

REVIEW

## What Influences the Success of Career Exploration in School?

### ¿Qué influencia el éxito de la exploración de la carrera profesional en la escuela?

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#### ABSTRACT

**Introduction:** career exploration is an individual's efforts to gain a better understanding of career-related information, alternatives, and choices. Career exploration behavior encompasses self-assessment and external search activities that provide information to support career choice and adjustment.

**Objective:** the aim of this study was to determine the factors that influence the success of career exploration in schools.

**Method:** this article presents a systematic literature review on the factors influencing career exploration in schools, using the Scopus and Web of Science databases. The research examines career exploration in schools between 2018 and 2023. A total of 137 articles were reviewed, and 36 were selected based on inclusion criteria.

**Results:** the bibliometric results and the influential factors related to career exploration in schools are presented. The largest number of affiliated journals and authors studying this phenomenon originate from the United States of America. The research findings indicate that the influential factors of career exploration can be categorized into four groups: in-depth self-exploration, extensive self-exploration, in-depth environmental exploration, and extensive environmental exploration.

**Scientific novelty:** the scientific novelty of this research lies in the discovery of factors that influence the success of career exploration in schools.

The results of this research have implications for future studies, particularly regarding career exploration as an individual decision-making preference. For educators, the findings suggest a need for individualized planning services to enhance students' career exploration, making it more focused and measurable in the context of career decision-making.

**Keywords:** Career Exploration; Influential Factors; School.

#### RESUMEN

**Introducción:** la exploración de la carrera profesional es el esfuerzo de un individuo por comprender mejor la información, las alternativas y las opciones relacionadas con la carrera profesional. La conducta de exploración de la carrera abarca la autoevaluación y las actividades de búsqueda externa que proporcionan información para apoyar la elección y el ajuste de la carrera.

**Objetivo:** el objetivo de este estudio era determinar los factores que influyen en el éxito de la exploración de la carrera profesional en las escuelas.

**Método:** este artículo presenta una revisión sistemática de la literatura sobre los factores que influyen en la exploración de carreras en las escuelas, utilizando las bases de datos Scopus y Web of Science. La investigación examina la exploración de carreras en las escuelas entre 2018 y 2023. Se revisaron 137 artículos y se seleccionaron 36 en función de los criterios de inclusión.

**Resultados:** se presentan los resultados bibliométricos y los factores influyentes relacionados con la exploración de carreras en las escuelas. El mayor número de revistas afiliadas y autores que estudian este fenómeno proceden de los Estados Unidos de América. Los resultados de la investigación indican que los factores influyentes de la exploración de carreras pueden clasificarse en cuatro grupos: autoexploración en profundidad, autoexploración extensiva, exploración ambiental en profundidad y exploración ambiental extensiva.

**Novedad científica:** la novedad científica de esta investigación radica en el descubrimiento de los factores que influyen en el éxito de la exploración de carreras en las escuelas.

Los resultados de esta investigación tienen implicaciones para futuros estudios, especialmente en lo que se refiere a la exploración de la carrera como una preferencia individual en la toma de decisiones. Para los educadores, los resultados sugieren la necesidad de servicios de planificación individualizados para mejorar la exploración de la carrera de los estudiantes, haciéndola más centrada y medible en el contexto de la toma de decisiones sobre la carrera.

**Palabras clave:** Exploración Profesional; Factores Influyentes; Escuela.

## INTRODUCTION

Individuals need to explore various ways to identify alternative career choices and consider the various probabilities of each possible career, which is known as career exploration behavior.<sup>(1,2)</sup> The definition of career exploration, according to Lim et al.<sup>(3)</sup>, is a series of processes in which individuals engage in activities such as gathering information and participating in educational programs to choose a career that suits their interests, skills, and abilities.

Career exploration is associated with several important personal and workplace outcomes, including confidence in one's career decisions,<sup>(4)</sup> training motivation,<sup>(5)</sup> and training performance.<sup>(6)</sup> According to Jordaan's definition, vocational exploration involves "mental and physical activities undertaken with the intention or desire to learn about oneself and one's environment". These activities aim to provide individuals with information for job and career selection, preparation and adaptation, in order to find a match between their skills and interests and the requirements and characteristics of different jobs and careers.

