

Environmental Factors Affecting Teacher Resilience in Special Education: A Systematic Review and SWOT Analysis

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Abstract

The high mobility of special education teachers as a result of the various dilemmas encountered in schools is not conducive to the learning and living of children with special needs in schools. To improve teacher resilience that contributes to greater teacher stability by improving the environment, this research seeks for environmental factors that favor the development of growth in teacher resilience. A total of 29 papers that met the authors' requirements were conducted with System Analysis and approximately 33 variables were identified to have influences on teacher resilience. The 33 variables were furthermore used for SWTO Analysis to derive the environmental factors. The results showed that School organizational climate, Professional study plan, School leadership support, Working conditions, Relationship trust among colleagues, Social support, and Teacher professional development can lead to the growth and development of teacher resilience.

Keywords: Teacher Resilience; Environmental factors; System Analysis; SWTO Analysis

Introduction

What is resilience?

Resilience research can be traced back to studies on crisis response and stress management (Borazon & Chuang, 2023). Resilience was initially explored to describe the trait of successfully adapting to changing circumstances and being less vulnerable, with a focus on the factors or characteristics that help individuals successfully turn adversity into triumph (Calgaro, Lloyd & Dominey-Howes, 2014). Rutter (1987) introduced the concept of protective factors, which he believed would enable individuals to reduce the impact of crises and maladjustment in unfavorable circumstances and reduce negative outcomes. In addition to the concept of protective factors, the research on the formation of resilience protection mechanisms suggests that the study of resilience is not only about finding out what characteristics an individual possesses but also about how resilience helps an individual resist stress. Werner (1992) further distinguished three levels of protective factors personal characteristics (including good personal traits, high internal control, and self-esteem), family factors (including good parent-child interactions, emotional support, and effective parenting), and social support systems (including good social support networks, social organizations, and participation in activities).

The earliest studies of resilience were based on the physics concept, which originally referred to the rebound of an object after it had been compressed by an external force. Over time, the definition of teacher resilience has evolved with the development of research and different perspectives. Webster's new world dictionary has two notes on resilience: the ability

to be flexible or to return to its original shape or position, and the ability to regain strength, spirit, and a good mood. Masten, & Barnes (2018) argue that positive patterns of development in the face of adversity have been widely described as the phenomenon of 'resilience', i.e. the ability, process or outcome of positively adapting to adversity. The ability to resist setbacks, adapt positively and recover from adversity is known as 'resilience' (Killgore, Taylor, Cloonan & Dailey, 2020). Walker (2020) believes that resilience in its simplest definition is the ability to respond to shocks and remain functional in approximately the same way.

Bronfenbrenner (1979; 1995) developed the ecological system theory related to human development, he believed that everyone can be regarded as embedded in multiple nested systems with different environmental degrees, and the development is the result of the complex interaction between various system factors or components of the interaction between the individual and the environment. The ecosystem theory model can be extended to the whole field of education (Obrovská & Sidiropulu Janků, 2021). Meda, & Albukhari (2023) think collaborative working relationships based on Bronfenbrenner's ecosystem are an indispensable way of enhancing the success of special education. Twenty years ago, when discussing the teacher resilience of teachers in special education schools, most of the researchers discussed personal factors, such as personality traits, mental health, and personal interaction (Xiao, 2015; Zhang, Bai, & Li, 2020). In this research, teacher resilience is considered as the most central system circle in the concentric circles of the ecosystem theory, which is an individual competence that is affected by several peripheral system circles at the same time; everything in the school is considered as the micro-system that is closest to the central circle in the concentric circles of the ecosystem theory, which is the environmental factor that affects the individual directly. Therefore, this research hopes to find out "which variables are the environmental factors affecting teachers' resilience", which has been verified by data analysis through system analysis and SWOT analysis.

Why focus on special education?

In the context of attaching importance to education and implementing comprehensive quality education, people with special needs have the right to receive education and are indispensable subjects of education for all. In the 21st century development, with the continuous economic development, populations gradually increases and the number of children and adolescents with disabilities also increases. Thus, developing special education and caring for children with special needs is an important part of building a harmonious society (Zhou, 2019). Special education refers to a method of educating people with physical and mental disabilities, including attention deficit and hyperactivity disorder, autism, intellectual disability, dumb, deaf, blind, and other disabled students through special measures, equipment, and methods (Pan, 2021). The quality of services dedicated to special education can not only measure the education level of a country but also reflect the progress of social civilization. Actively developing special education is the embodiment of China's people-oriented scientific outlook on development and an important way to promote educational equity (Ren, Zhang, Cao & Mao, 2021). Since the Special Education Promotion Program (SPP) (2014-2016) was issued by the Chinese Ministry of Education and another seven departments in 2014, special education schools have obtained more independent administrative power. The Chinese government expected the release of the SPP to provide significant opportunities for the development of special education in China. Since its publication, the SPP has been amended several times to further protect the rights of special education students and provide a solid foundation for the rights of students with physical and

mental disabilities in special education in China. Therefore, special education in China needs continuous plans for development and the attention of researchers.

