linguistics.* 2011;3(1):1–6.
 38. Gharetepeh A, Safari Y, Pashaei T, et al. Emotional intelligence as a predictor of self-efficacy among students with different levels of academic achievement at Kermanshah University of Medical Sciences. *J Adv Med Educ Prof.* 2015;3(2):50–55.
 39. Åge Diseth, Eivind Meland, Hans Johan B. Self-beliefs among students: Grade level and gender differences in self-esteem, self-efficacy and implicit theories of intelligence. *Learning and Individual Differences.* 2014;35:1–8.
 40. McKay MT, Dempster M, Byrne DG. An examination of the relationship between self-efficacy and stress in adolescents: the role of gender and self-esteem. *Journal of Youth Studies.* 2014;17(9):1131–1151.
 41. Amy D, Mary T. Self-limiting behavior in women: self-esteem and self-efficacy as predictors. *Group and Organizational Management.* 2000;25:192–211.