Career exploration is important for an individual's career development. It not only equips individuals with the understanding and knowledge to make career choices but also promotes successful career development. Previous research shows that individual career exploration is closely related to personality traits such as openness and self-awareness.<sup>(7)</sup> Social Cognitive Career Theory (SCCT) also suggests that an individual's personality traits are key factors that can support career exploration through the formation of self-efficacy.<sup>(8)</sup> This is further supported by Lee et al.<sup>(9)</sup> that divides career exploration into two types: self-exploration and environmental exploration. Self-exploration involves activities that enable individuals to gain self-understanding through reflection and introspection about their aspirations, career paths, job requirements, and the necessary skills. Environmental exploration involves activities that provide individuals with information and understanding of the external environment and career opportunities through career fairs or interactions with job holders.<sup>(10)</sup>

SCCT explains that a person's characteristics, behavior, and situational context can create new experiences related to work, which affect career development patterns.<sup>(11)</sup> SCCT also posits that self-efficacy and individual outcome expectations are strongly influenced and determined by the environment. A positive environment that is ideal allows individuals to develop traits such as extraversion, open-mindedness to new experiences, and heightened caution. Consequently, individuals with higher levels of these traits and self-efficacy will find it easier to set career exploration goals, engage in them, and be brave enough to make career decisions.<sup>(12)</sup>

Germeijs and Verschueren's research, cited in Dietrich et al.<sup>(13)</sup>, found that career exploration can predict individual adjustment during the transition to secondary school, for example, in terms of commitment to the learning process at school or academic motivation. Another influence can be the achievement of career identity, as shown by Gushue, Clarke, Pantzer, & Scanlan.<sup>(14)</sup>

Some junior high schools, more than a decade after receiving the introduction of career education, still ignore career exploration. Some career exploration activity programs for Senior High Schools are introduced too late. In fact, work-related strands of education should be available to students much earlier, especially as there are still some school dropout rates and many high school graduates are unprepared to choose a career due to limited information and inadequate career decision-making skills and knowledge.<sup>(15)</sup>

Between the ages of 13 and 15, individuals are at the junior high school level, which is the stage of preparation for career exploration through the exploration of interests, skills, and values. However, research on career exploration places more emphasis on the perceptions and needs of students at the high school and post-secondary levels than on individuals at the middle school level. Bardick et al. explained that to

adequately implement career preparation services and supports at the middle school level, there is a need to better understand career planning perceptions and needs. There has been no systematic review that collects, organizes, and evaluates these studies in one integrated framework.

Adolescents in their middle to late teens are making initial commitments to the career options they will choose. According Bardick et al.<sup>(16)</sup> explained that there are predictable developmental stages in life where the urgency and focus of career exploration vary greatly. Adolescence is divided into two phases. The first stage of adolescence is the growth phase of life (ages 4 to 13). This stage is characterized by tasks related to career exploration: (a) increasing a sense of concern for the future; (b) increasing autonomy and control within oneself; (c) developing internal motivation to achieve success at school and work; and (d) developing appropriate work attitudes and behaviors. The second stage of adolescence is life exploration (ages 14 to 24). In this phase, individuals focus on their ability to identify, determine, and implement their work choices. It is during this stage that a vocational self-concept emerges, which includes the constructs of skills, interests, values, and individual choices. Adolescents' conceptualization of the future at the secondary school level and the development of the self-concept are fundamental steps in career exploration and future planning.

Kleine et al.<sup>(17)</sup> explained that career aspirations can be formed at a young age. Dietrich et al.<sup>(13)</sup> added that junior high school students in Finland believe that things related to career and work, as well as predictions of future success, are important. Hiebert et al.<sup>(16,17)</sup> conducted research on the need for guidance in Canadian junior high schools. The research shows that “adolescents plan and pay attention to the quality of their school experiences in order to shape their future school or work experiences.” In this systematic literature review, the research questions are: What factors influence students' career exploration in school as reported in articles published in Scopus, EBSCO, and Web of Science databases over the past 10 years? What are the implications of this topic for future research?

## METHOD

A systematic literature review consolidates a summary of publications in a particular field. A literature review is conducted with the aim of defining relevant concepts, synthesizing evidence, identifying methodologies, and identifying research gaps.<sup>(18)</sup> The methodology used in this review is PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which was initiated by Liberati et al., with the aim of organizing the evidence on career exploration in schools using a structured method.<sup>(19)</sup>

Steps in the development of a systematic review include: (1) formulating research questions; (2) establishing inclusion and exclusion criteria for the articles to be used; (3) formulating a literature search plan; (4) identifying articles in the selected databases; (5) providing an assessment or rating of the quality of the articles identified according to predetermined criteria; (6) systematizing the information; and (7) interpreting and presenting the results obtained.

In this bibliography, the Web of Science (WOS) and Scopus databases were used to search for publications related to careers education in schools. The reason for using these databases is that they are considered to be the most reliable and cover multidisciplinary at an international level.<sup>(20)</sup> The search formula used was as follows: Scopus: TITLE-ABS-KEY AND TOPIC (career\* AND exploration\* AND school\* AND education) AND PUBYEAR > 2017 AND (LIMIT-TO (SRCTYPE, “j”)) Web of Science: TITLE-ABS-KEY AND TOPIC (career\* AND exploration\* AND school\* AND education).

