International Academic Institute for Science and Technology

International Academic Journal of Science and Engineering
Vol. 13, No. 1, 2026, pp. 103-111.

ISSN 2454-3896

International Academic Journal of Science and Engineering

www.iaiest.com

Post-Pandemic Resilience Coping and Thriving Among Higher Secondary Students in Thrissur Kerala

Bobby Pudukaden [a*], Dr.A. Martin Jayaraj [b]

[a] Research Scholar, Department of Management, Karpagam Academy of Higher Education, Coimbatore, India.*
E-mail: bobbypaul22873@gmail.com, Orcid: https://orcid.org/0009-0009-9386-4089
[b] Professor, Department of Management, Karpagam Academy of Higher Education, Coimbatore, India.
E-mail: martin.a@kahedu.edu.in, Orcid: https://orcid.org/0000-0003-4288-3174

Abstract

Higher secondary students had their academic, social, and emotional lives interrupted by the COVID-19 pandemic. The paper examines the correlation between internal coping, external coping, and resilience among higher secondary students in Thrissur, Kerala. The survey was a cross-sectional quantitative survey done among 440 students who were sampled in the district in government, aided, and unaided higher secondary schools. The questionnaire measured pandemic-associated issues, internal coping (emotional regulation, self-efficacy, optimism), external coping (social support, family involvement, educational resources), and resilience, based on validated Likert-scale measures. Structural Equation Modeling (SEM) revealed acceptable model fit ($\chi^2/df = 2.10$, CFI = 0.95, TLI = 0.94, RMSEA = 0.05) and internal coping strategies were found to be more related to resilience ($\beta = 0.84$ for emotional regulation, $\beta = 0.76$ for self-efficacy, $\beta = 0.54$ for optimism) were identified as particularly important predictors of resilience, whereas the social support and family engagement played the role of buffering against pandemic-related stressors. The results indicate that it is essential to enhance the personal coping strategies and supportive family and school conditions to enable students to overcome post-pandemic academic and emotional stress. Longitudinal studies and sample sizes that are larger and more varied are suggested to analyze long term impact of coping mechanisms on student resilience in Kerala and related situations.

Keywords: Post-pandemic Resilience, Coping Strategies, Higher Secondary Students, Emotional Regulation, Social Support, Kerala, Academic Challenges.

DOI: 10.71086/IAJSE/V13I1/IAJSE1311
Received: 24 December 2025/Revised: 19 January 2026/Accepted: 13 February 2026/Published: 30 March 2026

Introduction

The COVID-19 pandemic has caused serious impacts in the education sector, and it has affected the process of learning, emotional state, and performance of students (Heng et al., 2023; Waters et al., 2021; Vinod Kumar, 2022). The sudden shift in educational services to the online mode, social isolation, and the uncertainties regarding examinations were a big source of pressure among higher secondary students (Racine et al., 2021). These disruptions were very applicable in Thrissur, Kerala, as students there needed to get used to learning digitally and to deal with academic pressures, lack of peer interactions, and family-related pressures (Vattamparambil & Chatterjee, 2026). In this respect, it is pertinent to learn the coping mechanisms that led to resilience with the aim of developing student support frameworks that can promote recovery and long-term well-being (Awais et al., 2024).

The study is relevant in that it might lead to a valuable insight into coping strategies students used in Kerala during the pandemic and the impact such strategies had on their resilience (Pudukaden & Jayaraj, 2025). One of the success factors of students in their academic and personal issues is resilience, which is the ability to overcome a negative experience. Although the overall effects of the pandemic on the well-being of students have been well-researched on a global scale, the gap in research specifically on the students of higher secondary in Kerala is significant (De Lorenzo et al., 2023; Rutter, 2012). This gap is especially important to consider the particular context of socio-cultural conditions in Kerala, the educational system, and the active work of the state to respond to the pandemic (Finch & Ong, 2024). Exploring how students have used several internal and external coping methods, the study will help to gain a localized insight into student resilience, which can be used to inform future interventions to help students struggling with post-pandemic issues.

