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The Effect of Self-Efficacy Intervention Programs in Children: A Protocol for a Systematic Review *

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Abstract: Self-efficacy, defined as an individual's belief in their ability to succeed in certain situations, is a critical aspect of child development that significantly impacts various areas of life, including academic performance, social interactions, and emotional well-being. The importance of self-efficacy in children is highlighted by its role in promoting the resilience and motivation necessary to overcome childhood and later challenges. Recent research on self-efficacy intervention programs for children has highlighted various strategies and their effectiveness in increasing self-efficacy in different contexts. Self-efficacy in children appears to be a vital component that affects children's academic achievement, social interactions, and emotional resilience. Understanding and improving the factors that affect children's self-efficacy will increase the number of healthier and more successful individuals in society for parents, educators, and policy makers. In this context, interventions, educational tactics, and programs designed to increase self-efficacy levels in children and adolescents will be systematically reviewed. This study aims to clarify whether the current state of the research is suitable for a systematic review. A comprehensive search was conducted using the terms 'self-efficacy, children' and 'intervention' in databases such as EBSCOhost, Web of Science, PubMed, Scopus and DergiPark applying inclusion and exclusion criteria. The initial search yielded 122.829 studies spanning from 2015 to 2025. The planned review aims to provide a new perspective for educators and practitioners by providing a comprehensive analysis of interventions in different areas for the development of self-efficacy. Considering the significant amount of studies in this area, researchers need to conduct an extensive literature review. A thorough review of existing literature can provide resources for new research and can also inspire the design of new interventions and prevention measures in this area.

Keywords: Self-efficacy, Children, Intervention, Treatment.

Introduction

Self-efficacy refers to individuals' belief in their ability to successfully perform the behaviors necessary to achieve specific goals. Bandura's Social Learning Theory (Bandura, 1977) outlines how self-efficacy is shaped through cognitive, behavioral, and environmental factors, offering a comprehensive framework for understanding the development of self-efficacy. It is believed that self-efficacy is the most powerful predictor of human behavior. Bandura defined self-efficacy as "belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). In this regard, self-efficacy is a belief about one's ability and, therefore, may not necessarily align with actual competence in a given domain (Artino, 2012).

Bandura (1977) identified two key components of self-efficacy: outcome expectations and efficacy expectations. Outcome expectations are based on individuals' expectations about the consequences of their actions. This type of competence reflects an individual's ability to control environmental factors to achieve a desired outcome (Bandura, 1998). Efficacy expectations, on the other hand, relate to the consistency between an individual's effort and their belief in their own competence. Throughout life, individuals evaluate the effectiveness of their actions and compare them to those of others. A person may develop a positive sense of self-efficacy even if they are not actually skilled in a given area, simply because they believe they possess the ability. Conversely, a person may exhibit a low sense of self-efficacy and behave ineffectively even when they have the necessary skills (Bandura, 1977).

According to Bandura (1977), self-efficacy influences a person's choice of activities, effort, and persistence. Individuals with low self-efficacy may avoid tasks, while those with high self-efficacy are more likely to engage in them. The tendency of individuals with high self-efficacy to exert more effort and persist longer is particularly important, as most personal achievements require persistent effort. In this sense, low self-efficacy can become a self-limiting process. Therefore, individuals need a strong sense of self-efficacy to overcome life's inevitable challenges and succeed (Bandura, 1997).

According to Social Cognitive Theory (Bandura, 1997), children develop and modify their sense of self-efficacy through interpreting information from four main sources: past experiences (mastery experiences), feedback and evaluative information from others (social persuasion), observing models in reference groups (vicarious experiences), and physiological and emotional states experienced during or while thinking about a performance. Bandura (1986) argued that having self-efficacy beliefs slightly above actual abilities may be beneficial, as it can increase effort and persistence during difficult times.