The purpose of using the wildcard (\*) in the search formula is to obtain all the necessary information. The criteria for articles to be included in this review are: a) related to the central topic of career exploration in schools, b) research conducted between 2018 and 2023, and c) full-text articles in English. As stated by González-Pereira et al.<sup>(21)</sup>, a three-year period is broad and dynamic enough to cover the majority of citations and to measure the evolution of scientific journals.

The literature review in this study does not include articles in non-educational fields, books, book chapters, working papers, conference proceedings, or duplicate articles in databases. Additionally, the literature review in this research did not include articles related to primary and secondary education, articles on massive open online courses (MOOCs), or articles that were not included in the Q1 to Q4 quartiles. This was done because these articles had a relatively low impact factor.

Okagbue et al.<sup>(22)</sup> explain that “impact factors and CiteScore are used to assess and evaluate the impact, prestige, and quality of journals,” so in this literature review, the article selection criteria are articles in the Q1 to Q4 journal categories. The application of these criteria resulted in a final selection of 37 scholarly articles, which provided a dataset for further analysis in the research. Together with other articles, the articles used by the researcher present data on predictors of career exploration in schools, as well as related variables and approaches that can be used for future research. In doing so, the researchers followed a four-step review process recommended by PRISMA (see figure 1).

Table 1. Basic Inclusion and Exclusion Criteria		
No	Inclusion criteria	Exclusion criteria
1.	Studies published between 2018 and 2023	Studies older than 2018
2.	Primary studies published in journals Web of Science (WOS) or Scopus	Literature review, as well as books, book chapters, working papers and conference proceedings.
3.	Papers that are written in English	Papers that are not written in English
4.	Research that has a central theme or an explicit connection to career exploration in schools	Research that has not central theme or an explicit connection to career exploration in schools
5.	Articles in the social science, included: career, psychology and education	Articles in the non-social science

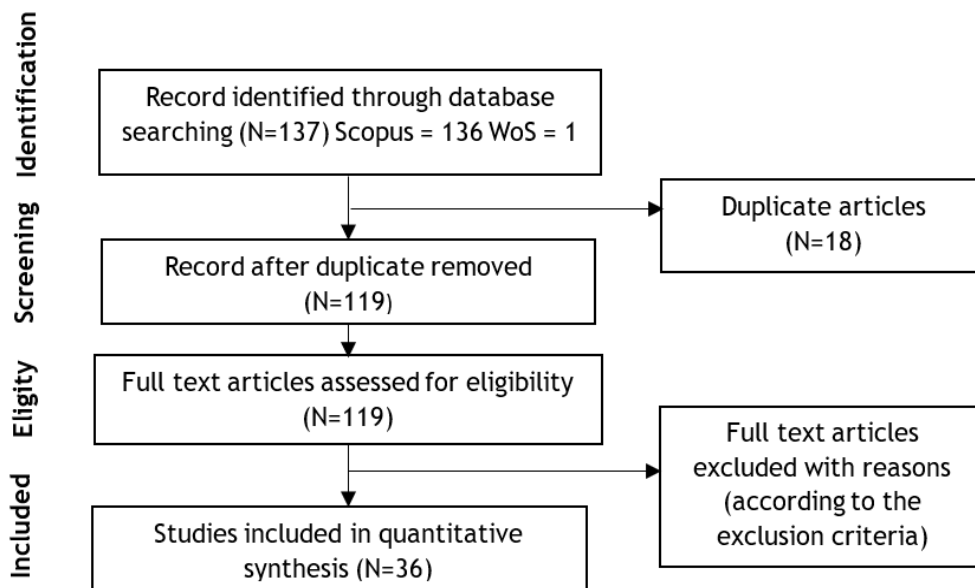


Figure 1. Flow Diagram Prisma

## RESULTS

The following presents the results of bibliometric analysis in articles about career exploration in schools. To study the countries of affiliation, the journals show that the United States of America has the largest number of career exploration studies in schools. Academic articles are distributed across four countries. Table 2 shows that the United States of America contributed 22 articles (61,1 %) related to career exploration in schools.

Table 2. Countries of Affiliation the Journals from January 2018 to December 2023								
Country affiliations	2018	2019	2020	2021	2022	2023	Total	%
United States of America	2	5	4	6	2	3	22	61,1
United Kingdom	1	1	1	1	3	3	10	27,7
Netherlands	0	0	0	0	0	2	2	5,6
New Zealand	0	0	0	0	0	2	2	5,6
Total	3	6	5	7	5	10	36	100

Regarding other countries, we grouped the records from the following countries: Africa, Japan, Lebanon, Hong Kong, Indonesia, Malaysia, Taiwan, the Netherlands, Turkey, Canada, Albania, and Switzerland, as they each had only one study between the period 2018 to 2023. Table 3 presents the countries of origin of the journals, with the United States of America having 9 articles, making it the country with the largest number of publications, followed by the Republic of China with 6 articles. These two countries accounted for 41,7 % of the total articles analyzed.

