

## Career Self-Efficacy of School and University Students: A Systematic Review of Individual and Contextual Antecedents (1995–2025)

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### Abstract

This article presents a systematic review of research on the antecedents of career self-efficacy among school and university students. Drawing on Social Cognitive Career Theory (SCCT), the review focuses on how individual characteristics and contextual conditions jointly shape students' beliefs in their ability to explore options, make decisions and pursue preferred career pathways. A PRISMA-guided search of Scopus, Web of Science, Emerald and EBSCO identified 48 empirical studies published between 1995 and 2025 that examined career self-efficacy or closely related constructs among secondary and higher education students. Data were extracted using a structured coding template and synthesized thematically.

The findings show that individual antecedents encompass both relatively stable traits (e.g., curiosity, persistence, openness to experience, emotional stability) and malleable psychological resources (e.g., emotional regulation, self-esteem, career adaptability, perceived person–environment fit). Contextual antecedents include social support from parents, teachers, counsellors and peers; structured career interventions such as courses, workshops and experiential programmes; and wider socio-demographic and structural factors related to social class, gender, ethnicity and migration background. Across studies, career self-efficacy is unevenly distributed, reflecting broader patterns of opportunity and constraint.

The review reinforces and refines SCCT by demonstrating that contextual supports and barriers operate as proximal determinants of self-efficacy alongside individual resources, and by highlighting psychological resources as mechanisms linking structure and agency. It identifies major gaps in the literature, including limited longitudinal and inter-sectional research, narrow geographical coverage and short-term evaluations of interventions. The article concludes by outlining implications for theory and practice and by calling for multi-level strategies that combine individual-focused support with efforts to address structural inequalities in education and career guidance.

**Keywords:** Career self-efficacy, Secondary Education, Career decision-making, Social Cognitive Career Theory, Higher Education

**Note:** The authors used AI tools for grammar correction, language refinement, and stylistic adjustments to enhance the clarity and coherence of the manuscript.

### Introduction

Career self-efficacy has become a central construct in educational psychology and career development research because it shapes how young people approach choices about their future. Building on Bandura's notion of self-efficacy as people's beliefs in their capabilities to organise and execute courses of action (Bandura, 1993), career self-efficacy refers to students' confidence in performing tasks such as exploring options, making decisions and pursuing preferred pathways. Prior studies show that these beliefs are closely linked to academic engagement, willingness to explore non-traditional routes and persistence in the face of setbacks, as well as eventual transitions into further study, training or the labour market (Betz, 2000; Jantzer, Stalides & Rottinghaus, 2009; Moldashev et al., 2019; Umirzakov et al., 2019). For adolescents in school and emerging adults in higher education, career self-efficacy is therefore a key psychological resource that underpins how they navigate increasingly complex educational and occupational environments.

Social Cognitive Career Theory (SCCT) has provided a powerful lens for understanding how such beliefs develop. SCCT conceptualises career self-efficacy as arising from the interplay of personal characteristics, learning experiences and contextual supports and barriers (Lent, 2008). Within this framework, students' confidence in their career-related capabilities is not a fixed trait, but a dynamic system of beliefs shaped over time by feedback from family, teachers, peers, institutions and the wider social structure. Empirical studies illustrate, for example, how emotional stability and personality characteristics relate to career

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self-efficacy (Bubić & Ivanišević, 2016), how emotional intelligence supports career-related decision-making (Santos, Wang & Lewis, 2018) and how career adaptability can help young adults maintain confidence in the face of barriers (Creed, 2018; Duffy, Douglass & Autin, 2015). Together, this work points to a complex set of individual and contextual influences that operate across secondary and higher education.

However, despite broad agreement that career self-efficacy plays a decisive role in students' career development, the literature remains fragmented. Studies are scattered across disciplines such as educational psychology, counselling, vocational behaviour and higher education research; they often focus either on intra-individual variables (e.g. personality, self-concept, emotional resources) or on selected contextual influences (e.g. parental support, religious or community support, specific interventions) without integrating these strands (Lent, 2008; Jantzer et al., 2009). The evidence base is dominated by cross-sectional survey research conducted in single institutions, relies heavily on convenience samples and frequently treats socio-economic status, gender, ethnicity and migration background as background controls rather than as central objects of inquiry. As a result, we have useful but partial insights and lack the kind of synthesis needed to understand how individual and contextual antecedents work together across secondary and higher education.

