



Resilience and Pedagogy

Theoretical Framework

Wave 1 – 2024/2025

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A Multilevel Panel for Assessing the Impact of Waldorf Education on Students' Resilience within the Framework of the Salutogenesis Model of Health

Introduction

Childhood and adolescence are critical developmental stages marked by rapid neurocognitive, emotional, social, and academic growth, making young people particularly vulnerable to psychological issues and fluctuations in subjective well-being (Sawyer et al., 2012). During these periods of intense growth, adolescents often struggle with adaptation, leading to an increased risk of long-term mental health problems such as depression and anxiety, which can persist into adulthood (Oswald et al., 2007). These mental health challenges have been exacerbated by the global rise of digital technology and its associated impacts on social interaction, attention, and emotional stability.

As the American social-psychologist Jonathan Haidt highlighted in *The Anxious Generation*, the decline of 'play-based childhood' and the rise of 'phone-based childhood' have contributed to this epidemic of teen mental illness (Haidt, 2024). This 'great rewiring' of childhood has interfered with social and neurological development, introducing challenges like sleep deprivation, attention fragmentation, loneliness, and social comparison—all of which have particularly damaging effects on mental health. The implications of these issues are alarming: they threaten not only individual well-being but also the broader social fabric, as today's youth struggle to find meaning and stability in an increasingly complex and crisis-laden world.

Waldorf pedagogy, rooted in Steiner's Anthroposophy, offers a potential framework to address these developmental crises. By integrating both epistemological and spiritual dimensions, Waldorf education nurtures the whole child—body, soul, and spirit—encouraging independent exploration, creativity, and emotional balance (Sobo, 2015). This pedagogical approach emphasizes not just rational knowledge but also the cultivation of inner moral and spiritual strength, offering a holistic understanding of human development (Schieren, 2023). In this way, Waldorf education might serve as a vital counterbalance to the disconnection and fragmentation caused by modern technological and societal pressures.

The goal of this research is to develop a multilevel panel to collect and analyse emotional, contextual, and relational data, focusing on whether Waldorf education contributes to the development of resilience in students from a salutogenic perspective.

Research Questions

1. Does Waldorf education contribute to the development of resilience in students?
2. How do the emotional, contextual, and spiritual aspects of Waldorf education influence students' resilience?
3. Is the development of resilience among students in Waldorf schools comparable across different cultures?
4. What is the relationship between resilience and the Sense of Coherence?

Theoretical Framework

Conceptualization of Resilience Over a Span of 50 Years

Time	Theorist	Findings
1970s	Norman Garmezy	Children of schizophrenic parents, despite their high-risk status, did not develop severe psychopathologies. Instead, they exhibited resilience, demonstrating normal or even exceptional adjustment.
1980s	Emmy Werner	Conducted the Kauai Longitudinal Study, which followed nearly 700 children in Hawaii from birth to adulthood. About 1/3 of the high-risk children were found to grow up to be competent, confident, and caring adults, highlighting the role of protective factors like strong relationships and community support.
1980s ~ 1990s ~ 2010s	Michael Rutter	The psychiatrist who researched in the context of child development and psychopathology proposed that resilience is not a fixed trait but a dynamic process that involves interactions between an individual's biology, psychology, and environment. Seminal works include the concept of "cumulative risk", "steeling effect", "mechanism of resilience", "school as protective factors". Isle of Wight Study: Showed that positive school environments and supportive relationships with teachers and peers promoted resilience. Introduced the concept of "steeling effects," where moderate stressors could strengthen coping mechanisms. Romanian Orphanage Study: Demonstrated the potential for recovery and resilience in children adopted from severe deprivation. Continued to emphasize the dynamic nature of resilience, involving interactions between biology, psychology, and environment. Further explored the mechanisms of resilience, including genetic, psychological, and environmental interactions.
1990s	Suniya Luthar	Examined resilience among adolescents in affluent communities and found that high expectations and pressure to achieve could undermine resilience, thus different socio-economic status can imply different type of stressors. Highlighted the importance of supportive parenting and balanced lifestyles for fostering resilience.
2000s	Ann Masten	Focusing on developmental psychology and the adaptive processes, she introduced the concept of "ordinary magic," suggesting that resilience arises from common protective systems like family support and cognitive skills. Masten's research spans including schools and communities, where she explored how children and adolescents develop resilience through experiences of challenge and support, emphasizing the role of competence, autonomy, and positive relationships in fostering resilience.
2000s	Michael Ungar	The scholar in the field of social work developed the social ecological model of resilience, emphasizing the importance of context and culture in shaping resilience. He highlighted how supportive social networks and community resources contribute to resilience in diverse populations.

