





## Career adaptability and individual factors in Greek secondary education

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### ABSTRACT

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This study investigates the factors shaping students' career orientations and adaptability in Greek education, emphasizing the interaction between individual characteristics and contextual influences. Grounded in Super's life-span, life-space theory, Savickas' career construction paradigm, and Bandura's concept of self-efficacy, career development is approached as a dynamic process influenced by identity, social context, and ongoing change. Quantitative analyses (t-tests, correlations, and ANOVA) were conducted on data collected from 627 students. Findings revealed that students demonstrate high levels of autonomy, self-efficacy, and proactive career management. However, the school environment was perceived as inadequate in offering systematic and meaningful career guidance. Instead, students rely heavily on social media and external sources for vocational information. Personalized interventions by career advisors were found to be significantly more effective than general institutionalized approaches. Moreover, age, educational level, and family-professional alignment emerged as significant predictors of career orientation, while sex, place of residence, and previous work experience showed no meaningful impact. These results underscore the importance of integrating personalized, developmentally informed, and contextually relevant counseling practices within Greek schools. Enhancing collaboration between educational institutions, families, and external career professionals could foster students' self-directed career development and adaptability to future labor market challenges. Overall, the study highlights the need to reframe career guidance as a continuous, student-centered process that supports autonomy and informed decision-making.

**Contribution/Originality:** This study contributes to the existing literature by linking individual traits and perceived school support to Greek upper-secondary students' career autonomy and adaptability, highlighting the influence of age, education, and family-profession alignment, and underscoring the need for more personalized, context-sensitive career counseling.

## 1. INTRODUCTION

Professional development is a multifaceted, ongoing process influenced by the context in which it occurs. It represents a continuous phenomenon shaped by personal characteristics, social relationships, cultural norms, and economic conditions that interact to influence an individual's professional identity and career trajectory (Patton & McMahon, 2014).

Factors influencing professional development can be broadly categorized as individual and non-individual. Individual factors include inherent traits such as physical attributes, cognitive abilities, and genetic predispositions,

as well as acquired aspects developed through learning, education, and experience (Super, 1990). Within this framework, self-concept, professional interests, values, skills, and competencies contribute to a sense of professional capability and maturity. Research by Judge and Kammeyer-Mueller (2012) suggests that positive self-perception and heightened self-awareness are associated with greater adaptability and fewer challenges in making career decisions. Additionally, personality traits such as perseverance, flexibility, emotional stability, and self-discipline influence responses to professional challenges and transitions.

The interaction between individual and external factors is equally critical. Patton and McMahon (2014) suggest that individuals with strong self-confidence, positive self-perception, and developed skills may overcome adverse socioeconomic conditions. Conversely, high-potential individuals may restrict their aspirations due to limited expectations or social stereotypes that constrain their perceived opportunities.

Social Cognitive Career Theory Brown and Lent (2013) further highlight that professional development arises from the interaction of self-efficacy beliefs, personal goals, and environmental supports or barriers. Thus, understanding career behavior requires an integrative approach that accounts for the dynamic relationship between personality, environment, and opportunity.

Building on these theoretical foundations, the present study aims to examine how individual factors influence professional decision-making within the Greek upper-secondary education context. Specifically, it investigates demographic and experiential factors, such as sex, age, educational level, residence, and professional experiences. Furthermore, the study explores the role of career counseling, both within schools and through external advisors, in shaping students' career orientations and self-perceived autonomy. Based on the literature, it is hypothesized that individual traits will be perceived as significant determinants of professional decision-making.

## 2. LITERATURE REVIEW

### 2.1. Individual Features and Social Factors Theories

One of the most prominent and widely recognized frameworks in career counseling is Holland (1997) typology (1977), which has had a substantial impact on contemporary methodologies. Holland, an eminent career guidance counselor, undertook systematic and empirical research, culminating in his theoretical approach finalized in 1985. As noted by Kantas and Chantzi (1991), this theory shares notable parallels with typological personality theories, positing the existence of distinct personality types and corresponding professional environments that can be effectively matched.

Holland's model asserts that career selection is fundamentally a process of aligning one's personality traits with compatible workplace settings. This alignment is optimized when individuals possess a strong sense of self-awareness and comprehend both their own attributes and the requirements of various professional contexts (Krivas, 1987). The function of a career counselor is pivotal, as the use of psychometric instruments such as Holland's questionnaire supports informed and satisfactory vocational decision-making. Holland himself emphasized the importance of ongoing reflection and evolution within his theoretical framework, acknowledging its utility whilst recognizing its limitations (Rayman & Gottfredson, 2020). Despite certain shortcomings, the typology remains among the most influential and practically utilized theories in career development and guidance. Yates (2025) further observes that Holland's theory continues to shape modern career counseling practices, consistently applied by professionals to reinforce the link between personality types and work environments.