This study addresses these gaps by conducting a systematic review of research on the career self-efficacy of school and university students published between 1995 and 2025. Using a PRISMA-guided approach, we identified, screened, and analysed forty-eight empirical studies that examine career self-efficacy or closely related constructs among secondary and higher education populations. Each article was coded for publication outlet, national context, educational level, methodological approach, measurement strategy, and substantive findings. The coded material was then synthesised thematically to identify recurring patterns in individual and contextual antecedents, as well as notable gaps and imbalances in the evidence base.

The review shows that students' career self-efficacy is shaped by two broad groups of antecedents. Individual factors include dispositional tendencies (such as curiosity, persistence and emotional stability) and malleable psychological resources (such as emotional regulation, self-esteem, career adaptability and perceived person–environment fit). Contextual factors encompass social support from parents, teachers, counsellors, peers and religious or community figures; structured career interventions such as courses, workshops and experiential programmes; and wider socio-demographic and structural conditions linked to class, gender, ethnicity and migration background. By bringing these strands together, the review extends existing knowledge in three ways: it consolidates a fragmented literature into an integrated framework of antecedents, refines SCCT-based understandings of how person–context transactions shape career self-beliefs in adolescence and emerging adulthood, and highlights underexplored areas, including developmental trajectories, intersectional disadvantage and the longer-term outcomes of career self-efficacy.

The remainder of the paper is structured as follows. The next section outlines the methodology of the systematic review, including search strategy, inclusion and exclusion criteria and data coding procedures. The Findings section then synthesises the reviewed studies by organising antecedents into individual and contextual domains and identifying key thematic clusters within each. The Discussion interprets these findings in light of SCCT, drawing out theoretical implications and methodological limitations and outlining directions for future research. The paper concludes by summarising the main contributions and offering practical recommendations for educators, counsellors and policymakers seeking to strengthen the career self-efficacy of school and university students.

## ***Methodology***

### **Data Collection**

This study adopts a systematic literature review approach to ensure transparency, consistency, and rigour in synthesising prior work (Tranfield et al., 2003; Page et al., 2021). The review was guided by the PRISMA framework, which structures the process into four stages — identification, screening, eligibility, and inclusion — and allows readers to trace how the final sample of articles was derived.

The focus of the review is on studies that examine career self-efficacy or closely related constructs such as career decision self-efficacy among students in secondary and higher education. To capture the development of this research over time, the search covered the period from 1995 to 2025. This time frame spans three decades during which both SCCT and the study of self-efficacy in education have expanded significantly.

Searches were conducted in four major databases widely used in education, psychology, and social sciences research: Scopus, Web of Science, Emerald, and EBSCO. Boolean operators were applied to combine keywords and synonyms related to the construct, population, and educational level. Typical search strings

included combinations such as “career self-efficacy” OR “career decision self-efficacy” AND “students” AND (“secondary school” OR “high school” OR “college” OR “university” OR “undergraduate”). The search was restricted to peer-reviewed journal articles written in English. In addition to database searches, manual checks of key journals in career development and educational psychology, as well as backward and forward citation tracking, were conducted to ensure that influential studies not captured by the initial search terms were included (Sarzhanova & Nurgabdeshev, 2025; Umirzakov et al., 2019).

#### *Screening and eligibility*

The initial search yielded a larger pool of publications, from which duplicates were removed. Titles and abstracts were then screened to exclude clearly irrelevant items. Full texts were obtained for the remaining articles and assessed against predefined inclusion and exclusion criteria.

To be included, studies had to: (i) be published in peer-reviewed journals; (ii) empirically examine career self-efficacy, career decision self-efficacy, or closely related career-specific efficacy beliefs as a focal construct; (iii) focus on student populations in secondary schools, high schools, colleges, or universities; and (iv) report primary data based on quantitative, qualitative, or mixed-method designs. Studies that focused exclusively on general self-efficacy without a clear career component, or that addressed broader aspects of career development without measuring self-efficacy, were excluded. Non-journal sources such as books, dissertations, conference papers, and reports were also excluded in order to maintain a consistent quality threshold.

Following this procedure, a final sample of forty-eight empirical studies published between 1995 and 2025 was retained for detailed analysis. These articles represent work conducted in a range of national contexts and educational levels, but all examine how individual or contextual factors shape students’ confidence in dealing with career-related tasks.

