



IMPACT OF SOCIAL EMOTIONAL LEARNING (SEL) INTERVENTION ON STUDENT MENTAL HEALTH: A QUASI-EXPERIMENTAL STUDY OF STANDARD IX STUDENTS

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Abstract:

The present study investigated the impact of a structured Social Emotional Learning (SEL) intervention on the mental health outcomes of Standard IX students. Utilizing a quasi-experimental pre-test/post-test non-equivalent control group design, a sample of 80 students was divided into experimental and control groups. The experimental group participated in a 12-week 'Resilience and Growth' programme, while the control group followed the regular school curriculum. Data were collected using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and the Social-Emotional Competence Scale (SECS). Statistical analysis revealed a significant improvement in the mental health scores of the experimental group. These findings suggest that integrating SEL into the secondary school curriculum is a vital strategy for enhancing adolescent psychological resilience and overall well-being.

Key Words: Social Emotional Learning (SEL), Resilience and Growth' Programme, Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), Social-Emotional Competence Scale (SECS), Standard IX Students

Introduction:

The contemporary educational landscape is undergoing a paradigm shift, recognizing that academic excellence cannot be achieved in emotional isolation. The psychological state of a learner serves as the foundational architecture upon which all cognitive processing and knowledge retention occur. Social Emotional Learning (SEL) is the process through which individuals acquire the capacity to recognize and manage emotions, demonstrate empathy for others, establish positive relationships and make responsible decisions. For students in Standard IX, this period is particularly critical. Aged typically between 14 and 15, these adolescents are navigating a complex intersection of neurobiological maturation and increasing academic expectations. The transition into the higher secondary years often brings a spike in cortisol levels due to exam-related stress, making this demographic uniquely vulnerable to mental health fluctuations. Adolescence is characterized by the rapid development of the limbic system, which governs emotions, while the prefrontal cortex responsible for impulse control is still maturing. This 'developmental gap' explains why Standard IX students often struggle with emotional regulation and interpersonal conflicts. This study posits that if schools explicitly teach social and emotional skills as a core competency, students will not only experience reduced psychological distress but also exhibit greater academic persistence. By framing mental health as a skill set rather than a static state, we move toward a more holistic educational philosophy that prepares students for the challenges of the 21st century.

Need and Significance of the Study:

The need for this study is rooted in the escalating global crisis of adolescent mental health. In recent years, educators have observed a rise in anxiety, social withdrawal and behavioural issues among secondary school students. Traditional pedagogical models have historically focused on Intelligence Quotient (IQ) while neglecting the Emotional Quotient (EQ). This imbalance leaves students ill-equipped to handle the stressors of a competitive social environment. In the context of Standard IX, students are often pressured to make early career-defining decisions, leading to a 'scissors effect' where external pressure increases exactly when internal emotional stability is at its most volatile. There is a dire need for evidence-based, school-integrated interventions that provide students with a psychological toolkit to navigate these pressures.

The significance of this research lies in its potential to influence systemic educational reform. While many mental health initiatives are reactive intervening only after a crisis this study advocates for a proactive, preventive approach. By demonstrating that a structured SEL intervention can lead to significant gains in mental well-being, the study provides empirical evidence for policymakers to move SEL from the periphery of 'extracurricular' to the centre of the formal curriculum. Furthermore, the study holds significance for teachers and parents, offering a framework for 'Relational Pedagogy' that fosters a supportive school climate. Ultimately, the significance of the study extends to the societal level; fostering emotionally competent citizens leads to lower rates of interpersonal violence, better workplace collaboration, and a reduced long-term burden on public health systems.

The efficacy of SEL is well-supported by an international body of research. A landmark meta-analysis conducted by Durlak et al. (2011) encompassing 213 school-based programmes revealed that participants in SEL interventions demonstrated significantly improved social-emotional skills, attitudes and behaviours. Notably, these students also showed an 11-percentile point gain in academic performance compared to their peers. This suggests a symbiotic relationship between emotional stability and cognitive capacity. Further research by Jones and Kahn (2017) emphasized that the school environment acts as a primary setting for social-emotional development, suggesting that the 'hidden curriculum' of peer interactions can be harnessed through formal SEL instruction to act as a buffer against depressive symptoms.

