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Towards a Deeper Understanding of Family Influence in the Guidance of Moroccan Muslim Students: Development and Validation of Specific Scales for Successful Guidance

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Abstract

In Moroccan Muslim societies, where collectivist and Islamic values shape familial roles, parental practices and family social-financial capital play a pivotal role in students' career trajectories. However, existing measures rarely capture these intertwined dimensions within this specific socio-cultural framework. This study addresses this gap by conducting two independent studies to develop and validate two scales: the Scale of Parental Practices in Educational and Vocational Guidance (PPEVG) and the Family Social Financial Capital Scope (FSFC). The first study involved 324 Muslim high school students (55% girls) aged 17–18, enrolled in the final year of baccalaureate programs across various academic tracks, from six Moroccan regions, to validate the PPEVG. The second study included 340 Muslim students (62% girls) with the same characteristics to validate the FSFC. Both studies employed multistage cluster sampling. Exploratory (KMO=0.776 and 0.722) and confirmatory factor analyses confirmed the robustness of both scales, with McDonald's omega coefficients ranging from 0.729 to 0.785. Findings from the PPEVG showed that supportive parental practices (M=16.4) were more prevalent than interfering ones (M=12.9), with a moderate correlation (r=0.36) suggesting that parents may exhibit both behaviors. Parental education significantly influenced practices: higher paternal education correlated with stronger support, while lower maternal education increased interference. FSFC scores highlighted the critical role of socio-financial resources in enabling students' mobility beyond their home region. These findings offer culturally tailored tools for counsellors and actionable insights for policymakers to design inclusive guidance frameworks and address socio-economic disparities in collectivist contexts.

INTRODUCTION

Numerous studies have explored the effects of family influences on students' career guidance, particularly in terms of career decisions and commitment (Wong et al., 2011). While these works have primarily focused on parenting styles, several key conceptual models stand out in the literature. For instance, Kerka (2000) proposed two models, the first emphasizes attention and responsiveness to the child, in contrast to rejection, neglect, and indifference, while the second emphasizes parental control in contrast to autonomy (Herz & Gullone, 1999; Hughes, 2011; Parker et al., 2011). In this respect, Dietrich & Kracke (2009) conceptualization provides a broader framework, integrating these models into three main types of parenting

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practices: supportive, interfering, and disengaging. Supportive practices foster autonomy and career exploration, interfering practices reflect excessive parental control, and disengaging practices denote little or no involvement in a child's educational or career guidance (Dangoisse & Nils, 2019). While these models have been instrumental in developing parental practices scales and remain highly relevant, prior research has predominantly focused on exploring parenting styles without fully accounting for the broader socio-cultural factors that inform such practices.

The identification of parental styles or levels of involvement is insufficient when addressing the complexities of career guidance. A deeper understanding requires exploring the socio-cultural dimensions underpinning these practices, particularly parental beliefs, values, and expectations, which shape guidance behaviors (Kewalramani & Phillipson, 2019). Wilder (2013) highlighted expectations as significant determinants of children's future outcomes, while (Fouad et al., 2015) emphasized the strong influence of beliefs and values, often rooted in ethnic and socio-economic contexts. These dimensions can interact indirectly in shaping vocational choices, offering a lens to better understand observed parental behaviors. In societies like Morocco, where collectivist norms dominate, direct influences such as financial and informational support remain critical (Vautero et al., 2021). However, indirect influences stemming from parents' socio-economic conditions and educational levels help explain practices of interference or neglect. Nevertheless, few studies have investigated how these parenting practices intersect with the specific cultural and structural realities of Moroccan society, characterized by collectivist norms, Islamic values, and diverse socio-economic conditions, to influence students' career choices. This gap underscores the importance of analyzing not only parenting styles in isolation but also the interplay between parental beliefs, broader cultural values, and financial or educational constraints. By addressing these dimensions, the present study provides a more holistic framework for understanding Moroccan parenting practices in educational and career guidance, thereby filling a critical gap in the literature.

Indeed, if parental decisions regarding their children's education are based on their beliefs as well as their life contexts, then the family contexts in which students' career development begins should be taken into account (Kewalramani & Phillipson, 2019) taking the example of Islamic Moroccan societies, parents, whatever their level of education, place great importance on education, perceiving it as the surest path to guaranteeing a prosperous future for their children. In addition, their previous educational experiences may be more significant in guiding their perceptions (Miller et al., 2011). Following Morocco's independence in 1956, the country faced significant educational and socio-economic challenges, reflected in low adult literacy rates (30.25% in 1985, rising to 41.59% in 1994; *World Bank Open Data*, 2024.). This limited exposure to formal education can still affect how parents understand the education system and the labor market.

In Islamic Moroccan societies, imbued with a collectivist culture, even when the parents' level of education is modest, they offer their children robust social support, which plays a crucial role in their academic and professional careers by helping them to overcome the obstacles they encounter (Boerchi & Tagliabue, 2018; Lent et al., 2000). This manifests itself through constant encouragement, spiritual prayers, a perpetual incentive to pursue studies, and a special attachment to their daughters with their preference for them to pursue their careers in the same region where they live. Students from collectivist cultures make career decisions with the aim of satisfying their relatives (Leong et al., 2011; Sawitri et al., 2013) and also perceive their parents' expectations in terms of career and educational attainment (Fouad et al., 2008). Conversely, some parents often encourage their children to choose specific or popular career paths (e.g., teaching or police work), wishing to ensure them both professional stability and secure employment. This is frequently motivated by fears of unemployment or financial strain,

since in rural and peri-urban areas it is common for sons to assume responsibility for supporting their families, thus adapting their own career interests accordingly.

Parents can transmit professional values (Liu et al., 2015); and in the context of our study, we could highlight the professional value of job security, which is a determining variable that influences and determines students' professional interests (Legres & Pemartin, 1986; Zemzami & Lotfi, 2024). Certain life events or circumstances lead individuals to include this value among their priorities, thus seeking a job that guarantees a stable income. However, by strictly yielding to parental expectations, some individuals find themselves engaged in occupations that do not correspond to their true vocation, or for which they lack the necessary skills or personality traits, such career decisions negating the self-concept (Super, 1953, 1980) and consequently professional identity. Drawing on the Social Cognitive Career Theory (Lent et al., 1994), these parental influences can shape students' self-efficacy, outcome expectations, and career decision-making processes.

