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Self-esteem: A study on the relationship between self-esteem and factors affecting student life

Abstract

Objective:

1) To assess self-esteem scores in college students.

2) To study the effects of various variables on self-esteem scores.

Method: In this study by AACCI, the Rosenberg Self-Esteem Scale (RSES) scale was used (n = 354; age range: 17-21 yrs.; M= 18.63 yrs., SD = 1.06 yrs) self-esteem and its relationship with age, sibling status, academic course, engagement in extracurricular activities, self-perceived internet and social media usage and dependence, substance use, and self-perception of control over one's life in an all-women's college in North India. The data were analysed using t-tests and one-way ANOVAs.

Results: Majority (76.27%) of the group has low scores (10-24), a minority (23.73%) have moderate scores (25-35) and no (0%) participants have high scores (36-40). Low RSES scores were seen in those participating in interschool/college competitions (n=77, 28.52%) (M = 23.922, SD = 1.403) vs those who did not (n=193, 71.48%) (M = 23.378, SD = 1.383), {t (268) = 2.905, p = 0.002}. Participants who engaged in interschool/ college sports competitions (n=15, 17.86%) (M = 26.333, SD = 0.617) had significantly higher moderate scores vs those who did (n=69, 82.14%) (M = 26.855, SD = 1.061), {t (82) = 1.833, p = 0.035.} Significantly lower scores were seen in participants using social media (n=255, 94.44%) (M = 23.596, SD = 1.368) as compared to participants who did not (n=15, 5.56%) (M = 22.467, SD = 1.685), {t (268) = 3.066, p = 0.001}. Other demographic variables had no statistically significant effects (p >0.05).

Conclusion: Participation in extracurricular activities improved self-esteem in students. Social media usage significantly impacted self-esteem negatively. Most participants had low to moderate self-esteem scores. None had high scores. AACCI recommended a session of Life Skill Education with special emphasis on self-esteem.

Keywords: self-esteem, extracurricular activities, social media, adolescent, young adults, maturational changes

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Introduction

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 Life Skill Education LSE for adolescents. Through the life skill approach, AACCI aims to prevent lifestyle disorders and promote mental health. This study aims to understand the relationship between self-esteem and different variables that affect student life. Student life is enriched by experiences that enhance their sense of self and their outlook toward life. It is a time when teacher and peer influences play an important role in addition to parental influences. Student life is also full of academic pressures that can influence the kind of behaviours—healthy or unhealthy—they choose to engage in. Their developing prefrontal cortex can either perceive these experiences as overwhelming or enriching. In 2017, the Association of Adolescent and Child Care in India (AACCI) initiated the "Building Resilience" project among school and college students in India. As part of this program, this study aims to understand the variables that affect self-esteem among students, to find ways to build skills related to self-esteem that can help students navigate their lives better. AACCI has published a study conducted with females studying in an engineering college in Pune to explore the relationships between individual scale scores and socio-demographic variables, including age, sibling status, and academic course (B.A., B.Com, and BSc.), engagement in extracurricular activities, perceived Internet and social usage and media dependence, substance use, and perception of control over one's life.[1]

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.[2] 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.[3] Most research which looks at self-esteem as a trait-like construct suggests that individuals with high self-esteem early in their life are likely to have high self-esteem years later, likewise individuals with low self-esteem early in life, are likely to have low self-esteem years later.[4]

Development and fluctuations in self-esteem across the lifespan can be attributed to both maturational changes in the mind and body as also the situations in the social environment. During adolescence, students continue to develop their sense of self; their ability to think abstractly and reason more makes them open to more experiences that they can relate to. Along with the academic and social pressures, appearance, and physical/athletic dimensions of self-esteem in middle and late childhood, adolescents value their competency in romantic relationships, in tasks, and in close friendships.[5] If they feel competent in their peer relationships, appearance, and athletic abilities, self-esteem tends to rise from mid to late adolescence for most students.[6]

Adolescents demand more freedom and as years pass by, more compromise is reached between parents and teenagers.[7] Fewer conflicts with parents and more parental support promotes secure attachments which in turn reduces adolescents' emotional problems,[8] drug abuse and other criminal behaviours,[9] and have more positive peer relationships.[10]

