



## SHAPING YOUNG MINDS: HOW SCHOOL ENVIRONMENT PREDICTS SOCIAL AND EMOTIONAL LEARNING (SEL) IN PRIMARY SCHOOLS

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### Abstract

*The current quantitative cross-sectional study addresses how SEL can be meaningfully embedded in a resource-constrained primary school environment. The main objective of the study was to examine the predictive relationship between different dimensions of the school environment on SEL. Through proportionate stratified random sampling (25%), 302 students (males = 156, Females = 146) were selected from classes IV and V from Karachi West schools. The Panorama Social-Emotional Learning Survey for Grades 3–5 was used for data collection on-site, which covers SEL competencies and school environment aspects. The findings reveal that there is a significant positive correlation between SEL and classroom effort ( $r = .291$ ), and SEL and rigorous expectations ( $r = .428$ ). However, for other dimensions, the relationship was negative and weak. Additionally, non-significant correlations were found for engagement ( $r = .034$ ,  $p = .277$ ) and school safety ( $r = -.083$ ,  $p = .074$ ) with SEL. Similar findings were observed with the multiple regression analysis, as classroom effort and rigorous expectations were the significant positive predictors, engagement was not a significant predictor of SEL, school climate was not a significant predictor, and school safety showed a marginal, non-significant effect. Thus, the study's findings can provide actionable insights for multiple stakeholders, including policymakers, curriculum developers, and educators, to create an emotionally supportive and equitable educational environment that facilitates effective SEL implementation. For this to be truly effective, aspects of SEL need to be integrated into the students' total environment, school policy, culture, and programs. This creates an inclusive environment where students develop self-awareness, empathy, and emotional regulation, enabling them to become emotionally mature and make wise decisions.*

**Keywords:** Social and Emotional Learning (SEL), School Environment, Primary Schools, Classroom Effort, Engagement, School Safety, Rigorous Expectations

### Introduction

As a critical component of holistic education, the emphasis on SEL at the primary school level helps develop students' social competencies and foundational emotional skills. SEL is defined as the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to manage and regulate emotions, set goals, show empathy, maintain relationships, and make responsible decisions in school and life (Borowski, 2019). Literature highlighted that the implementation of an effective learning program leads to better academic performance (Ahmed et al., 2020; Coskun, 2019). Some studies mentioned that it further enhances classroom behavior and reduces emotional distress among students (Durlak et al., 2022; Taylor et al., 2017; Zadorozhna-Knyagnitska & Hadzhinova, 2021). Meanwhile, Van Huynh et



al. (2023) emphasized that the early implementation of SEL not only develops coping mechanisms in students but also regulates long-term emotions.

On the other hand, the school environment plays a vital role in shaping the SEL development of students (Dyson et al., 2021), so there is a need to cultivate conditions that enable SEL to grow by utilizing a supportive and positive school environment (Ferreira et al., 2020). This supportive and positive school environment is characterized by emotional safety, inclusivity, interpersonal relationships, and experiential learning (Wigelsworth et al., 2021). In contrast, a negative and uncooperative school environment is characterized by rigid discipline, high academic stress, a lack of emotional support, and inadequate resources (Hawkins et al., 2023; Rehman & Sajjad, 2025).

While international research underlines the benefits of SEL (Dyson et al., 2021; Todd et al., 2022), there remains limited empirical exploration of its integration within the exclusive socio-cultural context of countries like Pakistan. Existing studies in South Asia often focus on academic outcomes, overlooking the interplay between emotional well-being, school environment, and SEL implementation, such as Barlas et al. (2022) and Hayashi et al. (2022). Besides this, the absence of culturally responsive SEL frameworks and teacher training in many developing contexts limits the scalability of interventions, as also highlighted by Hussain and Ahmed (2023).

In Pakistan, schools often operate under resource constraints, large class sizes, and a high student-to-teacher ratio (Shah et al., 2022), which prioritizes rote memorization at the expense of social and emotional development. Few Pakistani studies have been conducted on SEL and its effective interventions, such as Barlas et al. (2022) and Hussain and Ahmed (2023). But these studies don't highlight the connections between the comprehensive school environment and the impacts of these efforts. There is a lack of contextualized data on how these factors contribute to shaping the day-to-day experiences of students and teachers. If this understanding is not achieved, efforts to stimulate SEL risk being misaligned or unsustainable with the actual needs and capacities of schools. Thus, the current study addresses these overlooked aspects by integrating contextual factors that show how SEL can be meaningfully embedded in a resource-constrained primary school environment. The study's findings can provide actionable insights for multiple stakeholders, including policymakers, curriculum developers, and educators, to create an emotionally supportive and equitable educational environment that facilitates effective SEL implementation.

