

Latent Profiles of Career Decision-Making Difficulties Among College Students: Relational and Motivational Correlates

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Abstract

Career decision-making difficulties (CDMD) are one of the key barriers during emerging adulthood and the career decision-making experiences of individuals vary widely in terms of both pattern and degree of difficulty. The present study, based on the taxonomy developed by Gati et al. (1996) and the person-centered CDMD approach, sought to find the latent profiles of CDMD and to explore the correlates of these profiles in terms of their relationships, motivational and self-evaluative dimensions among college students. The measures completed by a sample of 400 college students, recruited through cluster random sampling, included career decision-making difficulties (lack of readiness, lack of information and inconsistent information), perceived parenting styles, social support, belongingness, academic motivation, and core self-evaluations. The optimal solution (highest entropy = .914) was a three-profile solution: Low Difficulty (12%), Moderate Broad Difficulty (74%) and Severe Global Difficulty (14%). There were notable differences between profiles in the psychosocial domains. The Low Difficulty profile had higher scores on belongingness, perceived social support, adaptive motivational regulation (intrinsic and identified regulation), and lower scores on maladaptive parenting (particularly authoritarian). The Severe Global Difficulty profile demonstrated elevated career decision-making difficulties, higher authoritarian parenting, and a complex motivational pattern characterized by both higher autonomous motivation and higher amotivation. while the Moderate Broad Difficulty profile had relatively lower social support, lower belongingness, and higher amotivation. Results are congruent with the multidimensional and heterogeneous character of career decision-making problems and suggest that motivational processes and dispositions in regard to self-evaluation relate to different career decision-making problems. The findings highlight the importance of person-centered approaches to identifying at-risk subgroups and provide some indications that intervention factors such as social connectedness, motivational regulation, and family-related contextual factors can be useful in improving career decision-making readiness in emerging adults.

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Introduction

Career decision making is one of the most core developmental challenges of emerging adulthood, influencing postsecondary educational experiences and future career outcomes. Indecision, a lack of career adaptability, and suboptimal transition outcomes are linked to difficulties in this process (Kulcsár et al., 2020; Lent & Brown, 2020). These challenges are often conceptualized in three fundamental areas: lack of readiness, lack of information and inconsistent information (Gati et al., 1996), encompassing both cognitive and informational difficulties in career decision making.

Career Construction Theory (CCT) offers an alternate developmental approach to career decision-making in which people actively build career meaning through the interplay of personal agency, life themes, and contextual constraints (Savickas, 2005; Savickas, 2013). From this perspective, career indecision reflects more than informational deficits and may also involve difficulties in identity construction, adaptability, and self-concept integration. Career adaptability is also recognized as an important psychosocial resource for managing vocational transition, and is defined by CCT as career concern, career control, career curiosity and career confidence. This perspective aligns with evidence showing that career decision-making difficulties arise not only from informational deficits but also from developmental, motivational, and identity-related processes. Early studies on career decision making difficulties (CDMD) have been mostly variable-centered, assuming homogeneity within the sample, but there is increasing evidence that problems with career decisions are structurally heterogeneous. Person centered approaches, notably latent profile analysis, have shown that people fall into qualitatively distinct subgroups instead of varying along a single pathway (Hofmans et al., 2020). Empirical studies in recent years have consistently revealed several different CDMD profiles in various cultural and educational settings (Levin et al., 2022; Levin et al., 2024; Yang et al., 2024; Zhou et al., 2025). As a whole, these results confirm the idea that career decision making difficulties are not necessarily the same, but rather are multidimensional and individual.

Although classification studies have advanced, limited evidence exists regarding the psychosocial characteristics that distinguish different career decision-making difficulty profiles. The theory of Social Cognitive Career (SCCT) is based on self-efficacy and outcome expectations as the constructs that explain the influence of environmental supports and barriers on career behavior (Lent et al. 2017). In this context, perceived social support is a major contextual resource that supports career exploration and confidence in making a choice (Metheny & McWhirter, 2013). Likewise, belongingness is a basic psychological need that is related to motivation, persistence, and adaptive function (Goodenow, 1993), but very little research has examined how belongingness relates to profiles of CDMD. Family environment also plays a role in career development processes. Parenting styles influence autonomy development, adolescent exploration behaviors, and decision independence. The effects of authoritarian parenting on career development outcomes are typically negative, and authoritarian parenting is linked to higher levels of indecision and less exploration (Alexander & Harris, 2022; Gao et al., 2024). However, few studies have examined the systematic differences of parenting styles across empirically-derived CDMD profiles.

