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## **Mental resilience of children and adolescents in the context of educational success**

### **Odporność psychiczna dzieci i młodzieży w kontekście sukcesów edukacyjnych**

#### **Abstract**

Mental resilience is understood as an individual's ability to function effectively under conditions of increased stress, pressure, and in the face of various challenges both in professional and personal life. Individuals with a high level of this trait are distinguished by a strong belief in their own abilities, openness to new experiences, and consistency in pursuing their intended goals. They tend to achieve success more frequently, respond constructively to criticism, and view failures as part of the developmental process.

This paper attempts to analyze the importance of mental resilience in children and adolescents within the educational environment. It outlines the direction of the discussion on the necessity of initiating broadly understood educational interventions, which are a guarantee of success for both learners and educators.

**Keywords:** mental resilience, education, student, pupil, academic achievement

#### **Streszczenie**

Odporność psychiczna rozumiana jest jako zdolność jednostki do skutecznego funkcjonowania w warunkach wzmożonego stresu, presji oraz w obliczu różnorodnych wyzwań – zarówno w życiu zawodowym, jak i osobistym. Osoby charakteryzujące się wysokim poziomem tej cechy wyróżnia wiara we własne możliwości, otwartość na nowe doświadczenia oraz konsekwencja w realizacji zamierzonych celów. Częściej odnoszą sukcesy, potrafią konstruktywnie reagować na krytykę, a porażki interpretują jako element procesu rozwoju.

Niniejsze opracowanie stanowi próbę analizy znaczenia odporności psychicznej dzieci i młodzieży w środowisku edukacyjnym. Nakreśla kierunek dyskusji na temat konieczności uruchamiania szeroko rozumianych oddziaływań wychowawczych, które są gwarantem sukcesów kształcenia osób uczących się i nauczających.

**Słowa kluczowe:** odporność psychiczna, edukacja, uczeń, student, osiągnięcia edukacyjne

## Introduction

Contemporary approaches to mental resilience define it as an individual's ability to function effectively despite the presence of stressors, environmental pressure, and task-related demands. This capacity allows a person to achieve outcomes that align with their individual potential, regardless of external circumstances.

The concept of mental resilience originates from the work of Jim Loehr, a sports psychologist who was the first to use this term, describing it as a mental trait characteristic of individuals who achieve success. According to Loehr, stress is an essential component of growth and development.<sup>1</sup>

Peter Clough, Dean of the Faculty of Psychology at the University of Hull, also recognizes mental resilience as a predictor of an individual's ability to cope with pressure and life difficulties, which directly impacts their capacity to manage stress.<sup>2</sup>

The core components of mental resilience include:

- a) a sense of control over one's life and circumstances;
- b) an optimistic outlook on the future;
- c) flexibility in adapting to change;
- d) a sense of meaning and purpose in life;
- e) the ability to establish and maintain positive relationships (social support);
- f) self-discipline and problem-solving competence;
- g) effective stress and emotion management in difficult situations.<sup>3</sup>

In contrast to relatively stable personality traits such as neuroticism or conscientiousness, mental resilience can be developed and modified over time, making it a crucial adaptive component.

## Models and Theories of Mental Resilience

Mental resilience is understood as an individual's ability to function effectively under conditions of increased stress, pressure, and in the face of various challenges both in professional and personal life. Individuals with a high level of this trait are characterized by a strong belief in their own abilities, openness to new experiences, and persistence in pursuing their goals. They tend to achieve success more often, respond constructively to criticism, and view failure as an essential part of the development process.<sup>4</sup>

<sup>1</sup> D. Strycharczyk, P. Clough, *Odporność psychiczna. Strategie i narzędzia rozwoju*, Sopot 2017, p. 56; J. Szlasa-Więczaszek, *Czym jest odporność psychiczna – model 4C, test?*, <https://poradnia-online.com/odpornosc-psychiczna/> (12.07.2025).