### ***Objectives of the Study***

The research objective was to examine the predictive relationship between different dimensions of school environment on Social and Emotional Learning (SEL).

### **Review of Related Literature**

Learning to engage with the environment is a deeply ingrained aspect of early school experiences, and much of this engagement is made up of interpersonal relationships. Preserving a child's emotional well-being can determine their attitude towards their school life and social-emotional learning experiences in the long run. Aside from establishing healthy relationships and developing lifelong social skills, the benefits of social-emotional learning extend to improved academic and, subsequently, professional performance. Despite the support for the implementation of SEL in educational settings, widespread practice is still a far cry from the current landscape. The value of SEL, as discussed previously, is not perceived to be greater than obstacles such as institutional barriers and adaptability for teachers and educators.

Many studies support the idea that SEL is linked to better academic results and overall development of a child (Aygün & Taşkın, 2022; LaBelle, 2023). A meta-analysis conducted by Durlak et al. (2022) showed that students who participated in SEL programs scored 11 percentile points higher academically and therefore showed higher motivation with less distress and behavioural problems. The relationship between SEL competencies and academic success is also supported by the conclusions of Villares et al. (2023). These academic successes have been attributed to traits like emotional and social regulation and confidence in one's decision-making abilities (MacCann et al., 2020).

SEL promotes traits and patterns that are highly desirable in the classroom, such as improved attention span, teamwork, cooperation, and help-seeking. All of these contribute to a drastically better learning environment (Ferreira et al., 2020). Positive student-teacher relationships and school connectedness are two



more elements that flourish alongside SEL-driven policies, in turn reducing dropout rates (Taylor et al., 2017). Hence, SEL is proven to be a strong determinant of emotional, social, as well as academic growth and development among the students (Schonert-Reichl, 2019).

### ***Role of School Environment in Social Emotional Learning***

Schools not only offer an academic infrastructure but also the social and emotional experience the students require to excel in real life (Kidger et al., 2012). This is the reason why the environment of a school is most important for the social and emotional growth of the students. A supporting and interactive school climate enhances the affective understanding of the students and also enhances their interpersonal relationships necessary for developing SEL skills (Allbright et al., 2019).

Martinsone et al. (2023) explained that the concept of the school environment is inherently multi-dimensional, comprising four dimensions. The dimensions are, namely, 'physical', 'instructional', 'emotional', and 'relational factors'. The 'physical' dimensions include physical factors like the lighting, ventilation, and cleanliness of the classes. These factors govern the levels of stimulation and directly influence the psychological readiness of the student to learn and benefit maximally from each lesson (Whiting et al., 2022). 'Instructional' factors encompass the nature and quality of teaching practices and access to academic support within the classroom and school (Stodden et al., 2023). The 'emotional' dimension is concerned with students being made to feel emotionally cared for and supported by teachers and other staff (Roztock et al., 2019). Interpersonal relationships at the organization, i.e., those between students, teachers, and other student-centred staff, all fall in the realm of the 'relational' dimension. Olivera and Tournier (2016) provide insights that these interactions may revolve around dealings of fairness, trust, and mutual respect. All four dimensions serve as a unique vantage point from which to view and control the school's social landscape, guided by an understanding of the degree of SEL incorporation, the need to entrench it more fully, and the challenges being faced at every organizational level in implementing the required changes.

### ***Student Learning Behavior in School Environment***

Any student will invest more effort into their academics when they are trained to self-regulate and instilled with internal motivation. These personal characteristics, which are considered the foundation of the CASEL framework, manifest themselves in visible positive behaviours like completing assignments on time and engaging with the class environment in a lesson-relevant manner (Shernoff et al., 2017). Students' increased effort was found to be correlated with higher levels of self-awareness and self-management. Effort, which is not a product of individual disposition, is greatly influenced by the environment of a classroom (Saleem et al., 2025; Shahid et al., 2022; Sökmen, 2021). A study by Wang and Degol (2016) proved that positive classroom environments that are well-structured and provide support and encouragement to students are more likely to bring out consistent efforts in students. Whereas, indifferent or chaotic classrooms may lead to poor regulation and disengagement. Therefore, assessing student-reported effort provides a valuable understanding of emotional resilience.