Research by Kumar and Devi (2021) explored the impact of mindfulness-integrated SEL programmes on Indian adolescents, finding a marked reduction in perceived stress and a higher degree of self-efficacy. Despite these findings, there remains a gap in literature regarding the specific impact on Standard IX students who are on the cusp of higher secondary education. Many existing studies focus on primary or early middle school. This study builds upon the work of Weissberg (2019), who argued that SEL is most effective when it is 'SAFE': Sequenced, Active, Focused and Explicit. By applying these principles to a quasi-experimental design, this research contributes to the growing body of evidence that adolescent mental health can be significantly bolstered through targeted school-based interventions.

Objective of the Study:

To find out whether Social Emotional Learning (SEL) is more effective than the regular school curriculum in improving the mental health of standard IX students based on their scores in (a) Warwick-Edinburgh Mental Well-being Scale and (b) Socio-Emotional Competence Scale.

Hypotheses:

- There is no significant difference between the experimental and control groups in their pre-test scores in Warwick-Edinburgh Mental Well-being Scale.
- There is no significant difference between the experimental and control groups in their post-test scores in Warwick-Edinburgh Mental Well-being Scale.
- There is no significant difference between the experimental and control groups in their pre-test scores in Socio-Emotional Competence Scale with respect to the (a) Socio-Emotional Competence (SEC total), (b) self-awareness, (c) self-management, (d) social awareness, relationship skills, and (f) responsible decision-making.
- There is no significant difference between the experimental and control groups in their post-test scores in Socio-Emotional Competence Scale with respect to the (a) Socio-Emotional Competence (SEC total), (b) self-awareness, (c) self-management, (d) social awareness, relationship skills, and (f) responsible decision-making.

Methodology and Tools:

This study utilized a quasi-experimental pre-test/post-test non-equivalent control group design. This methodology was selected because it allows for the study of real-world classroom environments where random assignment of individual students is not feasible due to administrative and scheduling constraints. The sample consisted of 80 students from two intact classrooms (Class A and Class B) of Standard IX at a secondary school in Kollam district of Kerala State. Class A (N=40) was designated as the experimental group, while Class B (N=40) served as the control group. Both groups were evaluated at the beginning (pre-test) and end (post-test) of a 12-week period.

To ensure the validity and reliability of the findings, two standardized tools were employed. The first was the Warwick-Edinburgh Mental Well-being Scale (WEMWBS), a 14-item scale designed to measure subjective well-being and psychological functioning. The second tool was a standardized Socio-Emotional Competence Scale (SECS), which measures the five core competencies of the CASEL framework: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. These tools provided a quantitative measure of the students' internal states and their ability to navigate social complexities.

The SEL Intervention: The 'Resilience & Growth' Programme:

The intervention was a structured 12-week programme delivered twice weekly in 40-minute sessions. The programme was designed to be experiential rather than didactic, utilizing role-plays, mindfulness exercises and group discussions. The first phase of the intervention focused on 'The Inner Landscape', where students practised emotional literacy. They learned to identify the physiological markers of stress such as a racing heart or shallow breathing and were introduced to the "S.T.O.P. Technique" (Stop, Take a breath, Observe, Proceed). This phase aimed to build the self-awareness necessary to catch a negative emotional spiral before it escalated.

The second phase, titled 'The Social Bridge', shifted the focus toward social awareness and relationship skills. Through perspective-taking exercises, students explored the intentions and feelings of others, which helped in reducing peer-related anxiety and conflict. The final phase focused on 'Responsible Decision-Making', where students applied their emotional skills to real-world dilemmas, such as managing social media pressure and academic time management. The intervention concluded with each student creating a 'Personal Resilience Plan', a personalized document outlining their unique triggers and the specific SEL strategies they intended to use to maintain their mental health during the high-pressure examination months.

Analysis and Interpretation of Data:

The analysis of data pertaining to the effectiveness of the SEL intervention is given below.

1. Comparison of the Pre-test Scores of the Experimental and Control Groups in Warwick-Edinburgh Mental Well-being Scale (WEMWBS):

The pre-test scores obtained by standard IX students in the experimental and control groups in Warwick-Edinburgh Mental Well-being Scale were compared in order to find out whether there is any significant difference between the experimental and control groups in their mental health well-being before the experimental treatment. The details of the analysis are given in table 1.