<sup>2</sup> I. Firmanty, *Czym jest odporność psychiczna – definicja i model 4C?*, <https://www.humanskills.pl/czym-jest-odpornosc-psychiczna/> (12.07.2025).

<sup>3</sup> S. M. Southwick, D. S. Charney, J. M. DePierro, *Resilience: The Science of Mastering Life's Greatest Challenges*, Cambridge University Press 2023; R. Karen, A. Shatté, *The Resilience Factor: 7 Keys to Finding Your Inner Strength and Overcoming Life's Hurdles*, Broadway Books 2003, p. 143.

<sup>4</sup> D. Strycharczyk, P. Clough, *Odporność psychiczna...*, p. 72.

### 1. The 4C Model

One of the most well-known frameworks of mental resilience is the 4C Model, developed by Peter Clough and Doug Strycharczyk, which identifies four key components of this trait:

- a) control – refers to an individual's belief in their ability to influence their own life, emotions, and circumstances, including the regulation of emotional responses;
- b) commitment – denotes determination and consistency in pursuing set goals, enabling discipline even under difficult conditions;
- c) challenge – involves perceiving difficulties as opportunities for personal and professional growth, rather than as threats;
- d) confidence – is the belief in one's own competencies, enabling risk-taking and perseverance in the face of setbacks.<sup>5</sup>

An important aspect to consider is the development of mental resilience. This process can be supported through:

- a) mental training (e.g., visualization, meditation, mindfulness);
- b) setting realistic and measurable goals;
- c) fostering positive internal dialogue;
- d) adopting a constructive approach to failure as a source of learning and growth.<sup>6</sup>

It is worth emphasizing that mental resilience is not a fixed trait it can be developed and strengthened in appropriate psychosocial conditions. This has practical applications in sports, education, and everyday life.

### 2. The Resilience Process Model by Garmezy and Masten

Norman Garmezy, Michael Rutter, and Ann Masten are among the pioneers of research on psychological resilience within the field of developmental psychology. In their 1991 conceptualization, Garmezy and Masten emphasized that resilience is not a fixed personality trait but a dynamic process shaped by the interaction between an individual and their environment. They identify three main pillars of this process:

- a) personal resources (cognitive abilities, social skills, self-esteem);
- b) social support (family relationships, peer connections, mentors);
- c) environmental factors (life stability, access to education, developmental opportunities).

This model suggests that individuals can strengthen their psychological resilience by developing adaptive competencies, utilizing available social support, and maximizing environmental potential.<sup>7</sup>

<sup>5</sup> *Ibidem*.

<sup>6</sup> T. Pielas, *Odporność psychiczna w sporcie: wyzwanie*, "Psycholog Sportu" 2018, p. 23, <https://tamarapielas.pl/odpornosc-psychiczna-w-sporcie-wyzwanie/> (12.07.2025); *Odporność psychiczna w sporcie*, <https://www.blog.pracowniatestow.com/index.php/2016/04/23/odpornosc-psychiczna-w-sporcie/> (12.07.2025).

<sup>7</sup> N. Garmezy, *Resiliency and vulnerability to adverse developmental outcomes associated with poverty*, "American Behavioral Scientist" 1991, No. 34(4), p. 423; A. S. Masten, N. Garmezy, *Risk, vulnerability, and protective factors in developmental psychopathology* [in:] *Advances in Clinical Child Psychology*, eds. B. B. Lahey, A. E. Kazdin, New York 1985, p. 34.

### 3. The “Hardiness” Concept by Suzanne Kobasa

In the 1970s, Suzanne Kobasa introduced the concept of “hardiness,” which describes a personality disposition that enables constructive responses to stress. This concept is based on three components:

- a) commitment – perceiving daily activities as meaningful and valuable;
- b) control – believing in one’s ability to influence the course of events;
- c) challenge – viewing difficulties as opportunities for growth rather than threats.<sup>8</sup>

### 4. Connor-Davidson Resilience Scale (CD-RISC)

Kathryn M. Connor and Jonathan R. T. Davidson developed one of the most widely used tools for assessing psychological resilience – the CD-RISC. Their model includes:

- a) psychological flexibility;
- b) optimism;
- c) social competence;
- d) spiritual strength, meaning a belief in purpose and meaningfulness of actions.

