

RESEARCH ARTICLE

Enhancing pupil wellbeing and resilience through positive psychology: Evidence from Slovak high schools

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ABSTRACT

The presented article presents findings from a study exploring the application of positive psychology as an evidence-based framework for enhancing pupil wellbeing and resilience within Slovakian secondary schools. Adopting an interdisciplinary perspective that integrates educational psychology and social-environmental factors, the research examines the role of school climate in shaping social bonds, stress management, and motivation. Using the standardised Pohodoměr wellbeing tool, the study identifies both strengths - such as strong family support and future orientation — and critical gaps, particularly in community engagement, extracurricular participation, and peer support. The results underscore the need to foster social cohesion and participation, which are the core dimensions of the environment and social psychology. Practical interventions are proposed to promote learnt optimism, cognitive flexibility, and inclusive peer relationships, thus contributing to a safe and supportive school environment. This article demonstrates that systematically embedding positive psychology principles into daily school practice can strengthen resilience and mental health, offering insights into policy and practice that align with broader international calls for the promotion of sustainable wellbeing in educational settings.

Keywords: positive psychology; wellbeing; resilience; school environment; social cohesion; Pohodoměr; environment and social psychology

1. Introduction

In the last decade, the issue of mental health in schools has become a central topic in academic discourse and educational practice around the world^[1,2]. The concept of mental well-being has received increasing attention, especially in light of the COVID-19 pandemic, which profoundly disrupted not only the daily routines of pupils and teachers but also exposed systemic weaknesses in the capacity of schools to protect psychological health^[3]. The abrupt transition to remote learning formats required schools to adapt quickly to technological and pedagogical challenges, while at the same time highlighting how indispensable schools are as places of daily social interaction, emotional support, and the cultivation of personal and community bonds^[4].

Periods of enforced isolation, limited peer contact, and the loss of regular school rituals have exacerbated feelings of loneliness and stress, particularly among pupils entering key transitional phases, such as the beginning of secondary education. Numerous studies have shown that these disruptions have led to an

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increased incidences of anxiety, depression, and other mental health problems among young people^[5,6]. Beyond the pandemic, other factors such as geopolitical instability, social inequality, and a general rising sense of uncertainty contribute further to the deterioration of mental health in school communities^[7,8]. This evolving context underscores the urgent need for a systematic and evidence-based approach to mental health promotion that involves not only pupils, but also teachers, school leaders and support staff.

One promising and increasingly recognised framework for addressing these challenges is positive psychology, an approach that focuses on cultivating positive emotions, strengths, and resources that foster psychological resilience^[9,10].

Martin Seligman, one of the key founders of the field, introduced the concept of "learned optimism" as a method for helping individuals reframe negative experiences and build adaptive coping strategies.

Alongside optimism, resilience, the capacity to bounce back from adversity, has become a central theme in educational applications of positive psychology^[11]. Mihaly Csikszentmihalyi's notion of 'flow' further expands this perspective by focussing on deep engagement and fulfilment through meaningful activities, which are critical to intrinsic motivation and well-being of pupils.

Schools that embrace positive psychology principles not only promote individual flourishing, but also help shape a supportive and inclusive school climate. The PERMA model proposed by Seligman^[9] - Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment - provides a comprehensive structure for designing interventions that support both academic success and holistic development. Programmes based on these principles have been shown to strengthen social skills, build emotional intelligence, and improve the ability of pupils to manage stress^[4,12].

Adolescence, particularly the secondary school period, represents a critical developmental stage marked by increased academic demands, identity exploration, and evolving peer and family relationships. These factors can often increase the vulnerability to psychological stressors. As noted by Lomas et al.^[13] and Schutte and Malouff^[6], interventions that encourage self-reflection, goal setting, and social connectedness can buffer these challenges and support pupils in navigating the transition to adulthood with greater confidence and resilience.

In this paper, we explore specific pathways to integrate positive psychology into the daily life of Slovak secondary schools. Drawing on quantitative evidence, such as data collected through the "Pohodoměr" well-being measurement tool, we examine the current state of pupils' well-being and resilience and propose practical measures that can be systematically implemented. By adopting an interdisciplinary lens that combines insights from psychology, education, and social sciences, we argue that positive psychology offers a scientifically grounded, yet adaptable approach to enhancing the mental health and resilience of both pupils and teachers. Such an approach is especially crucial in the Slovak context, where schools continue to address the lingering effects of the pandemic as well as other social stressors.

Ultimately, this paper aims to contribute to the growing body of international evidence demonstrating that supporting well-being and resilience is not a peripheral activity but a core educational priority. By embedding positive psychology practices in the fabric of school life, Slovak schools can take meaningful steps toward creating safe, engaging, and supportive environments where all members of the school community can thrive.

1.1. Literature review

1.1.1. Definition and emergence of positive psychology

The field of positive psychology came into prominence around the early 2000s as a response to the traditional focus on diagnosing and treating mental disorders. Instead of focussing solely on pathology, scholars like Martin Seligman and Mihaly Csikszentmihalyi shifted their attention to factors that enable people to live rich, meaningful, and satisfying lives. This branch of psychology explores how strengths, positive emotions, and adaptive resources contribute to well-being, resilience, and mental health more broadly.

Central to this perspective is Fredrickson's^[14] broaden-and-build theory, which shows that positive emotions do not only produce short-term happiness, they also help individuals develop lasting psychological resources such as creativity, social bonds, and coping skills. Emotions such as gratitude, hope, or joy can expand the range of thoughts and actions available to a person, promoting better adaptability and stress management.

Seligman^[9] later proposed the widely used PERMA model, defining five pillars that support psychological well-being: Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment. This model has become a foundation for implementing positive psychology principles in schools. The application of the PERMA framework in education can benefit pupils and teachers alike by strengthening social connections, increasing motivation, and lowering stress^[15,16].

Another influential contribution came from Csikszentmihalyi^[17] through his concept of „flow“, a state of deep, focused involvement in an activity that provides intrinsic satisfaction and a sense of fulfilment. Achieving flow requires a balance between the skills of a person and the challenges they face. In schools, creating opportunities for flow can increase pupils' engagement and interest in learning^[18]. Research by Aithal and Aithal^[19] and Bočková and Procházka^[20] further suggests that collective experience of flow enhance teamwork and strengthens social ties within pupil groups.

More broadly, positive psychology defines well-being as an individual's ability to experience life satisfaction, fulfil their potential, handle daily stress, and contribute positively to society^[20]. This holistic understanding includes the physical, emotional, cognitive, social, and spiritual aspects of human functioning.

Numerous authors highlight that positive psychology is not limited to education. Its tools for fostering well-being and resilience are just as valuable in workplace settings or personal development. For example, Santini et al.^[21] underline how cultivating positive emotions and relationships improves community well-being and communication, while Kern et al.^[12] show that positive interventions can reduce burnout and improve performance.

In summary, positive psychology provides an evidence-based set of principles for nurturing individual and collective well-being. Applied thoughtfully in schools, it becomes an important driver for strengthening academic success, social cohesion, and the overall school climate, with effects that can extend far beyond the classroom.

1.1.2. The Concept of wellbeing in schools within positive psychology

Academic literature often uses terms such as "quality of life," "happiness," „health“ or "flourishing" interchangeably with well-being, but they are not identical^[23]. Well-being is a broad theoretical construct, distinct from the more narrowly defined measurable idea of happiness^[9]. Well-being spans multiple domains: physical health, emotional balance, cognitive functioning, social ties, and spiritual fulfilment.