### ***Perceived School Climate and Its Social Impact***

Many researchers refer to 'school climate' as the character and quality of one's school life, which includes the physical architecture, as well as personal and social values, norms, and relationships (Pan et al., 2023). Baumsteiger et al. (2022) concluded that improved academic performance, emotional regulation, and levels of aggression are all dependent upon access to a positive school climate. Students are found to be more emotionally secure and motivated to form relations and express themselves when they feel their culture and climate inside the school aligns with SEL initiatives and is supportive of their emotional well-being (Mischel & Kitsantas, 2020). Teacher enthusiasm, fairness, and cooperation are a few SEL supporting factors that strengthen the school climate in social awareness and relationship skills, as also highlighted by da Cunha et al. (2021).

Da Cunha et al. (2021) further observed that factors like bullying, harassment, or violence can trigger anxiety and stress in students, which inhibits their ability to engage and form healthy, meaningful relationships. Elaborating upon the same risks in their article, Pan et al. (2023) provide evidence that emotional and academic success for students' takes root where schools invest in developing safe and supportive environments for them. Once assured of their psychological safety, absence of all judgement, and no chance



of being humiliated upon expressing oneself, any group of people is encouraged to establish meaningful and lasting relationships and open channels of communication (Kutsyuruba et al., 2015). Schools should create a supportive atmosphere by establishing clear behavioural expectations and taking anti-bullying initiatives to reach out to the students' emotional regulation and sense of belonging (Rehman & Sajjad, 2024). Such environments provide the students with a safe space to understand and apply SEL competencies.

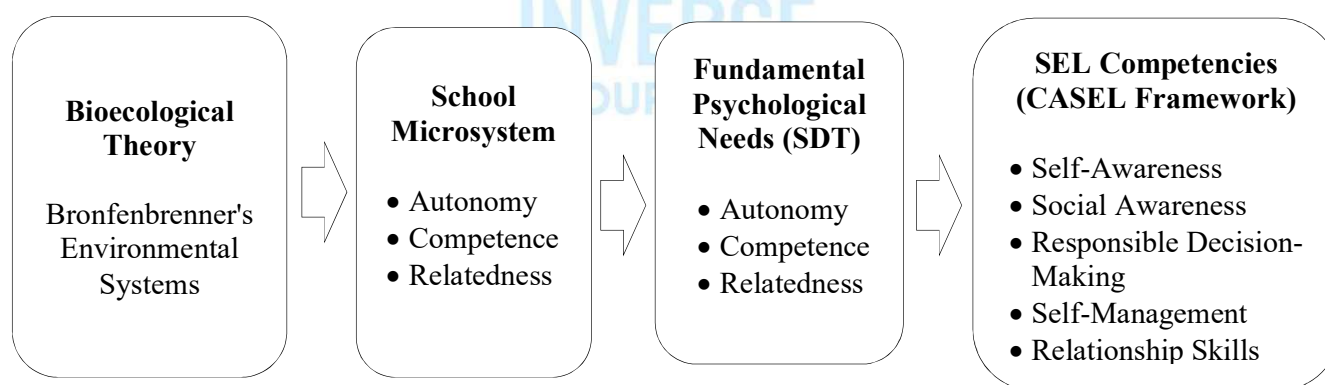
### ***Academic Encouragement and Rigorous Expectations***

Several studies have indicated that when students are placed in favourable, positive learning environments, they perform better academically and are more self-efficacious and driven (Cefai & Cavioni, 2013; Dusenbury et al., 2019). Realistic expectations, which adhere to the five SEL competencies, challenge the students to become resilient and improve decision-making. Studies demonstrated that when students believe their efforts lead to progress, they take more risks as they perceive mistakes as part of the learning curve (Baumsteiger et al., 2022; Dyson et al., 2021). Similarly, teachers who strike a balance between challenging and supporting their students strengthen them emotionally, which ultimately leads to greater academic success (Cipriano et al., 2023).