Some researchers have found that self-esteem and resilience have an important role to play in an individual's cognition, emotion and behaviours and can play an important part in understanding their coping styles.[11] In the Adolescent Resilience Model, it is demonstrated that self-esteem could offset the negative effects of life events.[12] In the context of self-esteem and resilience, self-esteem can be a protective factor of resilience and can have a predictive effect on resilience.[13] In contrast, negative experiences like social anxiety, depression, suicidal tendencies, disordered eating, substance abuse, initiation of early sexual activities (especially among girls) and other violent behaviours can be attributed to low self-esteem. This can lead to poor long-term outcomes like fewer years of education, greater likelihood of joblessness and financial difficulties, as well as poorer quality of health (both physical and mental) and higher chances of risky and criminal behaviour can be attributed to low self-esteem.[14] All these negative experiences can lead adolescents to exaggerate events as negative, interpret non-critical comments as critical, develop a pessimistic attitude towards people and increase social isolation.[15]

Aims

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. As part of this project, AACCI has been conducting multicentric studies on youth behaviour using standardized psychometric tools to study: a) resilience and b) some components that help to build resilience, such as self-esteem, self-regulation, emotional intelligence, and social self-efficacy.

The current study aimed to determine the scores of the Rosenberg Self-Esteem Scale in (n = 354) college girls from a women's college in Delhi; it assessed,

Study 1: self-esteem scores in this cohort in the context of resilience and

Study 2: the relationship between self-esteem and other variables like age, sibling status, academic course, participation in extracurricular activities, internet and social media use and dependency, alcohol and tobacco use and perceived control of life.

Methods

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.

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. from an all-women's college in North India.

Sample selection: Participants were selected via convenience sampling. AACCI conducted an awareness program at an 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 its multicentric 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, respectively:

1. Child and Youth Resilience Measure,[16]
2. Social Self-efficacy Scale,[17]
3. Schutte Emotional Intelligence Scale[18]
4. Adolescent Self-Regulation Inventory,[19] and
5. Rosenberg's Self-esteem scale.[20]

Additionally, the form contained the questionnaire to gauge the participants' socio-demographic details. Participants first reported their age, sibling status (no sibling, one sibling, and more than one sibling), and academic course (B.A. / B.Com. / B.Sc.). The questionnaire explored their participation in interschool/college competitions, especially athletic and sociocultural competitions, their self-perceived internet and social media usage and dependence as also use of tobacco products or alcohol. Lastly, they were asked if they believed that they were in control of their life. AACCI has published individual papers for the scales exploring their distinct relationships with the demographic variables for the same cohort.[21–24] The current paper discusses the analysis of results pertaining to the Rosenberg's Self-Esteem Scale.

Tools used: 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.[20] The RSES measures a single dominant factor measuring global self-esteem. It is a 10-item instrument that measures different aspects of self-esteem. As a Guttman scale, 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. Two or three out of three correct responses to items 3, 7, and 9 are scored as one item. One or two out of two correct responses for items 4 and 5 are considered as a single item; items 1,8, and 10 are scored as individual items; and combined correct responses (one or two out of two) to items 2 and 6 is considered to be a single item. 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. RSES demonstrates concurrent, predictive and construct validity using known groups. The RSES correlates significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory. In addition, the RSE correlates in the predicted direction with measures of depression and anxiety.

Permissions and ethical considerations: Ethical clearance for this project was given by AACCI's Institutional Ethics Committee. Permission for conducting the current study was procured from the college's principal. Informed consent was obtained via the questionnaire. This was not a clinical trial, and the participants were not patients.

Statistical analysis: The data were analysed using the IBM SPSS Software Version 29.0.0. T-tests were conducted to study the effects of age and engagement in extracurricular activities. Further, one-way ANOVAs were conducted to determine the effects of sibling status, academic course, and self-perceived control over one's life. The statistical significance of the calculated coefficients was considered at $p < 0.05$.