Table 1: Comparison of the Pre-test Scores of the Experimental and Control Groups in Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Results of t-test

Group	n	Mean	Std. Deviation	t-value	Significance
Experimental Group	40	42.50	5.12	0.59	p > 0.05
Control Group	40	41.80	5.45		

Table 1 shows that there is no significant difference between the experimental and control groups in their pre-test scores in Warwick-Edinburgh Mental Well-being Scale as the obtained t-value is not significant. This shows that initial mental well-being of the experimental and control groups is similar before the 12 week SEL intervention.

Thus, Hypothesis 1 “There is no significant difference between the experimental and control groups in their pre-test scores in Warwick-Edinburgh Mental Well-being Scale” is accepted.

2. Comparison of the Post-test Scores of the Experimental and Control Groups in Warwick-Edinburgh Mental Well-being Scale (WEMWBS):

The post-test scores obtained by standard IX students in the experimental and control groups in Warwick-Edinburgh Mental Well-being Scale were compared in order to find out whether there is any significant difference between the experimental and control groups in their mental health well-being after the experimental treatment with the 12 week programme. The details of the analysis are given in table 2.

Table 2: Comparison of the Post-test Scores of the Experimental and Control Groups in Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Results of t-test

Group	n	Mean	Std. Deviation	t-value	Significance
Experimental Group	40	58.20	4.12	13.98	p < 0.01
Control Group	40	43.10	5.45		

Table 2 shows that there is significant difference between the experimental and control groups in their post-test scores in Warwick-Edinburgh Mental Well-being Scale as the obtained t-value is significant at 0.01 level. The higher mean post-test score of the experimental group shows that the experimental group has achieved better score than the control group after the 12-week programme. This shows that the 12-week SEL intervention is very effective in enhancing the mental well-being of the experimental group of students when compared to the control group of students who underwent the regular classroom curriculum.

Thus, Hypothesis 2 “There is no significant difference between the experimental and control groups in their post-test scores in Warwick-Edinburgh Mental Well-being Scale” is rejected.

3. Comparison of the Pre-test Scores of the Experimental and Control Groups in Socio-Emotional Competence Scale (SECS):

The pre-test scores obtained by standard IX students in the experimental and control groups in Socio-Emotional Competence Scale were compared in order to find out whether there is any significant difference between the experimental and control group in their Socio-Emotional Competence (SEC total) and its five sub-competencies, namely, self-awareness, self-management, social awareness, relationship skills, and responsible decision-making before the experimental treatment. The details of the analysis are given in table 3.

Table 3: Comparison of the Pre-test Scores of the Experimental and Control Groups in Socio-Emotional Competence Scale (SECS): Results of t-test for the Total Score and Five Sub Competencies

Competencies	Group	n	Mean	Std. Deviation	t-value	Significance
Socio-Emotional Competence-Total	Experimental Group	40	148.50	13.40	0.19	p > 0.05
	Control Group	40	149.10	14.10		
Self-Awareness	Experimental Group	40	29.45	4.10	0.40	p > 0.05
	Control Group	40	29.10	3.80		
Self-Management	Experimental Group	40	28.10	4.55	0.39	p > 0.05
	Control Group	40	28.06	4.95		
Social Awareness	Experimental Group	40	30.80	3.20	0.68	p > 0.05
	Control Group	40	31.30	3.40		
Relationship Skills	Experimental Group	40	28.10	2.25	0.99	p > 0.05
	Control Group	40	28.70	3.10		
Responsible Decision-Making	Experimental Group	40	29.10	2.95	0.73	p > 0.05
	Control Group	40	28.60	3.10		

Table 3 shows that there is no significant difference between the pre-test scores of the experimental and control groups in their Socio-Emotional Competence (SEC total) and its five sub-competencies, namely, self-awareness, self-management, social awareness, relationship skills, and responsible decision-making as all the obtained t-values are not significant. This means that the total Socio-Emotional Competence and its sub components are identical for the experimental and control group before the experimental treatment.