Research Questions

- RQ1: What role do internal coping variables (self-efficacy, emotional regulation and optimism) play in the resiliency of students in Kerala after the pandemic?
- RQ2: How do external coping strategies (social support, family dynamics, access to educational resources) contribute to resilience in students?
- RQ3: How is the relationship between the challenges that students go through during the pandemic and their resilience and how coping strategies mediate this relationship?

Based on these Research Questions, the Study Hypothesizes

- H1: The internal coping strategies of the students who experienced more problems during the pandemic will be different than those of the students who experienced fewer problems.
- H2: Students who use internal coping mechanisms, including self-efficacy and emotional control, will be more resilient.
- H3: Internal coping strategies will mediate the relationship between issues that students encounter and their resilience to counter the adverse influences of the issues.
- H4: Students who encounter greater problems after the pandemic will use various external coping strategies than those who had fewer problems.
- H5: Students using external coping strategies, including social support or extracurricular activities, will have an increased level of resilience.
- H6: External coping strategies will mediate the relationship between problems facing students and their resilience to decrease the negative effects of problems on resilience.

Objectives

The primary objectives of this research are to:

1. Determine the problems that the higher secondary students in Thrissur, Kerala, had during the COVID-19 pandemic, especially in terms of academic disruption, social isolation, and mental health problems.
2. Consider how internal coping mechanisms (e.g., self-efficacy, emotional control, optimism) contribute to resilience and assist students to address the challenges that the pandemic brings about.
3. Find out how external coping strategies (e.g., social support, access to educational resources, community engagement) affect resilience and the capability of the students to cope with stress.

4. Evaluate how problems and coping strategies of students relate to resilience; to understand how coping strategies mediate the relationship between problems and resilience.
5. Give evidence-based advice to educational policymakers and teachers, as well as mental health workers, to develop effective interventions and support systems to help students become more resilient.

Contribution

This research paper can be added to the increasing literature on resilience by providing a regionalized view of how pupils in Kerala managed the compounded issues during the pandemic. It points to the socio-cultural and educational factors of uniqueness which also influenced their resiliency-building processes and the importance of both internal and external coping strategies to reduce the adverse impacts of stress. The study highlights the issue of offering a holistic approach in supporting students in terms of both internal psychological resources and external institutional supports. An in-depth analysis of these strategies can lead to some useful conclusions and inform future educational and mental health interventions in Kerala and other contexts, as discussed in this study.

The structure of this paper is presented as follows: Section II will review the literature on resilience and coping mechanisms, considering the effect of COVID-19. Section III explains the research design, sampling and data collection through a personalized questionnaire. Section IV shows the results of statistical tests, which revealed the importance of coping strategies in resiliency. Section V will be a conclusion of the major findings and provide future research and policy recommendations.

Literature Review

The ability to overcome adversity and positively adapt to challenges is what is referred to as resilience. It is an active process, which includes self-development, emotional stability, and the skill to cope and solve life challenges. In students, resilience helps them to endure academic demands, social demands, and personal difficulties eventually leading to academic persistence and emotional health. Both the internal and external coping mechanisms support resilience. Self-efficacy, emotional regulation, optimism, and mindfulness are internal coping mechanisms that enable individuals to cope with stress much better and stay involved even in the face of adversity. These are in-house strategies that are the key to emotional stability and academic motivation, especially in times of disruption like the COVID-19 pandemic (Garg et al., 2023; Chavira et al., 2022). Emotional regulation, e.g., assists students to overcome unfavorable emotions, whereas self-efficacy helps them to believe that they can successfully cope with difficulties.

The pandemic has been the only event that has challenged the strength of students around the globe, especially with the transition to remote learning, isolation, and confusion surrounding school timetables and exams (Steinhoff et al., 2024). The disruption led to considerable anxiety, depression, and loneliness among students. To address these difficulties, students have been using diverse coping mechanisms. Those who exhibited higher levels of optimism and emotional regulation were able to better manage the emotional and academic difficulties caused by the pandemic (Bolo, 2024). The use of external coping mechanisms, including seeking of support, peers, and teachers as well as extracurricular activities and utilization of available school resources have also been important in the reduction of stress and resilience during these challenging periods. Social support can assist in giving students a sense of belonging and an emotional sense of security, and extracurricular activities such as yoga and meditation have been found to diminish stress and enhance mindfulness.