It is therefore essential to examine and identify trends in family influence on students' career development (Vautero et al., 2021) in order to better understand and justify the parental practices identified through the measurement scales developed, on the one hand, and to enable guidance counsellors to ensure that students' career decisions are aligned with their own vocational interests, on the other. Nevertheless, the use of career interests to guide and counsel students is more effective than taking into account other variables such as salary or benefits (Wong et al., 2011).

According to Kim et al. (2015), parental financial support also plays a decisive role in the realization of young people's career ambitions. This underlines the importance of recognizing that this capacity for economic support varies significantly according to the educational and socio-economic level of families (Kewalramani & Phillipson, 2019), especially in contexts where economic hardship can limit parental investment in their children's education. Existing measures of parental influence have not fully captured these dual dimensions, parental practices and the broader social-financial capital, within an Islamic cultural framework. Consequently, developing specialized instruments becomes crucial for guidance counsellors who aim to provide culturally and financially responsive support.

Our initial research question was: "To what extent do parental practices and family social-financial capital influence Moroccan students' orientation and career development?" Through our literature review, we established that parental behaviors, ranging from supportive to interfering, and the family's social and financial resources both play critical roles in shaping students' educational trajectories in an Islamic collectivist context. However, most existing instruments do not fully capture these dimensions in Morocco's unique socio-cultural environment.

To address this gap, we developed and validated two new scales. The first, the Scale of Parental Practices in Educational and Vocational Guidance (PPEVG), draws on Dietrich & Kracke (2009) conceptualization of parental practices, supportive, interfering, or disengaging, to measure the intensity and type of involvement. The second, the Family Social Financial Capital Scope (FSFC), is inspired by the work of Bernaud & Caron (2004), but adapted to the Moroccan context, in order to assess the social (Sociability and Cultural Adaptability, Travel Autonomy) and financial (Parental Financial Support, Personal Financial Abilities) aspects of a student's family environment. Our goal was to offer counsellors a tool to gauge each student's overall capacity to pursue higher education opportunities, including those beyond the home region.

In this study, we first ask whether parents can combine supportive and interfering practices and what role guidance counsellors can play when dealing with interfering, neglectful, or conflictual parental behaviors. We also propose two main hypotheses: (1) the parental education level exerts a significant impact on students' educational choices and decision-

making, and (2) in collectivist societies, boys are more exposed to interfering practices due to parental expectations of job security, whereas girls experience lower social capital because of their stronger familial attachment. Finally, our study pursues two overarching objectives: first, to develop and validate the PPEVG and FSFC scales, ensuring that they account for the cultural and socio-economic characteristics of Morocco; and second, to examine current trends in parental practices and family social-financial capital, so as to offer practical recommendations for guidance counsellors.

By offering context-sensitive measurement tools, we aim to enhance career counseling by helping professionals identify students who may require additional support or interventions. These findings can also inform educational policymakers when allocating resources or designing targeted programs for families across various socio-economic backgrounds, thereby promoting more inclusive career guidance policies.

METHODS

Participants

This study involved two independent samples of high school students in their final year (baccalaureate level) from six Moroccan regions. A multistage cluster sampling technique was employed to ensure the representativeness of the population in terms of gender, academic tracks, and regional diversity. The sample sizes were determined based on psychometric guidelines, which recommend at least 10 participants per item for exploratory and confirmatory factor analyses. This approach ensured robust statistical validation of the scales while addressing practical constraints.

The first study, conducted to validate the Scale of Parental Practices in Educational and Vocational Guidance (PPEVG), included 324 students, 55% of whom were girls (177 girls and 147 boys). The second study, designed to validate the Family Social Financial Capital Scope (FSFC), involved 340 students, with 62% being girls (210 girls and 130 boys).

Research Procedures

This study followed a systematic approach comprising two distinct phases. The first phase focused on the development of two scales, the Scale of Parental Practices in Educational and Vocational Guidance (PPEVG) and the Family Social Financial Capital Scope (FSFC). Drawing from theoretical models and expert feedback, items were drafted, refined, and piloted with a small sample of students to ensure clarity and alignment with the targeted dimensions.

The second phase involved data collection and validation through two independent surveys conducted in six Moroccan regions. Each scale was administered to a separate sample of students in their final year of high school, ensuring representativeness through multistage cluster sampling. Ethical guidelines, including participant confidentiality and voluntary participation, were strictly observed throughout the process. Statistical analyses, detailed in subsequent sections, ensured the validity and reliability of the scales.

Development of Scale of Parental Practices in Educational and Vocational Guidance (PPEVG)

The Scale of Parental Practices in Educational and Vocational Guidance was developed based on the conceptualization proposed by Dietrich & Kracke (2009). The scale comprises two distinct dimensions. The first, bipolar dimension, assesses both parental support practices and parental disengagement. In its positive dimension, it measures parental involvement in supporting their children's vocational choices, while in its negative dimension, it assesses parental disengagement, i.e. the absence of support. The second dimension focuses on

Table 1. Items of the Parental Practices Scale

Dimension	No.	Item	Purpose of measurement
Supporting parental practices	1	My parents ask me about my career goals and aspirations for the future.	Evaluate direct support for reflection and career planning.
	3	My parents want to know what school subjects interest me most.	Assess support for study choices and encourage discovery of relevant subjects of interest.
	5	My parents give me advice and share their professional experience so that I can benefit from it.	Measure the quality and quantity of advice given by parents, and their willingness to share their professional experiences.
	7	My parents are keen to know more about my career ambitions and are actively making enquiries.	Measure parents' interest in and commitment to learning about their child's career ambitions.
	9	My parents advise me to visit different workplaces and discover different professions.	Assess parental influence on children's career and work exploration for informed decision-making.
	11	My parents encouraged me to do an internship to find out what kind of job I would like.	Evaluate the support they provide to help their children gain practical experience and discover their professional interests.
Interfering parental practices	2	My parents want me to complete a specific training course that they have chosen.	Evaluate the extent to which parents exert a direct influence by imposing specific training chosen by them.
	4	My parents try to persuade me to choose a particular profession, pointing out its considerable advantages.	Measure parents' efforts to persuade their child to choose a specific profession by emphasizing its advantages.
	6	My parents decide what field of study I should pursue at my school.	Evaluate parents' decision-making regarding their child's educational pathway.
	8	My parents' ambition is that I engage in a specific profession, which was once their own wish.	Measuring the pressure exerted by parents for their children to follow a career path they themselves had envisaged.
	10	My parents insist that I strictly follow their advice when it comes to career choices.	Assess the strength of parents' insistence that their child adopts their career recommendations.
	12	My parents mention professions and training that they don't approve of for me.	Measuring parents' tendency to express disapproval of certain professions and training courses.

interfering parental practices, which refer to parental behaviors that hinder children's autonomy in their educational and vocational guidance.