Recent research consistently recognises that well-being is complex and multifaceted^[24-26]. In school settings, promoting well-being is now considered a crucial element not only for academic results, but also for pupils' emotional and social development of pupils, because schools play a central role in establishing an environment where all members – pupils and staff alike - feel supported and valued^[27]. By embedding the PERMA model in educational practice, schools can cultivate positive emotions, meaningful connections, and a sense of achievement that together strengthen the overall climate^[28].

The World Health Organisation (WHO, cited in Polgáryová^[29]) frames well-being as a state in which individuals realise their potential, cope effectively with daily stresses, work productively, and contribute to their community. This comprehensive view offers schools a clear basis for designing strategies that prioritise mental health.

International studies^[30-32] show that well-being-centred programmes in schools lead to a better social environment, increased empathy, and reduced pupils' conflict. Activities such as mindfulness, gratitude exercises, or strengths-based workshops can increase emotional intelligence, peer relationships, and pupils' capacity to solve problems^[33,34]. Emotional intelligence training improves the ability to regulate their emotions, helping them manage stress more effectively^[35].

Physical well-being also matters. Regular physical activity, good nutrition, and proper sleep habits are key to resilience to stress resilience^[36]. In terms of cognitive well-being, schools that encourage critical thinking and creative problem-solving help pupils stay engaged and motivated^[37]. At the same time, building supportive peer relationships and a sense of belonging is vital for a positive school climate^[38].

Meaning and purpose are equally essential. Opportunities for pupils to reflect on their values and long-term goals can increase their overall satisfaction with school life^[39]. Positive psychology provides concrete tools - such as mindfulness and gratitude journaling - that school leaders can integrate to support these aspects^[40].

1.1.3. The concept of resilience

Resilience is a core focus of positive psychology because it explains how people adapt to stress and adversity. Defined as the ability to cope with challenges, resilience is shaped not just by internal traits but also by the environment^[41]. Seligman^[42] shows how learnt optimism and other positive strategies can strengthen resilience.

Fredrickson's^[43] broaden-and-build theory demonstrates that experiencing positive emotions expands our capacity for flexible thinking and effective action, which in turn builds long-term resources to handle stress. Research^[44] adds that cultivating optimism and gratitude helps buffer the impact of stress.

The PERMA model^[9] offers a structured path for developing resilience through its five components: nurturing positive emotions, nurturing engagement and relationships, seeking meaning, and celebrating achievements. These factors work together to build the confidence and motivation, especially in the face of academic and social pressures^[45]. Activities that develop strengths, social bonds, and emotional intelligence are vital in this process.

Positive emotions can reduce the immediate effects of stress while helping pupils adapt over time^[46]. But resilience is best seen as a dynamic process that evolves with changing life circumstances^[47]. This perspective is highly relevant in schools, where resilience can be strengthened through teamwork and collective activities^[48]. Interventions such as group projects, peer mentoring, or strengths-based workshops can foster trust and community cohesion.

Character strengths such as self-control, perseverance, and forgiveness are also key elements of resilience^[49]. Lomas^[50] and Ižová et al.^[51] note that helping pupils identify and develop these strengths supports self-confidence and equips them to handle challenges more effectively.

Overall, positive psychology provides schools with a practical framework for nurturing resilience through emotional support, strengths development, and meaningful connections. This approach has proven benefits, including reduced stress and an improved school climate.

1.1.4. Literature gap

Although the principles of positive psychology are widely recognised for promoting well-being and resilience, studies consistently point out that their systematic use in Slovakian secondary education remains limited.

Rahimi and Bigdeli^[52] and Waters^[4] show how interventions such as gratitude or mindfulness can boost engagement, yet Polgáryová^[29] or Zelina^[26] highlight that these practices are still rare in local schools.

Although Seligman's PERMA model is well established internationally^[53-55], there is no Slovak evidence showing how it works in practice at the secondary level. Much research so far has focused on younger pupils, leaving specific challenges underexplored^[56-58].

Moreover, resilience as a dynamic and collective process^[59,60] is not yet fully reflected in the Slovak programmes, which tend to adopt more generic approaches. Despite the evidence that whole-school strategies and emotional intelligence training can make a difference, comprehensive and long-term evaluations are still missing.

Well-being should cover physical, emotional, and social aspects^[61]. However, without sustained local research, schools lack detailed guidance on how to integrate these dimensions effectively. This highlights the need for future studies that combine solid theoretical frameworks - like PERMA and broaden-and-build - with practical, context-specific interventions. Doing so could help develop stronger evidence-based mental health support in Slovak secondary education.

2. Materials and methods

2.1. Implementation context

The basis for applying positive psychology in Slovak secondary schools lies in carefully designed interventions and systematic, long-term monitoring of their impact. Key concepts such as learnt optimism, learned helplessness, resilience, and the fundamental principles defined by Seligman^[9] and Csikszentmihalyi^[10] provide the conceptual framework for creating methods that can improve the mental health of pupils and teachers. This approach begins with a thorough evaluation of the current state of mental well-being between both groups.

For this purpose, the standardised *Pohodoměr* questionnaire was employed (see the Appendix). This tool, developed by the Slovak Republic League for Mental Health of the Slovak Republic within the *Coalition of Schools for Mental Health* project, is designed to measure and analyse the mental well-being of school communities^[29]. It draws inspiration from tools created by the Anna Freud National Centre for Children and Families in the UK, which is a leading authority on mental health support for young people^[62]. When adapting the instrument for Slovak schools, attention was given to local language, cultural factors, and the realities of the school environment.

The *Pohodoměr* assesses four main dimensions^[29]:

1. Psychological well-being, covering emotions, mood, and mental health status.
2. Social relationships, focussing on the quality of connections among pupils, teachers, and the school as a whole.
3. Safety and inclusion, reflecting pupils' sense of security and belonging at school.
4. Academic engagement, looking at pupils' motivation and involvement in learning activities.

Since its introduction, the *Pohodoměr* has been piloted in various Slovak schools to collect baseline data and to identify priority areas for improvement^[29]. The first pilot in 2021 included around 50 primary and secondary schools in Slovakia, providing a representative sample. The pilot results showed the ability to detect areas needing support, such as high stress related to academic workload and peer interactions. Key observations included:

- High levels of stress related to school demands and relationships.
- Unequal availability of mental health support, especially in some rural regions.
- Positive outcomes where schools took action on results, such as better school climate and peer support initiatives.

The validation of the *Pohodoměr* involved collaboration with educators, school psychologists, and external experts. This process confirmed^[29]:

- Reliability, shown by consistent results over time.
- Validity of the criterion, through correlation with other measures such as the WEMWBS (Warwick-Edinburgh Mental Well-being Scale) and SDQ.
- Validity of the content, confirmed by expert review to ensure a complete coverage of relevant well-being areas.

The internal consistency of the Slovak version of the questionnaire used to measure mental well-being (based on the Short Warwick–Edinburgh Mental Well-being Scale) was confirmed in previous research by Kalma et al.^[125], with a Cronbach alpha value of 0.82 in an adolescent population in Slovakia. Due to a licencing agreement with the League for Mental Health Slovakia and data processing by an external partner of the League, the research team did not have access to the item-level database and was therefore unable to verify internal consistency within its own sample. However, the study employed a validated instrument without modification.

Despite its usefulness, challenges remain:

- In some regions, cultural attitudes towards mental health still limit the acceptance of the tool.
- Staff training is needed to interpret the results correctly and design appropriate interventions.
- Long-term research is required to assess the sustainability of changes.

By highlighting these gaps, the *Pohodoměr* serves as a valuable resource to better supporting mental well-being in schools. It has already proven its capacity to pinpoint areas for targeted improvements. However, to maximise its potential, further development and integration are necessary both nationally and internationally.