Nevertheless, there is a dearth of research on resilience when it comes to the scenario of Kerala in India. The educational system in Kerala is considered to be competitive, and the students in the area also have certain special socio-cultural pressures, a family pressure, and an orientation towards academic achievement (Harris & Halpern, 2022). The sudden shift to online education and issues such as the lack of internet access and socio-economic differences aggravated the challenges of numerous learners. This was also complicated by the fact that there was no direct teacher-student contact resulting in an isolation among the students. Yet, the strong social network and community support systems of Kerala might have offered students with the special resources to overcome these difficulties. It is important to learn how these factors affected student resilience in the face of the pandemic to create interventions that can more effectively help students in this particular context (Mmari et al., 2024).

Although much of the studies have been conducted in global or Western settings, there exists a significant gap in the studies on resilience in Kerala, especially during the post-pandemic period (Xing et al., 2023; Lau et al., 2023). The educational system of the region with its academic demands and bond with the community is a specific socio-cultural environment that needs particular consideration. The advantages of the strong community support that the students received could have helped them overcome the challenges of the pandemic, including learning disruptions and social

isolation (Orban et al., 2024; Menon & Schmidt-Vogt, 2022). This research will identify the role of internal and external coping strategies and the educational and community environment in Kerala in helping students to be resilient in the post-pandemic recovery phase.

The literature review shows that localized studies on student resilience, especially in Kerala, are necessary as the socio-cultural and educational setting can influence coping strategies differently. By filling this gap, the study will be valuable in offering insights on how students in Kerala can be helped to develop resilience, increase their challenges and succeed in school and the personal life. The results will be used to create more appropriate context-specific interventions that will be able to improve the well-being and academic performance of students in future adversities.

Methodology

The research design of this study was cross-sectional quantitative study which aimed at analyzing the relationship between coping strategies and resilience among higher secondary students in Thrissur, Kerala. Students in the district of government, aided, and unaided higher secondary schools were the subject of the study. The number of surveyed students was 440 and they were incorporated in the final quantitative analysis. The choice of participants was based on convenience sampling, meaning that they were able to get students of various school types and academic streams, but it does not mean that they could represent all students of higher secondary in Thrissur statistically.

Study Area

The study focuses on higher secondary school students from Thrissur District, Kerala. The district is composed of a rich mix of educational institutions, government, aided, and unaided schools that offer a wide range of representation of socio-economic backgrounds and academic experiences. This diversity will help the research to include a broad spectrum of student experiences and coping strategies in the various types of schools.

Sampling

The final sample that underwent analysis was 440 higher secondary students comprising of science, commerce and humanities streams. Convenience sampling was used in recruiting the participants in the schools of Thrissur district. Since it was not a probabilistic sample, the results can be assumed to be representative of the students surveyed and not of the whole population of higher secondary students in Kerala.

Data Collection

A modified questionnaire was used to obtain the study data with the Connor-Davidson Resilience Scale (CD-RISC-25) on the basis. The questionnaire will include Likert-scale questions, which will be used to estimate the perceptions of students on the issues related to the pandemic, internal coping (self-efficacy, emotional regulation, and optimism), external coping (social support and access to resources), and overall resilience of students. Google Forms, which enabled the collection of data in a cost-efficient way and including multiple schools, and giving a chance to reach students who might not have been able to complete a paper-based survey due to geographic or logistical reasons were used to conduct the survey. The data were collected in October 2024-January 2025.