However, the direct applicability of Holland's typology within the Greek educational context remains limited, as empirical studies have not yet examined how personality-environment congruence functions among Greek adolescents facing a rapidly changing labor market. This underscores the need to contextualize traditional models within culturally specific frameworks.

## 2.2. Evolutionary Theories

The theory developed by Ginzberg, Ginsburg, Axelrad, and Herma (1951) represents an early effort to conceptualize career choice as an evolving process. Unlike earlier models that depicted career selection as a fixed and momentary event, this framework posits that career decisions emerge gradually over time. Each choice is viewed both as a consequence of prior experiences and as a foundation for subsequent decisions. The process was originally characterized as irreversible, influenced by the individual's age and developmental trajectory (Ginzberg et al., 1951).

A significant revision to this theory occurred in 1972, when the notion of "irreversibility" was replaced by the concept of "optimization." This adjustment introduced greater flexibility, suggesting that individuals strive to achieve the optimal balance between their professional aspirations and the opportunities available, while considering changing circumstances and personal priorities (Argyropoulou, Tsikoura, & Kaliris, 2017; Ginzberg, 1984).

This evolution highlighted the dynamic, non-linear, and ongoing nature of professional development. In subsequent refinements, Ginzberg (1984) recognized that career growth persists beyond youth and continues throughout an individual's life, particularly for those striving for high job satisfaction. He also underscored the influence of external factors, including gender, socioeconomic status, and cultural background, on career decisions, addressing the initial limitation of the theory's focus on individuals from middle and upper social classes Ginzberg, 1984. While Ginzberg's theory laid important groundwork for the evolutionary perspective on professional development, it has been subject to considerable criticism. As an economist, Ginzberg did not sufficiently integrate psychological aspects and intrapersonal variables, which subsequent theorists such as Super and Gottfredson identified as vital to understanding career trajectories. Furthermore, the original formulation of the theory demonstrates limited applicability and interpretive utility when applied to groups such as women, ethnic minorities, or individuals with discontinuous career paths (Sidiropoulou-Dimakakou, 2016). In the Greek context, where adolescents often make study and career choices under strong familial and cultural pressures, these critiques are particularly relevant. Ginzberg's framework provides limited insight into how external constraints and socioeconomic inequalities shape evolving career intentions among Greek students. Nevertheless, the theory maintains both historical and scientific significance, serving as a precursor to numerous contemporary approaches and influencing prominent figures in the field, including Super. Its enduring contribution is primarily found in shifting the discourse from static concepts to more dynamic, developmental perspectives, thus framing careers as long-term, interactive processes.

Donald Super's significant contribution to the field of career development is exemplified by his evolutionary theory, widely recognized as the life-span, life-space approach. This perspective adopts a holistic framework for understanding career trajectories, emphasizing the dynamic interaction among personal traits, developmental phases, and societal roles. Super (1957) and Super (1990) posited that career development constitutes an ongoing process rather than a singular event or immutable choice, shaped through successive role transitions, such as those of child, student, employee, and parent, and the continual evolution of professional self-concept. His work highlighted the necessity of self-reflection, the progressive maturation of vocational ambitions, and the alignment of career decisions with personal identity, establishing a foundational context for contemporary career counseling. Central to Super's theory is the notion of vocational self-concept, which develops through sustained engagement between the individual and their environment, and which transforms one's lifespan (Super, 1990). Vocational choice is understood as an effort to actualize this evolving self-perception; successful articulation of such aspirations enhances the individual's sense of fulfillment and self-realization (Super, 1957). On an applied level, the Super-advanced Career Developmental Assessment and Counseling (C-DAC) model integrates key concepts such as career maturity, role salience, and self-concept to promote a comprehensive approach in career guidance (Oliveira, Guimarães, & Coleta, 2006). While the theory enjoys widespread recognition and adaptability across diverse settings (Savickas, 2005), its complexity and the challenges associated with empirically validating all constituent

variables have elicited critique (Kantas & Chantzi, 1991). Furthermore, careful consideration must be given to cultural adaptation, as notions of career maturity may vary significantly across sociocultural contexts (Balbinotti, 2003).

This consideration is particularly salient in Greece, where career maturity may develop unevenly due to limited school-based guidance structures and the influence of family expectations. Investigating how individual characteristics interact with such contextual factors offers valuable empirical insight into the adaptability of Super's framework in non-Anglophone educational systems.