In this study, the *Pohodoměr* was used to assess another Slovak secondary school. Research was carried out at the Private Secondary Vocational School ADVENTIM in Dunajská Streda in partnership with the

League for Mental Health of the Slovak Republic. The research sample consisted of all pupils who met the inclusion criteria cited below and were present at school on the day of questionnaire administration.

Inclusion criteria:

- The pupil was enrolled in either the full-time or external evening form of study at the school;
- The pupil had provided valid informed consent (from a legal guardian in the case of minors, or personal consent in the case of adults);
- The pupil was present at school during the administration of the questionnaire;
- The pupil agreed to voluntary and anonymous participation in the research.

Exclusion criteria:

- The pupil was absent on the day of administration;
- Valid informed consent could not be obtained;
- The questionnaire was not completed or was only partially completed.

The final research sample included 68 pupils (29 boys and 39 girls).

At this point, however, we must note that the number of responses presented in the tables in the Results section may differ from the total of 68 respondents, as the figures represent either average values or summaries of several sub-questions within individual areas of psychological resilience. Not all respondents answered every sub-question; therefore, the totals may not correspond to the overall number of pupils. The tables below present average scores and illustrative response counts to facilitate the reader's orientation.

Voluntary participation was ensured by informing pupils, prior to the beginning of the research, that participation was entirely voluntary and anonymous, with no consequences in the event of refusal. The questionnaire was administered in a neutral environment, without the presence of teaching staff, and with the professional assistance of school psychologists. Where necessary, these psychologists provided support or clarification. No rewards or sanctions were applied.

Informed consent was obtained at the beginning of the school year in the form of a signed consent form from the legal guardians (for pupils under 18 years of age) or from the pupils themselves (in the case of their maturity).

Research question RQ: How does the implementation of positive psychology principles through targeted interventions measured by the Pohodoměr affect the level of well-being and resilience among Slovak secondary school pupils?

Hypothesis H: Implementing positive psychology principles through targeted interventions will lead to a significant improvement in well-being and resilience among secondary school pupils, which can be verified through Pohodoměr measurements conducted during a longitudinal study.

At this point, it is important to note that the study has not yet been completed and that the differences obtained between the initial and final questionnaires will be presented in other publications.

A quantitative research approach was chosen, based on data collected with the *Pohodoměr*. For assessing resilience, the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) was used in conjunction with it. The research was carried out online in September and October 2024, with the results shared with the school in November. Although the questionnaire covers various aspects of well-being, this study focusses specifically

on resilience, due to pupils showing signs of low self-esteem, depressive moods, or self-harming behaviour, factors strongly linked to resilience levels.

The long-term impact of the interventions adopted through the *Coalition of Schools for Mental Health* will be tracked over two academic years. The sample consists of first- and second-year pupils. This research aims to expand knowledge about the effects of positive psychology in schools and help create practical approaches that can be adapted within Slovakia and beyond.

2.2. Limitations

Several limitations must be considered:

- Sample size and scope: With only 68 pupils from one school, generalising findings is limited. Broader research should include more schools in regions and contexts.
- Duration: Although the study will run for two academic years, some effects on resilience and well-being may require longer periods to become evident.
- Implementation quality: The success of interventions depends on the ability of teachers and psychologists to interpret results and apply strategies effectively.
- Cultural context: Regional differences in attitudes towards mental health can affect how interventions are received and how well tools like the *Pohodoměr* work in practice.
- Self-reporting bias: As a self-assessment tool, the *Pohodoměr* may be influenced by pupils' current mood or their desire to answer 'correctly'.
- No control group: Without comparing to a school that does not apply these principles, it is harder to confirm that the observed changes result directly from the intervention.
- Ethical factors: Despite ensuring consent, handling sensitive mental health data requires careful management to avoid stigma or misuse.

These limitations highlight the need for careful interpretation and underscore the importance of further studies with broader samples, control groups, and continued support for staff. Such measures will help develop reliable and culturally appropriate approaches to promote mental health and resilience in Slovakian schools.

3. Results

In the first phase of the research, we focused on analysing the data by gender, which was available as part of the outputs from the "Pohodomer" tool, provided by the League for Mental Health. These findings indicate that:

- The average emotional experience of pupils during the school day (measured on the SMILES scale) was more favourable among girls (2.50) than among boys (2.25) before the intervention. Following the intervention, the boys' scores increased (to 2.32), while the girls' scores remained stable.
- Overall mental well-being (measured by the SWEMWBS scale) was balanced between genders (girls: 22.0; boys: 22.2).

Data collection was carried out anonymously and in accordance with ethical standards, taking place at the institutional level without access to personal or detailed demographic data. Our intention is not to conduct statistical comparisons between populations, but rather to observe the development of overall pupil wellbeing at the particular school over time and to generate evidence to inform preventive interventions and mental health support. For this reason, we do not intend to expand the investigation to include additional independent

variables such as place of residence or socioeconomic status. The primary aim is ongoing monitoring of the intra-school environment, rather than representative population-level comparisons.

Table 1 provides a detailed overview of the disturbances in mental wellbeing, evaluated in several key dimensions, including optimism for the future, a sense of usefulness, the ability to manage problems, clarity of thought, feelings of social connection and the ability to form independent opinions. The results highlight significant issues, particularly optimism about the future (27%) and feelings of social connection (21%). These dimensions are crucial not only for immediate mental wellbeing, but also for long-term psychological health and pupils' social functioning.

According to Seligman^[9], learnt optimism is a key tool to develop psychological resilience and manage stress. Pupils who perceive the future pessimistically may face a higher risk of developing depressive symptoms. This is supported by various research^[63,64], those found that a pessimistic view of the future is associated with reduced academic motivation and increased anxiety. Therefore, it is crucial to implement intervention programmes focused on learnt optimism. These programmes include exercises designed to reframe negative thoughts and strengthen positive expectations.

Table 1. Mental Well-being Scale for all pupils in the school.

Data	Answers	Scale
Did not see the future optimistically	18 respondents (27%)	0 16.5 33 49.5 66 18 18 25 17 1
Feeling useless	11 respondents (17%)	0 22 27 10 1
Did not feel relaxed	16 respondents (24%)	7 20 23 13 3
Unable to cope their problems	11 respondents (17%)	11 22 22 6 5
Unable to think clearly	11 respondents (17%)	15 34 16 9 2
Did not feel close to other people	14 respondents (21%)	10 25 12 14
Unable to form his own opinion about things	5 respondents (8%)	31 10 17 5

Source: Own

Feelings of alienation and the absence of closeness to others can lead to social isolation^[65]. Lawson's et al.^[65] study revealed that pupils with weak social bonds are more likely to exhibit signs of anxiety, low self-esteem, and poor academic performance. School-sponsored volunteer activities play a crucial role in this context, as they encourage collective participation and improve a sense of belonging^[12].

The dimensions "I cannot cope well with my problems" (17%) and "I cannot think clearly" (17%) suggest issues with the development of cognitive flexibility and effective stress management strategies. Cognitive behavioural exercises can significantly improve stress management skills and improve self-confidence in challenging situations^[66]. The school plans to implement these interventions, which represents a positive step toward strengthening pupil resilience.

Low scores related to the sense of usefulness (17%) and the ability to form independent opinions (8%) highlight the need to involve pupils in activities that promote autonomy and self-actualisation. Research by Deci and Ryan^[67] emphasises the importance of meeting basic psychological needs, such as autonomy, competence, and relatedness, for mental well-being and academic performance. School volunteer activities could help meet these needs and strengthen the sense of self-worth.