Each dimension is measured using six items, for a total of twelve items. The odd - numbered items correspond to the first dimension (supporting parental practices), while the even-numbered items assess interfering parental practices. The response mode adopted for this scale is a 5-point Likert scale, ranging from "always" to "never", enabling a precise assessment of the frequency of observed practices. The measurement objectives for each item are detailed in Table 1, providing a clear overview of the aspects assessed by the scale.

Development of The Family Social Financial Capital Scope (FSFC)

The Family Social Financial Capital Scope (FSFC) is a unidimensional scale developed to assess the social and financial dimensions of family support. The scale is divided into two main aspects. The social aspect comprises two facets: sociability and cultural adaptability, and

Table 2. Items of the Family Financial Social Capital Scale

Aspects	Facets	No.	Item	Purpose of measurement
Social aspect	Sociability and cultural adaptability	1	When I discover a new Moroccan city, I integrate and acclimatize to new customs and a new environment.	Good social skills and cultural adaptability make it easier to integrate into a new study environment, and foster a smoother transition to academic and professional environments different from one's place of origin.
		5	I adjust my behavior and habits to the cultures and lifestyles of others.	
		7	I can adapt and communicate effectively with people of different backgrounds and beliefs.	
		10	I make friends with people immediately after meeting and identifying them.	
	Travel autonomy	4	My parents allow me to visit one of my family members alone for an extended period of time.	Travel autonomy fosters the student's independence and ability to navigate in new environments, which is crucial for successful adaptation in an academic and professional context far from the student's usual place of residence.
		6	My parents suggest I spend my summer vacations with a family member or friend.	
Financial aspect	Parental financial support	2	I get money from my family for my personal effects.	Adequate financial support is crucial to ensure students' economic stability, enabling them to concentrate on their studies without the pressure of financial problems linked to academic mobility.
		8	My parents give me a monthly allowance for personal expenses.	
	Personal financial abilities	3	Whatever the month, I manage to put money aside.	Financial abilities are crucial for students planning to move outside their home region for their studies, as they enable them to maintain financial autonomy and manage the economic challenges associated with academic mobility.
		9	I'm able to manage a fixed budget for the food supplies I need each month.	
		11	I'm able to find a job to cover my monthly expenses.	

travel autonomy, totaling six items. The financial aspect is made up of the facets of parental financial support and personal financial abilities, comprising five items. The complete scale consists of 11 items, which will be described in detail in Table 2 along with the associated measurement objectives. The response mode is a 4-point Likert scale, ranging from "very difficult" to "very easy", allowing a nuanced assessment of perceptions and experiences relating to family social and financial capital.

Apparent validation of the scales

The scales developed, namely the Scale of Parental Practices in Educational and Vocational Guidance (PPEVG) and the Scale of the Scope of Family Social and Financial Capital (FSFC), underwent rigorous evaluation by a panel of six psychometric experts (S.L, K.A, S.Z, H.B, A.G, and A.J) affiliated with Moroccan universities and the National Guidance and Educational Planning Centre. This apparent validation focused on the conformity of the scales with the targeted theoretical dimensions and the relevance of the selected items. The experts assessed the ability of the items to measure the intended dimensions, while ensuring

Table 3. Frequency of parental educational levels

	Mothers' frequency			Fathers' frequency		
Educational level	Quantity	% of total	% cumulative	Quantity	% of total	% cumulative
Illiterate	137	42.3%	42.3%	78	24.1%	24.1%
Primary education	93	28.7%	71.0%	87	26.9%	50.9%
Middle school	48	14.8%	85.8%	53	16.4%	67.3%
High school	30	9.3%	95.1%	52	16.0%	83.3%
University	16	4.9%	100.0%	54	16.7%	100.0%

their clarity and appropriateness for the particular target audience. In addition, the scales were administered to a sample of 12 students to assess their understanding of the instructions and the psychometric significance of the items. This process confirmed the apparent validity of the instruments and their suitability for the sample studied.

Administration of the scales (Conditions of Administration)

The data collection process involved administering two separate surveys during school orientation sessions in six Moroccan regions. The surveys were conducted under standardized conditions to ensure consistency and reliability. Ethical guidelines, including participant confidentiality and voluntary participation, were strictly observed in both studies.

In the first study, the PPEVG scale was administered in person to a sample of 324 students. Alongside the scale items, a demographic questionnaire was included to collect information on gender, parents' educational levels, parents' professions, and parental status (alive or deceased). The educational levels were categorized as illiterate, primary education, middle school, high school, or university, while professions were captured as open-ended responses. This data was essential to explore the relationship between parental practices and family background and is summarized in Table 3.

In the second study, the FSFC scale was administered to a separate sample of 340 students. For this survey, only gender was recorded, as it was the sole demographic variable relevant to the study's objectives, as the FSFC scale directly assessed family social and financial capital through students' perceptions without relying on indirect indicators such as parental education. As this is a newly developed scale, further classification and standardization of family social-financial capital will be conducted after analyzing the data. The administration process was facilitated by guidance counsellors, who ensured that students understood the instructions and completed the surveys accurately.

Data Analysis

This study employed a rigorous quantitative approach to analyze the scales developed. Statistical methods included exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), performed with JAMOVI software. EFA was used to discover the factor structure of the scales, while CFA validated the theoretical models by testing their fit with the data. Item-test correlation analyses were carried out to assess the consistency of items with the total score, complementing internal consistency analyses measured by McDonald's omega. Visualization of theoretical models and relationships between variables was facilitated by AMOS, which generated the CFA diagrams. This integrated quantitative method, combining in-depth statistical analyses, internal consistency measures and graphical visualization, ensures robust scale validation and clear interpretation of results. Additionally, descriptive statistics such as means and standard deviations provided a detailed overview of the dominant trends in parental practices and family social-financial capital in Morocco. To further assess differences in practices and support across groups, non-parametric tests (e.g., Brunner-Munzel and Kruskal-Wallis tests) were used to explore variations by gender and parental education level.

