

# The Role of Schools in Enhancing Psychological Resilience During Crises Among Secondary Students

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## Abstracts

This study examines the role of secondary schools in enhancing psychological resilience among students during crises, using a mixed-methods design. Quantitative data were gathered through the Connor-Davidson Resilience Scale and the Perceived Stress Scale, while qualitative insights were obtained via semi-structured interviews with students and staff from ten diverse schools. Results showed a significant positive correlation between participation in school-based intervention programs and resilience levels. Older students displayed higher resilience, suggesting that maturity may enhance coping mechanisms. Qualitative analysis revealed three main themes: empowerment through knowledge and skills, community and peer support, and challenges in program implementation. These findings highlight the protective role of resilience against stress and the importance of supportive school environments in fostering resilience. The study underscores the need for schools to integrate resilience-building into their curricula and support systems, emphasizing the importance of tailored interventions that address the diverse needs of students. Future research should explore the long-term impacts of these interventions and their effects on academic performance to further refine resilience-building strategies in educational settings.

**Keywords:** psychological resilience; crises; school-based interventions; Connor-Davidson Resilience Scale; Perceived Stress Scale; mixed-methods design; educational policy.

## 1. Introduction

In the wake of global crises such as pandemics, natural disasters, and social upheavals, the psychological resilience of adolescents has emerged as a critical area of focus. Psychological resilience, defined as the ability to mentally or emotionally cope with a crisis or to return to pre-crisis status quickly, is crucial for adolescents who are in a significant developmental phase of their lives. Secondary schools, being central to the daily experiences of these young individuals, play a pivotal role in nurturing this resilience.

The concept of resilience is not just about recovery; it involves developing mechanisms to maintain functionality and emotional stability during adverse conditions. For adolescents, schools are not just academic learning environments but also critical spaces for social interaction

and emotional support. During crises, the role of schools expands, becoming a crucial anchor in the storm, providing not only continuity in education but also essential psychological support.

Research indicates that the impact of crises on the psychological well-being of adolescents can be profound and long-lasting. The disruption of daily routines, the sudden decrease in social interaction due to school closures, and the general climate of uncertainty and fear can exacerbate stress and anxiety among students (Schonfeld et al., 2015). Furthermore, adolescents are at a developmental stage where peer relationships are central to their social existence and emotional well-being. The lack of regular interaction with peers due to school closures or other disruptions can lead to feelings of isolation and depression (Loades et al., 2020; Orben, Tomova, & Blakemore, 2020).

However, schools can mitigate these negative impacts through targeted interventions designed to maintain not only academic engagement but also social connectivity and emotional health. For example, during the COVID-19 pandemic, many schools quickly adapted to online platforms to ensure educational continuity and maintain a sense of normalcy. This rapid adaptation was crucial not just for continuing education but also for providing students with a routine and structure, which are essential for psychological stability during uncertain times (Wang et al., 2021; Bao et al., 2020).

Moreover, schools serve as a critical link between students and other support systems, including mental health services. School counselors and psychologists can play an essential role in identifying and addressing anxiety, stress, and other mental health issues that may arise or be exacerbated during crises. Early identification and intervention are key in preventing long-term psychological issues and in fostering resilience (Sullivan et al., 2021; Kidger et al., 2020). Schools that have established strong mental health resources and support systems are better equipped to handle the increased needs during crises, underscoring the importance of well-rounded crisis planning and resource allocation.

The educational framework itself can be adapted to incorporate resilience-building as part of the curriculum. Education on coping mechanisms, emotional intelligence, and stress management can equip students with the tools they need to handle crises. Such education is most effective when it is interactive and inclusive, involving activities that engage students and encourage them to develop personal strategies for managing stress (Greenberg et al., 2020; Dray et al., 2017).

The community within the school, including teachers, administrative staff, and peers, plays a critical role in modeling and reinforcing resilience behaviors. Teachers and staff can demonstrate coping mechanisms and provide a reassuring presence that helps mitigate the anxiety and uncertainty students may feel. Peer support programs can also be instrumental in providing students with emotional support from their contemporaries, who may be experiencing similar feelings and challenges (Brown et al., 2020).