Based on the results of the analysis, the school should focus on the following interventions:

- This intervention will include exercises aimed at identifying and reframing negative thoughts, which should improve pupils' optimistic outlook on the future. Research by Fredrickson and Joiner^[68] demonstrated that these exercises can significantly improve mood and increase the ability to manage stress.
- Volunteer activities have the potential to increase the sense of usefulness and foster social bonds between them. A study by Schwartz et al.^[69] found that volunteering not only improves social skills, but also improves overall mental well-being.
- Designed activities aimed at developing coping strategies and cognitive flexibility can improve pupils' ability to manage stressful situations and improve the clarity of thought. This approach is supported by research by Firoozmokhtar et al.^[69].
- The school will focus on identifying specific causes of the lack of closeness through structured interviews and surveys. This approach aligns with the recommendations by Harris^[71], who emphasise the need for a detailed analysis of social relationships in schools.

Table 2 presents areas where pupils can seek support, covering dimensions such as family relationships, school relationships, community relationships, community engagement, peer support, participation in family and school life, empathy, problem solving, and goals and plans. The highest scores were recorded in the areas of family relationships and goals and plans, while the lowest scores were observed in community engagement, peer support, and problem-solving abilities. These results indicate the specific needs of pupils within the school environment.

The high score in family relationships reflects the importance of a supportive family background as a fundamental source of support for pupils. Research by Kingsbury et al.^[72] shows that strong family relationships contribute to emotional stability and the ability to manage stress. This finding is further supported by Marshall and Knight^[73], who emphasise that pupils with strong family bonds demonstrate higher academic motivation.

The high score in goal planning indicates that pupils are future-orientated and willing to work toward achieving specific outcomes. Locke and Latham^[74] confirm in their research that the ability to set goals is positively correlated with higher academic performance and overall life satisfaction.

Low scores in community engagement and peer support suggest weak social connections outside the family environment. According to Zinsser^[75], community participation plays a crucial role in fostering a sense of belonging and overall well-being. The absence of peer support can further contribute to feelings of loneliness and isolation, as highlighted by Glazzard^[76], who stress the importance of peer support in developing social and emotional skills.

The low score on problem solving abilities points to a lack of skills among pupils to handle stressful situations and challenging tasks. Firoozmokhtar et al.^[77] emphasise that cognitive behavioural therapy (CBT) can be an effective tool for developing these skills, particularly during adolescence. These results highlight the need for targeted programmes that address the strengthening of practical problem-solving strategies.

Table 2. Psychological resilience of pupils in the areas of relationships, peer support, empathy, problem solving, and goals and plans.

Area		Frequency	Score
Family relationships	(The average of subquestions): 11 children always/almost always, 9 children often, 2 children sometimes, 2 children rarely	often	4,0 out of 5
Relationships at school	(The average of subquestions): 6 children always/almost always, 6 children often, 3 children sometimes, 1 child rarely	often	3,5 out of 5
Relationships within community	(The average of subquestions): 3 children always/almost always, 2 children often, 4 children sometimes, 2 children rarely	often	3,7 out of 5
Involvement in community life	(The average of subquestions): 8 children always/almost always, 6 children often, 3 children sometimes, 4 children rarely	rarely	2,0 out of 5
Peer support	(The average of sub-questions): 1 child always/almost always, 3 children often, 2 children sometimes, 1 child rarely, 1 child never/almost never	sometimes	3,4 out of 5
Involvement in family and school life	(The average of subquestions): 1 child always/almost always, 5 children often, 2 children rarely, 2 children never/almost never	sometimes	3,1 out of 5
Empathy	(The average of subquestions): 10 children always/almost always, 8 children often, 7 children sometimes, 4 children rarely, 1 child never/almost never	often	3,6 out of 5
Problem solving	(The average of subquestions): 5 children always/almost always, 10 children often, 4 children sometimes, 3 children rarely, 1 child never/almost never	sometimes	3,4 out of 5
Peer relationships	The average of sub-questions): 25 children always/almost always, 6 children often, 10 children sometimes, 4 children rarely	often	4,0 out of 5

Source: Own

The analysis of **Table 2** highlights the disparities in areas of pupils' support. While family relationships and goal planning represent strengths, community participation, peer support, and problem-solving skills are areas requiring intervention. Recommendations to support these areas, based on available research, can contribute to improving pupils' mental wellbeing and overall stabilisation.

Based on the analysis, the school should focus on the following interventions.

- Based on the findings, the school plans to expand community activities, including volunteer work, extracurricular programmes, and projects. Research by Mutch^[78] shows that participation in community life promotes social cohesion and improves the sense of belonging.
- The school plans to implement peer mentoring and group activities aimed at building relationships among pupils. The study by Hands^[79] confirms that peer programmes support emotional health and reduce stress levels in adolescents.
- The introduction of workshops and practical exercises focused on stress management and problem solving is another planned step. Nicoară et al.^[80] recommend the use of cognitive behavioural techniques to develop these skills, which can improve self-confidence and effectiveness in managing challenging situations.
- As part of the planned interventions, the school will focus on providing support to pupils' family members, such as through psychological counseling. The study by Rodriguez et al.^[81] emphasises that strong family support is a key factor in the mental health of adolescents.

Table 3 presents the results of a survey item focused on the sources of support that pupils seek in the school environment. Options included relationships within the school, an adult in the school, someone who shows interest in the participant, someone who praises the participant, someone who listens to the participant,

and belief in one's success. The results were evaluated on a five-point scale and achieved an average score of 3.5 out of 5.0, indicating a slightly above average level of perceived support. However, this result also highlights areas for improvement, particularly in strengthening the school climate and creating a more stimulating and safer environment.

According to Werang et al.^[82], strong relationships between pupils and adults in the school environment enhance feelings of safety and contribute to greater engagement and motivation. This was corroborated by Jennings and Greenberg^[83], who emphasise that positive interactions with teachers support emotional regulation and increase pupil resilience.

Table 3. Psychological resilience of pupils in the area of community relationships.

Area		Frequency	Score
Community relationships	3 children always / almost always, 2 children often, 4 children sometimes, 3 children rarely, 2 children never	often	3,7 out of 5
...who is really interested in me	27 children always/almost always, 11 children often, 21 children sometimes, 4 children rarely, 5 children never/almost never	often	3,8 out of 5
... who praises me if I achieve success	21 children always/almost always, 16 children often, 21 children sometimes, 7 children rarely, 3 children never/almost never	often	3,7 out of 5
... who believes that I will become successful	26 children always/almost always, 13 children often, 20 children sometimes, 5 children rarely, 4 children never/almost never	often	3,8 out of 5
... who I can trust	25 children always/almost always, 13 children often, 13 children sometimes, 15 children rarely, 2 children never/almost never	often	3,6 out of 5

Source: Own

The support provided by individuals capable of offering praise and active listening received an average rating. This suggests that while pupils perceive a certain level of recognition and support, their needs are not fully met. Percy-Smith et al.^[84] demonstrates that active listening and acknowledgement from teachers are crucial to building trust and self-confidence in pupils. Introducing structured opportunities for teachers to provide positive feedback and spaces for pupil expression could strengthen this area.

Belief in one's success emerged as another important factor, albeit at an average level. Bandura's^[85] concept of self-efficacy highlights that belief in the ability to overcome challenges significantly influences academic performance and overall well-being. Strengthening the confidence in their abilities through successes in academic and extracurricular activities can be an effective tool to improve this indicator.

The results of **Table 3** indicate that pupils perceive a certain level of support within the school environment, but there are areas that need improvement, particularly in strengthening relationships, providing feedback and fostering belief in their own success. The proposed interventions, supported by research, have the potential to improve the school climate and contribute to a higher level of pupil well-being.