Results and discussion

Results for Study 1: (Table 1)

Table 1 Age-wise distribution of RSES scores (n = 354)

		Age			
		Late adolescents (n = 275) (Group I: 17-19 yrs.)		Young adults (n = 79) (Group II: 20-21 yrs.)	
RSES	**Range**	**N (%)**	**RSES (M ± SD)**	**N (%)**	**RSES (M ± SD)**
Total RSES Scores	Oct-40	275 (100)	24.291 ± 1.956	79 (100)	24.339 ± 1.745
Low	24-Oct	209 (76)	24.291 ± .956	61 (77.22)	23.672 ± .338
Moderate	25-35	66 (24)	26.818 ± 1.036	18 (22.78)	26.556 ± 0.922
High	36-40	0	-	0	-

Discussion for study 1:

When self-esteem was assessed in this cohort using the RSES scores (Table 1), majority of the participants had overall low scores (10 -24) (n=270, 76.27%) on the RSES scale compared to a minority who had moderate scores (25-35) (n= 84, 23.73%). None of the participants had high scores on the RSES scale. Low scores on the RSES in this sample can be attributed to many factors like age, gender (sample was all girls), body weight, influences from school, peers and parents as also socio-economic status and exposure to media. Research has found that self-esteem is highest in early adolescence and drops significantly in middle and late adolescence only to rise again in young adulthood that stabilises in 30s. Females show a significant increase in body dissatisfaction, reflecting a predominant desire to be thinner, a perception of being obese even when they are not technically obese. Positive influences from the school environments, peers and parents have a positive effect on self-esteem. Specifically, girls' participation in sports activity promotes positive body image, enhanced perceptions of physical competence, more flexible gender identities and higher college self-esteem. This has been explored in greater detail in our study. Research has also focused on the effects of low socio-economic status on student life showing that low SES has an indirect effect on student life because of decreased availability of parents, whereas high income families provide higher quality environments. This study did not focus on factors like SES, body weight and nature of school, peer and parental influences, though they can affect adolescent self-esteem.[25–28]

Results for study 2: (Table 2, 3 & 4)

Table 2 Effects of participation in inter school/ college competitions

Participation inter school/college competitions	Low RSES scores	Moderate RSES scores	High RSES scores	Mean scores
Yes	40 (14.81%)	15 (17.86%)	NA	55 (15.54%)
No	230 (85.19%)	69 (82.14%)	NA	299 (84.46%)
Total	270 (100%)	84 (100%)	NA	354 (100%)
Df	268	82	NA	352
P<0.05	0.221	**0.035***	NA	0.310

Table 3 Effects of participation in intra school/ college competitions

Participation intra school/college competitions	Low RSES scores	Moderate RSES scores	High RSES scores	Mean RSES scores
Yes	77 (28.52%)	34 (40.48%)	NA	111 (31.36%)
No	193 (71.48%)	50 (59.52%)	NA	243 (68.64%)
Total	270 (100%)	84 (100%)	NA	354 (100%)
Df	268	82	NA	352
P<0.05	**0.002*****	0.264	NA	**<0.001*****

Table 4 Effects of social media usage on RSES score

Social media usage	Low RSES scores	Moderate RSES scores	High RSES scores	Mean RSES scores
Yes	255 (94.44%)	77 (91.67%)	NA	332 (93.79%)
No	15 (5.56%)	7 (8.33%)	NA	22 (6.21%)
Total	270 (100%)	84 (100%)	NA	354 (100%)
Df	268	82	NA	352
P<0.05	**0.001*****	0.276	NA	0.135

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Results for other variables:

a) **Age comparison:** Several studies using functional MRI and PET scans have shown that brain development begins from behind and towards the front, that is, the hypothalamic limbic system (which controls our emotions) matures first and the prefrontal cortex (which controls the hypothalamic limbic system and helps to make rational decisions with an ability to see the future consequences of one's actions) matures last–at around 25 yrs. Hence, it is expected that there may be age-based differences in brain development among adolescents (17-19 yrs.) vs. young adults (20-21 yrs.) in the current sample.[45] Accordingly, the sample was divided into two groups and age-based differences in self-esteem were studied. In our sample, Group I (17-19 years) with mean scores (n=275, 77.68%) (M=24.291, SD=1.956) and group II (20-21years) with mean scores (n=79, 22.32%) (M=24.339, SD= 1.745), no significant relationship could be concluded {t (352), p=0.437} between age and RSES scores.