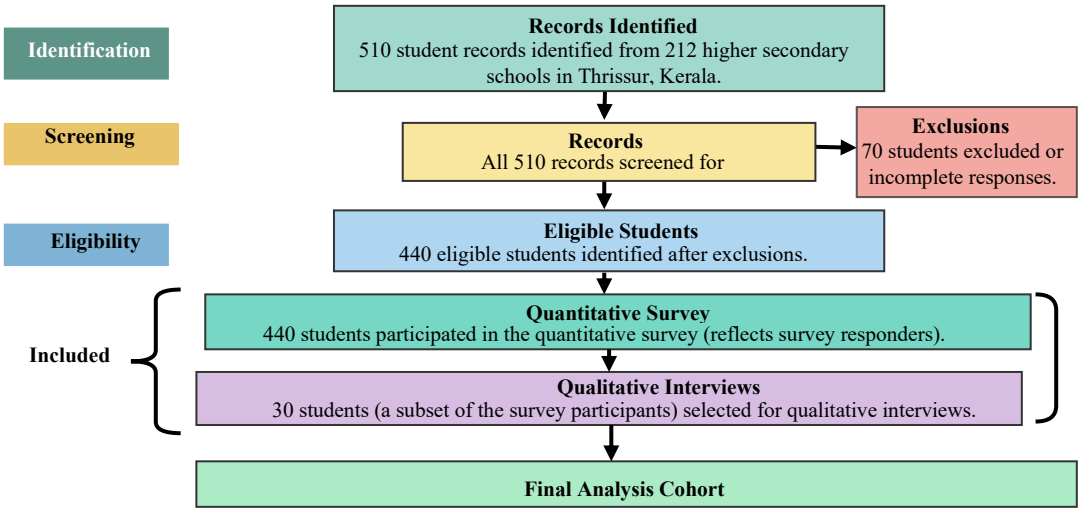


Fig. 1: Participant Flow for Post-Pandemic Resilience Study

Fig. 1 illustrates the study flow with regard to the participants, beginning with the identification of the eligible students and ending up with the final analytic sample of 440 survey participants.

Model and Analysis

The study uses Structural Equation Modeling (SEM) to analyze the data and can examine the complex relationships among several variables and determine the direct and indirect effects of coping strategies on resilience. To confirm the measurement model, confirmatory factor Analysis (CFA) will be performed to confirm that the questionnaire measures the constructs of interest properly. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett Test of Sphericity will be used to determine the appropriateness of the data to SEM and CFA. The demographic data will be summarized by the descriptive statistics and the research hypotheses will be tested with the help of the inferential statistics, regression analysis and correlation analysis. The evaluation of the model fit will be based on such indices like Goodness-of-Fit Index (GPI), Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA).

Ethical Considerations

The relevant institutional review board gave the study ethical approval. All the participants as well as their guardians gave an informed consent, and were made aware of the purpose of the study, that they were being interviewed on a voluntary basis, and that their answer would be kept confidential. Anonymity of respondents was ensured during the research and all data were managed in regards to ethical research principles.

Results and Discussion

Descriptive data revealed that a significant number of students expressed their disruption of their studies, emotional distress, and inability to adapt to online education. Resilience was positively related to internal coping strategies like self-efficacy, emotional regulation and optimism. There were also positive relationships between external coping mechanisms such as family support, peer support and accessibility of educational resources with resilience but their effects were relatively less.

Demographic Information

The sample comprised of 510 students that were screened and 440 eligible students that participated in the survey. There were 440 eligible students of which 234 were male and 276 were female. A sample of 212 higher secondary schools in the district was chosen to select these students, but they were chosen to represent a wide range of socio-economic backgrounds and academic streams such as Science, Commerce and Humanities. The demographic description gave a clue on how gender, academic background and socio-economic status could affect the coping mechanisms used by students.

Descriptive Analysis

The responses of the students to the survey were summarized using descriptive statistics, giving the types of challenges they had due to the pandemic, their coping strategies, and the levels of perceived resilience. The results of the survey showed that academic disruptions, emotional distress, and social isolation were the most prevalent issues reported. A huge percentage of the students said that they found it very hard to cope with the online learning and cope with schoolwork and social interaction with peers and teachers.

Self-efficacy, emotional regulation and optimism were the most commonly used internal coping strategies. These were strategies that were associated positively with increased resilience. In a somewhat lesser extent, external coping mechanisms like the availability of social support, family support, and involvement in extracurricular activities also led to resilience.