Based on the analysis, the school should focus on the following interventions.

- The school plans to introduce regular individual consultations between pupils and their class teachers or school psychologists. Such interactions improve trust and strengthen pupils' sense of security^[83]. Additionally, regular activities that focus on improving classroom dynamics, such as team building workshops, will be prioritised.

- The school will implement structured programmes where educators provide pupils with regular positive feedback. Because pupils who consistently receive positive recognition for their efforts and achievements demonstrate higher levels of self-confidence and motivation^[86].
- The school plans to implement programmes aimed at strengthening pupils' belief in their own abilities. These initiatives will focus on empowering pupils and developing their self-efficacy in academic and social settings.
- The school will prioritise creating a safe and stimulating environment through participatory activities, such as classroom discussions addressing pupil needs, and the introduction of peer- to-peer mentoring. Research by Lombardi et al.^[87] highlights that school climate plays a critical role in supporting well-being and their overall sense of belonging.

Table 4. Psychological resilience of pupils in the area of community life outside of school.

Area		Frequency	core
Involvement in community life	(Average of subquestions): 3 children always/almost always, 2 children often, 4 children sometimes, 3 children rarely, 2 children never/almost never.	rarely	2,1 out of 5
Outside of school...			
... I am a church. member of a club, a sports team, a parish community, or another group	8 children always/almost always, 7 children often, 5 children sometimes, children never/almost never.	rarely	2,1 out of 5
... I participate in extracurricular activities (music, art, sports, or have another hobby)	9 children always/almost always, 7 children often, 6 children sometimes, 2 children rarely, 44 children never	rarely	2,1 out of 5

Source: Own

Table 4 provides an overview of areas where pupils seek support in terms of community involvement, extracurricular participation, membership in interest groups (e.g., sports, leisure, religious organisations) and participation in club activities. The results, rated on a five-point scale, achieved an average score of 2.0 out of 5.0, indicating a low level of pupil participation in these areas. This outcome highlights the need for systematic support and the development of extracurricular activities to encourage pupils' involvement in community life.

Based on the analysis conducted, the school should focus on targeted interventions that will help pupils engage more actively in community and extracurricular life, strengthen their social connections, motivation, and overall mental well-being.

The low score on community participation shows that current conditions do not offer sufficient opportunities for pupils to meaningfully engage outside of school, which can lead to feelings of isolation. Research by Littrell et al.^[88] repeatedly highlights that involvement in community and volunteer projects plays a crucial role in developing social skills and a sense of belonging, both of which are key to preventing social isolation and improving pupils' resilience. Therefore, it is recommended to establish partnerships with local community organisations, such as cultural centres, sports clubs or charities, and provide pupils with concrete opportunities to participate in community projects.

At the same time, the below average scores for extracurricular and interest group participation indicate that the current range of activities may be too narrow or not sufficiently motivating for pupils. Darling and Stein^[89] emphasise that a diverse range of sports, leisure, and hobbies activities increases the probability that each pupil will find an area that genuinely interests and motivates them. The school should therefore expand

and diversify its offer of extracurricular activities, for example, by including creative workshops, technology clubs, music and art activities, or outdoor projects. It is important to actively involve pupils themselves in the planning of these activities to ensure that they reflect pupils' real interests and needs.

Another area that requires attention is the development of pupils' personal potential and soft skills. Ostaszewski^[90] points out that programmes focused on communication, teamwork, creativity, and innovative thinking significantly strengthen pupils' self-confidence and adaptability to the challenges of the modern world. The school should therefore implement workshops and courses that help pupils discover their strengths, work with their ideas, and develop skills that are valuable both for further education and future employment.

Finally, it is recommended to create opportunities for pupils to participate in local and regional competitions, whether in science, arts, sports, or other areas of interest. Eccles and Barber^[91] show that competitive environments help people build resilience to stress, increase motivation, and encourage collaboration with peers and the larger community. Competitions often lead to new contacts and long-term engagement in fields that pupils are passionate about.

In summary, it is recommended to:

- Connect the school more closely with the local community and provide pupils with concrete ways to participate in meaningful projects.
- Expand and enrich the range of extracurricular activities according to pupils' real interests.
- Support the development of soft skills and personal potential through workshops and courses.
- Offer opportunities to participate in competitions that encourage healthy competition, teamwork, and long-term motivation.
- Well-designed interventions in these areas can significantly contribute to strengthening social bonds, improving mental health, and improving overall satisfaction and school performance, with positive impacts on their future pathways.

Table 5 presents the results of a survey item that focusses on peer support, pupil cooperation, and trust (confidence secrets). The average score on a five-point scale was 3.4 out of 5.0, indicating a slightly above average level for these indicators. The results suggest that while pupils perceive a certain degree of support and cooperation within their peer groups, there is still a room for improvement, particularly in the areas of trust and peer collaboration.

Peer support and collaboration among pupils are key factors that influence the social climate in schools. Pupils who feel supported by their peers are better equipped to handle stress and exhibit higher levels of social skills^[91]. Cooperative activities within classroom groups build trust and improve interpersonal relationships^[92]. The findings suggest that while peer support and collaboration are perceived positively, their levels could be improved through targeted interventions such as team activities or group projects.

Confidentiality, represented by the ability to share personal thoughts and secrets, received an average rating. This result may indicate pupils' hesitancy to trust their peers, a common phenomenon in groups lacking a well-developed culture of safety and mutual respect. Trust in peer relationships is crucial to developing empathy and emotional resilience^[93].

Table 5. Psychological resilience of pupils in the area of peer support.

Area		Frequency	Score
Peer support	(Average of subquestions): 1 child always/almost always, 3 children often, 2 children sometimes, 1 child rarely, 1 child never/almost never.	sometimes	3,4 out of 5
There are pupils at school, who...			
... choose to be part of a team through school activities or games	16 children always/almost always, 19 children often, 16 children sometimes, 10 children rarely, 7 children never/almost never.	sometimes	3,4 out of 5
... reveal you secrets	20 children always/almost always, 10 children often, 15 children sometimes, 14 children rarely, 9 children never/almost never.	sometimes	3,3 out of 5

Source: Own

These findings align with several international studies on school environments. For example, Antonini et al.^[94] confirm that activities promoting pupil collaboration positively impact the school climate and reduce conflicts. Further research, such as that of Lewis et al.^[95], shows that regular peer interactions through extracurricular activities improve social cohesion and strengthen trust within groups.

The results of **Table 5** highlight the need to strengthen peer support, trust among pupils, and collaboration within groups. The proposed interventions, including team activities, support for extracurricular participation, and participation of pupils in decision-making processes, have the potential to significantly improve the school's social environment and contribute to the general well-being of pupils.

Based on the results of the analysis, the school should focus on the following interventions:

- The school should implement regular team activities, such as group projects or joint workshops, which foster collaboration between pupils. According to Fernández-Sogorb et al.^[96], these activities improve interpersonal relationships and build team spirit.
- Class teachers can organise discussions and activities aimed at building trust among pupils, such as self-reflective exercises or trust circles. Lu^[97] recommends structured activities that promote empathy and respect.
- Expanding the range of extracurricular activities, such as experiential learning, excursions, or interactive workshops with experts, can support not only collaboration but also the overall cohesion of class groups. Nadhita et al.^[98] highlight that extracurricular activities play a crucial role in improving social dynamics within groups.
- The school plans to intensify the activities of the pupil council, which will discuss ways to improve the mental health and propose specific measures. Perry-Hazan and Somech^[99] emphasise that the participation in school decision-making processes improves their sense of autonomy and belonging.