### *2.3. Career Information Processing Model of Career Choice - CIP*

The CIP Model, developed by Peterson, Sampson, and Reardon (1996), is grounded in the cognitive-behavioral approach and incorporates elements from metacognitive processing theory. Within this model, professional decision-making is viewed as an ongoing analytical process that involves understanding, evaluation, and action, rather than being a single moment of choice. According to Peterson et al. (1996), individuals construct their career paths based on two fundamental categories of knowledge: self-knowledge (including skills, interests, values, and personal characteristics) and knowledge of the external environment (such as professions, requirements, and working conditions). The CIP model aims to enhance individuals' ability to understand, process, and manage information related to professional decisions in ways that foster autonomy and adaptability. The model's structure centers on two primary tools: the Information Processing Pyramid and the CASVE Cycle. The pyramid organizes cognitive skills hierarchically at three levels: (a) the knowledge base (self-awareness and awareness of the work world), (b) decision-making skills, and (c) executive processing at the apex, which includes metacognitive abilities such as reflection, self-observation, and emotional regulation (Sampson, Reardon, Peterson, & Lenz, 2004).

Sampson et al. (2004) describe the CASVE cycle, Communication, Analysis, Synthesis, Valuing, Execution, as a sequential yet flexible decision-making process. It begins with identifying a professional problem (C), analyzing involved elements (A), generating and refining possible alternatives (S), evaluating options according to personal and social values (V), and implementing the decision (E). The process is dynamic and allows individuals to revisit earlier stages to reassess choices and adjust strategies as necessary. Overall, the CIP model is designed to support not only singular career decisions but also to equip individuals for ongoing professional challenges by promoting lifelong problem-solving skills. It provides a framework applicable in counseling settings, aiming to support individuals' functioning within environments characterized by continual change and complexity.

In Greece, where structured decision-making frameworks are often absent from school career programs, the CIP model's emphasis on metacognition and self-regulation could offer a valuable foundation for strengthening students' decision-making competencies.

### *2.4. Career Construction Theory - CCT*

CCT, developed by Savickas (2005) and Savickas (2013), was introduced as a response to evolving workplace and societal conditions, providing a framework designed to accommodate cultural diversity and changes in the labor market. CCT builds upon and extends the foundational ideas of Super (1957) and Super (1990), integrating concepts from theories on self-development and constructivism (Savickas, 2005, 2013).

In contrast to traditional models that conceptualize professional development as a linear process, CCT describes professional identity as a narrative construct. The individual is viewed as an active participant in shaping their career story, rather than simply possessing predetermined traits. Through personal narratives, individuals construct meaning, interpret experiences, and form self-perception (Savickas, 2013).

The narrative approach is central within this theory; it allows individuals to organize their biographical continuity and develop an understanding of their professional self. The professional self is described through three primary roles: the "actor," who adopts childhood roles through observation and imitation; the "director," who in

adolescence plans actions and adapts through self-reflection and adjustment; and the "author," who, in adulthood, composes a personal autobiography to establish identity coherence and self-regulation (Maree, 2020; Savickas, 2013).

CCT highlights career adaptability, encompassing concern for the future, decision-making control, curiosity about alternatives, and confidence in executing plans. These aspects constitute the individual's capacity to address challenges encountered in professional life. The theory informs career counselling practices through narrative-focused approaches, such as the "Career Construction Interview," where career choices are interpreted as symbolic expressions of personal identity. Career is viewed not as a fixed reality but as a dynamic and dialogical process shaped within social contexts (Savickas, 2013).

Recent research applications have explored the role of storytelling in career guidance and emphasized the relevance of aligning professional scenarios with personal meanings (Wang & Li, 2024). The individual develops self-awareness and the ability to articulate responses to questions about professional aspirations (Savickas, 2013).

Career Construction Theory is characterized as a flexible and culturally responsive approach, prioritizing narrative, identity, and adaptability in professional development. However, despite its versatility, few studies have empirically examined how adolescents in Greece construct career narratives amid limited institutional guidance and strong familial influence. Addressing this gap can provide valuable insight into how personal traits and social contexts jointly shape career adaptability and self-efficacy in non-Anglophone, transitional labor markets.

### *2.5. Research Questions and Contribution*

A synthesis of the above theoretical approaches presents career as a process characterized by interactions among personal identity, social contexts, and ongoing changes, rather than as a fixed or predetermined path. Analyzing the factors that influence professional decision-making is important for designing effective interventions, including those provided through career counseling. Grounded in the above theoretical and empirical considerations, the following research questions are formulated:

#### *2.5.1. Research Question 1*

Which dimensions within the individual traits framework are most influential?

#### *2.5.2. Research Question 2*

Do limitations in school-based career counseling drive students toward alternative sources of guidance?

#### *2.5.3. Research Question 3*

Do personal characteristics moderate the above-mentioned shift?

## **3. METHODOLOGY**

### *3.1. Research Design*

The present study adopted a quantitative research design, employing a structured questionnaire as the principal instrument for data collection. The questionnaire was divided into three distinct sections, comprising both original and adapted items: (a) a self-constructed section designed to elicit demographic, socioeconomic, and personal information, (b) a section adapted from Thomas (2017) addressing the influence of social factors on professional development and career choice, and (c) items derived from other sources to ensure comprehensive data collection from Bright, Pryor, Wilkenfeld, and Earl (2005) which examined the impact of social context and unanticipated events on career decision-making.