### ***Theoretical Framework***

The Ecological Theory provides a direct correlation between the various environmental systems and human development. Bronfenbrenner introduced five interdependent layers in the theory that determine development (Foster et al., 2022). Ecological theory emphasizes that a child's social and emotional development does not occur in isolation. It is deeply affected by the systems surrounding the child and his/her relationships. Thus, the theory is closely related to the current study and applied to SEL. For example, the microsystem fosters SEL skills through a supportive school climate that is further strengthened by family dynamics, educational policies, and community values and norms, which are the parts of the mesosystem and macro system. Therefore, this theory supports the view that effective SEL interventions must be considered across environmental systems, not at the individual or classroom level, and must engage multiple layers of a child's development.

**Figure 1**  
Theoretical Framework



### **Research Methodology**

This quantitative study employs a cross-sectional study design to examine the current state of SEL and the predictive role of school environment on SEL among primary school students. With the help of a regression analysis, this research design enables the statistical analysis of relationships between variables, including SEL and different dimensions of school environment. The research paradigm of the current study is based on the 'post-positivist paradigm', which focuses on discernible and quantifiable data.

### ***Sample of the Study***

The target population for the current study consisted of all students enrolled in Classes IV and V from public primary schools in Karachi West. However, all of these schools were selected for data collection





because there were only 16 functional schools in this region. By employing the Krejcie and Morgan Table, the sample size was determined to estimate an accurate sample size from the given population ( $N = 1164$ ). Thus, 302 students were selected with the help of proportionate stratified random sampling (25%). Table 1 highlights the sample size of students enrolled in Classes IV and V. There were 51.7% male students and 48.3% female students; among them majority (62.9%) were 8 years old and 30.1% were 9 years old.

**Table 1**  
*Demographic Characteristics of Students*

<b>Students</b>		<b>f</b>	<b>%</b>	<b>M</b>	<b>SD</b>
Gender	Male	156	51.7%	1.48	.501
	Female	146	48.3%		
Age	8 years	189	62.9%	1.48	.737
	9 years	91	30.1%		
	10 years	11	3.6%		
	11 years	11	3.6%		
	12 years	0	0		

The table 1 presents demographic data for 302 students. Gender distribution shows 51.7% male ( $n=156$ ) and 48.3% female ( $n=146$ ), with mean ( $M=1.48$ ) and standard deviation ( $SD=0.501$ ). Age distribution reveals most students were 8 years old (62.9%), followed by 9 (30.1%), with few aged 10–11 (3.6% each). No 12-year-olds were recorded ( $M=1.48$ ,  $SD=0.737$ ).

#### **Research Instrument**

For this study, the ‘Panorama Social-Emotional Learning Survey’ for Grades 3–5 was used, which is freely available on the internet from Panorama Education for researchers. The tool measures the SEL competencies across students (grades 3–12) and also covers the aspect of the school environment. The reliability of the tool was observed at .709 in this study, where the school environment reliability was observed at Cronbach’s alpha 0.623.

#### **Data Collection**

Data were collected by the researcher on the school site by filling survey questionnaire from the students in their mother tongue. The researcher strictly followed the ethical guidelines provided by the research committee of the university's ethical committee. Further, the researcher obtained informed consent from school principals (higher authority of the school) to collect data from students. The students were assured of their anonymity, data privacy, and confidentiality.

#### **Research Question**

Is there a predictive association between different dimensions of school environment influencing Social and Emotional Learning?

#### **Hypothesis**

- H<sub>0</sub>:** A predictive association exists between different dimensions of school environment influencing Social and Emotional Learning.
- H<sub>1</sub>:** A predictive association exists between different dimensions of school environment influencing Social and Emotional Learning.

#### **Data Analysis**

Social-emotional learning (SEL) plays a crucial role in students' overall development, influencing their academic success, mental well-being, and long-term life outcomes. Understanding how different aspects of the school environment contribute to SEL is essential for educators and policymakers seeking to foster supportive learning spaces. This study examines the relationship between SEL and key school environment dimensions, including classroom effort, engagement, school climate, safety, and rigorous expectations, through correlation and multiple regression analyses. The findings highlight which factors most significantly predict SEL outcomes, offering valuable insights for targeted educational interventions. By identifying the strongest influencers of SEL, this research provides evidence-based guidance on where schools should focus their efforts to maximize students' social-emotional growth.