Research has shown that self-efficacy predicts academic success and influences various aspects of children's lives, including physical activity, dietary habits, and social interactions (Bozgün & Pekdoğan, 2018; T et al., 2018; Curelaru et al., 2020). The development of self-efficacy in children is significantly influenced by both parental factors and educational environments, highlighting the importance of supportive contexts that strengthen children's belief in their abilities (Nursanti et al., 2023; Kim et al., 2017; Lu et al., 2015). Fostering self-efficacy in children not only promotes self-confidence and self-awareness of abilities but also enhances metacognitive awareness, a positive attitude toward learning, and coping skills (Cera et al., 2013). Furthermore, the effects of self-efficacy extend beyond immediate behavioral outcomes, being associated with long-term psychological well-being and resilience in children. High self-efficacy is linked to lower levels of anxiety and higher levels of life satisfaction, indicating that children who believe in their abilities are better equipped to handle challenges and stressors (Moksnes et al., 2018; Shi, 2023). Therefore, understanding the factors that

contribute to the development of self-efficacy in children is essential for educators, parents, and policymakers aiming to create environments that support healthy psychological and physical development.

Intervention programs designed for children aim to support their cognitive, emotional, and social skills by considering developmental stages. These programs not only promote healthy development but also play a protective role against risk factors. Especially for school-aged children, intervention programs are crucial across a broad spectrum, from academic achievement to social adaptation (Durlak et al., 2011).

In recent years, various intervention programs have been implemented to enhance children's self-efficacy. These programs vary in form, including individual psychoeducational activities, group-based applications, and school-based social-emotional learning (SEL) programs. However, the literature on these programs is scattered and methodologically heterogeneous. There are significant differences across studies in terms of duration, content, techniques used, and assessment tools. This variability makes it difficult for practitioners to determine which types of interventions are most effective (Usher & Pajares, 2008; Klassen, 2004).

At this point, systematic reviews serve as a method to comprehensively, objectively, and transparently evaluate scientific evidence within a field. Systematic reviews synthesize findings from individual studies, reveal general trends, identify research gaps, and help develop evidence-based recommendations for practice (Moher et al., 2009). Therefore, a systematic review focusing on interventions aimed at enhancing self-efficacy in children is expected to make a significant contribution to the literature.

Developing a protocol before conducting a systematic review ensures the scientific validity and methodological consistency of the study. Such a protocol increases transparency, promotes reproducibility, and prevents biased interpretations during the research process (Shamseer et al., 2015). Moreover, protocols enhance reporting integrity by defining potential deviations in advance and increase trust within the scientific community (Moher et al., 2009). In this context, it is considered necessary to develop a clearly defined and pre-established protocol for this study, which aims to systematically examine intervention programs designed to improve self-efficacy in children aged 6 to 12 years.

Method

This study aims to systematically examine intervention programs designed to positively influence the self-efficacy levels of children and adolescents. Accordingly, a systematic review methodology was employed in this research. A systematic review is defined as “the impartial and systematic identification of studies in a particular field based on predefined criteria, the evaluation of the validity of the obtained findings, and the comprehensive synthesis and presentation of results to answer a specific research question” (Çınar, 2021, p.1).

The conduct and reporting of this planned systematic review will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). PRISMA is a standardized and transparent approach that facilitates the rigorous execution of systematic reviews and meta-analyses, thereby enhancing the reliability and usability of their findings (Page et al., 2021).

Inclusion and Exclusion Criteria

The **inclusion criteria** for the review will consist of the following:

1. Interventions specifically designed to influence self-efficacy levels,
2. A sample comprising children or adolescents,
3. Studies conducted within the last 10 years,
4. Peer-reviewed research articles published in academic journals to ensure the quality and reliability of sources.

The **exclusion criteria** will include:

1. Literature types such as reviews, case studies, and descriptive studies that do not provide sufficient empirical evidence required for this analysis.

Search Strategy

To identify studies that examine variables affecting students' self-efficacy levels, searches were conducted using the PubMed, Web of Science (WoS), EBSCOhost, Scopus, and DergiPark databases. The scope of the review was limited to studies published between 2015 and 2025. The search strategy included the following terms: (*"self-efficacy" OR "self efficacy"*) AND (*adolescents OR "children" OR "youth" OR "students"*) AND (*"education" OR "intervention" OR "treatment" OR "program"*). In addition, the search was expanded in databases that may include Turkish literature, such as DergiPark and ERIC, by incorporating the Turkish equivalents of these terms.