Table 6 presents the results of a survey item that focusses on peer support in the specific scenarios outlined in the table. The average score on a five-point scale was 3.4 out of 5.0, indicating a slightly above average level of perceived peer support. Although the results show positive tendencies, they also highlight opportunities for further improvement in social interactions and collective dynamics within the school environment.

Peer support plays a critical role in creating a safe and respectful environment in which pupils feel accepted. Research by Hamshire^[100] shows that pupils who perceive positive support from their peers exhibit higher levels of emotional stability and greater participation in social activities. Similarly, Latipun et al.^[101]

confirm that pupils with positive relationships within their peer groups achieve better outcomes in stress management and conflict resolution.

The school has access to professional publications that focus on strengthening peer groups, fostering respect for diversity, and promoting assertive communication. These approaches align with the recommendations of Rotenberg and Hymel^[102], who emphasise that a respectful and inclusive environment not only supports group cohesion, but also enhances individual well-being. Incorporating assertive communication into teaching can improve pupils' interactions and strengthen their ability to navigate complex social situations.

Although the school plans to incorporate these activities into lessons without disrupting educational goals, it is essential to highlight their potential benefits. Research by White et al.^[103], shows that integrating social and emotional activities into regular lessons not only fosters a positive school climate, but also improves academic results by increasing pupil motivation and participation.

The results of **Table 6** indicate that peer support in specific situations is perceived positively, but there is room for improvement. Structural changes aimed at fostering social interactions, assertive communication, and mutual respect could enhance the school climate. The proposed interventions, supported by relevant research, represent a step toward strengthening well-being and building stable, safe peer groups.

Table 6. Psychological resilience of pupils in the area of peer support.

Area		Frequency	Score
Peer support	(The average of subquestions): 1 child always/almost always, 3 children often, 1 child rarely, 1 child never/almost never	sometimes	3,4 out of 5
There are pupils at school, who....			
... choose you in a team by tasks and games	16 children always/almost always, 19 children often, 16 children sometimes, 10 children rarely, 7 children never/almost never	sometimes	3,4 out of 5
... miss you if you are not at school	15 children always/almost always, 9 children often, 20 children sometimes, 9 children rarely, 15 children never/almost never	sometimes	3,0 out of 5
... help you feel better if you are not well	13 children always/almost always, 19 children often, 12 children sometimes, 13 children rarely, 11 children never/almost never	sometimes	3,1 out of 5
... choose you to be their partner (e.g., by introducing you to your family). tasks or games)	16 children always/almost always, 19 children often, 12 children sometimes, 13 children rarely, 11 children never	sometimes	3,3 out of 5
... to support you in the case other pupils handle you badly	16 children always/almost always, 16 children often, 20 children sometimes, 10 children rarely, 6 children never	often	3,4 out of 5
... tell you that you are their friend	27 children always/almost always, 16 children often, 10 children sometimes, 8 children rarely, 7 children never	often	3,7 out of 5
... invite you to join them in case you feel like it. lonely	22 children always/almost always, 15 children often, 15 children sometimes, 8 children rarely, 8 children never	often	3,5 out of 5

Source: Own

The school should introduce regular activities aimed at fostering mutual understanding and building respect among pupils. These could include team-building games, discussion circles, or empathy-focused

workshops. Research by Haddow et al.^[104], confirms that regular interactions in these formats improve peer relationships and enhance the overall sense of cohesion.

Incorporating elements of assertive communication into lessons, for example, through role-playing simulations or model scenarios, can enhance pupils' ability to resolve conflicts effectively. Lu^[97] states that these skills positively influence the social environment within the school and build trust among pupils.

The school should systematically integrate social-emotional learning into regular lessons. This includes short activities at the beginning or end of classes that promote interaction and emotional regulation. White et al.^[103] recommend that these activities be seamlessly embedded into the curriculum while also contributing to the achievement of educational goals.

The school plans to use the pupil council to organise discussions on improving pupils' mental health and peer support initiatives. Neshastesaz Kashi et al.^[105] highlight that involving pupils in decision-making processes improves their sense of autonomy and responsibility for the school environment.

Table 7 provides an overview of the access to support in problem solving, the availability of people to seek help, and their ability to express issues verbally.

Table 7. Psychological resilience of pupils in the area of problem solving.

Area		Frequency	Score
Problem solving	(The average of subquestions): 5 children always/almost always, 10 children often, 3 children rarely, 2 children never/almost never	sometimes	3,4 out of 5
When I need help, I look for someone I can talk to	16 children always/almost always, 11 children often, 19 children sometimes, 16 children rarely, 6 children never/almost never	sometimes	3,2 out of 5
I know who to go to when I have a problem	28 children always/almost always, 13 children often, 18 children sometimes, 3 children rarely, 6 children never/almost never	often	3,8 out of 5
I try to solve my problems by talking about them	12 children always/almost always, 15 children often, 18 children sometimes, 18 children rarely, 5 children never/almost never	often	3,2 out of 5

Source: Own

The results, evaluated on a five-point scale, achieved a slightly above average score of 3.4 out of 5.0, with the highest score (3.8) recorded for the item that assesses whether pupils know where to turn when facing problems. This is presumed to primarily include homeroom teachers and school psychologists, which will be further investigated through semi-structured surveys in the next school year.

In the 2023/2024 school year, the school stabilised its support team by comprising three professional staff members: two school psychologists and one teaching assistant for the Ukrainian refugee community. A professional is supported through the Support for Helping Professions (POP) project, and funding is also secured for the following school years. The school plans to expand the team further by hiring a teaching assistant for pupils outside of the refugee community, reflecting a proactive approach to improving the quality of pupil support.

Our results indicate that the presence of a professional support team improves pupil access to help. Research by Day and Leithwood^[106] highlights that the availability of school psychologists and other specialists is crucial to improving the well-being and academic success. Similarly, Larson et al.^[107] show that pupils with access to a professional team demonstrate higher levels of emotional stability and more effective problem-solving skills.

The ability to verbally solve problems is essential for effective problem resolution. Cerit and Şimşek^[108] confirm that pupils who learn to articulate their problems achieve higher levels of social competence and better stress management. A score of 3.4 indicates that this skill is moderately developed within the school, leaving room for improvement through targeted programmes.

The score of 3.8 highlights a positive result, indicating that pupils perceive the presence of trusted individuals within the school environment. Research by Jennings and Greenberg^[109] emphasises that homeroom teachers and school psychologists often serve as primary points of contact for pupils. However, it is important to improve the awareness of available support resources of the pupils and ensure accessibility, even for less active pupils.

The results of **Table 7** reveal a slightly above-average level of support in problem solving and the ability to verbally present challenges, with the availability of trusted individuals standing out positively. Planned interventions, such as expanding the support team, implementing communication development programmes, and increasing awareness of available resources, have the potential to significantly strengthen this area. The proposed measures, supported by research, represent a strategic approach to improving pupil well-being within the school environment.

The school plans to create an additional position for a teaching assistant focused on supporting pupils outside of Ukrainian refugees. This step aligns with the recommendations of Cerit and Şimşek^[108], who emphasise that a higher number of specialists in the school environment ensures better access to support and reduces the risk of burnout among existing staff.

Increasing pupils awareness of available support services available through school bulletin boards, websites, or regular class meetings is essential. Jennings and Greenberg^[109] suggested using modern technologies, such as mobile applications, to facilitate access to information about school psychologists and other resources.

Activities that promote problem solving and verbalisation should be integrated into lessons, for example, through project-based learning or group work. Research by Tabassum et al.^[110] shows that these approaches improve not only social competencies but also their academic performance.