To ensure both linguistic precision and conceptual consistency, the forward-back translation method was applied. A pilot study subsequently confirmed the clarity, cultural appropriateness, and comprehensibility of the

instrument. The finalized version of the questionnaire was developed in digital format (Google Forms) and disseminated electronically through multiple channels, including electronic mail, social networking platforms, and instant messaging applications.

This research design is best characterized as descriptive and exploratory, as it seeks to investigate the interplay of social influences and individual characteristics in shaping the career development trajectories and decision-making processes of young individuals at critical points of educational and professional transition.

### 3.2. Participants

The sampling framework restricted participation to three groups: high school seniors, first-year university students, and final-year undergraduate students enrolled in Greek secondary schools and universities. Data collection was conducted between December 2023 and July 2024, resulting in 627 valid responses, distributed almost equally between male (52.2%) and female (47.8%) participants. The largest share of respondents (40.6%) comprised students in the third grade of Lyceum. A considerable proportion (33.2%) was enrolled in the fourth or fifth year of undergraduate study, while the remaining 26.2% consisted of first-year university students.

### 3.3. Research Instrument

The research instrument, a structured questionnaire, comprised several sections. The first section included demographic items concerning basic individual attributes (e.g., gender, age, current educational level, high school or final-year undergraduate). It further incorporated family-related variables (e.g., number of siblings, parental educational attainment, place of residence) and socio-economic indicators (e.g., household vehicles, access to computers or laptops, frequency of family trips per year, availability of a private bedroom). In addition, this section examined participants' professional experience, primary occupational role models, and prior exposure to career guidance counseling within and beyond the school context.

Another section consists of 24 five-step (I strongly disagree, I disagree somewhat, I neither agree nor disagree, I agree enough, I agree completely) Likert-type questions (Likert items) (Joshi, Kale, Chandel, & Pal, 2015) which form the SIF Likert scale, related to the special individual features during the professional decision and course.

To determine whether the questionnaire has the capacity to produce reliable, repeatable, and consistent information, Cronbach's Alpha confidence factor, which is suitable for measuring the internal coherence of Likert-type scales, was calculated. Table 1 presents the relevant results, indicating that the scale under investigation demonstrates satisfactory reliability, as the Alpha value surpasses the 0.7 threshold (Cronbach, 1951). This finding confirms the internal consistency of the data.

With regard to the convergent validity of the SIF scale, high correlations are observed in variables related to active professional decision-making, such as: "I plan my career myself" ( $r_{xy} = 0.455^*$ ), "I search for and gather information about professions on my own" ( $r_{xy} = 0.553^*$ ), "The career counselor within the school environment showed me ways to search for information" ( $r_{xy} = 0.539^*$ ). The high correlations among the variables align with the theory of self-directed careers (Lent, Brown, & Hackett, 1994), confirming the convergent validity of the scale.

Distinct validity was also observed, as low or negative correlations appear in variables related to external influence or pressure: "I choose a career that will satisfy my family environment" ( $r_{xy} = -0.052$ ), "I am pressured by my relatives to follow a certain career path" ( $r_{xy} = -0.061$ ). The low correlation of these variables indicates that the scale mainly measures individual characteristics that influence professional decisions, separating them from external social factors (Messick, 1989).

The validity of the SIF scale is considered satisfactory, as the variables associated with personal activity and information show high correlations, confirming convergent validity. Variables associated with external pressures have low or negative correlations, indicating good discriminant validity. The scale effectively differentiates individual traits that influence professional development from external social factors.

Table 1. Measurement model results (SIF reliability and validity).

Item	Statement	Loadings	Reliability
<b>Special Individual Features Scale</b>			0.757
SIF1	The future of work is a subject that concerns me.	0.247 *	
SIF2	I proceed with actions to shape my work path	0.260 *	
SIF3	I have free choice in making decisions about my career	0.266 *	
SIF4	I chose a career that will satisfy my family environment	-0.052	
SIF5	I plan my career myself	0.455 *	
SIF6	I have knowledge of today's labor market	0.317 *	
SIF7	I am pressured by my relatives to follow a certain career path	-0.061	
SIF8	My talents are related to the profession I wish to pursue	0.439 *	
SIF9	I search for and gather information about the professions on my own	0.553 *	
SIF10	The dominant source of professional information is social media	0.383 *	
SIF11	My relatives encourage me to choose any career path I desire	0.371 *	
SIF12	I believe that I can deal with potential professional challenges	0.400 *	
SIF13	My interests are related to the profession I wish to pursue	0.380 *	
SIF14	At school, we give importance to my future work	0.537 *	
SIF15	My teachers are important people who influence me	0.464 *	
SIF16	I search for information related to professions mainly on social media	0.421 *	
SIF17	The career counsellor within the school environment showed me ways to search for information related to the professions	0.539 *	
SIF18	While I know what I want to pursue, it is difficult for me to create a plan to achieve it	0.147	
SIF19	I will choose a career path that will bring me a higher salary in exchange for prestige	0.310 *	
SIF20	I identify various educational and professional paths that suit me, but I cannot decide which one is the best	0.179	
SIF21	My parents have high expectations for my career path	0.159	
SIF22	The career advisor outside of school showed me ways to search for information related to the professions	0.104	
SIF23	I will choose a profession based on its high financial earnings	0.427 *	
SIF24	If I fail in my admission to the field of study that I had decided as my first choice, I will settle for another	0.164	