#### *Data coding and analysis*

Data from each article were extracted using a structured coding template. For every study, the following information was recorded: year of publication, journal outlet, country or region, educational level of participants (secondary school, high school, college, or university), sample characteristics, research design (quantitative, qualitative, or mixed-method), measurement instruments used to assess career self-efficacy, and key findings related to antecedents and outcomes of career self-efficacy.

On the basis of this coding, descriptive statistics were generated to characterise the evidence base in terms of publication outlets, temporal trends, and methodological approaches. Across the forty-eight studies, approximately nineteen per cent employed qualitative designs, fifty per cent used quantitative survey-based methods, twenty-seven per cent adopted mixed-method approaches, and four per cent were conceptual or theoretical contributions linked closely to empirical work. These patterns confirm that the field is dominated by cross-sectional survey research, with a smaller but growing body of qualitative and mixed-method studies.

The substantive analysis proceeded in two steps. First, findings from individual studies were grouped into broad categories according to whether they focused primarily on individual antecedents (for example, personality traits, psychological resources, academic self-concept) or contextual antecedents (for example, social support, career interventions, socio-demographic conditions). Second, within these two overarching domains, more fine-grained themes were inductively identified by comparing how different studies conceptualised and operationalised predictors of career self-efficacy. This iterative process of constant comparison allowed similar constructs to be clustered and recurring mechanisms to be identified across diverse samples and settings.

The approach adopted here follows established practices in systematic review research (Eva et al., 2019; Nguyen et al., 2025) and is designed to ensure that the synthesis is both transparent and replicable. By combining a structured search and screening strategy with systematic coding and thematic analysis, the review provides a coherent overview of what is currently known about the individual and contextual antecedents of students’ career self-efficacy, as well as the key gaps that warrant further investigation.

Table 1: List of journals and number of articles related to career self-efficacy of high school students (1995–2025)

No		No of papers
1	Career Development International	1
2	Journal of Career Assessment	8
3	Journal of Career Development	12
4	Journal of Counselling & Development	2

5	Journal of Counselling & Psychology	1
6	Journal of Hospitality, Leisure, Sport & Tourism Education	2
7	Journal of Science Education and Technology	1
8	Journal of Vocational Behavior	9
9	Leadership Quarterly	1
10	Personality and Individual Differences	3
11	Research in Higher Education	1
12	The Career Development Quarterly	8
<i>Note — compiled by the authors</i>		

**Publication outlets**

It is interesting to note that most of the papers (77 %) in our review were published in four journals, Journal of Career Assessment, Journal of Career Development, Journal of Vocational Behavior and The Career Development Quarterly (see Table 1). From the analysis of time trends, it is important to note that 66 % of the articles were published after 2009, which leads us to define this issue as a hot topic.

**Research methods used in the articles**

It can be seen from Table 2, 50 % of empirical studies were conducted by using quantitative research methods, quantitative research methods were preferred by 19 % of articles, while the remaining 27 % utilized a mixed-method approach and 4 % were conceptual studies.

Table 2. Research methods used by career self-efficacy

Research methods		No of papers	% of No
Qualitative	Interviews Observations Policy documents, secondary data Case study, interviews Longitudinal interviews	9	19 %
Quantitative	Survey, questionnaire Secondary data	24	50 %
Mixed	Survey and interviews Documental search from international agencies Survey, secondary data Case study	13	27 %
Conceptual papers		2	4 %
Total		48	100 %
<i>Note — compiled by the authors</i>			

**Findings**

Existing research provides extensive insights into the factors that shape students’ confidence in managing career-related tasks. Across the forty-eight studies reviewed, the antecedents of career self-efficacy cluster into two broad domains: individual characteristics and psychological resources on the one hand, and contextual influences embedded in family, school, and wider social environments on the other. In line with SCCT, these studies show that students’ beliefs about their ability to explore options, make decisions, and pursue preferred pathways are co-constructed through the interaction between personal dispositions and the supports and barriers they encounter in their environments.