Source Country	2018	2019	2020	2021	2022	2023	Total	%
Germany	0	0	1	0	0	1	2	5,5
Africa	0	0	0	1	0	0	1	2,8
Republic of China	0	1	1	2	0	2	6	16,7
Japan	0	0	0	0	1	0	1	2,8
Portugal	0	0	0	2	0	0	2	5,5
Lebanon	0	1	0	0	0	0	1	2,8
United States of America	1	2	1	2	2	1	9	25
Hongkong	0	0	1	0	0	0	1	2,8
Australia	1	0	0	0	1	1	3	8,2
Indonesia	0	0	0	0	0	1	1	2,8
Malaysia	0	1	0	0	0	0	1	2,8
South Korea	0	2	0	0	0	0	2	5,5
Taiwan	1	0	0	0	0	0	1	2,8
Netherland	0	0	0	1	0	0	1	2,8
Turkey	0	1	0	0	0	0	1	2,8
Canada	0	1	0	0	0	0	1	2,8
Albania	0	0	0	0	0	1	1	2,8
Switzerland	0	0	0	0	0	1	1	2,8
Total							36	100

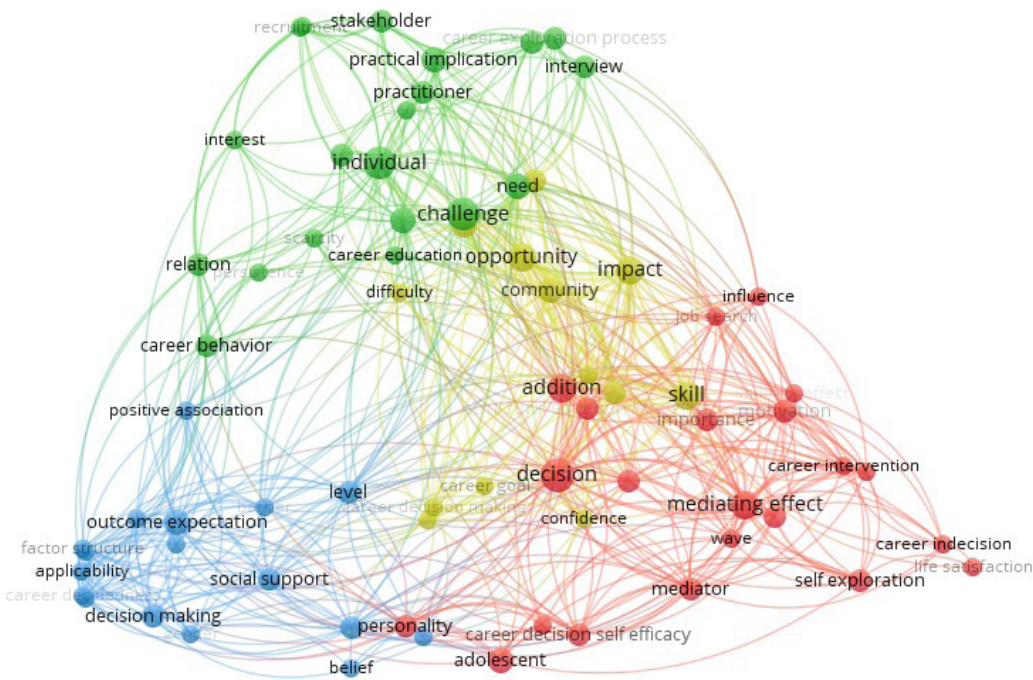
Table 4 provides a breakdown of the main journals that contributed to this literature review according to their impact factors. In addition, The Scimago Journal Ranking (SJR) is a bibliometric indicator that measures the influence of scientific journals. It can be observed that “Personnel Psychology” has the highest impact index, with an SJR of 3,75.

Journal	Country Of Origin	Quartile*	SJR 2022**	H-index
Psychology Research and Behavior Management	New Zealand	Q1	0,92	42
Personnel Psychology	United States	Q1	3,75	161
Journal of Pacific Rim Psychology	United Kingdom	Q2	0,63	21
Journal of Vocational Behavior	United States	Q1	2,93	175
Journal of Employment Counseling	United States	Q3	0,38	31
Journal of Hospitality, Leisure, Sport and Tourism Education	United Kingdom	Q2	0,58	34
Heliyon	Netherlands	Q1	0,61	69
Children and Youth Services Review	United Kingdom	Q1	0,97	107
Current Psychology	United States	Q2	0,66	54
British Journal of Guidance and Counselling	United States	Q3	0,37	52
Australian Journal of Career Development	United Kingdom	Q3	0,28	15
BMC Research Notes	United Kingdom	Q2	0,53	87
Research in Science and Technological Education	United Kingdom	Q1	0,61	36
Journal for Specialists in Group Work	United Kingdom	Q3	0,36	30
BMC Psychology	United Kingdom	Q1	0,91	34
Acta Psychologica	Netherlands	Q1	0,64	109
Journal of Career Development	United States	Q1	0,74	52
Applied Psychology	United Kingdom	Q1	2,28	104
International Journal of Adolescence and Youth	United Kingdom	Q1	0,97	30
Advances in Developing Human Resources	United States	Q2	0,76	53
Wildlife Society Bulletin	United States	Q2	0,54	89