Motivational processes constitute an important component of career decision making. Self-Determination Theory distinguishes between autonomous motivation (intrinsic motivation and identified regulation), with amotivation representing lack of intentional regulation (Ryan & Deci, 2020). Autonomous motivation has been linked to persistence and adaptive engagement, while amotivation is linked to disengagement and uncertainty in goal-directed behavior (Chang et al., 2023). Moreover, core self-evaluations which are higher order constructs reflecting self-esteem, self-efficacy, locus of control and emotional stability are predicted to support adaptive decision-making processes (Judge et al., 2003). In the integrative picture, SCCT accounts for the importance of contextual supports and motivational beliefs, SDT offers a developmental picture focus on the quality of motivational regulation, while CCT offers a developmental narrative picture focus on adaptability and identity construction. These frameworks imply that the difficulty in career decision-making is based on the interplay of environmental resources, motivational processes, and career identity processes by the individual, as opposed to a singular problem. The present research seeks to (1) assess latent profiles of career decision-making difficulties based on the three dimensions of the CDDQ and (2) compare profiles with regard to parenting styles, social support, belongingness, academic motivation, and core self-evaluations. This study extends the current literature on

person centered classification by linking it with important psychosocial constructs to promote knowledge about heterogeneity in career decision making and provide individualized intervention strategies for emerging adults.

Methodology

❖ Study Design

The study used a quantitative, cross-sectional, person-centered design to identify distinct profiles of career decision-making difficulties among college students. The selection of latent profile analysis was based on the fact that this study was not just trying to estimate associations among the variables, but also to classify students into subgroups based on their pattern of difficulties across the three major domains of career decision making difficulties, lack of readiness, lack of information, and inconsistent information. Once the latent profiles were identified, a comparison was conducted between the profiles with respect to the dimensions of parenting style, belongingness, perceived social support, academic motivation and core self-evaluation.

❖ Participants

The sample consisted of 400 college students from private College of Khanewal, Pakistan. Participants were enrolled in either first year or second year. The age distribution was 15–16 years, 17–18 years, and 19–20 years. A cluster random sampling approach was employed. Academic classes were randomly selected from participating colleges, and students enrolled in the selected classes were invited to participate in the study. Those who met the inclusion criteria and provided informed consent completed the questionnaires. The final sample included all 400 participants because complete data were available for the three career decision-making difficulty indicators used in the latent profile analysis.

❖ Procedure

The data were collected in the classroom, with the permission of the relevant college authority. The academic objective of the study was explained to students and it was made clear that participation would be voluntary. They were also assured of confidentiality of their answers, and answers would be used solely for research

purposes. The questionnaires were given in paper and pencil form at regular college time. Participants completed a demographic questionnaire and standardized measures of parenting styles, belongingness, perceived social support, academic motivation, core self-evaluations, and career decision-making difficulties.

❖ Measures

Demographic Information

Participants provided information about age group, gender, academic year, socioeconomic status, geographical area, and parents' education. These variables were used to describe the sample characteristics.

Perceived Parenting Styles

Perceived Parenting Style Scale (PPSS; Divya & Manikandan, 2013) was used to determine parenting styles. The PPSS is a 30 items instrument to measure students' perception of three parenting styles: authoritative, authoritarian, and permissive parenting. Items are rated on a 5-point Likert scale, ranging from 1 (not at all) to 5 (very much). Mean scores were derived separately for each parenting subscale (authoritative, authoritarian and permissive). The internal consistency for the authoritative parenting was $\alpha = .742$, authoritarian parenting, $\alpha = .676$, and permissive parenting, $\alpha = .766$ for the present study.

Belongingness

The General Belongingness Scale (GBS; Malone et al., 2012) was used to assess belongingness. There are 12 items on the GBS measuring general sense of acceptance, inclusion, and belonging. The items are rated on a 7-point Likert type scale. Items were reverse scored before calculating the overall score, if they were negatively worded. The higher the mean scores the stronger the belongingness. In the current study, the scale had an acceptable internal consistency ($\alpha = .724$).

Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to measure perceived social support. There are 12 items in the scale about

the perceived support received from family, friends and significant others. The items are rated on a 7-point Likert-type scale, with the higher the score, the greater the perceived social support. For the present analysis, a total mean score was obtained. For the current sample, the scale showed good internal consistency with an α of .793.