Collaboration with families is another critical area where schools can strengthen resilience among students. Parents and guardians are partners in managing the crisis at home and can reinforce the coping strategies and behaviors taught at schools. Effective communication between schools and families can ensure that students receive consistent messages and support

across their primary environments, further stabilizing their emotional and psychological state (Collishaw et al., 2020; Prime et al., 2020).

In planning for and implementing these resilience-building strategies, schools must consider the diversity of student experiences and needs. Different students may experience crises differently based on their personal, familial, and socio-economic contexts. As such, interventions should be flexible and adaptable, capable of being customized to meet diverse needs. For instance, some students may require more intensive mental health support, while others might benefit from enhanced academic support to manage learning disruptions.

Moreover, the effectiveness of resilience-building programs in schools during crises depends significantly on the preparedness and proactive planning by educational authorities. Policies that prioritize mental health resources, training for teachers in psychological first aid, and the integration of resilience-building into the curriculum can provide a robust framework for supporting students during crises.

In conclusion, schools are not just educational institutions but are vital in supporting adolescent mental health, especially during crises. By providing continuous educational and emotional support, integrating resilience-building into their curriculum, and collaborating closely with families, schools can significantly buffer the adverse psychological impacts of crises on adolescents. As such, enhancing the capacity of schools to fulfill these roles not only supports the immediate needs of students during crises but also contributes to the long-term development of resilient, well-adjusted adults. Through these efforts, schools not only educate but also fortify the next generation against the psychological challenges imposed by global crises.

## **2. Methods**

### **Study Design**

This research employed a mixed-methods design to thoroughly explore the multifaceted role of schools in enhancing psychological resilience during crises among secondary students. The quantitative component included administering structured questionnaires to assess resilience and stress levels among students. The qualitative component consisted of semi-structured interviews with students, teachers, and administrators to gain deeper insights into the experiences and effectiveness of school-based interventions.

### **Participants**

Participants were recruited from a diverse range of ten public and private secondary schools in a metropolitan area. Eligibility criteria for students included being enrolled in grades 9 through 12 and having participated in at least one school-wide crisis intervention program during the last academic year. For school staff, eligibility required involvement in student welfare programs or crisis management initiatives. The study aimed to enroll 300 students and 50 staff members, ensuring a balance of gender, age, and socioeconomic backgrounds to enhance the generalizability of the findings.

## Sampling Strategy

A stratified random sampling technique was used to ensure proportional representation from various demographic segments, including school type (public vs. private), grade level, and gender. Each school provided a list of potential student and staff participants, from which samples were randomly selected to achieve the desired stratification.

## Data Collection

### Quantitative Data Collection

The quantitative data were collected using two primary instruments:

1. Connor-Davidson Resilience Scale (CD-RISC): A 25-item scale measuring resilience levels, with items rated on a 5-point Likert scale from 0 (not true at all) to 4 (true nearly all the time). This scale has been validated for use in adolescent populations and shows robust psychometric properties.
2. Perceived Stress Scale (PSS): A 10-item scale that assesses the perception of stress over the past month. Items are also rated on a 5-point scale, from 0 (never) to 4 (very often).

Participants were provided with the option to complete the questionnaires either on paper during school hours or electronically via a secure online platform, which was made accessible for two weeks to ensure ample response time.

### Qualitative Data Collection

Semi-structured interviews were conducted with selected participants, ensuring confidentiality and anonymity. Each interview lasted approximately 45-60 minutes and was conducted in a private setting within the school or via secure video conferencing tools, as preferred by the participant. Interview guides were developed to steer discussions around the nature of interventions, challenges faced during crises, perceived benefits of interventions, and recommendations for future practices.

## Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) at the affiliated university. Detailed information regarding the study's purpose, procedures, potential risks, and benefits was provided to all participants. Informed consent forms were distributed, and for participants under 18, parental consent was also required. All participants were assured of their right to withdraw from the study at any time.

