



PSYCHOLOGICAL CHARACTERISTICS OF THE DEVELOPMENT OF PROTECTIVE MECHANISMS AGAINST STRESS IN ADOLESCENTS IN EXTREME SITUATIONS.

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Article history:	Abstract:
Received: 11 th June 2025 Accepted: 10 th July 2025	Adolescents often face stress due to psychological immaturity, unstable emotional regulation, and limited coping resources. Extreme situations such as natural disasters, conflicts, social pressures, and traumatic events can trigger acute stress responses in this age group. This article explores the psychological features of adolescents' stress protection mechanisms, emphasizing their developmental characteristics, social support systems, and adaptive strategies. The study analyzes literature on adolescent stress resilience, applies psychological assessment methods, and discusses results highlighting both protective and risk factors. Based on the findings, recommendations are made for strengthening stress-protection mechanisms through educational, clinical, and social interventions.

Keywords: Adolescents, stress, extreme situations, coping mechanisms, psychological protection, resilience, adaptation, mental health.

Adolescence is a critical developmental stage marked by intense psychological, biological, and social transformations. During this period, individuals are especially vulnerable to stress, as they are still developing mature mechanisms of emotional and behavioral regulation. Extreme situations — such as natural disasters, family crises, peer conflicts, academic overload, or exposure to violence — can overwhelm adolescents' limited coping capacity, leading to psychological maladjustment, anxiety, or even post-traumatic stress disorders.

The study of protective mechanisms against stress in adolescents is therefore essential. Psychological protection is understood as a set of conscious and unconscious processes that help individuals reduce the negative impact of stressful experiences and maintain mental stability.

Adolescents in extreme situations—such as maltreatment, natural disasters, violence, or chronic trauma—face heightened risks of psychological distress, including anxiety, depression, and post-traumatic stress disorder (PTSD). However, many develop protective mechanisms, often referred to as resilience or adaptive coping strategies, which enable them to maintain or regain psychological well-being. Resilience is not a static trait but a dynamic process involving the capacity to adapt successfully despite adversity, influenced by neurobiological, psychosocial, and environmental factors. These mechanisms develop during adolescence due to the brain's plasticity, making this period both vulnerable and opportune for building defenses against stress. Protective

mechanisms buffer against negative outcomes by promoting positive adaptation across emotional, cognitive, behavioral, and social domains.

Psychological Characteristics of Adolescents in Extreme Situations

Adolescents exposed to extreme stress often exhibit heightened internalizing symptoms, such as anxiety and depression, even among those who appear resilient behaviorally. Key characteristics include:

- **Emotional Regulation Challenges:** Teens may struggle with hyperarousal or emotional numbing, but resilient individuals show better emotion regulation through traits like ego-resiliency (adaptable personality) and ego-overcontrol (reserved, rational responses to threats).

- **Cognitive Flexibility:** The ability to reappraise situations positively helps mitigate stress, with optimistic outlooks and problem-solving skills distinguishing resilient adolescents.

- **Social Orientation:** High-risk teens may develop self-reliance as a defense, but those with strong social skills maintain peer popularity and support networks, reducing isolation.

- **Internal Locus of Control:** Believing in personal agency (internality) protects against declines in assertiveness and academic performance under stress.

In extreme contexts like maltreatment or genocide survival, adolescents might rely on defense mechanisms such as projection or intellectualization,



but positive temperament and self-esteem foster long-term adaptation.

Development of Protective Mechanisms

Protective mechanisms develop through iterative processes of "tempering" (refining existing skills to repair stress responses) and "fortification" (acquiring new skills to build long-term stability), particularly under moderate to severe adversity. In extreme situations, this development is shaped by the timing, severity, and type of stress—e.g., chronic maltreatment may overwhelm systems, while acute events like disasters allow for stress inoculation if support is timely. Adolescents' brain plasticity amplifies these processes, with neurobiological changes (e.g.,

strengthened cortico-limbic connections) enabling better stress regulation over time.