Table 4. Factor Contribution

	Factor		
	1	2	Unicity
Item 7	0.754		0.462
Item 1	0.724		0.454
Item 3	0.648		0.570
Item 5	0.620		0.596
Item 11	0.332		0.843
Item 9	0.258		0.867
Item 6		0.601	0.637
Item 10		0.592	0.662
Item 4		0.520	0.716
Item 8		0.506	0.757
Item 2		0.401	0.780
Item 12		0.385	0.840

RESULTS AND DISCUSSION

Result

Validation of the scale of Parental Practices in Educational and Vocational Guidance (Exploratory factorial analysis)

For the exploratory factor analysis (EFA) of the parental practices in educational and vocational guidance scale, we used the minimum residuals method for factor extraction, in response to the non-normality of the data. This method was followed by an oblimin rotation to allow correlation between factors. We specified two factors for extraction, corresponding to the theoretical dimensions of interfering and supporting practices. The results show a KMO index of 0.776, indicating data adequacy for AFE, and a significant Bartlett's test of sphericity, with a chi-square value of 767, degrees of freedom of 66, and a p-value less than 0.001, confirming the relevance of the factorization.

The analysis revealed that the 12 items were distributed in accordance with the expected theoretical structure as displayed in Table 4: odd-numbered items loaded on the supporting practices factor, while even-numbered items loaded on the interfering practices factor. The percentages of variance explained by the factors are 17.9% for the first factor (supporting practices) and 13.9% for the second factor (interfering practices), giving a cumulative percentage of 31.8%.

Item-Test Correlations and Internal Consistency

To assess the internal consistency of the two factors identified in the Parental Practices in Educational and Vocational Guidance Scale, we examined item-test correlations and McDonald's omega coefficients. The analyses displayed in Table 5 show that, for each factor, all items present significant correlations with the total score ($p < 0.001$), indicating a good association between the items and the dimensions they measure. With regard to internal consistency, McDonald's omega coefficient was 0.785 for the supportive practices factor, and

Table 5. Item-test Correlations

		Supporting parental practices						Interfering parental practices					
		Item 1	Item 3	Item 5	Item 7	Item 9	Item 11	Item 2	Item 4	Item 6	Item 8	Item 10	Item 12
Total score factor 1	r of Pearson	0.724	0.689	0.715	0.738	0.545	0.578						
	P value	<.001	<.001	<.001	<.001	<.001	<.001						
Total score factor 2	r of Pearson							0.590	0.667	0.646	0.632	0.608	0.558
	P value							<.001	<.001	<.001	<.001	<.001	<.001

Table 6. Covariance Matrix of Residuals

	Item1	Item3	Item5	Item11	Item7	Item9	Item2	Item4	Item6	Item12	Item8	Item10
Item1		15.8	4.74	2.420	0.196	2.130	5.988	0.055	0.336	2.619	0.427	0.654
Item3			2.71	1.306	1.849	1.569	2.250	0.107	0.703	0.837	0.989	0.296
Item5				0.200	11.956	0.934	0.278	3.379	2.630	0.781	1.096	1.394
Item11					0.287	27.579	0.834	1.60e-4	0.045	2.252	0.049	5.321
Item7						1.812	1.099	1.394	0.163	0.028	2.206	5.070
Item9							1.337	0.031	0.046	0.002	3.941	6.107
Item2								8.994	0.932	0.441	0.140	11.261
Item4									4.111	2.055	0.002	2.751
Item6										0.019	0.193	13.941
Item12											0.571	0.076
Item8												2.715
Item10												

0.729 for the interfering practices factor. These values suggest a satisfactory fit of items within each factor, and support the reliability of both scale dimensions.

Confirmatory Factorial Analysis

For the confirmatory factor analysis (CFA) of the parental practices in educational and vocational guidance scale, we initially obtained non-significant model quality indices. Analysis of the post-hoc modification indices, using the covariance matrix of residuals presented in Table 6, revealed high correlations between certain items, in particular items 9 and 10. Underlined values in the residual covariance matrix indicated high correlations between these items and other items (for example, a value of 27.579 for item 9 and several values above 3 for item 10).

After attempting several adjustments, we found that deleting items 9 and 10 led to the best indices of model quality. The results before deleting the items were: chi-square = 131, ddl = 53, p-value < 0.001, RMSEA = 0.0672, TLI = 0.865, and CFI = 0.892. After deletion of the items, the improved indices were: chi-square = 53.6, ddl = 34, p-value = 0.018, RMSEA = 0.0422, TLI = 0.954, and CFI = 0.966.

The tables below show the relevant results before and after the modifications: Table 7 encompasses factor contributions with Z-values, while Table 8 displays factor covariances. These tables illustrate the improvement in model quality indices after the removal of items 9 and 10. Their removal proved necessary to obtain significantly improved model quality indicators.

Table 7. Factor Contributions Before and After Deletion of items 9 and 10

		Contributions before deletion of items 9 and 10				Contributions after deletion of items 9 and 10			
Factor	Indicator	Estimation	SE	Z	p	Estimation	SE	Z	p
Supporting parental practices	Item1	0.881	0.0635	13.86	<0.001	0.891	0.0637	13.98	<0.001
	Item3	0.893	0.0739	12.09	<0.001	0.904	0.0738	12.24	<0.001
	Item5	0.924	0.0821	11.25	<0.001	0.913	0.0827	11.05	<0.001
	Item11	0.492	0.0791	6.21	<0.001	0.455	0.0792	5.74	<0.001
	Item7	0.969	0.0765	12.67	<0.001	0.975	0.0770	12.65	<0.001
	Item9	0.438	0.0833	5.26	<0.001				
Interfering parental practices	Item2	0.660	0.0887	7.44	<0.001	0.772	0.0900	8.57	<0.001
	Item4	0.821	0.0948	8.66	<0.001	0.902	0.0974	9.26	<0.001
	Item6	0.759	0.0798	9.52	<0.001	0.639	0.0833	7.68	<0.001
	Item12	0.582	0.0920	6.32	<0.001	0.578	0.0956	6.05	<0.001
	Item8	0.756	0.1042	7.26	<0.001	0.690	0.1088	6.34	<0.001
	Item10	0.669	0.0803	8.33	<0.001				

Table 8. Factor Covariances

	Contributions before deletion of items 9 and 10				Contributions after deletion of items 9 and 10			
	Estimation	SE	Z	p	Estimation	SE	Z	p
Factor 1 & Factor 2	0.343	0.0697	4.92	<0.001	0.362	0.0715	5.06	<0.001

Graphical Representation of the Theoretical Model

Figure 1 shows the confirmatory model of the parental practices in Educational and Vocational guidance scale, integrating only 10 items after the deletion of items 9 and 10. This deletion was made in order to improve the model's quality indices. The resulting diagram reveals several important points:

Firstly, the factor loadings of the items show variations in the contribution of the items to the latent factors. In particular, item 11 has a factor load of 0.35 with the supportive practices factor, while items 8 and 12 have factor loads of 0.42 and 0.40 respectively with the interfering practices factor. These loadings indicate that these items explain less variance than the other items in the model, suggesting a relatively low contribution to the definition of the latent factors with which they are associated.