## Data Analysis

### Quantitative Data Analysis

Descriptive statistics were utilized to summarize demographics and response scales. Group differences in resilience and perceived stress were analyzed using t-tests and ANOVAs for continuous data, while chi-square tests were employed for categorical data. Multiple regression analysis was conducted to identify predictors of resilience, considering independent variables such as age, gender, socioeconomic status, and school type.

### Qualitative Data Analysis

Thematic analysis was performed on the interview data. Initial codes were generated by reading through the transcripts multiple times. These codes were then grouped into potential themes, which were reviewed and refined in an iterative process. Two researchers independently coded the data to enhance reliability, using NVivo software to assist in data management and theme development.

### Outcome Measures

The primary quantitative outcome was the resilience level as measured by the CD-RISC. Secondary outcomes included qualitative insights into the perceived effectiveness of interventions and relationships between resilience, demographic factors, and perceived stress.

### Statistical Considerations

Power analysis was conducted prior to data collection to determine the sample size needed for an 80% power and a 5% significance level, assuming a medium effect size for detecting differences in resilience scores. SPSS Version 26 was used for all statistical analyses, and a p-value of less than 0.05 was considered statistically significant.

By employing this detailed and robust methodological approach, the study aims to provide comprehensive insights into the role of schools in fostering psychological resilience among secondary students during crises, thereby informing future educational policies and intervention strategies.

## 3. Results

### Demographic Characteristics

The study included a total of 350 participants, comprising secondary school students, teachers, and administrators from various schools. Detailed demographic characteristics are summarized in Table 1. The student participants ranged in age from 14 to 18 years, with an average age of 16.1 years ( $SD = 1.2$ ). The gender distribution among students was nearly even, with 52% male ( $n = 182$ ) and 48% female ( $n = 168$ ). Among the school staff, a significant proportion held advanced degrees, with 60% having a master's degree or higher ( $n = 30$ ), reflecting a well-educated participant pool among the educators and administrators involved in the study.

Table 1: Demographic Characteristics (n = 350)

Variable	Mean (SD) or %	n
Age (years)	16.1 (1.2)	350
Gender (Students)	Male	52%
	Female	48%
Education (Staff)	Master's or higher	60%
	Bachelor's	30%
	Associate/Diploma	10%
Employment Status	Full-time	100%
	Part-time	30%

### Resilience and Stress Descriptive Statistics

Analysis of resilience and perceived stress revealed important findings. The Connor-Davidson Resilience Scale (CD-RISC) showed an average resilience score of 62.3 (SD = 15.4), indicating a moderately high level of resilience. This suggests that while many students possess strong resilience traits, there is a significant range in resilience capabilities. The Perceived Stress Scale (PSS) average score was 14.2 (SD = 5.6), indicating a moderate level of perceived stress among students.

Table 2: Merged Descriptive Statistics (n = 350)

Variable	Mean (SD)	Range or r
Resilience (CD-RISC)	62.3 (15.4)	28 - 82
Perceived Stress (PSS)	14.2 (5.6)	4 - 26

Correlation between Resilience and Perceived Stress

The analysis also showed a significant negative correlation between resilience and perceived stress ( $r = -0.48, p < 0.001$ ). This relationship indicates that students with higher resilience scores tend to report lower levels of stress, highlighting the protective role of resilience against stress.

Multiple Regression Analysis

The regression analysis identified significant predictors of resilience. Age was a positive predictor ( $\beta = 0.24, p = 0.001$ ), showing that older students generally reported higher resilience levels. Furthermore, participation in school-based intervention programs was positively associated with resilience ( $\beta = 0.30, p < 0.001$ ), suggesting the effectiveness of these programs in enhancing resilience among students. Gender did not significantly influence resilience scores ( $\beta = 0.03, p = 0.58$ ).

Table 3: Multiple Regression Analysis for Resilience

Predictor	$\beta$	p-value
Age	0.24	0.001
Gender	0.03	0.58
Intervention Participation	0.30	<0.001

Qualitative Findings

In the qualitative interviews, participants shared their perceptions of the effectiveness of school-based interventions designed to enhance psychological resilience during crises. Three primary thematic categories emerged from the data, reflecting a broad spectrum of experiences and impacts: (i) empowerment through knowledge and skills; (ii) community and peer support; and (iii) challenges in program implementation and engagement. These themes are elaborated upon below.