This approach highlights the significance of life experiences as key factors in shaping psychological resilience, which entails the ability to constructively use hardships as elements of personal growth.<sup>9</sup>

### 5. Conservation of Resources (COR) Theory by Stevan E. Hobfoll

The COR theory posits that psychological resilience is based on an individual’s ability to protect, accumulate, and effectively use resources. These resources can be:

- a) material (e.g., sports equipment);
- b) social (support from a coach or team);
- c) personal (skills, sense of competence, coping mechanisms).

According to this theory, people who manage their resources effectively demonstrate greater resilience in stressful situations and perform better under pressure.<sup>10</sup>

### 6. Psychological Resilience Model by Robin Vealey

Robin Vealey proposed a theoretical framework focused on cognitive-emotional mechanisms operating under competitive conditions. Key components of this model include:

- a) emotional self-regulation;
- b) intrinsic motivation;
- c) confidence in technical and tactical skills.

This model emphasizes the importance of mental training as an effective tool for supporting the development of psychological resilience in educational settings.<sup>11</sup>

<sup>8</sup> S. C. Kobasa, *Stressful life events, personality, and health: An inquiry into hardiness*, “Journal of Personality and Social Psychology” 1979, No. 37(1), p. 8.

<sup>9</sup> K. M. Connor, J. R. Davidson, *Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC)*, “Depression and Anxiety” 2003, No. 18(2), p. 79.

<sup>10</sup> S. E. Hobfoll, *Conservation of resources: A new attempt at conceptualizing stress*, “American Psychologist”, 1989, No. 44(3), p. 518.

<sup>11</sup> R. S. Vealey, *Conceptualization of sport-confidence and competitive orientation: Preliminary investigation and instrument development*, “Journal of Sport Psychology” 1986, No. 8(3), p. 237.

### 7. Psychological Flexibility Theory

Developed within the framework of Acceptance and Commitment Therapy (ACT), this concept assumes that psychological resilience is demonstrated by the ability to:

- a) accept difficult emotions and thoughts without avoiding them;
- b) take action aligned with personal values despite the presence of discomfort.

In educational environments, psychological flexibility enables students to function effectively under stress, for example by managing anxiety and maintaining focus on tasks regardless of negative thoughts.<sup>12</sup>

The wide range of models and concepts of psychological resilience highlights the multidimensional nature of this construct. Applying the aforementioned theories in educational practice allows for more effective support in helping individuals cope with challenges. The process of building psychological resilience requires a personalized approach that takes into account both personality traits and environmental factors.

## Psychological Resilience in the Educational Context

In educational settings, psychological resilience is understood as a student's ability to effectively manage stress, maintain task focus, sustain motivation, and adopt a positive attitude toward the learning process. Empirical studies confirm that students with high levels of psychological resilience cope better with educational challenges, achieve higher academic outcomes, and show greater engagement.<sup>13</sup>

This resilience is reflected in problem-solving skills, acceptance of failure as a part of the learning process, flexible adaptation to changing demands, and perseverance in achieving educational goals. Psychologically resilient students are more likely to demonstrate greater independence, intrinsic motivation, and a sense of control over their learning process.<sup>14</sup>

The development of psychological resilience is shaped by both individual traits (e.g., optimism, self-efficacy, emotional competence) and environmental influences. One of the most important factors supporting the building of resilience is **intrinsic motivation**, defined as the drive to pursue goals regardless of external rewards. Individuals with this trait tend to learn more effectively and show greater resistance to difficulties.<sup>15</sup>

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<sup>12</sup> S. C. Hayes, K. D. Strosahl, K. G. Wilson, *Acceptance and Commitment Therapy: An experiential approach to behavior change*, New York, NY 1999, p. 87.