**Individual Antecedents**

Empirical research demonstrates that the career self-efficacy of school and university students is strongly shaped by individual characteristics. The first group of studies highlights the role of dispositional tendencies and career-related skills. Work using the Planned Happenstance Career Inventory shows that skills such as curiosity, persistence, flexibility, optimism, and risk-taking are positively associated with career decision self-efficacy, suggesting that students who are more open to unplanned opportunities and able to act on them report greater confidence in their ability to make career decisions (Huang, 2015). Similarly, studies grounded in the Big Five model indicate that conscientiousness, extraversion, and openness to experience are positively linked to career decision self-efficacy, whereas neuroticism tends to undermine students’ confidence (Hartman & Betz, 2007). Research on healthy personality profiles further suggests that adolescents and

young adults who score higher on indicators of emotional and social adjustment show stronger beliefs in their capacity to handle career tasks (Borgen & Betz, 2008).

A second set of studies focuses on psychological resources that help students regulate emotions and cope with uncertainty. Emotional stability has been identified as a significant negative predictor of career concerns, indicating that students who experience lower levels of anxiety and emotional volatility are less likely to report decision-making difficulties (Bubić & Ivanišević, 2016; Gati et al., 2011). Ability-based emotional intelligence, including the capacity to understand, regulate, and use emotions, is also positively related to career decision self-efficacy (Santos, Wang & Lewis, 2018). Self-esteem emerges as another robust predictor, although some studies report gender differences, with the association between self-esteem and career self-efficacy being particularly pronounced among male students (Lease & Dahlbeck, 2009). Building on SCCT, the research shows that independent self-construal and a sense of personal agency are positively associated with confidence in career decision-making, especially when students have access to adequate occupational information and opportunities for career planning (Gianakos, 2001).

The evidence also sheds light on individual factors that may hinder the development of career self-efficacy. Symptoms of depression, social withdrawal, and low life satisfaction are negatively associated with students' beliefs in their ability to make effective career choices, particularly among those who perceive limited control over their future (Hu, Hood & Creed, 2018). Beyond psychological adjustment, career adaptability has been identified as a key resource: students who report higher levels of concern, control, curiosity, and confidence tend to feel more capable of engaging in career exploration and handling transitions, and interventions designed to enhance career adaptability have been shown to increase career self-efficacy over time (Shin, Steger, & Lee, 2014). Other studies suggest that students' achievement-related beliefs and decision-making styles also matter. High academic achievement and realistic expectations about future performance are linked to stronger career self-efficacy (Choi & Kim, 2013), whereas a maximising orientation — striving to identify the single best option — can lead to rumination and indecision, partly through its effects on outcome expectations (Conklin, Dahling, & Garcia, 2013). Research on younger adolescents shows that early clarity about preferred career fields and realistic perceptions of occupational requirements are associated with higher confidence in navigating educational choices (Jantzer, Stalides & Rottinghaus, 2009).

Finally, several studies examine how person-environment fit shapes students' efficacy beliefs. Findings indicate that congruence between students' interests and their chosen programmes, as well as perceived alignment between personal values and anticipated occupational roles, are positively related to career decision self-efficacy and satisfaction with educational choices (Srsic & Walsh, 2001; Tziner, Oren, & Caduri, 2014). When students feel that their academic and vocational environments reflect their core identities and aspirations, they are more likely to believe that they can successfully pursue and sustain their desired career paths. Taken together, the reviewed studies suggest that individual antecedents of career self-efficacy span stable traits, malleable psychological resources, and dynamic perceptions of fit and capability. This body of evidence underscores that strengthening students' emotional regulation, self-beliefs, and sense of person-environment fit can meaningfully enhance their confidence in navigating career decisions.

### *Contextual antecedents*

In addition to individual traits and psychological resources, the development of students' career self-efficacy is strongly influenced by the environments in which they grow up and study. The reviewed studies consistently show that family, school, peers, religious communities, and broader structural conditions shape how students interpret their abilities, opportunities, and chances of success. In line with SCCT, these contextual influences operate through different forms of support and constraint, such as encouragement, role modelling, access to information, and exposure to barriers.

### *Social support*

A substantial body of work highlights the central role of social support in fostering students' career self-efficacy. Studies with college and university students show that perceived support from family, friends, and significant others is positively associated with confidence in making career decisions and pursuing occupational goals. Students who feel that important people in their lives take their aspirations seriously, offer encouragement, and provide instrumental help (for example, sharing information about courses, jobs, or internships) tend to report higher levels of career decision self-efficacy and lower levels of indecision (Chung-Ju Huan, 2016). Moreover, it was noted that contextual antecedents such as academic support from teachers,

usage of college academic resources improve students' career self-efficacy and allow them to search for different career opportunities (Di Fabio & Kenny, 2015).