Critical views on Resilience

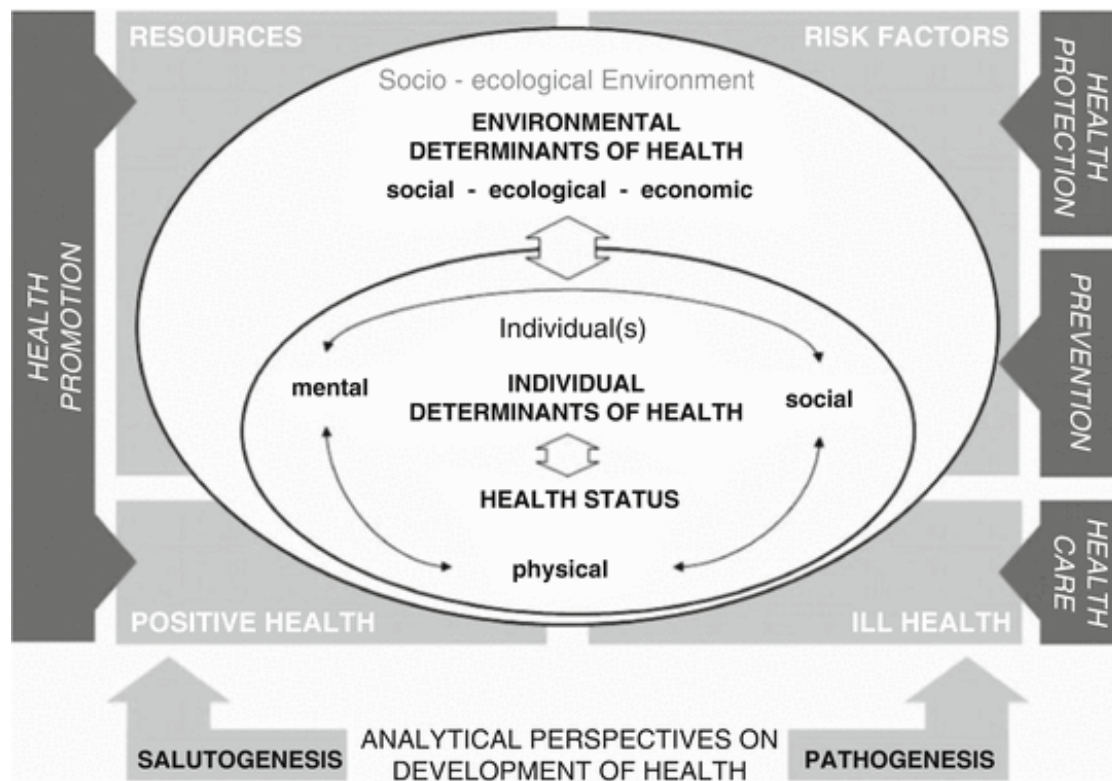
Resilience is widely acknowledged as a valuable quality, enabling individuals to navigate adversity and achieve positive outcomes. However, it is crucial to clarify the purpose and context in which resilience is studied.

- Resilience research that primarily stems from extreme cases, such as children of schizophrenic parents or those facing severe adversity, does raise concerns about generalizability to broader populations (Masten & Cicchetti, 2016)
 - extreme cases -- specific contexts -- exceptional protective factors
 - extreme cases could inadvertently create a bias
 - glamor light on exceptional individuals
 - overshadowing the majority who may struggle more significantly in similar circumstances.
- Resilience as a process does not universally ensure positive outcomes
 - due to variability in individual responses, contextual factors, and the complexity of adversity.
 - While some achieve growth and adaptation, others may struggle despite resilience efforts. Factors like socio-economic conditions, support networks, and personal traits influence outcomes.
 - Long-term effects can vary, contingent on ongoing stressors and access to resources.
- Resilience as a neutral process can indeed lead individuals to adapt and endure in toxic environments (O'Connell et. al., 2015).
 - adaptations help individuals survive in challenging circumstances, they may not necessarily lead to positive long-term outcomes
 - children in abusive households may develop resilience by suppressing emotions to avoid punishment, which can have detrimental effects on mental health in adulthood
 - resilience in toxic environments can sometimes perpetuate harmful coping mechanisms rather than fostering genuine well-being.

Introducing a broader perspective

The Salutogenic Model of Health (Antonovsky, 1984)

The Salutogenic Model of Health begins with the idea of 'the river of life'. It is a misconception that most people are safely ashore and that it is sufficient to erect barriers to prevent people from falling into the river and provide rescue services for those who stumble in. Salutogenesis views all people as being born into the river of life, needing to learn to swim and navigate its dangers and obstacles. This standpoint makes the theory more generalizable to the whole population because it focuses not on stress as pathogenic per se, but on how we handle stress, which makes a difference in our outcome and well-being.