<sup>13</sup> A. J. Martin, *Resilience in students: The role of self-regulation*, "Journal of Educational Psychology" 2007, No. 99(2), p. 331.

<sup>14</sup> B. J. Zimmerman, *Becoming a self-regulated learner: An overview*, "Theory into Practice" 2002, No. 41(2), p. 68.

<sup>15</sup> A. L. Duckworth, C. Peterson, M. D. Matthews, D. Kelly, *Grit: Perseverance and passion for long-term goals*, "Journal of Personality and Social Psychology" 2007, No. 92(6), p. 1099; E. L. Deci,

The educational environment also plays a crucial role. Emotional support from teachers, peers, and family contributes to a sense of safety and helps students cope with failure and academic stress. Research shows that educational systems that provide students with greater autonomy and opportunities for agency in their learning processes positively influence the development of their psychological resilience.<sup>16</sup>

## Factors Influencing the Development of Psychological Resilience

Psychological resilience, understood as an individual's ability to adapt and cope effectively in difficult situations, is shaped by both individual and environmental factors. Among the most important determinants of this ability are personality traits, temperament, self-efficacy, emotional intelligence, optimism, and perseverance. These issues have been extensively researched in both Polish and international literature, confirming their critical role in the development of resilience.

### 1. Personality Traits

According to the Big Five model, an individual's response to stress is influenced by traits such as neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness. Research by Laura Campbell-Sills et al.<sup>17</sup> suggests that individuals with low levels of neuroticism and high levels of extraversion demonstrate greater flexibility and effectiveness in stress management. In the Polish context, Jan Strelau<sup>18</sup> points out that temperamental traits such as perseverance, activity, and emotional stability play an important role in adaptive responses to challenges.

### 2. Temperament

Temperament, viewed as an innate and relatively stable component of personality, affects one's functioning in stressful situations. Individuals with low emotional reactivity are less prone to intense affective experiences, which supports the development of psychological resilience. Jan Strelau emphasizes that temperament can either support or hinder resilience—for example, high emotional endurance combined with high activity facilitates effective functioning under pressure.<sup>19</sup>

R. M. Ryan, *The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior*, "Psychological Inquiry" 2000, No. 11(4), p. 234.

<sup>16</sup> S. Cohen, T. A. Wills, *Stress, social support, and the buffering hypothesis*, "Psychological Bulletin" 1985, No. 98(2), p. 333.

<sup>17</sup> L. Campbell-Sills, S. L. Cohan, M. B. Stein, *Relationship of resilience to personality, coping, and psychiatric symptoms in young adults*, "Behaviour Research and Therapy" 2006, No. 44(4), p. 589.

<sup>18</sup> J. Strelau, *Temperament jako regulator zachowań: z perspektywy półwiecza badań*, Gdańsk 2008, p. 123.

<sup>19</sup> *Ibidem*.

Additionally, studies by Anna Matczak and Joanna Piekarska<sup>20</sup> confirm that individuals with higher emotional stability and endurance adapt more effectively to challenges in both personal and professional life.

### 3. Self-Esteem and Self-Efficacy

Self-efficacy and positive self-esteem are significant predictors of psychological resilience. According to Albert Bandura's theory,<sup>21</sup> individuals who believe in their own competencies and their ability to overcome difficulties are more likely to take on challenges and persist in pursuing their goals. Polish studies by Mariola Łaguna, Jerzy Trzebiński, and Mariusz Zięba<sup>22</sup> have shown that high self-efficacy fosters constructive problem-solving and a positive attitude toward difficulties.