Figure 2 shows a network of relationships between themes related to variables and factors influencing career exploration. This figure considers relationships between variables, not just those occurring within the same group. As the clusters become more prominent and closer together, it can be concluded that there are more documents related to the keyword, and the strength of the relationships that form is also greater. In



this scientific literature, we can see that keywords related to career exploration are closely connected to self-efficacy, personality, motivation, social support, career goals, expected outcomes of collaboration, and opportunities. Next, table 5 is presented, which contains keywords from current study topics.



**Figure 2.** Network Map of co-occurrence of keywords on article abstract  
**Note:** threshold=140 for the minimum number of occurrences of a keyword

Table 5. Key Words grouped according to Cluster		
Cluster	Colour	Keywords
1	Red	Self efficacy, self exploration, motivation, life satisfaction, career decision, career intervention
2	Yellow	Career goal, skill, impact, opportunity, difficulty, career decision making, community
3	Green	Interest, need, challenge, career education, relation, career behavior, individual, persistence
4	Blue	Outcome expectation, decision making, social support, belief, applicability, level, positive association



**Figure 3.** Conceptual map on career exploration and related variables

This analysis shows that, in relation to the factors influencing career exploration at school, cluster 1 was developed based on aspects of in-depth self-exploration, cluster 2 is more related to extensive self-exploration, while cluster 3 touches on in-depth environmental exploration. Finally, cluster 4 develops around extensive

environmental exploration. The previous bibliometric analysis is the result of all the articles analyzed and then included in this literature review. The results of this analysis are based on their relationship to the variables of students' career exploration at school. Next, the results of the article analysis are presented in terms of factors associated with different aspects of career exploration.

Figure 3 presents in more detail the correlation between these aspects as well as a classification of factors that influence career exploration at school. Cluster 1 shows factors that influence in-depth self-exploration, cluster 2 is related to extensive self-exploration, cluster 3 concerns in-depth environmental exploration, and Cluster 4 shows how to explore the environment extensively. This figure provides a perspective on intervention and follow-up plans in line with the research roadmap.

### **Influential Factors of Career Exploration in School**

This section provides a more detailed and in-depth explanation of the findings of previous research, variables that influence career exploration at school, and explanations of different approaches to the phenomenon.

#### **In-depth self-exploration**

Personality traits are classified into five dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism.<sup>(9)</sup> Often, certain personality characteristics are included in these five factors. The traits or characteristics of these five dimensions can predict important workplace outcomes such as performance and satisfaction.<sup>(23)</sup>

A person who has traits such as high openness will tend to exhibit characteristics of imagination, curiosity, creativity, and low indifference. Being open will aid in all individual activities related to exploration. Openness is also synonymous with the ability for self-reflection, meaning that an individual's openness will have a strong correlation with their ability for self-exploration.

Career exploration is related to personality, career stress, and self-efficacy in career decision-making. The relationship between interest variables and career exploration ranges from medium to large, depending on the unique effects present in each individual.<sup>(24)</sup> Self and environmental exploration differ, with the difference being closely related to openness. Most specific hypotheses suggest a correlation between exploration and awareness, locus of control, self-efficacy in career decision-making, and exploration stress. However, neuroticism is not effectively correlated with individuals' career exploration, so avoidance behavior is not supported by consistent data.

Self-efficacy refers to the cognitive beliefs that individuals hold about their ability to successfully complete certain tasks. Self-efficacy can be a predictor in determining the career field an individual is interested in, as well as the career development process undertaken.<sup>(17)</sup> The average individual will pursue a job that they feel capable of doing and will avoid jobs in which they feel incompetent. In relation to career exploration, self-efficacy can be described as an individual's confidence in making career decisions.<sup>(25)</sup> Additionally, self-efficacy significantly contributes to individuals' exploration behavior and interests.