The Salutogenic Model of Health is a systems theory, drawing on a range of biological, psychological, sociological, anthropological, and measurement theories that Antonovsky considered essential to his idea about the origins of health (Antonovsky, 1984). The Sense of Coherence (SOC), one of two key constructs of the theory, is a subjective lens through which life may be experienced as more or less comprehensible, manageable, and meaningful. A strong SOC facilitates the adaptive use of resources to tackle life's various stressors. Expounding on the concept of resources, Antonovsky coined the term "generalized resistance resources," another key construct in the Salutogenic Model of Health (Antonovsky, 1993).

Implicitly of Resilience within the Salutogenic Model of Health (Mittelmark & Bauer, 2017)

Resilience and the Salutogenic Model of Health, as articulated by Antonovsky in 1984, are not mutually exclusive concepts. While *the model* primarily focuses on the SOC as a central construct, resilience is implicitly included within its broader framework. Antonovsky's theory emphasizes that individuals' ability to perceive life as comprehensible, manageable, and meaningful Sense of Coherence (SOC) enhances their capacity to effectively manage stressors and maintain health (Mittelmark et. al., 2022).

Although resilience itself is not explicitly measured in the SOC scale, the salutogenic approach underscores the importance of adaptive responses to stress and the utilization of generalized

resistance resources. These resources encompass personal, social, and environmental factors that contribute to an individual's ability to cope and thrive despite adversity.

Current research interest in both resilience and the salutogenic model of health has surged due to their complementary perspectives on well-being. Resilience research explores individuals' capacity to bounce back from adversity and thrive, while the Salutogenic Model of Health offers a holistic framework for understanding how individuals manage stressors and maintain health over the life course. Integrating these themes provides a comprehensive approach to promoting resilience and well-being across diverse populations.

Research Gap

Despite significant advancements over decades, gaps remain in the research fields of resilience and the Salutogenic model of health. There is a notable lack of attention to the spiritual dimensions of resilience, the specific role of school environments in fostering resilience, and a scarcity of large-scale, representative panel studies to track resilience longitudinally across diverse populations. Addressing these gaps can provide deeper insights into resilience mechanisms and contribute to more effective interventions and policies aimed at enhancing well-being.

Mixed-Mode Methodology

This research employs a mixed-mode methodology combining qualitative and quantitative approaches to address the identified research gaps comprehensively (Hox et. al., 2017).

1. Qualitative Component

Objective: To explore the contextual and spiritual aspects of resilience and their interplay with health and education in school settings.

- **Focus Groups:** Conduct focus groups with students, teachers, and parents to gather in-depth insights into the spiritual dimensions of resilience and the contextual factors within schools that support or hinder resilience.
 - *Participants:* Select participants from a diverse range of schools across four countries, ensuring representation from different age groups, socioeconomic backgrounds, and educational environments.
 - *Procedure:* Use semi-structured interviews to allow flexibility and depth in exploring participants' experiences and perspectives.
 - *Analysis:* Employ thematic analysis to identify common themes and patterns related to resilience, spirituality, and school context.

2. Quantitative Component

Objective: To capture changes in resilience over time and examine causal relationships between school environments, teacher credentials, and student resilience.

- **Panel Survey:** Implement a longitudinal panel survey to track resilience in students across different schools and countries over a specified period.
 - *Participants:* Aim to include a representative sample of students from schools in each participating country, for example a total population of 3000 students.
 - *Sample Size Calculation:* Assuming a confidence level of 95% and a margin of error of 5%, calculate the required sample size and account for a 30% non-response rate, approximately we need to send out 560 - 600 invitations per region.

- *Sample size is calculated with the formular*

$$n = \frac{Z^2 \times p \times (1 - p)}{E^2}$$

- *Procedure:* Distribute standardized resilience scales and additional measures related to the Salutogenic Model of Health. Collect data at multiple time points to monitor changes and trends.