Why is teacher resilience important for special education teachers?

Fernandes, Jardim & Lopes (2021) believed that the prerequisite for special education is the teacher's ability to withstand stress. Special education teachers are the key element of the development of special education process (Dingle, Brownell, Leko, Boardman & Haager, 2011). In the context of special education, soft skills are the decisive factor of teacher education action (Pijl, Meijer & Hegarty, 1997; Cinque, 2016). Sultanova, Hordiienko, Romanova & Tsytsiura (2021) hold the view that teacher with a healthy mind can more easily overcome the challenges of today's teaching career and thus be able to effectively manage daily tasks in a challenging environment. Pickl, Holzinger & Kopp Sixt (2015) showed that teachers need to improve their skills in reflexivity, resilience, reflexivity, collaborative work, and effective communication. The resilience is seen as a dynamic interaction between risk and protective factors, which may come from within individuals or the environment (Crompton, Chigona & Burke, 2023). Resilient teachers can utilize they personal soft skills by assuming behaviors that help him achieve success in situations where he has to face pressure or adversity (Bogler & Somech, 2023). Mu, Hu & Wang (2017) found from an ecological perspective that students in special education schools already face multiple stress factors, which require teachers in special education schools to have sufficient resilience to find sufficient resources and minimize students' difficulties. Resilience can be defined as the ability to apply knowledge, attitudes, and skills to prevent, minimize, or overcome the harmful effects of crises and adversity (Duchek, 2020). Wang & Lo (2022) proposed that special education teachers need resilience to cope with the inevitable adversity caused by their profession. Resilience is an important area of research in psychology, which aims to explore how people achieve positive adaptive outcomes in adverse situations (Luthar, Lyman & Crossman, 2014; Hoegl & Hartmann, 2021). Fernandes, Jardim, & Lopes (2021) identified special education teacher resilience as an important and understudied indicator of resilience in the face of adversity. Improving teacher resilience can be effective in preventing teacher burnout and promoting quality teacher retention, among other things (Zadok-Gurman, et al, 2021; Stewart & Rotheram-Fuller, 2021). The psychological well-being of special education teachers can be maintained and promoted through the development of resilience. Hence, Teacher's resilience is an area of research worthy of research.

Research Objective

The purpose of this research was to investigate and study teacher resilience among teachers facing adversity. Specifically, the objective was to identify environmental factors that favor the development of growth in teacher resilience.

Research Methods

A predetermined search strategy covering representative "teacher resilience" and "influencing factors" was applied to Google Scholar and China National Knowledge Infrastructure (CNKI) between 2015 and 2024. The search was conducted between June 2023 and June 2024. Any design publications that included research with a primary research focus on teacher resilience. The author began with a full title and abstract screening followed by a detailed reading.

The authors used a systematic analysis to derive factor variables that can influence teacher resilience, and then drew on a Strengths Weaknesses Opportunities Threats Analytical Method (SWOT analysis) to derive environmental factors that are conducive to the growth and development of teacher resilience.

SWOT analysis is used to assess various aspects of a business in terms of strengths, weaknesses, opportunities, and threats (Jackson, Joshi & Erhardt, 2003; Kim, 2005). According to Davis (2007), tools such as the External Factor Evaluation (EFE) matrix, the Internal Factor Evaluation (IFE) matrix or the Competitive Profile Matrix (CPM) can also be used to construct SWOT matrices. Benzaghta, Elwalda, Mousa, Erkan & Rahman (2021) were of the opinion that SWOT analysis is undoubtedly an important tool for strategic planning, and it has been applied in many different fields and contexts and can be divided into five main areas, namely general management, academia and education, marketing and social media, health and wellness, and agriculture. According to the research objectives of this research, the author believes that the direction of thinking in the opportunities section of the SWOT analysis will help the author to analyze and summarize the environmental factors that are conducive to teacher resilience development.

Inclusion criteria

Table 1 lists the inclusion and exclusion criteria for the research. Eligible studies were limited to research reports describing original research written in English. Reviews, case reports, commentaries, government reports and non-peer-reviewed papers were excluded. The primary population of interest was teachers working in schools. Given our focus on teacher resilience, research was asked to identify or name 'teacher resilience' as the focus of the investigation.