b) **Sibling status:** In this sample, only 19.77% (n= 70) participants had 'no siblings' (M= 24.421, SD=2.217) compared to 12.15% (n= 43) of participants who had 'one sibling' (M=24.215, SD=2.007) and 68.08% (n= 241) participants who had 'more than one sibling' (M=24.389, SD=1.800). Sibling status did not have any significant relationship with RSES scores {t (2,351), p= 0.681}.

c) **Academic course:** In this sample, 5.37% (n=19) participants were from the B.A. stream (M=24.195, SD=1.915) whereas 52.54% (n=186) participants were from the B. Com stream (M=24.349, SD=1.758) and 42.09% (n=149) were from the B.Sc. stream (M=24.629, SD= 1.979). There was no significant relationship between RSES scores and choice of academic course {t (2,351), p=1.419}.

d) **Internet use and dependency:** During the global pandemic of COVID-19, the internet and social media were primary sources that fostered connectedness. This continued post-COVID and has led to issues like addiction, breach of privacy, and disconnect from the real world. AACCI has previously studied the impact of Internet addiction using Kimberly Young's Internet addiction test.[49] We inquired about their self-proclaimed dependence on the Internet (yes vs. no) and on social media (yes vs. no) on self-esteem. This was preceded by an inquiry about whether they used the internet and social media (yes vs. no). In this sample, majority (n= 352, 99.44%) of the participants used internet daily. There was no significant relationship between RSES scores and internet use (M=24.304, SD=1.913), {t (352), p=0.593}. Most participants (n= 332, 62.71%) (M=24.261, SD=1.906) reported that they were dependent on the internet compared to some participants (n= 22, 37.29%) (M=24.364, SD=1.919) who reported that they were not dependent. It is to be noted that these are self-perceived notions held by participants and are their views on dependency. No significant relationship was found between perceived dependency on the internet and RSES scores {t (352), p=0.487)}.

e) **Alcohol and tobacco use:** In this sample, majority of the participants (n= 351, 99.15%) did not use tobacco (M= 24.313, SD=1.903) and no significant relationship was found between tobacco use and self-esteem {t (352), p=0.069}. Majority (n=344, 97.18%) participants (M=24.314, SD=1.912) reported that they did not use alcohol daily. There was no significant relationship between RSES scores and alcohol use {t (352), p=0.201}.

f) **Perceived sense of control:** In this sample, it was seen that almost half (n= 41, 48.87%) the participants believed that they had control over their lives (M=24.382, SD=1.875) while some participants (n= 33, 38.83%) responded with 'maybe' when asked about perceived control (M=24.170, SD=1.871) whereas a minority (n= 10, 11.30%) of the participants responded with 'no' when asked about perceived control. There was no significant relationship between perceived control and RSES scores {t (2351), p=0.585}.

Discussion for study 2:

In this section, self-esteem scores on the RSES were compared with different variables like age, sibling status, academic course, participation in extracurricular activities, internet and social media use and dependency, alcohol and tobacco use and perceived control over life.

Relationship between participation in extracurricular activities and self-esteem:

Participation in intercollegiate competitions is known to increase self-confidence and self-esteem and enhance the ability to deal with stress, reduce performance anxiety, and strengthen other soft skills. Accordingly, the current study tried to see if there is a difference in self-esteem among participants who participated (vs. did not participate) in intercollegiate non-athletic competitions. Sports are known to enhance executive functions, teamwork, resilience, and the capacity to deal with failures. Our previous study showed that the engineering college girls who participated in sports competitions scored higher on social self-efficacy and self-regulation than non-participants.[16] Accordingly, the current study tried to see if there is a difference in self-esteem among participants who participated (vs. did not participate) in intercollegiate athletic competitions. Table 2 and 3 suggest that in this sample, a significant relationship was found between participation in extracurricular activities and RSES scores. Participants (31.36 %) who engaged themselves in interschool/college competitions (M = 24.766, SD = 1.824) had significantly higher RSES scores as compared to participants who did not participate (68.64 %) in those competitions (M = 24.086, SD = 1.913), {t (352) = 3.145, p <0.001}.