**Table 2**

*Descriptive Statistics of SEL and School Environment*

	<b>M</b>	<b>SD</b>
Self-Awareness	3.18	.579
Self-Management	3.2417	.35565
Social Awareness	3.3019	.18480
Relationship Management	3.1623	.45741
Responsible Decision-Making	3.0132	.33717
<b>SEL</b>	3.1805	.24382
Classroom Effort	3.0205	.36922
Engagement	3.1060	.35852
School Climate	2.5745	.44633
School Safety	2.9748	.47351
Rigorous Expectations	3.1086	.35921
<b>School Environment</b>	2.9569	.20231

Table 2 highlights the descriptive statistics of SEL and the school environment. The overall mean score was observed for SEL M = 3.180 (SD = .2438), whereas for the school environment, M = 2.956 (SD = .2023).

**Table 3**

*Multiple Regression Analysis: Dimensions of School Environment and SEL*

<b>Correlation</b>		<b>SEL</b>	<b>Classroom Effort</b>	<b>Engagement</b>	<b>School Climate</b>	<b>School Safety</b>
<b>Pearson Correlation</b>	SEL	1.000				
	Classroom Effort	.291	1.000			
	Engagement	.034	-.144	1.000		
	School Climate	-.102	-.192	.410	1.000	
	School Safety	-.083	-.224	.312	.511	1.000
	Rigorous Expectations	.428	.283	.114	-.198	-.319
<b>Sig. (1-tailed)</b>	SEL	.000				
	Classroom Effort	.000	.006			
	Engagement	.277	.000	.000		
	School Climate	.038	.000	.000	.000	
	School Safety	.074	.000	.000	.000	.000
	Rigorous Expectations	.000	.000	.024	.000	.000

Table 3 gives principal measures of the general fit of the regression model. The value of R (0.472) shows that there is moderate connection between predictors and SEL. The R<sup>2</sup> (0.223) is an indicator that gives it 22.3 estimated proportions of variance in SEL based on the factors of school environment. The variance explained is Adjusted R<sup>2</sup> (0.210), and it is adjusted according to the number of predictors, such that a slight decrease is made so that it is not overestimated. Standard Error of the Estimate (0.21673) indicates the mean differences between the predicted and actual SEL scores, thus the accuracy of prediction can be determined.

**Table 4**

*Regression Model Summary for SEL Prediction*

<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>Std. Error of Estimate</b>
.472 <sup>a</sup>	.223	.210	.21673

Table 4 gives important measures on how the regression model fits in general. The R-value (0.472) means that there would be moderate relationship between the predictors and SEL. where R<sup>2</sup> = 0.223 implies



that about 22.3 percent of the variance in SEL is due to the school environment factors. The Adjusted R<sup>2</sup> (0.210) accounts for the number of predictors and minimally lowers the variances of what is explained in order to avoid overestimation. The SEE (0.21673) represents an overall reflection of how close the predicted and actual scores of SEL are to each other allowing to gauge the accuracy of the prediction.

**Table 5**

*ANOVA Results for the Regression Model Predicting SEL*

ANOVA <sup>b</sup>	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.990	5	.798	16.990	.000 <sup>a</sup>
Residual	13.903	296	.047		
Total	17.893	301			

The ANOVA (Analysis of Variance) table examines the hypothesis on whether the regression model is significantly able to predict SEL. The F-statistic (16.990) involves a comparison (after dividing) between the explained and unexplained variance of the model, and the extremely significant p-value (.000) indicates that the whole model is itself significantly meaningful. Regression Sum of Squares (3.990) indicates the variance with the predictors and Residual Sum of Squares (13.903) is the variance that is unexplained. The overwhelming F-value indicates that some of its predictors have significant effects on SEL.

**Table 6**

*Regression Coefficients for School Environment Dimensions Predicting SEL*

Coefficients <sup>b</sup>	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.840	.202		9.132	.000
Classroom Effort	.129	.036	.195	3.569	.000
Engagement	.000	.040	.000	-.003	.998
School Climate	-.022	.035	-.041	-.650	.516
School Safety	.056	.032	.109	1.721	.086
Rigorous Expectations	.271	.039	.400	6.899	.000

a. Predictors: (Constant), Rigorous Expectations, Engagement, Classroom Effort, School Safety, School Climate

b. Dependent Variable: SEL

The table 6 is an explanation of how every aspect of the school environment relates to SEL. The strongest are positive predictors are Rigorous Expectations (beta = 0.400,  $p < .001$ ) and Classroom Effort (beta = 0.195,  $p < .001$ ). There is a weak positive relationship between school Safety ( $\beta = 0.109$ ,  $p = .086$ ) and the rest of the variables are insignificant with insulation ( $\beta = 0.000$ ,  $p = .998$ ), and school Climate (128 (beta = -0.041,  $p = .516$ ). The constant (1.840) is the mean of the SEL score of when predictors take the value of 0. These coefficients can be used to determine the factors that have the greatest impacts on SEL outcomes.