Parental support emerges as particularly influential during adolescence. Research indicates that adolescents who perceive their parents as warm, involved, and encouraging of exploration are more likely to believe that they can successfully manage educational and career choices (Renn, Steinbauer, Taylor & Detwiler, 2014). Parents who expose their children to different occupations, discuss educational pathways, and model persistence in the face of difficulties help create a climate in which career self-efficacy can develop (Wright et al., 2014). At the same time, overly controlling or critical parental behaviour, or the absence of guidance, can undermine young people's confidence and lead to uncertainty about future plans (Lapan, 2002).

Supportive school environments also play an important role. Perceived teacher support, positive relationships with school counsellors, and constructive interactions with peers are associated with higher career self-efficacy. Teachers who provide feedback on strengths, link classroom learning to real-world work contexts, and encourage students to consider different possibilities help students see themselves as capable of succeeding in further study or work (Lease and Dahlbeck, 2009). Counsellors who actively listen, normalise uncertainty, and provide structured guidance similarly contribute to stronger self-efficacy beliefs (Poux & Fry, 2015). Beyond family and school, some studies emphasise the role of religious and community support (Ginevra, Nota, & Ferrari, 2015). For certain groups of students, feeling supported by faith communities and perceiving a sense of purpose or calling can reinforce confidence in career-related decisions, especially when they face external barriers or discrimination (Duffy & Lent, 2008).

Overall, this evidence suggests that social support functions as a key contextual resource. It not only supplies information but also validates students' aspirations, provides emotional reassurance, and offers concrete opportunities to practice decision-making. When such support is absent or inconsistent, students are more likely to doubt their capabilities and to experience career-related anxiety.

#### *Career Interventions*

A second line of research examines how structured career interventions influence students' self-efficacy. The reviewed studies include a range of programmes, such as career decision-making courses, workshops, group counselling, virtual experiences, and intensive camps (Glessner, Rockinson-Szapkiw, & Lopez, 2017). Most interventions adopt pre-test–post-test or quasi-experimental designs and report positive effects on career self-efficacy indicators (Van Raalte et al., 2017).

Career courses that explicitly teach decision-making skills, provide information about educational and occupational options, and offer opportunities for guided reflection consistently lead to increases in career decision self-efficacy and reductions in career indecision (Grier-Reed & Skaar, 2010). For example, students who participate in semester-long courses or short modules that combine lectures, exercises, and individual counselling typically report greater confidence in their ability to identify goals, evaluate alternatives, and implement plans than those in control groups. Interventions that incorporate experiential components — such as role plays, group discussions, or structured exposure to professionals — appear particularly effective, as they provide mastery experiences and vicarious learning opportunities emphasised by SCCT (Grier-Reed, Skaar & Conkel-Ziebell, 2009).

Shorter interventions, including workshops and virtual programmes, can also produce meaningful gains. Studies of online or technology-assisted interventions suggest that interactive exercises, personalised feedback, and scenario-based role modelling can enhance students' confidence, especially when combined with opportunities to reflect on personal strengths and values (Cardoso, Janeiro, & Duarte, 2018). Career camps and intensive programmes, often targeting specific groups of students, show improvements in clarity of aspirations and increased willingness to explore career options (Speight et al., 1995; Reese & Miller, 2006; Fouad, Cotter, & Kantamneni, 2009). However, some studies also note that the durability of these effects over time is not always assessed, and that follow-up measurements are needed to determine whether gains in self-efficacy are sustained (Komarraju, Swanson, & Nadler, 2014; Tansley et al., 2007).

Taken together, the literature indicates that well-designed interventions can strengthen students' career self-efficacy by providing structured environments in which they can practise decision-making, receive feedback, and see others successfully negotiate similar challenges. At the same time, the evidence base remains dominated by short-term evaluations and relatively homogeneous samples, leaving open questions about how to tailor interventions for diverse cultural and socio-economic contexts.