Secondly, the correlation between the two latent factors (supporting practices and interfering practices) is significant, with a coefficient of 0.36. This positive correlation indicates that supporting and interfering practices, although distinct, show a certain interdependence, which may reflect complex dynamics in the parenting behaviors observed.

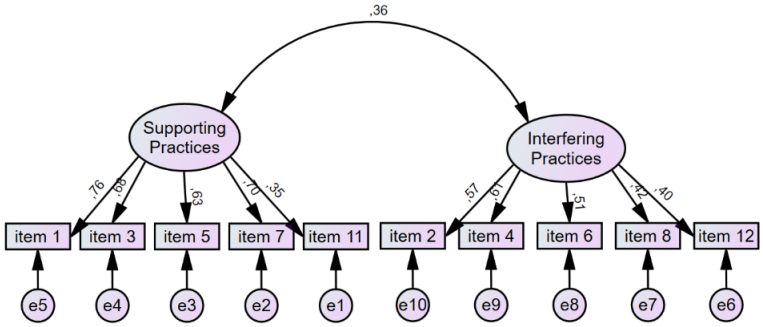

Figure1. Confirmatory Model of The Parental Practices Scale

Descriptive Analysis and Average Comparison

For descriptive statistics, we adopted revised total scores for each factor to ensure the accuracy of the analyses. Based on these new total scores, we performed skewness and kurtosis analyses presented in Table 9, revealing distribution characteristics that deviate slightly from normality. The first factor (supporting practices) shows a slightly leftward skewness and

Table 9. Descriptive analysis of data

					Asymmetry Coefficient		Kurtosis		Shapiro-Wilk	
	Mean	SD	Minimum	Maximum	Asymmetry coefficient	SE	Kurtosis	SE	W	p
Total score of supporting practices	16.4	4.75	5	25	-0.442	0.135	-0.530	0.270	0.967	<.001
Total score of interfering practices	12.9	4.54	5	25	0.254	0.135	-0.568	0.270	0.979	<.001

negative kurtosis, indicating an upward concentration of scores with lighter tails. The second factor (interfering practices) shows a slightly rightward asymmetry and negative kurtosis, indicating a downward concentration of scores with also lighter tails. Normality tests showed significant differences for both factors, although the deviations remained moderate. Because of these deviations from normality, we chose to use non-parametric tests for comparing means between groups, such as the Brunner-Munzel test and the Kruskal-Wallis test, which do not assume normality of the data.

Brunner-Munzel test (Gender Variable)

We tested the two variables, supporting practices and interfering practices, for two distinct groups, namely girls and boys, using the Brunner-Munzel test to assess differences between these groups. For the dependent variable of supporting practices, the results showed a statistical value of 0.141 with degrees of freedom (df) of 322 and a p-value of 0.888, indicating a non-significant difference between the groups. On the other hand, for the dependent variable interfering practices, we obtained a statistical value of -3.187 with degrees of freedom (df) of 320 and a p-value of 0.002, revealing a significant difference between the groups.

Examining the means of the two groups for this variable, it was found that the boys' mean is significantly higher than that of the girls. This significant difference in interfering practices between boys and girls supports the hypothesis that, in collectivist societies, boys experience more interfering parental behaviors due to heightened expectations of job stability.

Krustal-Wallis test (Parents' Educational Level Variable)

We performed analyses using the Kruskal-Wallis test to examine supporting and interfering practices as a function of fathers' levels of education, divided into five distinct groups: illiterate, primary level, secondary level (middle school), secondary level (high school) and university level.

For supporting practices, we obtained a chi-square of 10.44 with 4 degrees of freedom (ddl) and a p-value of 0.034, indicating a significant difference between groups. On the other hand, for interfering practices, the chi-square was 3.7 with 4 ddl and a p-value of 0.448, suggesting no significant differences between fathers' levels of study for this variable.

When examined post-hoc using the peer comparison method of Dwass, Steel, Critchlow and Fligner, we observed a W value of 4.16 with a p-value of 0.027 for support practices. This analysis revealed a significant difference between the scores of students whose fathers were illiterate and those whose fathers had attained a university level of education. Specifically, students whose fathers had a university education had significantly higher supporting practice scores than those whose fathers were illiterate.

We also carried out an analysis according to the mothers' level of education, divided into the same groups as above. For supportive practices, we obtained a Chi-2 value of 11.5 with 4 degrees of freedom and a p-value of 0.022, indicating a significant difference between the groups. For interfering practices, the Chi-2 value was 13.5 with 4 degrees of freedom and a p-value of 0.009, also significant.

To examine these results in more detail, we performed the Dwass, Steel, Critchlow and Fligner post hoc peer comparison test. For support practices, we observed a single W value of 3.827 with a p-value of 0.053. Although this p-value is close to the significance threshold, it is not strictly significant. This suggests a trend towards a difference between the scores of students whose mothers are illiterate and those whose mothers have a middle school education. The mean score for the group with middle-school mothers is higher than for the group with illiterate mothers.

For interfering practices, two peer-to-peer comparisons revealed significant results. The first comparison gave a W value of -4.953 with a p-value of 0.004, indicating a significant

difference between the scores of students whose mothers had a university education and those whose mothers had a middle-school education. In this case, the average score was higher for the group with mothers with a middle school level. The second comparison produced a W value of -4.056 with a p-value of 0.034, showing a significant difference between the scores of students whose mothers had a university education and those whose mothers had a high school education. In this case, the average score is higher for the group with high-school mothers.

These results highlight that parental education, particularly that of mothers, significantly influences both supportive and interfering practices. While higher levels of education among fathers generally correspond to more supportive practices, the findings also suggest that middle-level educational attainment among mothers may correspond to higher interference, potentially reflecting a tension between traditional family roles and educational aspirations.