Even amongst low scores on the RSES, participants who engaged themselves in interschool/college competitions (M = 23.922, SD = 1.403) had significantly greater low RSES scores as compared to participants who did not engage themselves in interschool/college competitions (M = 23.378, SD = 1.383), {t (268) = 2.905, p = 0.002}. In the moderate scores group, participants who engaged themselves in interschool/college sports competitions (M = 26.333, SD = 0.617) had significantly higher moderate RSES scores as compared to participants who did not (M = 26.855, SD = 1.061), {t (82) = 1.833, p = 0.035}.

This finding implies that participation in extracurricular activities has helped to boost their self-esteem even though self-esteem progressively increases with age. Changes in both the initial level of self-esteem and the growth of self-esteem over time were significantly influenced by the type of extracurricular activity portfolio.[29,30] By late adolescence, individuals are aware of their interests and can choose to increase their participation and intensify their interest.[31] Success and participation in extracurricular activities can promote self-awareness, skill building, interpersonal and intrapersonal competence, a strong sense of self-efficacy which can affect academic performance and personal development.[32,33] Research also suggests that many of the character-building skills common to extracurricular activities are needed in the workplace, but are not regularly evaluated

and practised in the classroom.[34] For instance, skills like time management and leadership skills as also constructive criticism are required for intellectual and personal growth.[35] Additionally, participation gives opportunities to experience the importance of community involvement.[35] Participation in extracurricular activities is influenced by parental support, family finances, the school's ability to provide opportunities and variety of activities provided in these competitive environments. Breadth of activities plays an influential role i.e. individuals who participate in a variety of activity domains tend to fare better than those who do not participate or participate at low levels. Positive experiences in many domains can extend across domains, compensating for negative experiences in other domains.[36]

Another component related to participation is self-selection of activities i.e. participants are allowed to choose activities that fit with their interests and talents. This is beneficial because activities then validate their sense of self. This would also mean that impulsively pushing an adolescent into an activity for his/her own good is unlikely to yield any substantial benefits for self-esteem. Adolescents in this case many end up dealing with increasing frustration as each class progresses. It is important to note that along with exposure to activities, a supportive environment from families and an empowering environment where these activities are provided can be given to yield best outcomes.[37]

Relationship between social media use, dependency and RSES scores:

Table 4 suggests that in this sample, majority of the participants (n=255, 94.44%) used social media (M=23.596, SD=1.368) compared to a minority (n= 15, 5.56%) of participants who did not use social media (M=22.467, SD=1.685). A significant relationship was found between social media use and low scores on the RSES. This means that as hypothesized, participants who used social media regularly had significantly greater low RSES scores in that social media use seems to affect RSES scores negatively. The more the social media use, the lower the RSES scores suggesting low self-esteem. Social media use would entail mediums on the internet that involve interpersonal interaction and engagement.

In research, it was found that individuals experience significant boosts (or drops) in self-esteem when they experience minor disapproval (or approval) from their peers, whereas the self-esteem of others may fluctuate only in case of serious self-relevant experiences.[38] Some studies have focused on the positive feedback hypothesis on self-esteem, whereas some other studies have focused on the social comparison hypothesis i.e. primarily the negative effects of social comparison on self-esteem.[39,40] Both these theories have two perspectives; in that, while most adolescents receive positive feedback while using social media, some also receive negative feedback resulting in decrease in self-esteem.[41] Likewise, although social comparison can lead to envy, it can also lead to inspiration, thereby increasing self-esteem.[41] In another theory called self-esteem contingency theory, it is proposed that individuals differ in the areas of life that serve as the basis of their self-esteem. For example, for some adolescents their physical appearance may serve as the basis of their self-esteem, whereas others may base their self-esteem on peer approval.[42] Different contexts may also activate different self-esteem contingencies.[43,44] To elaborate, in a football field, athletic ability is valued, which may activate the athletic ability contingency in this context while on social media, physical appearance and peer approval may be relevant, so that these contingencies may particularly be triggered in the social media context. Therefore, adolescents who base their self-esteem on appearance or peer approval may be more susceptible to the effects of excessive social media usage than adolescents who base their self-esteem less on these contingencies.