Study Records

Data Management

To manage the data extraction process, the Rayyan – Intelligent Systematic Review software, developed by Ouzzani et al. (2016), will be utilized to evaluate eligible articles. Rayyan is an AI-assisted web application specifically designed for conducting systematic reviews. It allows researchers to include or exclude articles, import search results, and remove duplicates efficiently, thereby facilitating the review process.

Selection Process

The researcher will independently screen the titles and abstracts of studies obtained through the search process, eliminating duplicate records. Following this initial screening, the full texts of the shortlisted studies will be thoroughly reviewed to determine their eligibility based on the predefined inclusion and exclusion criteria.

To ensure full transparency of the systematic process, the study selection methodology will be illustrated using a PRISMA flow diagram, as recommended by the PRISMA-P guidelines. This flowchart will detail the entire pathway—from the initial identification of records to the final inclusion of studies—providing a clear overview of the selection process (see Figure 1).

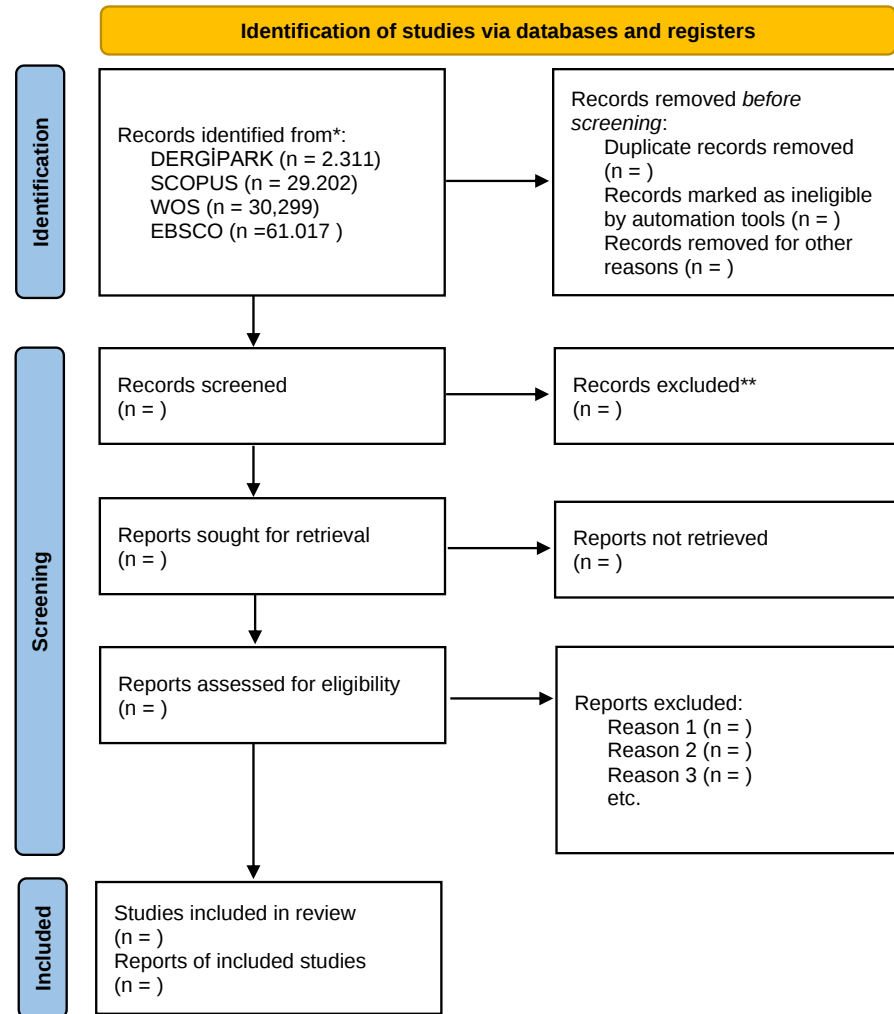


Figure 1. The selection process

Discussion

Self-efficacy, defined as an individual's belief in their ability to succeed in specific situations, is a critical component of child development that significantly affects various aspects of life, including academic performance, social interactions, and emotional well-being. The importance of self-efficacy in children is underscored by its role in fostering the resilience and motivation needed to overcome challenges during childhood and beyond. Recent research on self-efficacy intervention programs for children has highlighted diverse strategies and their effectiveness in enhancing self-efficacy across different contexts.