Using the multiple regression, an important revelation is what the various elements of the school environment have to do with the effectiveness of Social-Emotional Learning (SEL) among the students. Classroom Effort and Rigorous Expectations turn out to be the best positive predictors of SEL as both exhibit statistically significant correlations and regression coefficients. This implies that academic diligence and high expectations of an environment play a positive role on the emotional and social development of the students. Remarkably, the correlation between School Climate and School Safety, and SEL elicited either weak negative or negligible relationships, with their regression coefficients being either not significant or barely significant. It means that although safety and general climate play an essential role concerning the well-being of students, they are not likely to have a direct positive impact on SEL as significantly as effort and expectations. Engagement proved to have virtually no predictive value, meaning that plainly going through with school activities does not automatically result in better SEL outcomes.

The overall model has a significant effect; it is able to explain 22.3 percent of the variance in the SEL



( $R^2 = 0.223$ ), which shows that the school environment factors are involved, but there are possibly other external factors, which can also have a considerable impact on feeling. The ANOVA output ( $F = 16.990$ ,  $p < .001$ ) also support the validity of the model, which adds weight to the fact that these predictors influence SEL acting together with one another.

To reconstruct the main points, schools whose goal is to increase SEL need to focus on instilling the teachings of effort-oriented classrooms and high expectations, both of which boast the greatest connection to positive social-emotional results. Future studies should examine more variables in order to explain the rest of unexplained variance in SEL.

### Discussion

This study highlights the dependence of key life outcomes, like academic and school environment and future success, on SEL. The role of the student-teacher relationship in fostering a sense of support, upkeep, and security is well established by the findings of this research. This proves that a direct positive correlation exists between SEL and the school environment. These results are consistent with many prior research studies, which indicate that when students are exposed to emotionally supportive and safe environments, they show higher levels of SEL competencies (Berg et al., 2023; Mahfouz & Greenberg, 2021).

According to the current study's findings, the strongest predictor is the student-teacher relationship, which plays a central role in fostering SEL among students. Rimm-Kaufman et al. (2022) reported that because young students internalize behaviours they observe, they are more likely to be emotionally and socially well-regulated when exposed to positive interpersonal relationships, such as students' relationships with their teachers. Hence, teachers should be trained to communicate deferentially and respectfully, listen actively, and be emotionally sensitive, especially when dealing with young individuals.

Safety and support are the second most predictive factors in SEL implementation after the student-teacher relationship, which suggests that students are more confident and emotionally adept when they are exposed to nurturing and caring environments. A study by Osher et al. (2020) highlighted that when students feel physically and emotionally safe in their surroundings, they are more eager to participate in classroom activities, discussions, and open to social interactions. This behaviour proves that students become socially and emotionally mature when they are exposed to proper SEL programs.

Even though student-teacher relationship and safe, supportive environments are significant factors in the current study, peer interaction and learning environment have failed to do so. On the other hand, rules and discipline showed marginal results. These findings can be attributed to the difference in the implementation and perception of these factors between primary children and teenagers. Denham et al. (2022) reported that peer interactions are more likely to influence SEL in teenagers than primary students, as the latter are more heavily dependent on adult modelling. Similarly, unless discipline policies incorporate restorative and relational approaches, they are more likely to discourage SEL (Ahad et al., 2025; Balouch et al., 2025; Sajjad et al., 2019; UNESCO, 2021).

Overall, this study affirms that some factors of the school environment encourage SEL and directly impact it, while others do not. Social and emotional factors were the most influential, highlighting the need to make students feel supported and connected for SEL success. This requires establishing the need for proper teacher training and allowing them the resources to create nurturing and emotionally safe classroom environments. This is only possible if school administrations implement policies to incorporate SEL as an integral part of a student's holistic education. Schools in low and middle-income countries, such as Karachi, need special emphasis, as contextual challenges affect how environmental factors shape SEL.