Discussion for other variables:

Relationship between age and RSES scores:

As per results (a), in this sample, age did not impact participants' self-esteem scores. Individuals with high self-esteem in early life have high self-esteem in later life as well and vice versa,[46] thereby making self-esteem an important focus. Self-esteem begins increasing around adolescence (15 years) and continues to build into young and middle adulthood (30-60 years) wherein self-esteem is attributed this to an increase in autonomy to choose activities and relationships that align with individual's harmony and an increase in social roles and responsibilities. This could be a reason that self-esteem scores were not affected significantly in 17-21 yrs age range, as the experiences do not differ very much.

Relationship between sibling status and RSES scores:

As per results (b), in this sample, no significant relationship was found between sibling status and self-esteem. In this study, differences in self-esteem among participants who had no siblings, one sibling, or more than one sibling were explored. We have not conducted an in-depth analysis of the gender and age of siblings, inter-sibling relationships, sibling rivalry, differential parenting, etc. as that was not the focus of our study. Instead of the mere presence or absence of a relationship, studies have focused on the quality of the relationship between siblings and have found that a warm sibling relationship can serve as a protective factor for future mental health concerns.[47] However, nature of sibling relationship was not the focus of the study.

Relationship between academic course and RSES scores:

As per results (c), in this sample, academic course and self-esteem did not have any significant relationship. There is little research which connects type of academic course and development of self-esteem. Most research focuses on academic achievement and environment in development of self-esteem.[48] However that is beyond the purview of this paper.

Relationship between internet use and dependence with RSES scores:

As per results (d), in this sample, internet use and dependency did not have any significant relationship with self-esteem. Though research suggests that individuals with high problematic internet use (PIU) had lower scores on self-esteem and that problematic internet usage possibly arises from low self-esteem in the first place,[50,51] PIU was not the focus of the study.

Relationship between alcohol and tobacco use with RSES scores:

As per results (e), in this sample, alcohol and tobacco did not have any significant relationship with self-esteem. One study found that for each one-point increase on the RSES, there was a reduction in the odds of initiating substance use by up to 9% for tobacco, 3% for alcohol, and 7% for marijuana i.e. self-esteem is protective against the initiation of tobacco, alcohol, and marijuana use.[52,53] This can be explored in future studies.

Relationship between perceived life control and RSES scores:

As per results (f), in this sample, self-perceived sense of control over one's life and self-esteem did not have any significant relationship with self-esteem. Studies on self-esteem and locus of control have shown mixed results.[4]

Limitations

A major limitation was that the sample was a convenience sample, collected from only one college which had female students. Hence, the generalizability of this sample to the wider population needs more studies that include with both genders and different age groups.

Another limitation is that this study used self-report measures which are known to have the probability of skewed data due to various individual biases such as wanting to have social desirability and answering with this bias.

A univariate analysis may be oversimplifying the relationships found to be significant in this study. There could be confounders like income, SES, parents' education, occupation etc. which could be why the authors found high SEIS scores among students with high social media use. Hence, a univariate analysis is a limitation in this study.

Conclusion

The importance of developing self-esteem cannot be understated. Because fierce academic environments can be a challenge at school/college as also at home for students, developing skills related to self-esteem in the context of building resilience can help students navigate the stressors of their life with relative ease. In this study, it was concluded that participation in extracurricular activities and social media use have an impact on adolescents' self-esteem. Also, more multi-centric studies involving both genders in early and mid-adolescent ages will give more insight and validity to the results of demographic variables.

Recommendations

It is important to make students' parents and teachers aware of understanding and developing self-esteem, which is very important for holistic mental and emotional well-being. It is best encouraged and developed in early childhood a strong sense of self can help adolescents cope better with stressors and major life events. AACCI conducts multi-centric youth behaviour studies in schools and colleges using standardised scales. It also conducts regular workshops for parents, teachers, children, and adolescents in schools and colleges using the WHO life skill education framework for the development of soft skills to improve their resilience, of which, self-esteem is an integral part.

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Conflicts of interest

We have no conflicts of interests to declare.

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