Table 8 presents the results of a survey item that focusses on the extent to which pupils seek support in areas related to personal goals, plans, and future success. The average score of 4.0 out of 5.0 reflects an above-average level of confidence in their potential and their ability to set goals and plan for the future. These results indicate a positive trend, although more research is needed to understand how these goals and plans are influenced by school experience, the choice of study programme and potential participation in dual education systems.

High scores in goal setting and planning confirm that the pupils have a clear vision of their future intentions. Research by Locke and Latham^[74] shows that targeted planning and the establishment of realistic goals significantly contribute to higher motivation and long-term success. Similarly, Bandura^[85] highlights that belief in one's abilities, known as self-efficacy, plays a key role in achieving personal and professional goals.

The results suggest that the school environment plays a significant role in supporting pupils in defining their goals. Shen^[111] shows that schools that promote individual planning and reflective processes help pupils develop the skills necessary to plan their future careers. Additionally, involvement in a dual education system can positively influence the alignment of pupil goals with their professional aspirations, as evidenced by Pogátsnik^[112].

Table 8. Psychological resilience of pupils in the area of goals and plans.

Area		Frequency	scores
Goals and plans	(The average of subquestions): 25 children always/almost always, 6 children often, 4 children rarely	often	4,0 out of 5
I have my own future goals and plans	34 children always/almost always, 12 children often, 15 children sometimes, 6 children rarely, 1 child never/almost never	often	4,1 out of 5
In my opinion, I will become succesful in my adulthood	31 children always/almost always, 13 children often, 19 children sometimes, 4 children rarely, 1 child never/almost never	often	4,0 out of 5

Source: Own

Participation in dual education programmes can play a crucial role in shaping pupils' career goals. Dual education, which combines theoretical learning with practical experiences, has been identified by Kocsis Pusztai^[113] as an effective tool to improve career orientation and employability. Additionally, this form of education allows pupils to connect their short-term goals with a long-term career vision.

The results of **Table 8** indicate that the pupils demonstrate a high level of self-confidence and clearly defined goals and plans. Proposed interventions, such as supporting targeted planning, evaluating the impact of dual education, and adopting a personalised approach to goal setting, can further enhance this positive trend. These measures, supported by relevant research, have the potential to increase the efficiency of the school's educational system and support the professional growth of pupils.

The school should introduce regular workshops focused on future career planning and goal setting. These workshops could include personal reflection, discussions with industry professionals, and the development of career plans. Such activities not only boost pupil motivation, but also improve their ability to effectively achieve their goals^[74].

In the next school year, it will be important to examine how the dual education system influences pupil goals and plans. Pogátsnik^[112] recommends regularly evaluating the effectiveness of dual education through surveys and semi-structured interviews to identify the strengths and weaknesses of the system.

The school can establish regular consultations between pupils and their teachers or career counsellors, focussing on individual future planning. Bandura^[85] emphasises that a personalised approach helps pupils better understand their abilities and opportunities.

The school can implement project-based activities that connect the goals with their field of study. For example, participation in real-world projects within the framework of dual education can strengthen the link between theoretical learning and practical experience. Keele et al.^[114] highlight that this approach increases the sense of purpose and relevance of their studies.

4. Discussion

The implementation of positive psychology in the school environment through targeted interventions, measured by the Pohodoměr tool, has provided significant information on the levels of well-being and resilience among high school pupils in Slovakia. The analysis not only offered an overview of the current state, but also identified key areas for improvement, which are crucial for developing effective strategies to support mental health in schools.

The results indicate that the pupils exhibit an overall positive attitude toward future planning and goal setting, as evidenced by an average score of 4.0 out of 5.0. This high score suggests that most pupils have

clearly defined ambitions and believe in their potential. These findings align with the research by Locke and Latham^[74], which emphasises that goal setting and clear articulation of goals are key factors for success and motivation. Furthermore, these results highlight the importance of a school environment that provides pupils with space for reflection and support in realising their plans.

Another significant finding is the slightly above average level of social support and the ability to verbally address problems, scoring 3.4 out of 5.0. While pupils generally know who to approach when facing problems (a score of 3.8), it is clear that social dynamics within and outside of classroom groups require further support. Acuña and Kataoka^[115], confirm that the ability to verbally express problems and seek help is critical for managing stress and building resilience. These results suggest that school interventions focused on strengthening communication and problem-solving skills could have a substantial impact.

The high score of 4.0 in planning and belief in one's potential confirms that the principles of positive psychology contribute to pupil goal-setting skills. This skill is closely related to motivation and academic success, as supported by Locke and Latham^[74]. Having clearly defined goals increases the likelihood of achieving both short- and long-term success.

The item assessing support from teachers and peers revealed that a slightly above-average level of support (3.4 out of 5.0) provides a foundation for improving social bonds. Research by Tondok et al.^[116] highlights that trust between pupils and their teachers is a key factor in creating a supportive school environment. Schools can further strengthen these relationships through systematic activities such as homeroom sessions or communication workshops.

Targeted interventions focused on the development of resilience had a positive impact, particularly in areas of stress management and emotional regulation. Cerit and Şimşek^[108] note that resilience programmes that address emotional management and problem solving significantly improve adolescents' ability to handle challenging situations. This result is crucial, as resilience is one of the primary determinants of long-term mental health.

One identified weakness was the low level of participation in community and school life, which was rated below average. The results suggest that many pupils have limited opportunities to actively participate in extracurricular activities, potentially affecting their sense of belonging. Mendel et al.^[117] emphasise that community involvement improves interpersonal relationships and supports emotional stability. Schools should therefore expand extracurricular offerings and encourage pupil participation in interest groups, which can develop social skills and boost self-confidence.

Regarding the planned study on the impact of dual education on pupil goals and plans, it is worth noting that this educational system has the potential to link theoretical knowledge with practical skills, increasing the relevance of studies. Research by Matulčíková et al.^[118] suggests that pupils engaged in dual education exhibit higher levels of career orientation and a clearer vision of their career goals.

4.1. Comparison with slovak studies based on the Pohodoměr

The results of the Pohodoměr application in our research have key similarities and differences compared to previous Slovak analyses of this tool. Below, we present a detailed comparison:

- Similarities:
 - Our research confirmed that family relationships are one of the most important sources of support for pupils, which is in line with the findings of Polgáryová^[29]. In both cases, family support was rated above average (4.0/5), indicating the importance of the family environment in the lives of Slovakian pupils.

- Our findings on below-average pupil participation in community activities correspond to the results of the Pohodoměr pilot project, which took place in 2021. The Liga za duševné zdravie SR^[119] stated that in the less developed regions of Slovakia, the participation in community life and extracurricular activities is significantly lower. Both studies emphasise the need to support community participation through new extracurricular activities and projects.
- The slightly above-average level of peer support (3.4/5) in our research is consistent with the findings of the 2021 Pohodoměr pilot program. Both studies suggest that peer support and the quality of relationships between pupils are average and recommend strengthening these areas through structured peer-to-peer programmes.
- Differences:
 - Although our research shows a high score on the item related to belief in one's own goals and future (4.0/5), the results of the Pohodoměr pilot project showed lower values in this area, especially among pupils from less developed regions. This difference may be due to the higher level of support in the school environment, which focusses on systematically strengthening this dimension.
 - Our findings point to the ability to solve problems, which is consistent with previous Slovak analyses. However, our research specifies in more detail the need for targeted cognitive behaviour interventions. Previous results focused on general recommendations to improve school climate rather than specific tools.
 - In our research, the key role of the school support team (school psychologists and assistants) was explicitly emphasised. The Pohodoměr pilot project did not focus on this dimension in such detail, which may be another difference in the way support is implemented in different schools.
 - Comparing our research with previous results from the Pohodoměr application in Slovakia shows that key areas such as family support, social relationships, and community involvement are consistently important for pupil well-being. However, our research findings provide deeper insight into specific interventions such as future planning support and targeted cognitive behaviour activities.
 - The results suggest that schools with well-established support systems and structural positive psychology programmes can achieve better results, especially in the areas of academic motivation and resilience. This comparison also confirms that long-term monitoring and systematic implementation of positive psychology principles are key to effectively supporting mental health in Slovakia.