Reliability and Validity

Table 1: Reliability and Convergent Validity of Study Constructs

Construct	Number of items	Cronbach's alpha	Composite reliability	AVE
Pandemic-related problems	8	0.85	0.88	0.52
Internal coping – self-efficacy	6	0.87	0.90	0.55
Internal coping – emotional regulation	6	0.89	0.92	0.59
Internal coping – optimism	5	0.86	0.89	0.54
External coping – social support	5	0.84	0.87	0.52
External coping – family support	5	0.86	0.89	0.57
External coping – educational resources	4	0.83	0.86	0.51
Resilience (CD-RISC-based scale)	10	0.91	0.93	0.58

Cronbach alpha was used to measure the reliability of the questionnaire, with the acceptable internal consistency level of 0.7 or above. Factor analysis was used to test the construct validity of the questionnaire, and the convergent validity was tested using the Average Variance Extracted (AVE) and Composite Reliability (CR). Discriminant validity testing was also used in the study to make sure that the constructs being measured are not a similarity to each other.

Table 1 indicates that all study constructs show acceptable internal consistency, with Cronbach's alpha and composite reliability values being above the minimum accepted threshold of 0.70. Furthermore, Average Variance Extracted (AVE) values for each construct were above 0.50, denoting satisfactory convergent validity of the measurement model. These findings affirm the use of the scales measuring the pandemic-induced problems, coping strategies (both internal and external), and resilience of higher secondary students in Thrissur.

Regression and SEM Analysis

The analysis found a strong correlation between the coping mechanisms developed by the students and resilience demonstrated by them. Emotional and self-regulatory mechanisms were identified as the most influential internal coping mechanisms. Students displaying the aforementioned mechanisms were found to be more resilient to the stress toxicity of the pandemic. The analysis also found family support and community resource engagement to be noteworthy external coping mechanisms. However, this was to a lesser degree than in internal coping mechanisms.

To assess the coping mechanisms and resilience achieved by the students regarding the adversity they faced, Structural Equation Modeling was employed. The analysis showed that both internal and external coping mechanisms were significant mediators between the pandemic-related challenges and resilience; however, the internal mechanisms were the most significant.