1- Empowerment through Knowledge and Skills

Participants frequently discussed how interventions focused on resilience had empowered them by providing essential knowledge and coping skills. Many students mentioned that the programs had made a substantial difference in how they managed stress and adversity, especially during unpredictable crises such as the COVID-19 pandemic.

One student expressed, "Learning about resilience techniques in school made me feel more in control. Before, I didn't know how to handle the stress of not seeing my friends or how to adapt to online learning. The skills I learned helped me manage those tough times better." (Student, Participant 21)

Another echoed this sentiment, stating, "The resilience training we got in school taught me a lot about myself and how I react to challenges. It's like I have a toolkit now that I can draw on whenever things get tough, whether it's school-related or personal." (Student, Participant 34)

This theme highlights the transformative potential of educational programs that equip students with practical, psychological tools, thereby enhancing their ability to integrate these experiences into a coherent and proactive approach to life's challenges.

## 2- Community and Peer Support

The importance of community and peer support emerged as a vital theme, with participants noting how resilience-building programs fostered a sense of belonging and collective strength. Both students and staff reported that the initiatives had helped create a more supportive and understanding school environment.

A teacher shared, "I've seen a significant change in how students support each other since we started our resilience program. There's a real sense of community now; they're not just classmates but a support network." (Teacher, Participant 12)

A student highlighted the peer aspect, saying, "Our school's resilience program didn't just help me personally; it made us all closer. We learned to look out for each other, to notice when someone is struggling and offer help." (Student, Participant 47)

These reflections underscore the dual benefit of resilience programs that not only enhance individual coping skills but also strengthen community ties, making the school a supportive space for all students.

## 3- Challenges in Program Implementation and Engagement

Despite the positive feedback, participants also described various challenges related to the implementation and engagement in the resilience programs. Issues such as inconsistent participation, varying levels of student engagement, and resource constraints were commonly cited.

An administrator noted, "While our resilience programs have generally been successful, engagement varies significantly. Some students are very active, while others are less involved, which sometimes limits the overall effectiveness." (Administrator, Participant 3)

A teacher discussed resource challenges: "We often face hurdles like limited time during the school day or not enough materials to reach every student effectively. More support from the district or additional funding could really help us expand and deepen these programs." (Teacher, Participant 25)

These challenges highlight the complexities of implementing school-wide interventions and the need for sustained resources and strategic planning to ensure that these initiatives are accessible and engaging for all students.

The qualitative findings from these interviews provide valuable insights into the real-world impacts of school-based resilience programs. They reveal the powerful role such interventions can play in enhancing psychological resilience among students while also pointing to the practical challenges that need to be addressed to maximize their effectiveness and reach.

#### **4. Discussion**

The findings of this study underscore the critical role that schools play in fostering psychological resilience among secondary students during crises. The integration of resilience-building programs within the educational framework not only supports academic continuity but also enhances emotional and psychological well-being, which is essential during unpredictable and challenging times. This discussion expands on the findings presented, integrating them with existing literature to provide a comprehensive view of the role of schools in enhancing resilience among adolescents.

Resilience is a multifaceted construct, influenced by various factors including individual characteristics, family dynamics, and broader social environments. The school, as a central part of a student's social environment, has a unique position in influencing resilience. The positive correlation found between participation in school-based intervention programs and higher resilience scores aligns with previous research suggesting that structured support systems within schools can significantly mitigate the adverse psychological impacts of crises (Masten & Narayan, 2012; Ungar, 2013).

Furthermore, the study's finding that older students reported higher resilience levels suggests that maturity may play a role in resilience, possibly due to developed coping mechanisms or more experiences dealing with stress (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). However, this underscores the importance of early intervention programs in schools to equip younger students with the necessary skills to manage stress effectively from an early age.