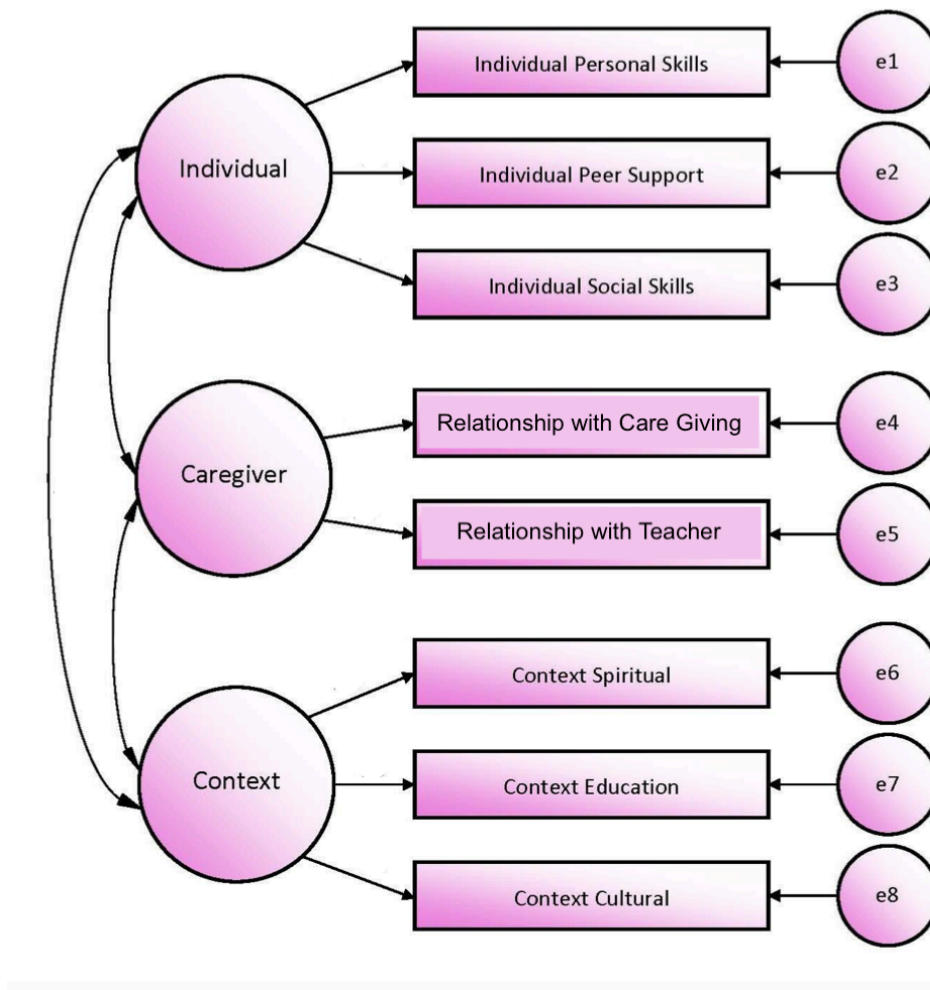
- ***Child and Youth Resilience Measure (CYRM)***

The Child and Youth Resilience Measure (CYRM) is a measure of the resources (individual, relational, communal, and cultural) available to individuals that may bolster their resilience. The measure was developed as part of the International Resilience Project (IRP) at the Resilience Research Centre (RRC) in 14 communities around the world (Ungar & Liebenberg, 2011).

- ***Sense of Coherence Reduced version (SOC-R)***

In its measurement, the SOC-R scale is comprised of three theoretical aspects that focus on the ability to deal with ambiguous life stress. The 'Manageability' aspect refers to dealing with difficult situations; the 'Balance' aspect refers to the balancing of positive and negative life experiences and feelings; and the 'Reflection' aspect refers to the consideration of different perspectives and understanding connections to the wider context (Bachem & Maercker, 2016).

- *Analysis:* Perform multilevel modeling to assess the impact of school-level variables (e.g., teacher credentials) on student-level resilience. Ensure measurement invariance across countries before conducting cross-national comparisons.
- Expecting Structure of Resilience:



3. Mixed-Mode Integration

Objective: To integrate qualitative and quantitative findings to provide a holistic understanding of resilience in educational contexts.

- **Data Triangulation:** Combine qualitative insights from focus groups with quantitative survey data to validate and enrich findings. Use qualitative data to interpret quantitative results and explore underlying mechanisms.
- **Comprehensive Analysis:** Address how spiritual dimensions and school environments contribute to resilience, considering both individual and contextual factors. Examine the implications for policy and practice in educational settings.

Conclusion

By employing a mixed-mode methodology, this research aims to fill critical gaps in the understanding of resilience and the Salutogenesis model of health. The integration of qualitative and quantitative approaches provides a comprehensive view of how resilience develops and is sustained in school contexts, highlighting the importance of spiritual and contextual factors. The findings will contribute to more effective interventions and policies to enhance student well-being and resilience across diverse populations in the global Waldorf movement.

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