Self-regulation is another mediator in the relationship between gender role personality and career exploration.<sup>(7)</sup> Self-regulation includes several aspects such as autonomous goal setting, the use of effective strategies to achieve set goals, controlling emotions and inappropriate behavior to achieve goals, and monitoring achievements.<sup>(26,29)</sup> Gender is also an aspect that influences individual self-regulation. Lim et al.<sup>(3)</sup> argue that adolescents with a high level of femininity are better at controlling their emotions by adjusting to the demands of the social environment, while adolescents with a high level of masculinity tend to be more autonomous. This shows that adolescents with these two traits will have the highest level of self-regulation.

#### **Extensive self-exploration**

Initially, SCCT consisted of three interrelated models that focused on several aspects, including (a) interest development, (b) decision-making skills, and (c) educational and vocational achievement and persistence.<sup>(11)</sup> Subsequent theoretical additions include (d) the satisfaction and well-being model, intended for the educational and vocational context of Lent et al.<sup>(25)</sup>, and (e) the career self-management model, which addresses the tasks and challenges of career processes such as career decision-making, job search, work-life balance, and retirement planning across the lifespan.<sup>(26)</sup> Many streams of research were productive in the early days of the model. Like the earlier models, the satisfaction model was also successful in numerous studies, both in the US and internationally.<sup>(27,28)</sup> The career management model has also been the subject of extensive research with various interesting applications.<sup>(28)</sup>

Career adaptability is part of an individual's readiness and resources to deal with various tasks in current and future career development, as well as being a transitional phase for work and personal trauma.<sup>(26)</sup> An individual's career adaptability is related to how they consider and think about their future work, take responsibility for personal growth and their environment (control), have the ability to explore themselves and develop future scenarios (curiosity), and strengthen self-confidence in pursuing their goals (confidence).<sup>(29)</sup> In addition, the

benefits of career adaptability include helping individuals perform specific tasks and job roles effectively,<sup>(30)</sup> manage career development and transitions well, and arrange future plans effectively.<sup>(31)</sup> Students with low adaptability tend to avoid career-related decisions, are easily distressed by unexpected situations, tend to be apathetic, and struggle to achieve their desired goals.<sup>(32)</sup>

There is also the life design model initiated by Watermann et al. This model can make an important contribution to helping individuals make career decisions through a holistic approach.<sup>(33)</sup> This model<sup>(17)</sup> focuses on the growth of individual resources to explore the complexity of career choices. The growth of personal resources relates to self-awareness, adaptability, and resilience in facing career challenges. This model guides individuals to make informed decisions, leading to satisfaction and success in their careers. This career development approach has been used as a foundation by career professionals to help individuals find purposeful work lives and achieve satisfaction.

### **In-depth environmental exploration**

Increasing the provision of career guidance services in schools has become a necessity, even at the international level. Previous research indicates that the availability of career guidance services positively impacts students' ability to make career decisions. However, in reality, these services are currently inadequate or even non-existent in many areas. For example, in Lebanon, there is a significant lack of career guidance and counseling services for students, making it interesting to explore the relationship between Career Decision-Making Self-Efficacy (CDMSE) and psychological factors, specific behaviors, and cognitive constructs. The Lebanese region is known for its slow expansion of career guidance and counseling services in schools,<sup>(36)</sup> and this issue persists for students entering university.<sup>(34)</sup> Many findings indicate that career guidance is often neglected at the secondary school level, with only a few private schools providing career guidance to assist students in applying to universities.<sup>(35)</sup> Research shows that family members significantly influence individual career decisions in Lebanon,<sup>(35)</sup> while indecision in career decision-making is influenced by perceptions of obstacles and support from parents.<sup>(37)</sup>

Previous research has shown that when young people experience failure in achieving their career goals (e.g., negative feedback and unsatisfactory results), they are more likely to abandon their desired career and switch to another.<sup>(38)</sup> Additionally, individuals' decisions to invest energy and time in their career activities are influenced by perceived resource constraints. If students have access to more time and work opportunities, they can maximize their potential and opportunities for future advancement, thereby securing their desired jobs and achieving maximum career success.<sup>(39)</sup> Conversely, limited resources may hinder the optimal achievement of career goals. Comprehensive career exploration is especially challenging for individuals with limited time to search for work, making it necessary to compromise on goals when opportunities are perceived as unfavorable.<sup>(40)</sup>

Career exploration is a lifelong process, with early experiences significantly impacting individuals' psychosocial adjustment in the future.<sup>(41)</sup> Addressing children's career development requires a multidisciplinary perspective and is part of a multidimensional system.<sup>(11,42)</sup> Children's career thinking can be shaped through various activities such as play, observation, investigation, and participation in family, school, and community environments. Through these activities, children can reconcile their feelings with societal expectations, begin to envision themselves in the future, and build career plans and life stories.<sup>(35)</sup>

Overall academic success provides individuals with the opportunity to consider the relationship between career development and academic achievement. Explicitly describing the connection between career fields and academic domains can encourage progress in both areas and raise awareness among policymakers and communities to collaborate in supporting student academic success. Strategies to target students may include collaborative work, providing information, and consulting with families, teachers, community stakeholders, and educational professionals across all areas of education.