Table 1 *Review inclusion and exclusion criteria*

	Inclusion criteria	Exclusion criteria
Study design	Cohort studies, cross-sectional studies, randomized trials and qualitative studies reporting original research.	Reviews, case reports and commentaries.
Type of paper	Peer-reviewed published papers.	Non-peer-reviewed papers, grey literature.
Participants	Teachers who have been traumatized or afflicted by exposure to adversity.	Exposure to hardship as a result of physical rather than social factors, for example, natural disasters, cancer, genetic disease or physical disability.
Informants	All staff at the school	
Outcomes of interest	Factors associated with resilient outcomes.	

Research Results

Flores (2018) identified 23 relevant aspects of resilience, which are organized according to four overall dimensions: emotion (managing emotion, enjoying teaching, etc.), career relevance (commitment, reflection, and flexibility to students, etc.), motivation (motivation and enthusiasm, positive optimism, etc.), and social interaction (interaction with students and colleagues, interpersonal relations, and communication skills, etc.). In a research project on an empirical study of teacher resilience in vocational institutions from a social support network perspective, Du (2018) found that individual differences in teachers' gender, age, teaching experience, title, and education could influence teacher resilience, resulting in significant differences in teacher resilience. In addition to individual teacher differences, occupational stress from the external environment is also a significant predictor of resilience (Zhou & Ning, 2020; Zhang, Yao & Liu, 2020). The data also support the finding that teacher resilience is influenced by school support. In addition to school support, social support, which has a broader reach, can also influence teacher resilience (Xie, et al., 2018). Teachers' emotions can have an impact on their own resilience, and positive emotions have been found to impact resilience in primary school teachers (Zhi & Derakhshan, 2024). The findings show that some factors can positively influence teachers' resilience, while some factors negatively influence teacher resilience. This chapter will summarize the relevant research on the impact of teacher resilience in recent years, as shown in Table 2:

Table 2 *List of Research about Factors Affecting Teacher Resilience.*

Researcher	Factors Affecting Teachers' Resilience	
Wu, et al., (2018)	Personal gratitude tendency	
Naemi (2018)	Teachers' basic psychological needs and satisfaction	
Yao & Yang (2019)	School organizational climate	
Fernandes, Peixoto, Gouveia, Silva & Wosnitza, (2019)	Professional study plan	
McGraw & McDonough (2019)	Personal reflection and strategic thinking	
Li, Gu & He (2019)	Working conditions and Trusting relationships in schools	
Shirazizadeh, Tajik & Amanzadeh (2019)	Metacognitive and practical reflection	Protective Factors
Van Wingerden & Poell (2019)	Meaningful work, Participation in work, Work formulation	
Ngui & Lay (2020)	Teachers' EQ, self-efficacy, and subjective well-being	
Daniilidou, Platsidou & Gonida (2020)	Personal self-efficacy	
Ayoobiyan & Rashidi (2021)	Teachers' personal reflection	
Zhang & Wu (2021)	Social support	
Sagar (2021)	Teachers' emotion regulation skills and self-control	
Chen (2022)	Teachers' self-sympathy	
Larasati & Kuswandono (2023)	Teacher professional development	

Heng & Chu (2023)	Teacher reflection and Teacher self-efficacy	
González-Valero, et al., (2023)	practice of a physical-sports activity	
Xu, et al., (2023)	Teachers' competence	
Belknap & Taymans (2015)	Teachers feel isolated and underprepared	
Chou, Lee & Wu (2016)	Negative emotions of teachers	Risk
Boldrini, Sappa & Aprea (2019)	Difficulties perceived by teachers	Factors
Zhang, Bai & Li (2020)	Teachers' barriers to teaching	
Polat, et al., (2023)	Organizational ostracism	

The factors identified by the “SWOT Analysis” and categorized them into positive factors that can influence teacher resilience through teachers’ internal factors, negative factors that can influence teacher resilience through teachers’ internal factors, positive factors that can influence teacher resilience through teachers’ external environmental factors, and negative factors that can influence teacher resilience through teachers’ external environmental factors, which are:

Intrinsic teacher personal factors that positively influence teacher resilience include Individual background differences, Personality traits, Personal emotions, Personal gratitude tendency, Perceived social support, Personal self-efficacy, Meaningful work, Participation in work, Work formulation, Teachers’ personal reflection, Metacognitive and practical reflection, Teachers’ basic psychological needs and satisfaction, Teachers’ EQ, Subjective well-being, Teachers’ self-sympathy, Strategic thinking, and Teachers’ emotion regulation skills, self-control, Practice of a physical-sports activity and Teachers’ competence.