Validation of the Family Financial Social Capital Scope Scale (Exploratory Factorial Analysis)

For the exploratory factor analysis of the family financial social capital scope scale, we opted for the factor extraction method using minimum residuals, due to the non-normality of the data. We used an oblimin rotation to enable correlation between factors, as well as relying on eigenvalues to determine the number of factors. Although the scale is unidimensional according to its theoretical design, this approach enabled us to uncover the underlying structure of the data. The KMO index for this analysis is 0.722, indicating a moderate fit of the data for AFE. The analysis presented in Table 10 revealed four distinct dimensions corresponding exactly to the proposed theoretical structure: (1) parental financial support, represented by factor 1 with 2 items, explaining 13.2% of the variance; (2) sociability and cultural adaptability, represented by factor 2 with 4 items, explaining 12.28% of the variance; (3) travel autonomy, represented by factor 3 with 2 items, explaining 8.85% of the variance; and (4) personal financial abilities, represented by factor 4 with 3 items, explaining 7.91% of the variance. Cumulatively, these four factors explain 42% of the total variance, revealing a factor structure consistent with the predicted theoretical dimensions.

Item-test Correlations and Internal Consistency

We measured item-test correlations for the scope of family financial social capital scale, and as displayed in Table 11, all items showed significant correlations ($p < 0.001$) with the total score. To assess the internal consistency of the scale, we used McDonald's omega coefficients for both the total scale and its specific dimensions. The total scale showed a coefficient of 0.758, indicating good overall consistency. The dimensions were defined as follows: the social aspect, comprising sociability, cultural adaptability and mobility autonomy, showed a coefficient of 0.714. The financial aspect, comprising parental financial support and personal financial

Table 10. Factor Contribution

	Factor				
	1	2	3	4	Unicity
Item 8	0.979				0.462
Item 2	0.584				0.454
Item 5		0.611			0.570
Item 7		0.592			0.596
Item 1		0.558			0.843
Item 10		0.520			0.867
Item 6			0.725		0.637
Item 4			0.558		0.662
Item 9				0.711	0.716
Item 11				0.430	0.757
Item 3				0.332	0.840

Table11. Item-Test Correlations

		Items of the scale for the scope of family social financial capital										
		Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11
Total score	r of Pearson	0.545	0.581	0.682	0.628	0.579	0.513	0.542	0.598	0.585	0.595	0.495
	P value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

abilities, had a coefficient of 0.749. These values confirm the reliability of each dimension, underlining their relevance in assessing the extent of family financial social capital.

Confirmatory Factorial Analysis

As part of the confirmatory factor analysis, we adopted a model comprising four facets (factors). The results show that this model is well suited to the observed data, as confirmed by the model quality indices. All items show significant contributions to their respective factors, with significant Z values, as illustrated in Table 12. Specifically, the model produced a Chi-square of 49.5 with degrees of freedom of 29 and a p-value of 0.012. Additional quality indices support this fit: the RMSEA is 0.0456, suggesting a good fit of the model to the data. The TLI is 0.940 and the CFI is 0.962, indicating excellent model fit. These results demonstrate that the proposed model is well calibrated and that the items contribute effectively to their respective factors, thus validating the factor structure of the scale.

Graphical Representation of The Theoretical Model

As part of the confirmatory factor analysis, the model generated by AMOS was validated by comparing the correlations observed in the diagram with the covariance values extracted from the table generated by JAMOVI. The values displayed on the diagram and the covariances show significant correspondences, indicating the robustness of the model. In particular, the correlation of 0.61 between the latent variables “parental financial support” and “personal financial abilities”, both of which relate to the financial aspect, is in line with theoretical expectations and confirms their close association within the same construct. Similarly, the correlation of 0.27 between the latent variables “sociability and cultural adaptability” and “travel autonomy”, integrated into the social aspect, reinforces the idea that these factors share common characteristics despite their specificities.

However, some unexpected correlations deserve particular attention. The observed correlation of 0.34 between “sociability and cultural adaptability” and “personal financial abilities” suggests an interaction between the social and financial aspects, which could reflect underlying dynamics between these dimensions. Furthermore, the correlation of 0.25 between

Table 12. Factor Contributions

Factor	Indicator	Estimation	Standard error	Z	p
Parental financial support	Item8	0.911	0.0762	11.95	<.001
	Item2	0.554	0.0574	9.64	<.001
Sociability cultural adaptability	Item1	0.399	0.0490	8.15	<.001
	Item5	0.478	0.0507	9.43	<.001
	Item7	0.525	0.0596	8.82	<.001
	Item10	0.540	0.0615	8.78	<.001
Personal financial abilities	Item9	0.452	0.0585	7.72	<.001
	Item3	0.647	0.0661	9.79	<.001
	Item11	0.240	0.0601	4.00	<.001
Travel autonomy	Item4	1.025	0.2344	4.37	<.001
	Item6	0.439	0.1128	3.89	<.001

"travel autonomy" and "parental financial support" highlights a moderate connection between these two aspects, suggesting that the variables are not totally independent, but may influence the overall perception of family social financial capital.

Analysis of item factor loadings shows that the majority of items have loadings above 0.5 on their respective latent variables, indicating a significant contribution to factor measurement. However, two notable exceptions stand out: item 6, which is associated with the latent factor travel autonomy, has a load of 0.42, and item 11, which is linked to the latent factor personal financial abilities, has a load of 0.27. Loadings of less than 0.5 indicate that these items make a less marked contribution to the latent dimensions with which they are associated.