Note: Reliability is based on Cronbach's Alpha ( $\alpha$ ) coefficient. All factor loadings reported are statistically significant ( $p < 0.001$ ). \* Important Associations ( $\rightarrow$  Pearson's  $r$ , Critical Value = 0.195)

### 3.4. Data Analysis

To assess the degree of agreement with the statements measured by the scale and corresponding Likert-type items, mean values were computed for each variable. Subsequent analyses employed t-tests in accordance with established guidelines (Gravetter & Wallnau, 2016) following confirmation that all necessary assumptions were met. These tests compared the mean scores of the Likert-type variables against the benchmark value of 3, which, by design, represented a neutral position. Accordingly, values above 3 indicated agreement, whereas values below 3 denoted disagreement.

The potential influence of demographic variables on participants' attitudes was further examined using one-way ANOVA, independent-samples t-tests, and Pearson's product-moment correlation coefficient (Field, 2017). Statistical significance was determined at the conventional threshold of  $p < 0.05$ . All analyses were conducted with IBM SPSS Statistics, version 26.0, an established software package for quantitative social research (Field, 2017).

## 4. RESULTS

In order to assess the importance of individual traits in shaping professional decisions and career orientation, the mean score of the SIF scale was calculated. The overall mean value of the instrument was 3.33, which indicates that respondents regarded individual traits as moderately to highly significant factors influencing their career-related choices. The difference between this mean score and the reference value of 3, which represents the threshold

of “average importance,” was found to be statistically significant ( $t = 22.579, p < 0.001$ ). This finding indicates that students recognize the role of personal attributes, such as self-knowledge, autonomy, motivation, and initiative, as crucial components in career decision-making processes and aligns with contemporary career development theories emphasizing the role of personal agency and self-efficacy (Bandura, 1997; Lent et al., 1994) in shaping vocational behavior. It also supports Super's (1990) life-span, life-space approach (1990) and Savickas's (2005) career Construction Theory (2005), both of which frame career choice as a self-directed process influenced by personal values, interests, and perceived competencies.

To further interpret this general finding, each item representing an individual trait was examined separately to identify which specific factors students rated as more or less important. The mean scores for each statement were calculated and compared against the critical reference value of 3 (see Table 2). The results of this item-level analysis revealed significant patterns of agreement and disagreement across specific aspects of individual influence, providing deeper insight into how students prioritize different personal traits in their professional decision-making.

**Table 2.** SIF t-test results.

Item	Statement	Means	p-v
<b>Special individual features scale</b>		3.33	< 0.01
SIF1	My future of work is an issue that concerns me	4.65	< 0.01
SIF2	I proceed with actions to shape my work path	4.21	< 0.01
SIF3	I have free choice in making decisions about my career	4.13	< 0.01
SIF4	I chose a career that will satisfy my family environment	3.35	< 0.01
SIF5	I plan my career myself	3.39	< 0.01
SIF6	I have knowledge of today's labor market	3.30	< 0.01
SIF7	I am pressured by my relatives to follow a certain career path	2.34	< 0.01
SIF8	My talents are related to the profession I wish to pursue	3.59	< 0.01
SIF9	I search for and gather information about the professions on my own	3.17	0.005
SIF10	The dominant source of professional information is social media	4.32	< 0.01
SIF11	My relatives encourage me to choose any career path I desire	3.24	< 0.01
SIF12	I believe that I can deal with potential professional challenges	3.97	< 0.01
SIF13	My interests are related to the profession I wish to pursue	4.29	< 0.01
SIF14	At school, we give importance to my future work	2.31	< 0.01
SIF15	My teachers are important people who influence me	2.51	< 0.01
SIF16	I search for information related to professions mainly on social media	3.80	< 0.01
SIF17	The career counsellor within the school environment showed me ways to search for information related to the professions	1.42	< 0.01
SIF18	While I know what I want to pursue, it is difficult for me to create a plan to achieve it	2.52	< 0.01
SIF19	I will choose a career path that will bring me a higher salary in exchange for prestige	4.34	< 0.01
SIF20	I identify various educational and professional paths that suit me, but I cannot decide which one is the best	2.30	< 0.01
SIF21	My parents have high expectations for my career path	4.21	< 0.01
SIF22	The career advisor outside of school showed me ways to search for information related to the professions	2.34	< 0.01
SIF23	I will choose a profession based on its high financial earnings	3.36	< 0.01
SIF24	If I fail in my admission to the field of study that I had decided as my first choice, I will settle for another	2.78	< 0.01