### **Extensive environmental exploration**

Self-efficacy, outcome expectations, goals, and actions are central features of SCCT. The application of self-efficacy using the Career Self-Management (CSM) model in the context of decision-making is based on an individual's ability to engage in career exploration and make decisions. The outcomes obtained are a consequence of the individual's involvement in each task, so maximum involvement leads to better career decisions. The intention and implementation of decision-making behavior, particularly in further engaging in career exploration, are key to individual goal setting and action. Self-efficacy and predicted outcome expectations can motivate individual goals and actions, ultimately influencing career decisions.<sup>(11)</sup>

Outcome expectations refer to the anticipated outcomes or expected results of engaging in certain behaviors. Individuals who have a clear understanding of the outcomes related to their careers tend to find decision-making easier and are better able to achieve their expected career goals. According to SCCT theory, individuals will avoid actions that bring unfavorable results, but if they anticipate positive outcomes, they will pursue their goals, even if it involves challenging or undesirable tasks. Important variables in adolescent career



guidance include career self-efficacy, career goals, and outcome expectations.<sup>(40)</sup> High levels of these variables indicate a higher level of security in one's career decision-making.<sup>(40)</sup>

Currently, many researchers are interested in exploring and studying contextual factors that can facilitate or hinder a person's career development.<sup>(42)</sup> Previous research has concluded that high social support positively correlates with a person's confidence in their abilities in a particular vocational field. Social support is positively related to self-efficacy, exploration, and career choice. The important role of social support in individual exploration is to provide emotional security, guidance, and other instrumental assistance. Thus, individuals with socially oriented personality traits may experience improvements in relational contexts and, ultimately, enhance their exploration behavior. In the career development process, parents are usually considered the most helpful social supporters,<sup>(7,43)</sup> especially in cultures like the Chinese, where parental involvement in children's career decisions remains dominant.<sup>(43)</sup> Therefore, it is hoped that socially oriented personality traits will help individuals in career exploration and make them feel more supported by their parents.<sup>(23)</sup>

Academic expectation stress can be defined as mental stress arising from expectations placed on oneself by others, such as teachers or parents.<sup>(44)</sup> Parents are the most influential factor in an individual's career. They play a significant role in setting and achieving career goals, including the reasons for the need to succeed in school and education.<sup>(17)</sup> Previous research has found a relationship between academic expectation stress and career development, vocational identity, and problem-focused coping.<sup>(37)</sup>

Unfortunately, previous research has not specifically examined the role of parents in academic expectation stress, nor has any research examined the relationship between expectation stress and career fit among adolescents or parents. Nonetheless, conflicts between adolescents and parents regarding academic expectations could be reduced, as adolescents tend to accept parental expectations. Career congruence between adolescents and parents is likely to increase when the pressure of academic expectations is at a reasonable level, although relatively few studies have explored the relationship between these two concepts. Based on this description, this study is important because it examines the relationship between academic expectation stress and career suitability experienced by adolescents and parents. The mediating role of adolescents' and parents' career fit was also examined in relation to academic expectation stress, career exploration, and school attachment.<sup>(24)</sup>

Well-facilitated, collaborative, and systematic exploration provides reflective opportunities for individual career development and can lead to a more thorough understanding of career influences. Typically, career exploration takes place in a collaborative environment. This process may provide participants with their first opportunity to gain a holistic view of career development that was not previously available due to the absence of career counseling services.<sup>(45)</sup> The communication established in career exploration groups can be a collaborative tool for school career counselors, refugee youth, and cultural intermediaries. Schools can offer a safe environment for young people to discuss the challenges and difficulties they face in the career exploration process, such as discrimination, gender issues, racism, language differences, curriculum challenges, and a sense of connection and kinship in their journey to achieve their expected career goals.

## DISCUSSION

The aim of this research is to examine and identify the factors that influence students' career exploration at school, both theoretically and practically, considering the conceptual evolution and various factors discussed in the literature. This was achieved by analyzing literature published during the period 2018-2023, focusing on studies included in the first four quarters. The results of various journals and research studies that provide insights into the potential and factors influencing individual career exploration were systematically synthesized, analyzed, and compiled using the PRISMA model to achieve a comprehensive understanding. Therefore, it is necessary to offer solutions to improve the career exploration process by considering personal and contextual factors in both research and institutional settings, such as the provision of psychological intervention services.<sup>(46)</sup>

Career exploration, according to Osborn et al.<sup>(47)</sup>, refers to all activities aimed at fostering and developing self-awareness and career choices. Career exploration is essential for helping students direct their efforts effectively<sup>(27)</sup> and is a critical phase in individual career development as it relates to the transition from school to the world of work.<sup>(48)</sup> Self-exploration is a significant developmental task during adolescence, and schools play a crucial role in shaping students' career exploration.<sup>(49,50)</sup> Given the high unemployment rate among youth in Europe in 2016—23 % for the age group 15-24 years<sup>(51)</sup> it is important to identify the mechanisms by which the learning environment can support or hinder students' career exploration process.