Studies have shown that children with higher self-efficacy are more likely to engage in self-regulated learning, persist in the face of difficulties, and demonstrate better problem-solving skills. This core belief in their capabilities not only improves their academic outcomes but also contributes positively to their mental health and social competence (Bozgün & Pekdoğan, 2018; Shin, 2021). Beyond academic and behavioral outcomes, self-efficacy plays a crucial role in emotional regulation and coping strategies. Research indicates that children who believe in their abilities are better equipped to handle stress and adversity, which is particularly

significant in contexts of trauma or adverse life conditions (Diehl & Prout, 2002; Han & Park, 2020). For instance, self-efficacy can mediate the effects of traumatic experiences by helping children develop healthier coping mechanisms and reduce the likelihood of developing anxiety or depression (Diehl & Prout, 2002). Thus, promoting self-efficacy in children not only benefits immediate performance but also serves as a protective factor for long-term psychological well-being.

Intervention programs aimed at increasing self-efficacy can enhance children's belief in their abilities, thereby improving both academic achievement and social relationships. These programs may also reduce the negative impact of social challenges on academic success by increasing motivation, strengthening resilience to peer bullying, and improving emotional adjustment (Raskauskas et al., 2015). One key area of focus in self-efficacy-based interventions is health behavior education, which has been shown to significantly improve children's self-efficacy. For example, a study on the Healthy Friends program demonstrated that targeted interventions in healthy eating and physical activity effectively closed the intention-behavior gap, thereby increasing children's self-efficacy regarding physical activity (Isa et al., 2018). Similarly, interventions targeting children with chronic illnesses such as asthma reported increases in self-efficacy following educational programs that helped them manage their health more effectively (Kocaaslan & Kostak, 2019). These findings emphasize the value of structured educational interventions in promoting self-efficacy in health-related behaviors.

Moreover, creative interventions, such as dance therapy, have also been explored. A study in China examining the impact of a Latino dance intervention on left-behind children found significant improvements in both academic motivation and self-efficacy (Zhou et al., 2023). This suggests that engaging children in enjoyable and culturally relevant activities can enhance their self-efficacy in ways that transfer to other areas of life, including academic domains. These findings align with broader evidence that self-efficacy-focused interventions can enhance children's life satisfaction and overall well-being (Long, 2023).

Additionally, self-efficacy is intricately connected to the support children receive from parents and educators. Studies have shown that parental self-efficacy—parents' belief in their ability to influence their children's development—plays a significant role in shaping children's own self-efficacy beliefs (Kong & Yasmin, 2022; Strauß et al., 2001). For instance, parents with high self-efficacy are more likely to engage in positive parenting practices that encourage children's autonomy and learning, thereby fostering a stronger sense of competence in their children (T et al., 2018). This reciprocal relationship underscores the importance of creating supportive environments that nurture both parental and child self-efficacy, which in turn can lead to improved health behaviors and academic achievement (Diehl & Prout, 2002).

Despite the common perception that research on self-efficacy interventions for children is limited, there has been a growing number of studies in recent years, with many published in international databases (Usher & Pajares, 2008; Klassen, 2004). However, the dispersal of these studies across disciplines and the restricted use of keywords may hinder access to this knowledge and reduce visibility in the literature (Bergman et al., 2018; Shogren et al., 2020). Furthermore, the tendency of many systematic reviews to focus only on local-language databases may exclude studies published in English, creating a misleading impression of the available body of evidence (Cunningham & Card, 2014).

In conclusion, self-efficacy in children is a vital factor influencing their academic success, social functioning, and emotional resilience. For parents, educators, and policymakers, recognizing the role of self-efficacy in creating nurturing environments for children's development can significantly contribute to supporting individual growth and long-term well-being.

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