External environmental factors that positively influence teacher resilience include School organizational climate, Professional study plan, School leadership support, Working conditions, Relationship trust among colleagues and Teacher professional development.

Intrinsic personal factors that negatively affect teacher resilience include Difficulties perceived by teachers, Teachers feeling isolated and underprepared, and Negative emotions of teachers.

External environmental factors that negatively affect teacher resilience are Occupational stress, Organizational ostracism and Teachers’ barriers to teaching.

The author identifies the seven of the environmental variables that are positive for teacher resilience, namely “School organizational climate, Professional study plan, School leadership support, Working conditions, Relationship trust among colleagues, Social support, and Teacher professional development”.

Discussion

According to Beltman, Mansfield & Price (2011) the results of a systematic analysis using 50 empirical researchers found that resilience is the result of a dynamic relationship between individual risk and protective factors, and that contextual support or protective factors may come from sources such as school administration, colleagues, and students. “School /administrative support, Mentor support, Support of peers and colleagues, Working with the students, Characteristics of pre-service program, Support of family and friends” was identified as a contextual (environmental) protective factor in favor of teacher resilience.

The findings of both author is similar in terms of “leadership support, surrounding individual support, and on-the-job training”; however, the present study also referred to the wider peripheral environmental factors of school organizational climate; Although “Characteristics of pre-service program” and “Professional study plan and Teacher professional development” both contain the element of “training”, the definitions of the three variables are ultimately different. Although we have all analyzed the factors that can affect teacher resilience into four groups, this research is innovative in classifying them using the analytical logic of SWOT analysis. At the same time, this research must admit that 29 papers for systematic analysis will still suffer from insufficient sample size.

Conclusion

Through Systematic Review, the researcher obtained 33 variables that can affect teacher resilience, then the researcher used SWOT to analyze these variables affecting teacher resilience in four main categories. The answer to research question 1 of this research is: *School organizational climate, Professional study plan, School leadership support, Working conditions, Relationship trust among colleagues, Social support, and Teacher professional development* are environmental factors that positively affect teacher resilience.

Recommendations

Based on the conclusions of this research, the author has the following thoughts to bring to the attention of those involved:

For the educational department.

With regard to special education, although the attention paid by the education department to special education has increased to varying degrees every year, and a system of laws and regulations in the field of special education is being established and is being improved, the attention paid by the education department to special education has yet to be increased compared to other fields with a larger audience (e.g., shadow education, etc.). The education department can make its budget more favorable to the construction of infrastructure in special education schools and to the support of teachers and students, and can strengthen administrative supervision to ensure that policies and funds are implemented in a more targeted manner. For in-service teachers in special education schools, the education department should also organize more professional learning, assist schools in promoting teachers’ professional development, help individual teachers to build a healthy psyche, and enhance teachers’ performance in teacher resilience, so as to ultimately ensure and improve the retention rate of in-service teachers in special education schools; The education department can also make an appeal to researchers to do more scientific research in the field of special education, to provide in-service teachers in front-line special education schools with more theories on special education to help them provide better assistance to students.

For principals of special education schools.

Principals of special education schools are required to report truthfully to the education authorities on the situation of the teachers and students in the school and the overall situation of the school, so as to assist the education authorities in formulating coordinated work in the light of the actual situation of special education; The principal of a special education school needs to manage the school in a more enlightened way. At the same time, the principal needs to communicate the school’s development goals clearly to everyone in the school, and needs

to receive and accept suggestions from everyone in the school on the management and development of the school, it is all the more important for the principal to empower the leadership of the school to the thoughtful and capable subordinates in the school for the long-term development of the school; Principals should pay more attention to the teachers in their school, and the mental health of teachers is a key concern of principals, and principals should be proactive in identifying teachers' perceived frustrations, looking into the causes of these frustrations, and finding ways to resolve them, as well as increasing the organization of various activities that enable teachers to develop professionally.

For in-service teachers in special education schools.

As teachers in special education schools, teachers should communicate and learn more from their colleagues and leaders, and should respond effectively to the actual situation in the school to the principal; Actively participate in various learning and exchange activities organized by education department, schools and even among colleagues; In work and life, teachers need to take the initiative to find a variety of ways (e.g., outdoor sports activities, volunteer activities, academic advancement programs, etc.) to increase teacher resilience and ensure their mental health.

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