Academic Motivation

The academic motivation was measured by Short Academic Motivation Scale (SAMS; Kotera et al., 2023). The SAMS is a 7-point response scale that measures various types of academic motivation. Three subscale scores were used to analyze the present profile, namely the intrinsic motivation, identified regulation and amotivation subscales, in accordance with the purpose of the present profile-comparison analysis. Intrinsic motivation was defined as involving engagement in academic activity for interest or enjoyment, identified regulation was defined as involving valuing academic activity as personally important, and amotivation was defined as involving a lack of purpose, intent, or perceived value in academic activity. The mean scores were calculated for each subscale, with higher subscale mean scores representing higher levels of the corresponding motivational dimension.

Core Self-Evaluation

The Core Self-Evaluations Scale (CSES; Judge et al., 2003) was used to measure core self-evaluation. There are 12 items on the scale that measure general self-evaluative tendencies such as self-esteem, self-efficacy, locus of control, and emotional stability. Items are rated on a 5-point likert-type scale. Following scoring as appropriate, a mean score was calculated and then a total mean score computed, with higher scores indicating more positive core self-evaluation. The scale had an acceptable internal consistency in the present sample, $\alpha = .698$.

Career Decision-Making Difficulties

The Career Decision-Making Difficulties Questionnaire (CDDQ; Gati et al., 1996) was used to assess career decision making difficulties. The survey measures the problems that could arise prior to or during the career decision making process. Three domain scores were selected for use as the latent profile indicators for the present study: lack of readiness, lack of information, and inconsistent information.

The two items measuring validity were not included in substantive scoring. A higher score reflected higher difficulties in career decision making. The 32 substantive CDDQ items had a good internal consistency in the present sample, $\alpha = .887$.

❖ Data Screening and Scoring

Data were checked beforehand for analysis. Any values that did not fall within the range of possible responses for each scale were not recoded as plausible values, but were treated as missing. Items in the parenting style scale were expected to range from 1–5, items in the belongingness scale from 1–7, items in the social support scale from 1–5, items in the core self-evaluation scale from 1–9, and items in the career decision-making difficulty scale from 1–9. The belongingness items were reverse scored prior to the calculation of the belongingness total, based on the negative wording of items. The two validity items were not used for the career decision-making difficulties measure, and the three domain scores were calculated as mean scores for all profile indicators to be on a scale of 1–9.

❖ Data Analysis

The analysis was carried out in two steps. The three-career decision making difficulty indicators, lack of readiness, lack of information, and inconsistent information, were used to derive student subgroups by conducting first latent profile analysis. Latent profile analysis (LPA) is a model-based clustering technique that identifies unobserved subgroups within a population based on individuals' response patterns across continuous indicators (Collins & Lanza, 2010). This person-centered approach allows for the detection of heterogeneity in career decision-making difficulties that may not be observable through variable-centered methods. The snowRMM module in jamovi was used for LPA, which is carried out via the tidyLPA framework. Mixture modeling approaches such as LPA assume that population heterogeneity can be captured through latent categorical structures, and model selection is guided by both statistical fit indices and theoretical interpretability (Muthén & Muthén, 2000). Various models with varying amounts of profiles and variance-covariance specifications were compared. Model selection was based on statistical fit indices, entropy, parsimony, and substantive interpretability. Principal fit indices evaluated were the AIC, BIC, SABIC, and entropy. The relative fit was indicated by lower values of information criteria, while higher values of

entropy meant better classification. Models were not retained when they demonstrated excessive complexity, low entropy, or poor profile interpretability. Once the final profile solution was determined, membership in the profiles was retained and was used as the grouping variable for the subsequent comparisons. The size of each profile was described using frequencies and percentages. The profiles were compared using Welch's one-way analysis of variance, an approach recommended when the assumption of homogeneity of variance is violated (Welch, 1951). Pairwise comparisons were conducted using the Games–Howell post hoc test, which is appropriate for unequal sample sizes and heterogeneous variances (Games & Howell, 1976). Analyses were conducted using jamovi software with the snowRMM module implementing tidyLPA for latent profile estimation.

Results

❖ Participant Characteristics

The final sample consisted of 400 college students. Participants were grouped into three age categories: 15–16 years ($n = 149$, 37.3%), 17–18 years ($n = 228$, 57.0%), and 19–20 years ($n = 23$, 5.8%). The sample included 195 male students (48.8%) and 205 female students (51.2%). Regarding academic year, 170 students (42.5%) were enrolled in first year and 230 students (57.5%) were enrolled in second year. Most participants belonged to the middle socioeconomic group ($n = 262$, 65.5%), followed by higher socioeconomic status ($n = 94$, 23.5%) and lower socioeconomic status ($n = 44$, 11.0%). For geographical area, 326 students (81.9% of valid responses) belonged to urban areas and 72 students (18.1%) belonged to rural areas, with two missing responses. For parents' education, 310 students (77.9% of valid responses) reported educated parents and 88 students (22.1%) reported uneducated parents, with two missing responses.