### 4. Optimism and Positive Outlook

Optimism, defined as the tendency to expect favorable outcomes, supports the maintenance of psychological resilience. Snyder highlights the importance of hope and optimism in perceiving challenges as opportunities for growth rather than threats.<sup>23</sup> Similarly, Jerzy Trzebiński and Mariusz Zięba emphasize the role of a positive mindset and hope as defense mechanisms that support stress adaptation.<sup>24</sup>

### 5. Emotion Regulation and Emotional Intelligence

The ability to regulate emotions plays a vital role in maintaining psychological stability in the face of adversity. Emotional intelligence understood as the ability to identify, understand, and manage one's own emotions impacts one's effectiveness in stress management. K. V. Petrides and Adrian Furnham point to a strong relationship between emotional intelligence and psychological resilience.<sup>25</sup> Similar conclusions were drawn by Anna Matczak and Katarzyna A. Knopp, who demonstrated that individuals with high emotional intelligence process emotions more effectively and use them as a source of adaptive information.<sup>26</sup>

### 6. Determination and Perseverance (Grit)

Determination and perseverance in pursuing long-term goals (grit) have been recognized as key components of psychological resilience. Research by Angela L. Duckworth et al.<sup>27</sup> has shown that individuals with high levels of grit cope more effectively with adversity, displaying consistency and commitment despite setbacks.

<sup>20</sup> A. Matczak, J. Piekarska, *Temperament a strategie radzenia sobie ze stresem*, "Przegląd Psychologiczny" 2011, No. 54(1), p. 17.

<sup>21</sup> A. Bandura, *Self-efficacy: The exercise of control*, New York 1997, p. 221.

<sup>22</sup> M. Łaguna, E. Trzebińska, M. Zięba, *Kwestionariusz Poczucia Własnej Skuteczności – Skala GSES*, Warszawa 2005.

<sup>23</sup> C. R. Snyder, *Hope theory: Rainbows in the mind*, "Psychological Inquiry" 2002, No. 13(4), p. 262.

<sup>24</sup> J. Trzebiński, M. Zięba, *Nadzieja podstawowa a radzenie sobie ze stresem*, "Roczniki Psychologiczne" 2004, No. 7, p. 137.

<sup>25</sup> K. V. Petrides, A. Furnham, *Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies*, "European Journal of Personality" 2004, No. 18(5), p. 439.

<sup>26</sup> A. Matczak, K. A. Knopp, *Rola inteligencji emocjonalnej w radzeniu sobie ze stresem*, Warszawa 2013, p. 187.

<sup>27</sup> A. L. Duckworth, C. Peterson, M. D. Matthews, D. R. Kelly, *Grit: Perseverance and passion for long-term goals*, "Journal of Personality and Social Psychology" 2007, No. 92(6), p. 1099.



In the Polish context, Sylwia Bedyńska and Anna M. Zawadzka confirmed the relationship between perseverance and resilience, particularly in the context of long-term challenges such as career or athletic development.<sup>28</sup>

**In conclusion**, individual factors including personality, temperament, self-esteem, optimism, emotional intelligence, and determination form the foundation for the development of psychological resilience. Identifying and cultivating these traits serves as the basis for effective interventions that support personal and professional growth. The integration of national and international research findings allows for a more comprehensive understanding of this issue and provides a starting point for further theoretical and practical analyses.

At the same time, it is important to emphasize that psychological resilience does not arise solely from internal traits but also largely depends on external conditions. The physical and social environment, as well as the quality of interpersonal relationships, significantly influence an individual's ability to adapt and overcome difficulties. Social support, family and peer relationships, and access to appropriate resources are key elements that foster the development of coping mechanisms, enabling effective responses to stress and life challenges.

## Mental Resilience and Educational Success

In the educational context, mental resilience is one of the fundamental factors determining school and academic achievement. The ability to effectively cope with difficulties, pressure, and stressors characteristic of the learning process such as exams, grades, coursework, and demands from teachers and peers conditions the effectiveness of learning. Mental resilience influences how an individual responds to educational challenges and whether they are able to maintain motivation, focus, and engagement despite emerging difficulties.