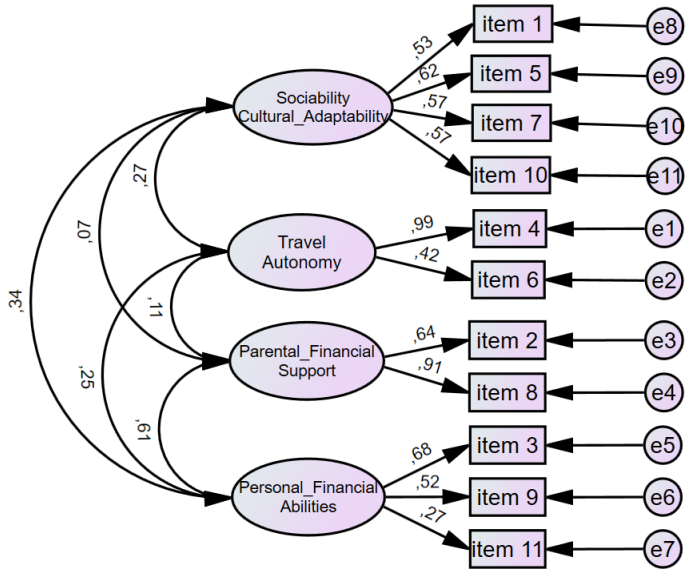

Figure2. Confirmatory Model of The Family Social Financial Capital

Descriptive Analysis and Average Comparison

The descriptive and normality analyses of the total and sub-scores of the extent of family financial social capital presented in Table 14 reveal some notable aspects. The skewness coefficients for the total score -0.0795, the social aspect -0.0588 and the financial aspect -0.0694 are close to zero, indicating a relatively symmetrical distribution. However, the negative kurtosis for these scores, respectively -0.368 for total, -0.111 for social and -0.359 for financial, suggest slightly flattened distributions with lighter tails. The results of the Shapiro-Wilk normality test show that the W values for total score 0.989, social aspect 0.986 and financial aspect 0.986 are all significantly less than 0.05, indicating significant deviations from normality for these distributions.

Table 13. Factor covariances

		Estimation	SE	Z	p
Parental financial support	Sociability cultural adaptability	0.0635	0.0725	0.875	0.381
	Personal financial abilities	0.6599	0.0758	8.702	<.001
	Travel autonomy	0.0983	0.0672	1.463	0.143
Sociability cultural adaptability	Personal financial abilities	0.3370	0.0907	3.715	<.001
	Travel autonomy	0.2636	0.0830	3.174	0.002
Personal financial abilities	Travel autonomy	0.2431	0.1006	2.415	0.016

Table 14. Descriptive Analysis of Data

					Asymmetry coefficient		Kurtosis		Shapiro-Wilk	
	Mean	SD	Minimum	Maximum	Asymmetry coefficient	SE	Kurtosis	Standard error	W	p
FSFC total score	29.0	4.81	16	40	-0.0795	0.132	-0.368	0.264	0.989	0.009
Total Social dimension	16.7	3.20	7	24	-0.0588	0.132	-0.111	0.264	0.986	0.003
Total financial dimension	12.3	2.93	5	20	-0.0694	0.132	-0.359	0.264	0.986	0.002

FSFC: Family Social Financial Capital

Brunner-Munzel Test (Gender Variable)

We used the Brunner-Munzel test to compare means by gender for the three dependent variables of the Family Social Financial Capital (FSFC) breadth scale, due to the non-normality of the data. For the FSFC total score, the test revealed a statistic of -1.685 with a degree of freedom of 277 and a p-value of 0.093, indicating a non-significant difference between genders. For the social aspect, we obtained a statistic of -2.829 with a degree of freedom of 285 and a p-value of 0.005, indicating a significant difference between the genders. Comparative means show that boys score higher in the social aspect than girls, suggesting that boys possess higher social capital in this dimension. On the other hand, for the financial aspect, the statistic obtained is 0.478 with a degree of freedom of 264 and a p-value of 0.633, indicating a non-significant difference between the genders. These findings align with the hypothesis that in a collectivist Moroccan society, girls experience lower social capital due to their stronger attachment to family norms and the constraints placed on their autonomy, reinforcing the importance of culturally sensitive support for female students.

Discussion

Regarding the validation of the scale of parental practices in educational and vocational guidance, the results were conclusive in terms of the structure and model adopted. Exploratory and confirmatory factor analyses confirmed the validity of the model, indicating that the scale reliably measures the intended dimensions. However, the deletion of items 9 and 10 was necessary to improve the overall quality of the model.

Item 9, which concerns encouraging parents to visit and explore professional sites, was not included because of the complexity of its application in practice. Indeed, the difficulty of accessing professional environments or the constraints linked to the necessary authorizations limited the relevance of this item in the context studied. This observation is consistent with findings from studies on career exploration among high school students, which highlight institutional and logistical barriers as significant obstacles to accessing professional environments. For example, Wang (2021) emphasize that such barriers may include complex authorization processes, and a lack of trust from professionals in hosting students who lack prior knowledge of the field. The same applies to item 11, which stipulates that parents should encourage their children to take part in an observation internship to discover a professional area of interest. This item also showed a low factor load, due to similar problems relating to accessibility and necessary authorizations. Although these items are theoretically relevant to the evaluation of parental guidance practices, the practical difficulties encountered in their application limited their statistical significance.

Similarly, item 10, relating to parents' desire for their children to strictly follow their advice on career choices, did not show significant statistical significance. This lack of

Table 15. Recommended Strategies for Guidance Counsellors

Possible cases	Interpretation	Recommended strategies for guidance counsellors
High Score in Supporting Practices Compared to Interfering Practices	Students benefit from strong parental support, with little interference.	Reinforcing Assets: Valuing parental support by highlighting how this support can facilitate the exploration and clarification of the student's career goals. Encourage Autonomy: Encourage discussions about the student's personal aspirations, while ensuring that parents respect the student's growing autonomy in decision-making.
High Scores for Both Practices (Scores More or Less Equal)	The student receives both support and parental interference.	Optimizing support: Work with the student to identify which aspects of parental support are beneficial and which may be perceived as interfering. Reducing Interference: Work with the student to develop strategies to minimize the impact of parental interference, such as managing parental expectations and independent decision-making.
High Score in Interfering Practices Compared to Supporting Practices	The student faces significant parental interference, with limited support.	Reinforcing Resilience: Teaching techniques for developing assertiveness skills, managing stress and parental pressure. Self-Exploration: Encourage the use of career self-assessment tools and propose personal projects to explore career interests independently. Plan parent meetings: organize meetings with parents to discuss concerns, clarify expectations and raise awareness of good practices that enhance their children's career development.
Low Scores for Both Practices (Scores More or Less Equal)	The student receives no significant support or interference from parents.	Vocational Maturity Development: Organize workshops or sessions to help students develop their vocational maturity through career tests and guided reflection. Exploration initiatives: Set up activities such as meetings with professionals from different sectors to share information about careers, including benefits, difficulties and prerequisites. Encouraging Parental Communication: Promoting the importance of better communication so that parents can better support their children in the career guidance process.

significance could be linked to the parents' lack of information or limited educational level, suggesting that they have not always developed clear or prior strategies for guiding their children's career choices. Research on parental involvement indicates that parents with lower educational attainment may lack access to reliable information about career pathways, making their guidance less structured and more emotionally driven (Sawitri et al., 2013).