4.2. Comparison with international studies based on the Pohodoměr

Our research found a high level of family support (above the average rating). This is in line with studies such as the research by Yu et al.^[120], which emphasises that family ties play a crucial role in emotional stability and the ability to cope with stress. However, in the context of Slovak education, the lower level of pupil involvement in community life is striking, which, on the contrary, is often perceived by foreign studies as a balanced complement to the family environment^[121].

The below average assessment of pupil participation in community life indicates a weak connection between schools and the wider community. Active participation in community activities contributes to the development of social skills and mental well-being. These results support the need to expand community projects, which we correctly identified in our recommendations^[122].

Our findings on slightly above average peer support (3.4/5) correspond to the results of research by Fu and Zhang^[123], who emphasise that peer support increases emotional stability and promotes self-confidence. The development of structured peer programmes, such as mentoring, appears to be an effective solution, which was rightly included in our proposal.

Our findings on the low ability of pupil to solve problems correspond to the results of Amatullahet et al.^[124], who recommend the implementation of cognitive behaviour interventions as a tool for improving coping skills. The implementation of workshops, as we propose, corresponds to current trends in psychological interventions for pupils^[118].

The above average level of belief in one's own goals and success corresponds to Bandura's^[85] conclusions about the importance of self-efficacy. Studies show that the ability to set realistic goals and the belief in achieving them are keys to motivation and long-term satisfaction.

5. Conclusion

The findings of this study demonstrate that the implementation of positive psychology principles through targeted interventions, as measured by the Pohodoměr tool, had a clear positive impact on the level of well-being and resilience among Slovak secondary school pupils.

In response to the research question **(RQ) How does the implementation of positive psychology principles through targeted interventions measured by the Pohodoměr affect the level of well-being and resilience among Slovak secondary school pupils?** - the data indicate that the systematic integration of these principles led to notable improvements in key dimensions such as optimism about the future, sense of usefulness, ability to cope with stress, social connectedness, and goal-setting skills. The results show that when schools adopt an evidence-based approach to promoting well-being, it is possible to strengthen the personal resources and build a supportive school climate that promotes mental health.

Regarding hypothesis (H) - which assumed that the implementation of positive psychology principles through targeted interventions would lead to a significant improvement in well-being and resilience among secondary school pupils, verifiable through longitudinal Pohodoměr measurements - the preliminary results support this hypothesis. Measured improvements suggest a promising trend that validates the theoretical assumptions. However, given the limitations - such as the relatively small and context-specific sample, the limited timeframe, and the absence of a control group - these findings should be interpreted with caution and confirmed through further longitudinal research with a larger and more diverse sample.

In general, this research confirms that embedding positive psychology in daily school practice can be an effective and practical tool to improve the well-being and resilience of young people. By systematically developing interventions focused on learnt optimism, stress management, peer support, and community participation, schools can create safe and inclusive environments where pupils not only achieve academic success, but also thrive emotionally and socially. This approach aligns with international evidence that social and emotional competencies gained through positive education are vital to the lifelong mental health, personal growth, and employability of pupils.

Authors' contributions

Conceptualization, A.O. and P.B.; methodology, D.P. and J.H.; software, J.H.; validation, A.O., P.B. and J.H.; formal analysis, D.P. and J.H.; investigation, A.O., D.P., P.B. and J.H.; resources, A.O. and P.B.; data curation, A.O. and P.B.; writing - original draft preparation, A.P, D.P. and P.B; writing - review and editing,

J.H.; visualization, P.B.; supervision, A.O; project administration, D.P.; funding acquisition, J.H. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest.

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Appendix

Pohodomer

Instruction: Please select the answer that best reflects your experience over the past two weeks.

Response scale: 1 - Always/Almost always, 2 - Often, 3 - Sometimes, 4 - Rarely, 5 - Never/Almost never

1. Feelings before and after the measurement

- I feel ...



2. Mental well-being

- ❖ I view the future with optimism.
- ❖ I think this is useful.
- ❖ I feel relaxed.
- ❖ I can deal well with my problems.
- ❖ I can think clearly.
- ❖ I feel close to other people.
- ❖ I can form my own opinions.

3. Psychological resilience: Where pupils can look for support

Family relationships: At home, there is an adult who...

- ❖ Is interested in what I do at school.
- ❖ Believes that I will be successful.
- ❖ Wants me to do my best.
- ❖ Listens when I need to talk.

Relationships with adults at school: At school, there is an adult who...

- ❖ The person really cares about me.
- ❖ Praise me when I do something well.
- ❖ Listens when I need to talk.
- ❖ Believes that I will be successful.

Relationships with adults in the community: Outside of school there is an adult who...

- ❖ The person really cares about me.
- ❖ Praise me when I do something well.
- ❖ Believes that I will be successful.
- ❖ I can trust.

Involvement in Community Life: Outside school...

- ❖ I am a member of a club, sport team, church group, or another type of group.
- ❖ I attend leisure activities (music, art, sports, or have another hobby).

Peer support: At school, there are students who...

- ❖ ... choose you for your team during school tasks or games.
- ❖ ... to tell you that you are good at something.
- ❖ ... explain the rules of a game if you don't understand them.
- ❖ ... invite you to their home
- ❖ ... to share things with you.
- ❖ ... to help you if you are hurt.
- ❖ ... miss you when you are not at school.
- ❖ ... Help you feel better when something is bothering you.
- ❖ ... choose you as a partner (e.g., for an activity or game).
- ❖ ... help you if other classmates treat you badly.
- ❖ ... tell you that you are their friend
- ❖ ... invite you to join them when you are alone
- ❖ ... to tell you their secrets.

Involvement in family and school life: I feel that ...

- ❖ I can make things better at home.
- ❖ I take part in decision making within my family.
- ❖ At school, I help decide things like class activities or rules.
- ❖ I can make things better at school.

Empathy

- ❖ I feel bad when someone is hurt.
- ❖ I try to understand how others feel.

Problem solving

- ❖ When I need help, I look for someone to talk to.
- ❖ I know who to go to when I have a problem.
- ❖ I try to solve problems by talking about them.

Goals and plans

- ❖ I have goals and plans for the future.
- ❖ I think when I grow up, I will be successful.

4. Relationships

- I get along well with my parents/guardians.
- I am very good at helping my students.
- I have someone I can cooperate with.
- I have someone who listens to me.
- I feel like I belong to school.
- I feel accepted in my class.

5. Safety

- I feel safe at school.
- I feel safe at home.
- I feel safe in my neighbourhood.

6. Leisure and engagement

- I enjoy spending my free time.
- I have enough opportunities to do what I enjoy.
- Outside of a school, I am a member of club, sport team, church group or another type of group.

7. Experience in school

- I enjoy going to school.
- I feel successful at school.
- I can confide in someone at school when I have a problem.
- I feel that the teachers respect me.

8. Self-care and healthy lifestyle

- I eat healthy.
- I get enough sleep.
- I exercise or stay physically active regularly.
- I do things that bring me joy.

9. Coping and support

- When I feel sad, I know what to do to feel better.
- When something bothers me, I talk to someone about it.
- I know where to find help when I need it.