### 1. Mental Resilience and Learning Effectiveness

Mental resilience in education is reflected in skills such as managing stress, maintaining focus on tasks, sustaining a positive attitude, and continuing educational efforts despite setbacks. Research shows that students with higher levels of mental resilience perform better academically and cope more effectively with educational challenges than those who struggle to regulate stress.<sup>29</sup>

Problem-solving skills, resilience to failure, cognitive flexibility, and perseverance in achieving goals are competencies closely linked to mental resilience. Contemporary studies in educational psychology indicate that developing this trait leads to better concentration, more effective knowledge acquisition, and greater learner autonomy.

<sup>28</sup> S. Bedyńska, A. M. Zawadzka, *Wytrwałość a sukces: polska adaptacja Skali Wytrwałości (Grit-S)*, "Studia Psychologiczne" 2016, No. 54(2), p. 53.

<sup>29</sup> A. J. Martin, *Resilience in students...*, p. 334.



Mentally resilient individuals cope better with exam-related stress and performance pressure, which contributes to learning efficiency and sustained motivation.<sup>30</sup>

## 2. Factors Supporting the Development of Mental Resilience in Education

The development of mental resilience in educational settings depends on both individual predispositions and external conditions. Key roles are played by personality traits such as optimism, self-efficacy, and stress management competencies. One of the most important aspects of resilience development in this context is intrinsic motivation understood as the pursuit of goals regardless of external rewards. Students with high levels of intrinsic motivation tend to show greater engagement and effectiveness in completing educational tasks.<sup>31</sup>

Environmental factors are equally important, especially social support provided by teachers, peers, and family. Such support not only fosters a sense of security but also enhances the ability to deal with failure and educational stress. Additionally, educational systems that emphasize student autonomy, provide influence over the learning process, and allow decision-making help shape mental resilience. Research shows that such learning environments positively impact the development of independence, responsibility, and perseverance<sup>32</sup>.

## 3. Mental Resilience and Academic Stress

Academic stress – one of the most common sources of tension in the lives of students significantly affects their ability to function effectively within the educational system. Its sources include excessive demands, performance pressure, exams, and the need to balance academic responsibilities with other aspects of life. Mental resilience acts as a protective mechanism in this context, enabling constructive coping with such challenges.

Individuals with higher levels of mental resilience adapt better to stressful situations, show greater emotional stability, and effectively mobilize cognitive and emotional resources. As a result, they can maintain concentration and learning efficiency even under high stress. Furthermore, mental resilience correlates with lower levels of academic burnout, reduced emotional exhaustion, and higher intrinsic motivation.<sup>33</sup>

The ability to interpret difficult situations positively, regulate emotions, and stay engaged is crucial for achieving high academic performance. Mentally resilient students are more likely to view failures as part of the educational process rather than as insurmountable obstacles. This mindset contributes to greater learning effectiveness and long-term educational development.<sup>34</sup>

<sup>30</sup> B. J. Zimmerman, *Becoming a self-regulated learner...*, p. 67.

<sup>31</sup> A. L. Duckworth, C. Peterson, M. D. Matthews, D. Kelly, *Grit: Perseverance...*, p. 1091.

<sup>32</sup> S. Cohen, T. A. Wills, *Stress, social support...*, p. 334; E. L. Deci, R. M. Ryan, *The "what" and "why"...*, p. 243.

<sup>33</sup> B. Meyer, M. M. Mark, *The resilience of college students: Relationships with stress and academic performance*, "Journal of Educational Psychology" 2007, No. 99(2), p. 372.

<sup>34</sup> A. Kitsantas, B. J. Zimmerman, *College students' self-regulated learning and academic achievement*, "Journal of Advanced Academics" 2009, No. 20(2), p. 271.