A useful theoretical framework to address this issue is self-determination theory.<sup>(52)</sup> Self-determination theory suggests that support for autonomy, competence, and relatedness in the learning environment positively influences students' intrinsic motivation.<sup>(27)</sup> Intrinsic motivation is linked to exploratory thinking and behavior.<sup>(53)</sup> Based on research on career exploration<sup>(54)</sup> and self-determination theory,<sup>(45)</sup> this study was conducted to determine the motivational processes underlying the relationship between classroom characteristics (including autonomy, competence, and relatedness support) and career exploration. The purpose of this research on motivation is to understand how the classroom environment is perceived to motivate students, with the hope that it can help them develop their ability to explore careers.

One of the research results on the social cognitive model of career management and the literature reviewed by Lim et al.<sup>(3)</sup> explains the relationship between gender role personality and career exploration among female students in Korea. Additionally, the study recognized the mediating role of self-regulation and planning in clarifying the positive relationship between masculine and feminine characteristics and career exploration.<sup>(9)</sup> Thus, it can be concluded that research on the relationship between career exploration and specific gender role personality types can contribute to the development of social cognitive models of career management, while also providing valuable information for the implementation of career counseling and other educational programs.

The research described above examined the relationship between gender role personality and career exploration, as well as the mediating roles of self-regulation and career planning among Korean female college students. The results indicate that feminine traits have a positive relationship with career exploration, while masculine traits do not. It also shows that career exploration is a conscious, deliberate, and systematic process, requiring effort and communication with others, which is strongly associated with feminine traits such as interpersonal orientation and rigor. Therefore, this supports research identifying a positive relationship between extroversion, socialization ability, and conscientiousness with career exploration.<sup>(51)</sup>

The results were further explained based on the main characteristics of the subjects in the study. Most individuals tend to choose a work environment and field that align with their personality. Notably, 71,4 % of the participants were in majors focusing on social sciences, such as education, psychology, social welfare, humanities, and arts, which prioritize subjectivity, emotion, caring, and empathy. These fields are often considered feminine.<sup>(54)</sup> Students interested in these areas tend to have higher levels of femininity, making them more likely to explore careers dominated by women in these majors. Therefore, the finding of a direct positive relationship between femininity and career exploration can be clarified by the concentration of majors in the sample. This result aligns with research by Lim et al.<sup>(3)</sup>, which shows that higher levels of femininity among college students are associated with greater career decision-making abilities in feminine-oriented fields.<sup>(9)</sup>

Other studies further prove that the quality of motivation plays an important role in analyzing the function of motivation on career exploration. The quality of motivation reflects how individuals reason and experience their efforts to address future jobs considered autonomous and controllable.<sup>(55)</sup> From this perspective, a high quantity of motivation does not always lead to adaptive career exploration. For example, Beutel et al.<sup>(55)</sup> and Ghassani et al.<sup>(56)</sup> found that a group of students with experiences influenced by external factors had similar levels of career exploration as an intervention group. However, in terms of career indecision, the findings were different. Students externally influenced showed higher levels of career indecision than those in the intervention group with motivational qualities directed towards future career choices.<sup>(32)</sup> Finally, the above predictor variables—such as motivation, independence, competence, and personality (gender roles)—as efforts to gain knowledge and understanding of self-concept (strengths and weaknesses) are complemented by mastery of the learning environment as an essential integrated part of the individual planning component to enhance specific, systematic, and realistic career exploration.<sup>(34)</sup>

## CONCLUSIONS

Career exploration plays an important role in the individual experience because it motivates children to take risks, try and accept new things, and continue to learn. Learning about students' career development can be done through intentional and unintentional modeling, giving feedback, providing support, supporting symbolic play and experiments, telling stories, encouraging writing about oneself and accepting emotional experiences in various life roles. Thus, experiential learning (such as project development) and reflection (such as critical analysis of situations) can help individuals agency, explore careers and provide career development learning.

These results have important implications for practitioners. Although there is some risk in interpreting the impacts found as causal, interventions that provide career exploration skills, opportunities and support may increase self-efficacy, which may then increase exploratory behavior. In addition, interventions for career exploration can target individuals who are not engaged in the career exploration process such as those with low awareness or locus of control. Ultimately, through exploration, individuals should develop an understanding of the career development process with questions or problems they want to solve, learn how to ask new questions that guide future exploration experiences and redefine past experiences.

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