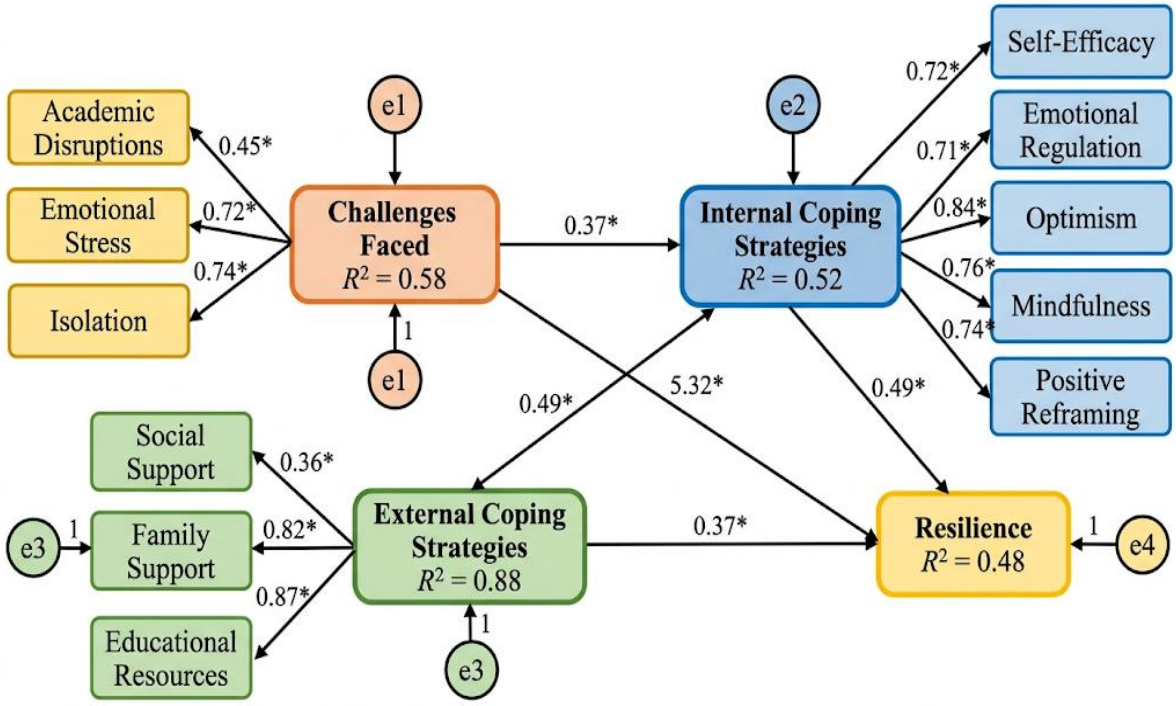


Fig. 2: SEM for Post-Pandemic Resilience Among Higher Secondary Students

Fig. 2 shows how the pandemic challenges, internal coping strategies, external coping strategies, and resilience among higher secondary students in Thrissur, Kerala, interconnect. The model shows the challenges of academic disruption, emotional strain, and social isolation, and their impact on the internal coping strategies (self-efficacy, emotional regulation, and optimism) and external coping strategies (social support, family support, and educational coping), and how these impact the resilience of the students. The diagram shows the path coefficients (for example 0.72*, 0.84*) and R^2 values of each latent variable, which allows the reader to visualize the study's theoretical framework and the interconnection of the major variables.

Table 2: Structural Model Fit Indices for the SEM of Post-pandemic Resilience

Fit index	Recommended threshold	Observed value
χ^2/df	< 3.00	2.10
GFI	> 0.90	0.93
CFI	> 0.90	0.95
TLI	> 0.90	0.94
RMSEA	< 0.08	0.05
SRMR	< 0.08	0.04

As illustrated in table 2, the structural model showed an acceptable to good fit: χ^2/df < 3, CFI and TLI above 0.90, and RMSEA and SRMR below 0.08.

Table 3: Key Standardized Path Estimates for the SEM of Post-pandemic Resilience

Path	β (standardized)	p-value
Pandemic problems → Internal coping	0.72	< 0.001
Pandemic problems → External coping	0.84	< 0.001
Internal coping → Resilience	0.84	< 0.001
External coping → Resilience	0.49	< 0.001
Pandemic problems → Resilience (direct)	0.20	< 0.01
Indirect effect via Internal coping	0.30	< 0.001
Indirect effect via External coping	0.18	< 0.01

Table 3 presents the main standardized paths which show that internal coping has a stronger effect on resilience than external coping, and that both sets of strategies mediate the effect of pandemic-related problems on resilience.

Hypothesis Testing

Table 4: Hypothesis Testing for Post-Pandemic Resilience

Hypothesis	Result	Path Coefficient / Value	Explanation
H1: Students who faced more problems during the pandemic employed different coping strategies.	Supported	0.72 (Internal), 0.84 (External)	Students facing greater academic and emotional challenges reported using both internal and external coping strategies to a greater extent.
H2: Students who employed internal coping strategies exhibited higher resilience levels.	Confirmed	0.84 (Emotional Regulation), 0.76 (Self-Efficacy)	Emotional regulation, self-efficacy, and optimism were strongly correlated with higher resilience.
H3: Internal coping strategies mediated the relationship between challenges and resilience.	Supported	0.72 (Self-Efficacy), 0.74 (Emotional Regulation)	The mediation effect of internal strategies was statistically significant, showing that emotional regulation and self-efficacy buffered the negative impact of pandemic challenges.
H4: Students facing more challenges employed different external coping strategies.	Supported	0.82 (Social Support), 0.87 (Family Support)	Students facing more challenges sought higher levels of social support and family engagement.
H5: Students using external coping strategies exhibited higher resilience.	Supported	0.49 (Social Support), 0.72 (Family Support)	External strategies like social support and extracurricular activities showed positive associations with resilience, but the effect was weaker than internal strategies.
H6: External coping strategies mediated the relationship between challenges and resilience.	Supported	0.37 (External Coping), 0.49 (Resilience)	The mediation effect of external coping strategies was supported, but weaker than that of internal strategies.

Table 4 provides the results of hypothesis testing using Structural Equation Modeling (SEM), focusing on the effects of coping strategies on resilience among higher secondary students in Thrissur, Kerala. Path coefficients are given for

each hypothesis, affirming the significant contribution of internal and external coping strategies to resilience. Emotional regulation (β = 0.84) and self-efficacy (β = 0.76) made the strongest direct contributions to resilience. Furthermore, internal coping, being a higher-order construct, had a significant indirect effect (≈ 0.30) in the mediation of pandemic-induced problems and resilience.