### Conclusion

SEL has emerged as a fundamental aspect of holistic education, which equips students with essential life skills that help them excel in life within and outside of school. When SEL is effectively incorporated into the curriculum as a core component, not as an auxiliary support, students' higher achievements can be observed. With the framework in place, it is now on the school administration and leaders to establish proper practices that create an inclusive school culture catering to the socio-emotional development of the students. These practices include incorporating SEL into the curriculum, encouraging students to partake in SEL activities, etc. It is now the job of the teacher, the frontline implementers, to execute SEL through daily





instructions and classroom management so that emotional literacy becomes part of a student's daily routine. Similarly, parents and caregivers are expected to further reinforce these SEL values at home. Meanwhile, the role of the community stakeholders, including NGOs, religious leaders, and local organizations, is to support SEL efforts through outreach programs and awareness campaigns. When all these people work in unison, SEL can move from being an isolated initiative to a systemic, sustainable force that nurtures emotionally healthy, empathetic, and socially responsible future citizens.

### **Limitations of the Study**

The research is useful in understanding the relationship between the dimensions of school environment and social-emotional learning (SEL) although some limitations need to be put into consideration when dealing with the findings. To start with, the cross-sectional nature does not allow us to not only establish the causal relationships among the school environment factors and the SEL outcomes. Although we found the correlations to be significant, we are unable to ascertain whether the more worthy classroom effort and a high bar of expectations result in superior SEL or whether students who have more advanced SEL abilities have a more favourable view of their school setting. The directional relationships would be achieved by use of a longitudinal study design.

Second, self-report measures might bring response biases which can alter accuracy of data. The social desirability bias or temporary moods might affect the responses of students regarding their perception of school climate and SEL competencies. The building of several assessment tools by incorporating teacher ratings or observational data would increase the dimensional picture of these constructs. Also, the fact that the explained variance ( $R^2 = 0.223$ ) is rather low implies that almost 80 percent of SEL variability depends on factors that were not taken into account in our model.

Our results can have low generalizability due to the nature of the sample of the study. Having 301 participants whose educational setting is not specified, the findings may not be representative of all the contexts of education, across various cultures, socioeconomics and geography. Future studies ought to focus on whether these relationship findings apply to more demographically diverse student populations. In addition, we have been able to operationalize the important variables such as school climate and engagement using only a part of the complex variables forcing us to possibly look at the important dimensions that can affect advancement of SEL.

Lastly, the fact that we will not include some potentially influential variables in our model i.e. teacher-student relationships or family support is another shortcoming. These uncontrollable variables may interfere with the reported associations of school environment dimensions with SEL. Nevertheless, the limitations notwithstanding, the findings that we managed to present can guide educators in that particular aspects of the school environment were identified as the ones most closely associated with SEL. These findings should be the starting point of future research using more well-developed research designs and measurement tools.

### **Recommendations**

SEL is key to holistic development across all major schools globally. For this to be truly effective, there needs to be aspects of SEL integrated into the students' total environment, school policy, culture, and programs. This creates an inclusive environment where students develop self-awareness, empathy, and emotional regulation, enabling them to become emotionally mature and make wise decisions. Regular assessments, active family engagement, and alignment should support these efforts with community-based values and practices to ensure long-term relevance and impact. Not only are that, but teacher training, supportive leadership, and consistent reinforcement across all levels of the educational system also very important.

It is essential when introducing a new idea or concept in a society to adapt it to its cultural, religious, linguistic, and systemic demands. This makes the idea much easier and digestible for the targeted audience, allowing for a quicker reception and acceptance. The same is the case for introducing SEL into the Pakistani educational system. Here, local languages, traditions, ethical values, and Islamic principles of compassion (rahma), respect (adab), and community welfare (ihسان) must be taken into consideration when incorporating SEL in the national curriculum. A slow, consistent shift towards a balanced educational system needs to be made in the exam-centric Pakistani schools. This requires the introduction of activities like role plays, class



discussions, and reflection on their daily routines. The recognition of SEL as a core element of a child's development and its implementation require clear standards and accountability mechanisms.

Another way to promote SEL initiatives is to explore multi-stakeholder perspectives. This includes the perspectives of parents, school administrators, community leaders, and policymakers. By understanding their stance and how they perceive SEL programs and initiatives, more acceptable programs can be created. These collaborative, sustainable strategies are more likely to be adopted by the general society with little to no resistance. Additionally, as education technology becomes widespread in Pakistan, SEL modules and teacher training should be made available online as well through online platforms and mobile applications. This will increase one's access to SEL programs, especially in areas where physical resources are limited, in a cost-effective manner.

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