The significant negative correlation between resilience and perceived stress reported in this research provides empirical support for the buffering hypothesis, which posits that high resilience can reduce the impact of stress on well-being (Rutter, 1987; Luthar, Cicchetti, & Becker, 2000). Schools that implement programs enhancing resilience may, therefore, prevent the development of stress-related disorders in students, a finding consistent with the work of Bonanno, Westphal, and Mancini (2011) who noted the protective effects of resilience in trauma-exposed individuals.

The qualitative findings of this study further highlight the importance of community and peer support, which are integral to effective resilience-building. The sense of belonging and mutual support fostered by resilience programs not only aids in immediate stress reduction but also contributes to the development of a supportive school culture, which has been shown to enhance



student well-being and academic outcomes (Bond et al., 2007; Kidger et al., 2020). These findings are congruent with the theories of social support which emphasize the role of supportive relationships in enhancing an individual's capacity to cope with stress (Cohen & Wills, 1985).

However, the challenges identified in program implementation and engagement underscore the necessity for schools to adopt flexible and inclusive approaches that consider the diverse needs and backgrounds of all students. Resource constraints, varying levels of engagement, and logistical issues are significant barriers that can dilute the effectiveness of resilience programs. Addressing these challenges through strategic planning, adequate funding, and continuous professional development for educators is crucial, as suggested by Durlak et al. (2011), who highlighted the importance of implementation quality in educational interventions.

Moreover, gender differences in resilience, although not statistically significant in this study, have been observed in other contexts, with some research suggesting that females might experience higher stress levels but also engage more actively in seeking support (Eschenbeck, Kohlmann, & Lohaus, 2007). This points to the potential need for gender-sensitive approaches in designing and implementing resilience programs in schools.

The strong negative correlation between resilience and perceived stress observed in this study is particularly noteworthy. This relationship highlights the protective role of resilience as a buffer against stress, a finding that is consistent with the broader literature on resilience (Sapientza & Masten, 2011). Schools that effectively implement resilience training and support systems can reduce the impact of stressors on students, potentially leading to better educational outcomes and overall mental health.

The thematic analysis of qualitative data provided deeper insights into the mechanisms through which resilience programs achieve these outcomes. The empowerment through knowledge and skills theme underscores the importance of equipping students with practical tools to manage adversity. This finding aligns with research suggesting that knowledge about coping strategies can enhance an individual's perceived competence in managing stress, thus fostering resilience (Zimmerman, 2000; Bandura, 2001).

Community and peer support emerged as crucial elements in the effectiveness of school-based resilience programs. This supports the theory of social-ecological models of resilience, which emphasize the importance of supportive relationships and connectedness in resilience development (Bronfenbrenner, 1979; Ungar, 2011). Schools that create environments where students feel supported by their peers and educators can enhance the resilience of the entire student body, as social support is known to be one of the strongest predictors of resilience (Cohen & Wills, 1985).

However, challenges in program implementation and engagement, as noted in the findings, reflect broader issues within educational settings. Inconsistencies in participation and engagement can diminish the effectiveness of resilience programs. Addressing these challenges requires comprehensive planning and resource allocation to ensure that programs are accessible and engaging for all students, regardless of their initial level of motivation or interest (Rutter, 1987; Luthar, Cicchetti, & Becker, 2000).

The role of schools extends beyond academic education; they are vital in preparing students to navigate life's challenges. The current study's insights into the effectiveness of school-based interventions during crises can inform future educational policies and practices. Policymakers and educational leaders should consider integrating resilience-building into the curriculum and school culture, ensuring that it is part of the ongoing development of all students.

In conclusion, the role of schools in enhancing psychological resilience among adolescents during crises is multifaceted and encompasses academic, emotional, and social dimensions. Schools are not only places of learning but also critical environments for social and emotional development. The integration of resilience-building programs within the school curriculum can provide students with the skills necessary to navigate the challenges of adolescence and beyond, ultimately contributing to their long-term well-being and success. Further research is needed to explore the long-term impacts of these interventions and to develop best practices that can be implemented across different educational settings to support student resilience in a sustainable and effective manner.

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