### **Socio-demographic factors**

The final group of contextual antecedents concerns socio-demographic and structural conditions that shape students' career development. Studies focusing on social class, ethnicity, gender, and migration background show that career self-efficacy is not distributed evenly across student populations. Instead, it reflects broader patterns of opportunity and constraint (Jackson, Potere, & Brobst, 2006; Ojeda et al., 2012; Nadermann & Eissenstat, 2018).

Research on ethnicity and acculturation, for instance, finds that students from minority backgrounds may face additional barriers that can weaken their self-efficacy, such as discrimination, limited access to role models in desired occupations, or conflicting expectations between family and host cultures (Bounds, 2017). At the same time, a strong sense of ethnic identity and positive cultural socialisation can act as protective factors, supporting resilience and promoting confidence in career decision-making (Lewis et al., 2017). Studies of acculturation processes suggest that as students become more familiar with the educational and labour market systems of the host country, their career self-efficacy tends to increase, although this relationship is shaped by the quality of support they receive (Nauta & Kahn, 2007; Metz, Fouad, & Ihle-Helledy, 2009).

Socioeconomic status (SES) and parental education also influence students' beliefs about their career capabilities (Harlow & Bowman, 2016). Findings indicate that students from higher-SES families, or whose parents have completed higher education, generally report higher career decision self-efficacy, likely because they have greater access to information, networks, and financial resources (Huang & Hsieh, 2011). In contrast, students from lower-SES backgrounds may perceive more constraints and fewer viable options, which can dampen their confidence even when they have comparable abilities and aspirations (Metheny & McWhirter, 2013). Some studies show that targeted interventions and strong school support can partially compensate for these disadvantages, but they do not fully eliminate structural gaps (Suh & Flores, 2017).

Gender differences are another recurrent theme. In several studies, female students report lower confidence in their ability to pursue certain career paths, particularly in fields that are traditionally male-dominated, despite having similar or higher academic performance. These patterns are linked to gendered expectations, stereotypes about occupations, and differential encouragement from teachers and parents (Scheye & Gilroy, 1994; Metz, Fouad, & Ihle-Helledy, 2009). Conversely, in some contexts male students report lower self-efficacy for pursuing careers that are perceived as less prestigious or less aligned with dominant masculine norms (Albaugh & Nauta, 2005).

In summary, the reviewed studies highlight that contextual antecedents of career self-efficacy extend beyond immediate social support and formal interventions to include wider socio-demographic and structural factors. Family resources, community and cultural contexts, and gendered and ethnic inequalities all shape how students interpret their chances of success and the kinds of careers they consider attainable. Career self-efficacy is therefore best understood as a product of ongoing transactions between individuals and their environments, in which personal dispositions interact with the supports and barriers embedded in family, school, and society.

### **Discussion**

This review set out to synthesise three decades of research on the antecedents of career self-efficacy among school and university students. Drawing on forty-eight empirical studies published between 1995 and 2025, it examined how individual characteristics and contextual conditions shape students' confidence in managing career-related tasks, such as exploring options, making decisions, and pursuing preferred pathways. Guided by SCCT, the analysis shows that career self-efficacy is not a fixed personal trait but a dynamic belief system that develops at the intersection of personal dispositions, psychological resources, and the social and structural environments in which young people are embedded.

The findings highlight two broad domains of antecedents. On the individual side, traits such as curiosity, persistence, openness to experience, and emotional stability are consistently associated with higher levels of career self-efficacy, whereas tendencies towards anxiety, low self-esteem, and pessimistic expectations undermine students' confidence. Psychological resources, including emotional intelligence, self-esteem, and career adaptability, emerge as particularly important because they are malleable and can be strengthened through guidance and intervention. Perceptions of person-environment fit also play a critical role: students who experience congruence between their interests, values, and chosen fields of study report stronger beliefs in their ability to cope with career tasks and transitions. Together, these findings suggest that individual ante-

cedents are best understood as a combination of relatively stable dispositions and more dynamic self-beliefs that can be shaped by experience.

On the contextual side, the review demonstrates that social support, structured career interventions, and wider socio-demographic and structural conditions substantially influence students' career self-efficacy. Supportive relationships with parents, teachers, counsellors, and peers provide encouragement, information, and role models that help students interpret their abilities and opportunities in a more positive way. Well-designed career education and counselling programmes, including courses, workshops, and experiential activities, tend to produce measurable increases in self-efficacy, especially when they offer mastery experiences and opportunities for vicarious learning. At the same time, socio-economic disadvantage, limited parental education, discrimination, and gendered or ethnic stereotypes constrain students' perceived options and can dampen confidence, even when academic ability is high. These patterns underscore that career self-efficacy is unevenly distributed and reflects broader structures of opportunity and inequality.