**Note:** Critical Value = 3, p-v = p value

A central finding concerns students' strong concern for their future careers ( $SIF1: M = 4.65, SD = 0.63, t(626) = 65.4, p < 0.001$ ), their willingness to actively shape their work paths ( $SIF2: M = 4.21, SD = 1.04, t(626) = 29.32, p < 0.001$ ), and their belief in their own decision-making autonomy ( $SIF3: M = 4.13, SD = 0.94, t(626) = 30.13, p < 0.001$ ).

These results suggest high levels of career self-efficacy, a construct central to Bandura (1997) theory of self-efficacy and further elaborated in Lent et al. (1994) *Social Cognitive Career Theory (SCCT)*. The ability to proactively

engage in career planning is also consistent with findings from Savickas (2013) on career adaptability and Maree's (2020) emphasis on self-directed career construction.

Family influence emerges as a decisive factor. Students report agreement with statements highlighting family expectations ( $SIF21: M = 4.21, SD = 0.95, t(626) = 31.9, p < 0.001$ ), while also acknowledging the role of choosing a career path that satisfies their family ( $SIF4: M = 3.35, SD = 1.31, t(626) = 6.56, p < 0.001$ ). This reflects the strong family-centered cultural orientation in Greece, as previously discussed by Kantas and Chantzi (1991) and Krivas (1987).

At the same time, students reported significant disagreement with being pressured by relatives ( $SIF7: M = 2.34, SD = 1.24, t(626) = -13.33, p < 0.001$ ), suggesting that while family expectations are high, students still perceive autonomy in their choices.

In contrast, the influence of the school context appears limited. Students disagreed that schools emphasize career guidance ( $SIF14: M = 2.31, SD = 1.17, t(626) = -14.8, p < 0.001$ ) and that career counselors within schools provided useful information ( $SIF17: M = 1.42, SD = 1.06, t(626) = -37.37, p < 0.001$ ). Similarly, reliance on external advisors was low ( $SIF22: M = 2.34, SD = 1.18, p < 0.001$ ).

These results are in tension with Super (1990) *life-span, life-space approach*, which emphasizes the role of institutional guidance in vocational maturity, as well as with Balbinotti (2003) transcultural perspective on vocational development. They highlight a gap between the high career concerns of students and the low institutional support they perceive.

An interesting pattern emerges when comparing the role of external career advisors with that of counselors within schools. Students expressed very strong disagreement regarding the usefulness of school-based career counselors, suggesting that institutional guidance inside the school system is perceived as largely ineffective. By contrast, although the mean for external advisors still falls below the neutral point, it is notably higher than that for in-school counselors, indicating that students view external professionals somewhat more positively.

This divergence could be interpreted through the lens of Super (1990) *life-span, life-space theory* (1990) and Savickas (2005) and Savickas (2013) *career construction theory*, both of which emphasize the importance of contextual and developmental support in fostering vocational maturity. The relatively better perception of external advisors may stem from their specialized training, updated knowledge of labor market demands, and stronger professional identity, as opposed to school-based counselors who may be constrained by broader teaching responsibilities, limited resources, or outdated guidance frameworks (Sidiropoulou-Dimakakou, 2016).

The findings also resonate with Bright et al. (2005) emphasis on the role of context and social connections in career decision-making: students may perceive external advisors as being closer to real-world labor market dynamics and better able to connect them to opportunities beyond the school environment. In contrast, the low evaluation of school counselors highlights a structural gap in the Greek educational system, where career services have historically been underdeveloped (Kantas & Chantzi, 1991; Krivas, 1987).

Taken together, the data suggest that while students still show limited reliance on professional guidance overall, they attribute more credibility and value to external career advisors compared to school counselors. This finding underscores the need for reforms in school-based career services in Greece, ensuring that counselors are adequately trained, resourced, and integrated into students' developmental trajectories in ways that align with contemporary theories of career adaptability and construction (Maree, 2020; Savickas, 2013).

Another notable dimension concerns information sources. Students strongly agreed that social media constitutes their dominant career information tool ( $SIF10: M = 4.32, SD = 1.01, t(626) = 32.8, p < 0.001$ ;  $SIF16: M = 3.80, SD = 1.46, t(626) = 13.72, p < 0.001$ ), whereas reliance on structured, school-based information channels was minimal. This shift aligns with studies on the growing importance of digital platforms in career development (Sidiropoulou-Dimakakou, 2016; Thomas, 2017) as well as with theories that emphasize contextual and happenstance factors in vocational choices (Bright et al., 2005; Krumboltz, 2009).