## Mental Resilience in the Context of Educational Achievement in the Light of Scientific Research

Clough and colleagues,<sup>35</sup> presenting the *Mental Toughness* model, indicated that individuals with a high level of mental resilience exhibit greater ability to cope with stress, higher self-confidence, and determination in pursuing goals. Similar findings were obtained by Helen L. St Clair-Thompson and Susan N. Gathercole,<sup>36</sup> who showed that mentally resilient individuals demonstrate more effective self-regulation strategies and adapt better to academic pressure, which translates into improved educational performance. Research conducted on physical education students confirms this relationship, suggesting that the development of mental resilience can support academic success.

Comparable conclusions emerge from the studies of Aine MacNamara and Dave Collins,<sup>37</sup> who, within the field of sports psychology, confirmed that mental resilience plays a significant role not only in athletic achievements but also in educational and professional success. The results of our research, concerning physical education students, are consistent with these findings and point to common psychological mechanisms present in both sports and academic environments such as stress management skills, perseverance, and self-confidence.

An important supplement is provided by the research conducted by Adam R. Nicholls and colleagues,<sup>38</sup> which confirms that individuals with high levels of mental resilience are more likely to use task-focused and problem-solving strategies, whereas those with lower resilience tend to avoid difficult situations and experience negative emotions. The results of our research suggest that similar patterns occur among physical education students, where a higher level of resilience correlates with a more adaptive coping style in educational settings.

However, it is worth noting that not all studies unequivocally confirm a strong relationship between mental resilience and educational outcomes. For example, Richard Gregory Cowden and Anna Meyer-Weitz<sup>39</sup> pointed out that the impact of

<sup>35</sup> P. Clough, D. Strycharczyk, *Developing Mental Toughness: Improving performance, wellbeing and positive behaviour in others*, London 2002, p. 212.

<sup>36</sup> H. St Clair-Thompson, S. Gathercole, *Executive function and achievements in school: Shifting, updating, inhibition, and working memory*, "Quarterly Journal of Experimental Psychology" 2006, No. 59(4), p. 751.

<sup>37</sup> A. Macnamara, D. Collinsa, *Development and initial validation of the Psychological Characteristics of Developing Excellence Questionnaire*, "Journal of Sports Sciences" 2011, No. 29(12), p. 1357.

<sup>38</sup> A. Nicholls, A. Levy, R.C.J. Polman, L. Crust, *Mental toughness, coping self-efficacy, and coping effectiveness among athletes*, "International Journal of Sport and Exercise Psychology" 2011, No. 42, p. 521.

<sup>39</sup> R. G. Cowden, A. Meyer Weitz, *Self reflection and self insight predict resilience and stress in competitive tennis*, "Social Behavior and Personality: An International Journal" 2016, No. 44(7), p. 1140.

resilience on academic achievement may be moderated by other variables, such as social support, the level of intrinsic motivation, or learning strategies. In the context of the present study, this implies that while mental resilience plays an important role in shaping educational success, it is not the sole predictor – further analyses that take into account a broader psychosocial context are necessary.

Moreover, a review of the literature indicates that the strength of the relationship between mental resilience and academic performance may vary depending on the field of study. Research by Markus Gerber and colleagues<sup>40</sup> showed that for students in disciplines characterized by high levels of pressure (e.g., medicine, sports, psychology), mental resilience is of key importance, whereas in other fields, its role may be less prominent.

### **Programs Supporting the Development of Mental Resilience in Education**

Modern pedagogical approaches emphasize the importance of mental resilience as a key factor influencing the effectiveness of the teaching and learning process. Educational programs aimed at developing this competence among students and pupils are gaining increasing popularity. These initiatives include, among others, stress management training, workshops to strengthen intrinsic motivation, problem-solving classes, and sessions that support building self-confidence.<sup>41</sup>

Developmental programs implemented in schools and higher education institutions aim to strengthen students' mental resilience by providing tools that enable them to function effectively under pressure and within an ever-changing educational environment. Empirical studies demonstrate that these interventions especially those focusing on stress and emotional management skills contribute to increased levels of mental resilience, and consequently, to improved academic performance.