Discussion

The results identified factors that contributed to resilience among higher secondary students after the pandemic. Both personal and social coping resources contributed to resilience. Internal coping strategies have a greater contribution. Emotional regulation and self-efficacy were critical in helping students deal with academic and emotional strain. External supports, that is, family involvement and social support, were still necessary, especially as a buffer against stressors related to disrupted learning and contact with peers.

Existing literature recognizes that coping strategies are important, and this study, to some degree, contributes a regional context, giving understanding to the ways the socio-cultural context of Kerala can influence student resilience. For stressed students to sustain academic achievement despite the stress, Kerala's community support and schools that supply the necessary resources were instrumental. Nevertheless, the digital divide and the socio-economic gap are still a key concern that affect the resilience and coping strategies of students.

The results suggest that school-based interventions in Kerala should focus on emotional regulation, self-efficacy, and optimism, while also improving family involvement and peer support. The findings may assist administrators in the school and policymakers in addressing the need to include socio-emotional learning and resilience in the curricular and instructional framework, alongside training teachers in psychological first aid and student mentoring. Improving access to counseling and digital resources is necessary to ensure that the resilience interventions support students of all socio-economic levels.

Conclusion

The structural model for this study shows that positive coping strategies and resilience are correlated for students in higher secondary education in Thrissur, Kerala, and that the structural model provides an acceptable fit ($\chi^2/df = 2.10$, CFI = 0.95, TLI = 0.94, RMSEA = 0.05). Predictors of resilience for internal coping strategies, particularly emotional regulation (β = 0.84), self-efficacy (β = 0.76), and optimism (β = 0.54), were stronger than external coping strategies like social support (β = 0.49) and family involvement (β = 0.72). The findings acknowledge the greater impact of psychological resources and support the development of targeted interventions to improve individual coping strategies and protective school and family environments. The internal resources investigated had greater direct effects on resilience and were also more prominent in the mediating effect of coping strategies, with an indirect effect of 0.30, than the external resources, which had an indirect effect of 0.18. Despite social support and family involvement having an indirect effect, they were extremely helpful in enabling students to retain emotional self-regulation and academic motivation during the academic disruption, emotional distress, and social isolation caused by the pandemic. A simple and straightforward approach to student support is essential. Improving psychological coping skills, along with social and institutional support, is equally important. The study demonstrates that programs should be developed to focus on improving emotional regulation and self-efficacy, practicing mindfulness, and increasing family involvement, along with strengthening peer relationships and improving teacher–student communication. Future studies should look into the sustaining ability of the relationships over time and in different contexts using longitudinal designs and larger and more varied samples. Additionally, research should look into how digital education continues to evolve, and how it influences the coping mechanisms and the psychosocial health of students during and after the pandemic.

References

Heng, K., Sol, K., & Pang, S. (2023). Challenges and opportunities of online learning: Insights from Cambodian higher education during Covid-19. *Issues in Educational Research*, *33*(2), 608-630.

Pudukaden, B., & Jayaraj, A. M. (2025). Resilience of College Teachers After Pandemic with Special Reference to Arts and Science Colleges in Thrissur District, Kerala State. *IJSAT-International Journal on Science and Technology*, *16*(2), 1-17. https://doi.org/10.71097/IJSAT.v16.i2.3202

Garg, N., Verma, S., & Palframan, J. T. (2023). Positive reframing as a mediator between gratitude and technostress amongst Indian students during the COVID-19 pandemic. *Kybernetes*, *52*(8), 2810-2825. https://doi.org/10.1108/K-12-2021-1250

Vattamparambil, K. P., & Chatterjee, S. C. (2026). Evaluating community perceptions of leadership in decentralized governance during public health crisis: a case study from Thrissur district, Kerala (India). *Leadership in Health Services*, 1-21. https://doi.org/10.1108/LHS-04-2025-0062

Waters, L., Allen, K. A., & Arslan, G. (2021). Stress-related growth in adolescents returning to school after COVID-19 school closure. *Frontiers in psychology*, *12*, 643443. https://doi.org/10.3389/fpsyg.2021.643443