Finally, financial motives are clearly evident in career orientation. Students significantly agreed with choosing careers for financial reward over prestige ( $SIF19: M = 4.34, SD = 0.87, t(626) = 38.57, p < 0.001$ ) and for financial earnings in general ( $SIF23: M = 3.36, SD = 1.42, t(626) = 6.43, p < 0.001$ ). These results reflect the pragmatic orientation described in Ginzberg et al. (1951) and Ginzberg (1984) theory of occupational choice (1951, 1984) and resonate with Judge and Kammeyer-Mueller's (2012) findings on job attitudes shaped by extrinsic rewards.

In summary, the statistical results show that Greek upper-secondary students are highly career-concerned, self-efficacious, and motivated by financial security, while being strongly influenced by family expectations.

At the same time, they reveal a lack of effective school-based career guidance, which stands in contrast to the expectations of developmental theories (Savickas, 2005, 2013; Super, 1990). The findings point to the importance of reinforcing structured career counseling interventions in the school environment, while also acknowledging the central role of family and the increasing reliance on digital information sources.

To gain a more comprehensive understanding of the above findings, the study further examined the impact of personal characteristics, including age, sex, educational level, professional experience, place of residence, alignment with family members' professions, and engagement with career advisors, on students' perceptions of the importance of individual traits in professional decision-making. This analysis aimed to identify which demographic and experiential factors significantly shape students' career orientations and the weight they assign to personal attributes in guiding their choices.

**Table 3.** Effect of personal characteristics on SIF.

Sex	$t(625) = -0.765, p = 0.445$
Age	$r(627) = -0.106, p = 0.008$
Experience	$r(623) = 0.032, p = 0.432$
Educational level	$F(2, 624) = [18.035], p < 0.001$
Place of residence	$F(3, 623) = [1.397], p = 0.242$
Professional model	$F(7, 619) = [5.730], p < 0.001$
Individual meeting with the professional career advisor at school	$t(94) = 5.770, p < 0.001$
I have turned to an out-of-school career counselor	$t(625) = 1.901, p = 0.058$
My studies or profession are related to my family member's profession.	$t(625) = -2.181, p < 0.030$

**Note:** t: t-test, r: Pearson Correlation Coefficient, F: ANOVA

Results showed that sex ( $t(625) = -0.765, p = 0.445$ ), experience ( $r(623) = 0.032, p = 0.432$ ), and place of residence ( $F(3, 623) = 1.397, p = 0.242$ ) had no significant effects, suggesting that demographic factors are less critical in shaping career orientations. In contrast, age had a weak but significant negative correlation ( $r(627) = -0.106, p = 0.008$ ), indicating that younger students reported higher career concern and adaptability. Educational level was also highly significant ( $F(2, 624) = 18.035, p < 0.001$ ), consistent with Super (1957) and Super's (1990) theory of vocational maturity, where readiness for career decision-making increases with educational progression.

The presence of a professional role model significantly shaped career orientations ( $F(7, 619) = 5.730, p < .001$ ), reflecting the influence of observational learning described by Bandura (1997) and further emphasized in SCCT (Lent et al., 1994). Similarly, students whose intended studies or professions were related to a family member's occupation scored differently on the SIF ( $t(625) = -2.181, p < 0.030$ ), reinforcing the central role of family background and intergenerational continuity in Greek career choices.

Interestingly, career counseling showed mixed effects. While general perceptions of school career counselors were strongly negative (SIF17), individual meetings with a career advisor within the school significantly improved SIF scores ( $t(94) = 5.770, p < 0.001$ ). This suggests that personalized, one-on-one interventions are more

effective than general guidance provision, consistent with the cognitive information processing model of career counseling (Peterson et al., 1996; Sampson et al., 2004). Turning to an out-of-school counselor showed a near-significant trend ( $t(625) = 1.901, p = 0.058$ ), confirming that students assign slightly greater credibility to external advisors compared to in-school counselors, although the effect was weaker.

In summary, the findings indicate that Greek students are highly career-concerned, proactive, and motivated by financial security, while strongly shaped by family and role models. However, they also highlight deficiencies in school-based career guidance, with students relying more on social media and external resources for vocational information. These results call for strengthening the role of structured, individualized career interventions within schools, in line with developmental and constructivist career theories (Savickas, 2013; Super, 1990) while recognizing the continuing importance of family, culture, and contextual influences.

## 5. DISCUSSION

The study revealed a generally high level of concern and proactive engagement with career planning among Greek upper-secondary students. The strong agreement with statements about concern for the future (SIF1), active career planning (SIF2), and autonomy in decision-making (SIF3) aligns with Social Cognitive Career Theory (Lent et al., 1994) and career adaptability theory (Savickas, 2005), highlighting the importance of self-beliefs and adaptability in career development.