Among the most effective methods, relaxation techniques and mindfulness training occupy a special place. These approaches support concentration, reduce emotional tension, and promote students' overall well-being.<sup>42</sup> Their implementation in school settings leads to better preparedness for coping with everyday educational challenges.

Mental resilience, in the educational context, thus emerges as one of the most important predictors of academic success. Students with higher levels of mental

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<sup>40</sup> M. Gerber, S. Brand, A. K. Feldmeth, C. Lang, C. Elliot, E. Holsboer-Trachsler, U. Pühse, *Adolescents with high mental toughness adapt better to perceived stress: a longitudinal study with Swiss vocational students*, "Personality and Individual Differences" 2013, No. 54(7), p. 810.

<sup>41</sup> F. Zeidan, S. K. Johnson, B. J. Diamond, Z. David, *Mindfulness meditation improves cognition: Evidence of brief mental training*, "Consciousness and Cognition" 2010, No. 19(2), p. 602.

<sup>42</sup> *Ibidem*.

resilience demonstrate greater adaptability, which enables them to effectively overcome difficulties and achieve better learning outcomes. The development of this trait can be supported by both individual factors (such as personality and motivation) and environmental influences (such as social support and educational program structure).

The collected research findings point to the necessity of systematically integrating mental resilience-related topics into educational curricula. This would allow for more effective support of students in achieving their academic goals.

When discussing the practical aspects of implementing resilience-building programs, it is worth pointing to specific intervention models. One example is the “Brave Children” program by Iwona Sikorska, targeted at preschool-aged children. This program focuses on developing emotional competencies, strengthening a positive self-image, and teaching coping strategies. Evaluations of the program’s effectiveness confirm its positive impact on fostering attitudes conducive to educational success in later stages of schooling.<sup>43</sup>

From a motivational perspective, mental resilience supports the strengthening of intrinsic motivation for learning, which is a significant factor in achieving high academic results. Students with higher mental resilience are more willing to take on educational challenges, set ambitious goals, and show greater determination in achieving them. They also cope better with exam pressure and are less vulnerable to the negative effects of academic stress.

In conclusion, mental resilience is a key component enabling effective functioning within the educational system. Its development should be an integral part of educational programs aimed at supporting the multifaceted development of students.

### **Recommendations for Professional Practice**

The presented perspectives clearly emphasize the importance of mental resilience as a crucial factor determining educational success. Therefore, it is recommended to implement systemic actions aimed at supporting the development of this trait among students and pupils. The practical proposals include the following areas of intervention:

- a) organizing workshops and training sessions focused on developing mental resilience, including activities related to stress management, building self-confidence, concentration techniques, and emotional regulation in difficult situations;
- b) implementing elements of mental training into academic curricula, which may contribute to increased teaching effectiveness and better preparation of students for professional demands;

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<sup>43</sup> I. Sikorska, *Odporność psychiczna w okresie dzieciństwa*, Kraków 2016, p. 187.

- c) providing access to individual and group psychological support, such as consultations with academic advisors, sports psychologists, or mental coaches;
- d) integrating issues related to mental resilience into teaching methodology – e.g., through the use of activating teaching methods that develop perseverance, the ability to cope with failure, and readiness to take on challenges.

From the perspective of future professional activity, the development of mental resilience is of key importance for graduates across various fields of study. Mental competencies, alongside physical skills, play a vital role in professional work. A high level of mental resilience enables:

- a) effective management of occupational stress in situations requiring intense interaction with people and high-performance pressure;
- b) better coping with failures, teaching difficulties, and educational challenges;
- c) building authority based on emotional stability and the ability to motivate students and those under one's care;
- d) developing adaptive skills in rapidly changing professional environments.

These considerations confirm the legitimacy of taking steps to strengthen mental resilience among students and pupils. Such initiatives can not only improve the quality of education but also contribute to better preparation of graduates for the demands of their future careers.

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