Taken together, the evidence reviewed here reinforces a central insight of SCCT: students' career beliefs are co-constructed through ongoing transactions between person and context. However, the findings also extend SCCT in several ways. First, they show that contextual supports and barriers are not simply background conditions but can be as proximal and powerful as individual traits in shaping self-efficacy, particularly for students from marginalised groups. Family resources, school climate, and community and cultural supports emerge as active ingredients in the development of career self-efficacy rather than distant influences. Second, the review highlights the importance of psychological resources such as career adaptability and emotional regulation as mediating mechanisms between structural conditions and self-efficacy. These resources help explain why some students maintain confidence despite adversity, while others with similar abilities experience persistent doubt.

The review also refines our understanding of developmental timing. Studies with younger adolescents suggest that early experiences of success or failure, initial clarity of interests, and parental encouragement during key educational transitions lay the groundwork for later self-efficacy beliefs. Research with university students shows that these beliefs continue to evolve as students encounter new demands, such as selecting majors, pursuing internships, or transitioning into the labour market. This developmental perspective suggests that career self-efficacy should be conceptualised as a trajectory rather than a static outcome, with different antecedents becoming more or less salient at different stages.

In terms of the broader literature, this review contributes by bringing together fragmented strands of research on individual and contextual antecedents of career self-efficacy across secondary and higher education. Existing studies often focus either on intra-individual variables, such as personality and self-concept, or on specific forms of support or intervention, such as parental encouragement or career courses. By integrating these strands within a single framework, the review shows that neither perspective is sufficient on its own. High levels of personal agency and adaptability cannot fully compensate for unsupportive schools or severe structural constraints, just as favourable environments may not translate into confident career decision-making if students lack basic psychological resources. A key implication is that theory and practice need to attend more explicitly to the interplay between individual and contextual factors, rather than treating them as separate domains.

Finally, the review identifies several imbalances in the evidence base that shape its conclusions. The field remains dominated by cross-sectional survey studies with relatively homogeneous samples, often drawn from single institutions and middle-class backgrounds. Many interventions are evaluated only in the short term, and there is limited attention to how career self-efficacy develops among students who face intersecting disadvantages related to class, gender, ethnicity, disability, or migration status. Addressing these gaps is essential if future research is to capture the full complexity of how young people construct and sustain beliefs about their career capabilities.

### **Limitations and directions for future research**

Like any systematic review, this study has several limitations that should be acknowledged when interpreting its findings. These limitations also point to promising directions for future research on career self-efficacy among school and university students.

The first limitation concerns the scope of the evidence base. The review focuses on peer-reviewed journal articles published in English between 1995 and 2025. While this ensures a consistent quality threshold, it also introduces potential publication and language bias. Studies published in other languages, as well as dissertations, reports, and conference papers, were not included and may contain additional evidence, particular-

ly from non-Anglophone and low- and middle-income countries. Future reviews could broaden the range of sources and incorporate systematic searches in other languages to capture a more global picture of how career self-efficacy develops in diverse educational systems.

Second, the available research is heavily skewed towards cross-sectional, survey-based designs conducted within single institutions. This limits the ability to draw causal inferences or to understand how career self-efficacy evolves over time. Few studies follow students across key educational transitions, such as moving from lower to upper secondary education, from school to university, or from higher education into the labour market. Longitudinal and multi-wave designs are needed to trace trajectories of career self-efficacy, identify critical periods of change, and examine how early experiences of support or constraint reverberate across later stages. Such designs would also allow researchers to test more complex SCCT-based models that include mediating and moderating processes.

Third, although this review highlights the importance of contextual and structural factors, the empirical literature often treats variables such as socio-economic status, gender, ethnicity, and migration background as control variables rather than as focal constructs. As a result, the field still lacks a nuanced understanding of how intersecting disadvantages shape students' opportunities to develop and sustain strong career self-beliefs. Future research should place these dimensions at the centre of analysis, using intersectional and critical perspectives to explore how social class, gender norms, racialised experiences, and migration histories interact with school and family environments to produce differentiated patterns of career self-efficacy. This would help move the field beyond generic "one-size-fits-all" models.