Family emerged as a central influence. Students strongly acknowledged parental expectations (SIF21) and family satisfaction in career choices (SIF4), while simultaneously rejecting overt pressure (SIF7). This balance reflects the Greek cultural context, where family plays a decisive but nuanced role in shaping career paths (Kantas & Chantzi, 1991).

In contrast, the school environment was evaluated critically. Students disagreed that schools emphasize career preparation (SIF14) and rated school-based career counseling as ineffective (SIF17). However, one-on-one meetings with school advisors significantly improved SIF outcomes, suggesting that personalized interventions are more impactful than general provision (Peterson et al., 1996). The more favorable perception of external counseling compared to in-school guidance may reflect students' desire for autonomy and individualized support, consistent with Super (1990) and Savickas (2013) views of career development as a self-directed process shaped by personal agency and contextual opportunities.

Interestingly, social media was identified as a dominant source of professional information (SIF10, SIF16). This reliance reflects the digital shift in vocational exploration (Thomas, 2017) and corresponds with the planned happenstance theory (Krumboltz, 2009), where unstructured and informal influences guide career decisions.

Finally, financial considerations were strong motivators, with students prioritizing high earnings over prestige (SIF19, SIF23). This pragmatic outlook reflects broader economic uncertainty and resonates with Ginzberg (1984)'s developmental approach and Judge and Kammeyer-Mueller's (2012) work on extrinsic career motivators.

The examination of personal characteristics (Table 3) revealed that sex, experience, and residence had no significant impact on SIF scores, suggesting a general convergence of attitudes across groups. By contrast, age ( $r = -0.106, p = 0.008$ ) showed a small but significant effect, with younger students reporting higher adaptability. Educational level was a strong predictor ( $F = 18.035, p < 0.001$ ), supporting Super (1990) theory of vocational maturity. Additionally, the presence of a professional role model ( $F = 5.730, p < 0.001$ ) and alignment with family professions ( $t = -2.181, p = 0.030$ ) confirmed the enduring impact of family and social capital on career orientations.

The role of external career counselors was rated slightly more positively than in-school advisors ( $t = 1.901, p = .058$ ), pointing to issues of credibility and institutional trust. Although not statistically significant at the 0.05 level, the trend suggests that students may view external advisors as more neutral and resourceful compared to school-based staff.

Despite these meaningful insights, the findings should be interpreted with caution. As the study relied on self-reported data, students' responses may reflect socially desirable attitudes or retrospective bias rather than objective behaviors. Moreover, the cross-sectional design does not capture the temporal evolution of career attitudes or adaptability, which are dynamic constructs that change over time. Longitudinal or mixed-method approaches could provide a deeper understanding of how personal characteristics, social influences, and institutional factors interact throughout adolescents' career development. Finally, contextual factors such as local labor market conditions and regional disparities in school resources may have subtly shaped students' perceptions, limiting the generalizability of results.

## 6. CONCLUSION

This study highlights the strong career concern and planning orientation of Greek upper-secondary students, alongside the decisive influence of family, financial incentives, and professional role models. While students demonstrate high levels of autonomy and proactive career management, the school context is perceived as inadequate, particularly in terms of systematic career guidance. Instead, students turn to social media and external sources for vocational information.

Personal characteristics such as age, educational level, and family-professional alignment significantly shaped career orientations, while demographic variables like sex and residence were less influential. Importantly, personalized interventions from career advisors, whether inside or outside the school, proved more effective than general, institutionalized guidance.

## 7. IMPLICATIONS OF THE STUDY

The findings of the present study offer several important implications for educational policy, career counseling practice, and future research.

1. Strengthening career guidance in schools

Schools should move beyond general career counseling toward individualized, one-on-one interventions, which have been shown to positively impact student orientations. Training programs for in-school counselors should emphasize practical tools for career exploration, digital literacy, and individualized planning.

2. Integrating digital career exploration

Since social media is already a dominant source of information, schools could leverage digital platforms to provide structured, credible, and interactive career resources. Partnerships with online career services could help reduce reliance on unverified or biased online content.

3. Family engagement

Career guidance initiatives should actively involve families, recognizing their dual role as motivators and gatekeepers. Workshops and parent-student sessions could help balance family expectations with student autonomy.

4. Addressing financial concerns

Given the strong emphasis on financial security, guidance programs should include realistic labor market information on earnings, job stability, and career growth, helping students make informed, long-term decisions.

5. External advisors and cross-sector Collaboration

The near-significant effect of external career counselors suggests the value of partnerships between schools and external professionals. Collaborations with universities and private career centers could expand the range of perspectives available to students.

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**Transparency:** The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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