Thus, Hypothesis 3 “There is no significant difference between the experimental and control groups in their pre-test scores in Socio-Emotional Competence Scale with respect to the (a) Socio-Emotional Competence (SEC total), (b) self-awareness, (c) self-management, (d) social awareness, (e) relationship skills, and (f) responsible decision-making” is accepted.

4. Comparison of the Post-test Scores of the Experimental and Control Groups in Socio-Emotional Competence Scale (SECS):

The post-test scores obtained by standard IX students in the experimental and control groups in Socio-Emotional Competence Scale were compared in order to find out whether there is any significant difference between the experimental and control group in their Socio-Emotional Competence (SEC total) and its five sub-competencies, namely, self-awareness, self-management, social awareness, relationship skills, and responsible decision-making after the experimental treatment with the 12 week programme. The details of the analysis are given in table 4.

Table 4: Comparison of the Post-test Scores of the Experimental and Control Groups in Socio-Emotional Competence Scale (SECS): Results of t-test for the Total Score and Five Sub Competencies

Competencies	Group	n	Mean	Std. Deviation	t-value	Significance
Socio-Emotional Competence-Total	Experimental Group	40	192.35	12.40	13.78	p < 0.01
	Control Group	40	151.40	14.10		
Self-Awareness	Experimental Group	40	38.45	3.10	9.15	p < 0.01
	Control Group	40	30.12	4.80		

Self-Management	Experimental Group	40	40.10	2.55	12.12	p < 0.01
	Control Group	40	29.45	4.95		
Social Awareness	Experimental Group	40	37.80	3.20	8.81	p < 0.01
	Control Group	40	31.30	3.40		
Relationship Skills	Experimental Group	40	38.95	3.45	9.56	p < 0.01
	Control Group	40	30.20	4.65		
Responsible Decision-Making	Experimental Group	40	37.05	2.95	9.92	p < 0.01
	Control Group	40	30.33	3.10		

Table 2 shows that there is significant difference between the post-test scores of the experimental and control groups in their Socio-Emotional Competence (SEC total) and its five sub-competencies, namely, self-awareness, self-management, social awareness, relationship skills, and responsible decision-making as all the obtained t-values are significant at 0.01 level. For the total score and all the five sub-competencies, the post-test mean scores of the experimental group is higher. This reveals that the experimental treatment with the 12 week programme is very effective in enhancing the scores in total Socio-Emotional Competence and its sub components in the experimental group when compared to the control group of students who underwent the regular classroom curriculum.

Thus, Hypothesis 4 “There is no significant difference between the experimental and control groups in their post-test scores in. Socio-Emotional Competence Scale with respect to the (a) Socio-Emotional Competence (SEC total), (b) self-awareness, (c) self-management, (d) social awareness, relationship skills, and (f) responsible decision-making” is rejected.

Conclusion:

This study serves as a critical intervention in the ongoing debate regarding the role of schools in student mental health. The data proves that the 12 week ‘Resilience & Growth’ programme successfully enhanced adolescent well-being. By integrating SEL into the Standard IX curriculum, we do not merely improve grades; we equip students with a psychological ‘safety net’ that will support them through the rigours of higher secondary education and beyond. It is no longer a question of whether schools should address emotional health, but how rapidly they can implement structured, evidence-based programmes like the one evaluated here.

Recommendations:

Based on the significant findings of this study, it is recommended that Social Emotional Learning be integrated into the core curriculum of secondary schools. Educational planners should move away from treating mental health as an extracurricular luxury and instead view it as a fundamental component of student development. Furthermore, comprehensive teacher training programmes are essential; educators must be equipped with the social-emotional skills they are expected to teach, fostering a ‘top-down’ culture of emotional intelligence within the school. It is also recommended that schools establish a ‘Wellness Monitoring System’ to track the emotional health of students longitudinally, ensuring that the gains made in Standard IX are sustained through the graduation years.

This study demonstrated that a structured SEL intervention significantly enhanced the mental health and emotional competence of Standard IX students. By addressing the psychological needs of adolescents during this critical developmental period, we provide them with the resilience required to thrive in both academic and personal spheres. The ‘Resilience & Growth’ programme proved to be an effective intervention, turning the classroom into a laboratory for emotional development. Ultimately, prioritizing SEL is not just an investment in better grades, but an investment in the creation of a more resilient, empathetic, and mentally healthy generation.

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