A related limitation concerns the limited geographical and cultural diversity of the existing studies. Much of the evidence comes from North America, Western Europe, and East Asian contexts, with relatively few studies conducted in the Global South or in countries undergoing rapid social and economic transformation. Yet educational systems, labour markets, and cultural norms around career and family responsibilities differ substantially across regions. Comparative and cross-cultural research is therefore needed to examine whether the antecedents identified in this review operate similarly across contexts, or whether different constellations of individual and contextual factors shape career self-efficacy in different settings. Such work would also help refine SCCT by testing its assumptions in a broader range of cultural and institutional environments.

Finally, the synthesis presented here is shaped by methodological choices in coding and categorising the literature. Although a structured template was used to extract data and to group antecedents into individual and contextual domains, any thematic synthesis inevitably involves a degree of interpretive judgement. Some constructs could reasonably be placed in more than one category, and alternative coding strategies might yield slightly different thematic emphases. Future reviews could build on this work by focusing on more specific subtopics — for example, the role of career adaptability, the impact of parental involvement, or the effectiveness of particular types of intervention — and by triangulating quantitative meta-analyses with qualitative meta-syntheses.

Despite these limitations, the review provides a coherent overview of what is currently known about the individual and contextual antecedents of career self-efficacy among school and university students. Addressing the gaps identified here — through more diverse samples, longitudinal and intersectional designs, rigorous evaluations of interventions, and stronger attention to structural inequalities — would significantly advance theoretical understanding and support the development of more equitable and effective practices in career guidance and education.

### ***Conclusion***

This article has synthesised three decades of research on the antecedents of career self-efficacy among school and university students. By systematically reviewing forty-eight empirical studies published between 1995 and 2025, it has shown that students' confidence in managing career-related tasks arises from the interplay between individual traits and psychological resources on the one hand and social, institutional and structural conditions on the other. The evidence confirms a core premise of SCCT: career self-beliefs are not fixed attributes but dynamic constructions that emerge through ongoing person–context transactions.

The review makes three main contributions. First, it consolidates a fragmented literature into an integrated framework of individual and contextual antecedents of career self-efficacy. Individual factors include not only dispositional tendencies such as curiosity, persistence and emotional stability, but also malleable resources such as emotional regulation, self-esteem, career adaptability and perceived person–environment fit. Contextual factors span social support from parents, teachers, counsellors and peers; the design and de-

livery of career education and counselling interventions; and socio-demographic and structural conditions linked to class, gender, ethnicity and migration background. Viewing these elements together underscores that strong personal agency is difficult to sustain in the absence of supportive environments, and that favourable contexts may not translate into confident decision-making if students lack basic psychological resources.

Second, the review refines SCCT-based understandings of career development for adolescent and emerging adult populations. It highlights that contextual supports and barriers often function as proximal determinants of career self-efficacy, particularly for students facing structural disadvantage, and that psychological resources such as career adaptability and emotional regulation mediate the translation of structural conditions into self-beliefs and behaviour. It also emphasises the developmental nature of career self-efficacy: early experiences of academic success or failure, transitions between educational stages and initial exposure to work and higher education all leave traces in students' subsequent confidence and aspirations.

Third, the review identifies critical gaps that limit current knowledge and provides a focused agenda for future research. Existing studies are dominated by cross-sectional survey designs conducted in a relatively narrow set of countries and often treat socio-economic status, gender, ethnicity and migration background as control variables rather than as central objects of inquiry. Addressing these limitations will require longitudinal, intersectional and cross-cultural designs, as well as more rigorous and longer-term evaluations of career interventions. Such work is essential if research is to capture how career self-efficacy develops among students who navigate complex and unequal educational and labour market systems.

Overall, the review argues that efforts to enhance students' career self-efficacy must operate on multiple levels: by strengthening individual psychological resources, by designing rich and inclusive learning and guidance environments, and by addressing structural barriers that constrain young people's opportunities. For researchers, this implies moving beyond individualised models towards more contextually and critically informed accounts of career development. For practitioners and policy-makers, it points to the importance of aligning career education, guidance services and social policy so that all students — not only those with favourable starting positions — can develop the confidence needed to imagine, plan and pursue meaningful career pathways.

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