Chavira, D. A., Ponting, C., & Ramos, G. (2022). The impact of COVID-19 on child and adolescent mental health and treatment considerations. *Behaviour research and therapy*, *157*, 104169. https://doi.org/10.1016/j.brat.2022.104169

De Lorenzo, A., Lattke, L. S., & Rabaglietti, E. (2023). Creativity and resilience: a mini-review on post-pandemic resources for adolescents and young adults. *Frontiers in public health*, *11*, 1117539. https://doi.org/10.3389/fpubh.2023.1117539

Finch, B., & Ong, E. (2024). Exploring coping resiliency and depression among university students in a post-pandemic context. *Advances in Mental Health*, *22*(3), 711-727. https://doi.org/10.1080/18387357.2024.2323507

Racine, N., McArthur, B. A., Cooke, J. E., Eirich, R., Zhu, J., & Madigan, S. (2021). Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. *JAMA pediatrics*, *175*(11), 1142-1150. https://doi.org/10.1001/jamapediatrics.2021.2482

Steinhoff, A., Johnson-Ferguson, L., Bechtiger, L., Murray, A., Hepp, U., Ribeaud, D., ... & Shanahan, L. (2024). Early adolescent predictors of young adults' distress and adaptive coping during the COVID-19 pandemic: Findings from a longitudinal cohort study. *The Journal of Early Adolescence*, *44*(9), 1250-1280. https://doi.org/10.1177/02724316231181660

Bolo, M. N. V. (2024). Turning Setbacks into Comebacks: High School Students Academic Resilience in the Post-Pandemic Era. *International Journal of Research and Innovation in Social Science*, *8*(3s), 5661-5685. https://doi.org/10.47772/IJRISS.2024.803425S

Awais, A., Fu, N., & Jones, S. (2024). Developing students' resilience during the crisis: A moderated model linking college support, study demands, student resilience, and students' change-oriented behaviours. *Higher Education Quarterly*, *78*(3), 565-585. https://doi.org/10.1111/hequ.12468

Rutter, M. (2012). Resilience as a dynamic concept. *Development and psychopathology*, *24*(2), 335-344. https://doi.org/10.1017/S0954579412000028

Harris, K. M., & Halpern, C. T. (2022). Implications of adolescence for Adult Well-Being: 25 years of add Health Research. *Journal of Adolescent Health*, *71*(6), S1-S5. https://doi.org/10.1016/j.jadohealth.2022.09.012

Mmari, K., Mafuta, E., Yu, C., Pinandari, A., Borges, A. L. V., Maddaleno, M., & Martinez-Baack, M. (2024). Coping strategies among adolescents during the COVID-19 pandemic: A cross-cultural exploration. *Journal of Adolescent Health*, *75*(6), S50-S56. https://doi.org/10.1016/j.jadohealth.2024.09.001

Xing, J., Xu, X., Li, X., & Luo, Q. (2023). Psychological resilience interventions for adolescents during the COVID-19 pandemic. *Behavioral Sciences*, *13*(7), 543. https://doi.org/10.3390/bs13070543

Orban, E., Li, L. Y., Gilbert, M., Napp, A. K., Kaman, A., Topf, S., ... & Ravens-Sieberer, U. (2024). Mental health and quality of life in children and adolescents during the COVID-19 pandemic: a systematic review of longitudinal studies. *Frontiers in Public Health*, *11*, 1275917. https://doi.org/10.3389/fpubh.2023.1275917

Lau, Y. Y., PV, R., Man Hin, C. E., Kanrak, M., & Varma, A. J. (2023). A new shape of the supply chain during the COVID-19 pandemic. *foresight*, *25*(4), 578-596. https://doi.org/10.1108/FS-04-2022-0035

Vinod Kumar, T. M. (2022). Covid-19: Containment, life, work and restart urban and regional studies. In *COVID 19, Containment, Life, Work and Restart: Regional Studies* (pp. 3-93). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-19-6183-0_1

Menon, A., & Schmidt-Vogt, D. (2022). Effects of the COVID-19 pandemic on farmers and their responses: A study of three farming systems in Kerala, South India. *Land*, *11*(1), 144. https://doi.org/10.3390/land11010144