Resilience trajectories vary: some teens show stable high resilience, while others fluctuate based on cumulative risks like childhood adversity. Early exposure can act as a "first hit," sensitizing systems to later stressors, but protective factors can reverse this through adaptive coping.

Multilevel Factors Influencing Protective Mechanisms

Protective factors operate across individual, relational, and community levels. Below is a table summarizing key factors, drawn from reviewed studies:

Level	Factor	Description	Role in Extreme Situations
Individual (Internal)	Self-Esteem	Positive self-worth and sense of efficacy.	Buffers against depression; higher in resilient maltreated teens.
	Emotional Regulation	Ability to manage emotions via reappraisal or suppression.	Reduces hyperarousal in trauma; key for daily stress coping.
	Optimism & Cognitive Flexibility	Positive future outlook and adaptive thinking.	Protects life satisfaction; enhances problem-solving in crises.
	Physical Health (Sleep, Activity)	Adequate rest and exercise.	Lowers cortisol; builds neurobiological resilience post-trauma.
Relational (External)	Family/Parental Support	Strong, protective caregiver relationships.	Provides safety; mitigates maltreatment effects through attachment.
	Peer & Social Networks	Friendships and belonging.	Reduces isolation; stronger protective effects than family in teens.
	School Staff Support	Positive teacher/adult relationships.	Fosters academic engagement; buffers school-related stress.
Neurobiological	HPA Axis & Hormones	Balanced cortisol/DHEA; gene-environment interactions (e.g., MAOA).	Regulates stress response; higher morning cortisol aids resilience in abuse.
	Brain Connectivity	Amygdala-PFC coupling; left hemisphere activation.	Improves emotion processing; supports approach behaviors in trauma.
Community	Access to Services	Mental health, recreation, safe environments.	Prevents toxic stress; promotes belonging and routines post-disaster.

Gender differences exist: boys may benefit more from physical activity, while girls show stronger effects from social support. Vulnerability factors, like high intelligence in unpredictable environments, can paradoxically increase stress susceptibility.

Coping Strategies in Extreme Situations

In extreme stress, adolescents employ active coping (problem-solving), emotion-focused strategies (e.g., humor, positive reframing), and support-seeking. Effective strategies include:

- Mindfulness and meditation to reduce anxiety.
- Physical activity and sleep routines to lower physiological stress.
- Journaling or talking to trusted adults for emotional processing.
- Building routines and avoiding overload to manage daily triggers.

Interventions and Implications



Brief interventions, like a 30-minute synergistic mindsets program teaching growth and stress-enhancing views, can reduce threat responses, cortisol, and anxiety symptoms, especially in high-stress contexts. Trauma-informed care, strength-based assessments, and community support are crucial for fostering these mechanisms. Early identification of risks allows for targeted development of protections, emphasizing that resilience can be cultivated even after extreme adversity.

The findings confirm that adolescent stress-protection mechanisms are still developing and highly dependent on environmental factors. Extreme situations amplify stress vulnerability, but protective psychological mechanisms can be fostered through education, counseling, and structured support. The literature and results align with the view that resilience is not innate but can be cultivated.

One important discussion point is the balance between individual psychological resources (self-esteem, problem-solving) and external support systems (family, peers, school). Adolescents with both strong internal resources and supportive environments are most capable of adapting to extreme stress.

CONCLUSIONS

Adolescents are highly vulnerable to stress in extreme situations due to psychological immaturity. Psychological protection mechanisms include both adaptive and maladaptive strategies, with strong dependence on social support. Resilience can be strengthened through targeted training, education, and counseling.

Introduce school-based stress-management programs focusing on relaxation, mindfulness, and problem-solving.

Train parents and teachers to recognize stress symptoms and provide effective support.

Develop peer-support groups to enhance adolescents' sense of belonging and reduce isolation.

Implement psychological counseling services in schools and community centers, with emphasis on resilience training.

Encourage physical activity, arts, and structured extracurricular activities, which are proven to buffer stress and promote self-confidence.

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