Despite these adjustments, the scale successfully validates the dimensions of parenting practices and reveals valuable insights into the influence of parental beliefs, expectations and values. These results provide guidance counsellors with a solid foundation for adapting their practices. Guidance counsellors could also use the PPEVG scale to identify students facing parental interference and provide tailored interventions. Collaborative meetings between students, parents, and counsellors could help clarify expectations and support students in making informed career decisions.

The strategies presented in Table 15 will help guidance counsellors interpret the scale results, personalize their approach according to the parenting dynamics observed, and effectively support students in their professional development. The results of our study reveal a notable interdependence between parental support and interference practices, with a positive correlation of 0.36, indicating that some students simultaneously benefit from parental support while facing some interferences. This duality suggests that guidance strategies must not only reinforce parental support but also mitigate interference. Regarding the impact of parental educational level, our data show that fathers with a university education provide more significant support compared to their less educated counterparts, which could be attributed to a better understanding of career guidance issues. Similarly, university-educated mothers exhibit less frequent interfering behaviors, suggesting that mothers' education is also associated with reduced interfering. Furthermore, as mothers are generally the main sources of daily contact with their children, they exert a predominant influence on their orientation decisions.

Table 16. Calibrated Scores of The Family Social Financial Capital Scale

	Groups				
	Very low FSFC	Low FSFC	Moderate FSFC	High FSFC	Very high FS
Intervals	Scores ≤ 22	23 ≤ Scores ≤ 26	27 ≤ Scores ≤ 32	33 ≤ Scores ≤ 36	Scores ≥

FSFC: Family Social Financial Capital

Our findings align with those of Sawitri et al. (2013), who emphasized the influence of parental education on students' vocational decisions, especially in collectivist societies where family expectations strongly shape career choices. However, unlike Leong et al. (2011), who observed that both boys and girls face substantial parental control in traditional societies, our results indicate that boys experience more interfering practices than girls. This suggests that cultural expectations regarding boys' economic roles may lead to increased parental pressure and stricter guidance on job security.

The data analysis of the Family Social Financial Capital Scope scale confirmed the validity of the proposed structure and model, with interconnected facets forming a homogeneous construct. This scale assesses two main aspects: family attachment (social aspect) and financial support (financial aspect), and comprises four distinct facets. The results show that, overall, these facets are well integrated, although item 11, which measures personal financial abilities, revealed a low factor load. This weakness is understandable given the age of the students (17-18), who are not expected to have significant experience in finding or managing contractual employment to cover their expenses. However, this item aims to assess students' ability to find limited income opportunities, such as small jobs or services, in order to reduce the financial burden of their higher education, where necessary. In addition, this scale proves useful not only for guidance counsellors, who can gain a better understanding of students' social and financial potential, but also for students themselves in making decisions about pursuing studies in other regions. Financial support and geographical mobility are crucial factors to consider when choosing educational institutions, and guidance counsellors need to integrate these variables into their advice to offer informed recommendations adapted to students' resources and financial capabilities.

To classify the Family Financial Social Capital test scores, we adopted a method based on normal distribution thresholds, adjusted to match the integer values of the available scores, ranging from 11 (minimum score) to 44 (maximum score). The thresholds were defined to divide the scores into five distinct groups, reflecting different levels of family social and financial capital. These groups were determined by rounding the calculated thresholds to ensure a practical and consistent distribution of scores. as well as the intervals are presented in Table 16. It is important to note that this calibration is specific to the Moroccan context and should be reassessed and adjusted if the scale is used in other cultural or geographical contexts to ensure its relevance and applicability.

The analyses of family financial social capital scores revealed that girls have lower social capital than boys. This difference reflects an often-observed reality where families show greater reluctance to support girls' geographic mobility, emphasizing increased attachment. This finding validates the observations made in the introduction to our study, where it was mentioned that family dynamics influence mobility opportunities differently according to gender. This observation aligns with findings by Fouad et al. (2015), who highlighted that girls in collectivist societies often face additional constraints related to family expectations and limited support for geographic mobility.

In the Moroccan context, several national initiatives aim to address disparities in social capital, particularly for girls. The generalization of the new regional training policy, through the creation of “Cities of Trades and Skills” and new multidisciplinary universities in various regions, represents a concrete effort to reduce barriers to mobility and promote equal opportunities. By improving access to higher education institutions closer to students' homes,

these initiatives could play a key role in increasing girls' academic mobility and aligning their career interests with available opportunities. Future studies could evaluate the long-term impact of these initiatives on students' educational aspirations and academic outcomes.

In summary, our findings highlight the importance of considering both supportive and interfering parental practices, along with family social-financial capital, when providing career guidance to students, particularly in collectivist contexts. These insights underline the need for holistic approaches that address family dynamics, socio-economic disparities, and students' individual aspirations to foster equitable educational opportunities.

This study is limited by its reliance on students' perceptions, which may not fully capture the complexity of parental practices from the parents' perspectives. Additionally, the impact of interfering practices on students' self-concept was not measured directly, as the study focused on observable parental behaviors rather than psychological constructs.

Future research could incorporate qualitative interviews with parents and students to gain deeper insights into family dynamics. Moreover, integrating measures of self-efficacy and autonomy could provide a more comprehensive understanding of the psychological impacts of interfering practices. Longitudinal studies could also assess the long-term effects of parental practices on students' career trajectories.

CONCLUSIONS

This research highlights the decisive role played by parents in the construction and development of their children's careers, particularly in collectivist contexts where family expectations and socio-economic resources strongly influence educational decisions. The findings confirm that parents can combine supportive and interfering practices, offering both encouragement and control, even among parents with higher levels of education. Guidance counsellors play a critical role in managing interfering, neglectful, or conflictual parental behaviors by fostering balanced guidance and promoting students' autonomy in making career decisions. This study emphasizes the need for a comprehensive approach to career guidance that considers parental practices, socio-economic disparities, and strengthened collaboration between schools, families, and counsellors. Future research could further examine the long-term impact of parental guidance on students' self-concept and resilience in the face of career-related challenges.

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AUTHOR CONTRIBUTION STATEMENT

MZ contributed to conceptualization, collecting data, data analysis and manuscript writing. SL contributed to conceptualization, data analysis and manuscript revision.

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