Table 1 Participant Characteristics

Characteristic	Category	<i>n</i>	%	Characteristic	Category	<i>n</i>	%
Age	15–16 years	149	37.3	Gender	19–20 years	23	5.8
	17–18 years	228	57.0		Male	195	48.8

Characteristic	Category	n	%	Characteristic	Category	n	%
Academic year	Female	205	51.2	Geographical area	Lower	44	11.0
	First year	170	42.5		Urban	326	81.9
	Second year	230	57.5		Rural	72	18.1
Socioeconomic status	Higher	94	23.5	Parents' education	Educated	310	77.9
	Middle	262	65.5		Uneducated	88	22.1

Note. $N = 400$. Percentages for geographical area and parents' education are based on valid responses because two cases were missing for each variable.

The three dimensions of career decision-making difficulties were used as indicators in the latent profile analysis: lack of readiness, lack of information, and inconsistent information. Each of the three indicators was rated on the same response scale, higher scores indicative of more career decision making difficulty. The highest mean was observed for lack of readiness ($M = 5.34$, $SD = 1.30$), followed by lack of information ($M = 5.32$, $SD = 1.41$) and inconsistent information ($M = 4.93$, $SD = 1.50$).

Table 2 Descriptive Statistics for Career Decision-Making Difficulty Indicators

Variable	N	Min	Max	M	SD
Lack of readiness	400	1.00	9.00	5.34	1.30
Lack of information	400	1.00	8.64	5.32	1.41
Inconsistent information	400	1.00	8.36	4.93	1.50

Note. Higher scores indicate greater career decision-making difficulties.

Latent profile analysis was conducted using the three dimensions of career decision-making difficulties as profile indicators. Several model specifications were compared, including models with equal or varying variances and zero or estimated covariances. Although more complex models produced lower BIC values, their entropy values were weaker, indicating less precise classification. The three-profile solution under Model 1, with equal variances and zero covariances, was retained because it showed high entropy, clear profile separation, theoretical interpretability, and parsimony.

The retained three-profile solution showed high entropy indicating clear class separation, LogLik = -1856, AIC = 3741, BIC = 3796, SABIC = 3752, entropy = .914. The two-profile solution under the same model was rejected because it was too broad and did not capture meaningful heterogeneity in career decision-making difficulties. The four-profile solution showed a slightly lower BIC but was not retained because it split the lower-to-moderate range without adding a clearer theoretically meaningful profile structure.

Table 3 Fit Indices for Latent Profile Models

Model	Classes	LogLik	AIC	BIC	SABIC	Entropy	Decision
Model 1	2	-2002	4024	4064	4032	.825	Rejected: too broad
Model 1	3	-1856	3741	3796	3752	.914	Retained
Model 1	4	-1839	3714	3786	3729	.874	Rejected: less parsimonious
Model 2	3	-1807	3654	3733	3670	.832	Rejected: weaker classification

Model	Classes	LogLik	AIC	BIC	SABIC	Entropy	Decision
Model 6	2	-1778	3593	3669	3609	.663	Rejected: weak entropy
Model 6	3	-1750	3558	3674	3582	.625	Rejected: weak entropy

Note. The retained solution was Model 1 with three profiles, specifying equal variances and zero covariances. AIC = Akaike information criterion; BIC = Bayesian information criterion; SABIC = sample-size adjusted Bayesian information criterion.

The retained three-profile solution classified students into a Low Difficulty Profile, a Severe Global Difficulty Profile, and a Moderate Broad Difficulty Profile. The Low Difficulty Profile included 48 students (12.0%) and showed the lowest scores across all three career decision-making difficulty dimensions. The Severe Global Difficulty Profile included 56 students (14.0%) and showed high scores across all three dimensions, with the highest score on lack of information. The Moderate Broad Difficulty Profile included 296 students (74.0%) and showed moderate levels of difficulty across all three dimensions.

Table 4 Profile Sizes and Mean Scores on Career Decision-Making Difficulty Indicators

Profile	<i>n</i>	%	Lack of readiness	Lack of information	Inconsistent information	Label
Profile 1	48	12.0	3.88	2.83	2.62	Low Difficulty Profile
Profile 2	56	14.0	6.93	7.52	6.92	Severe Global Difficulty Profile

Profile 3	296	74.0	5.28	5.32	4.94	Moderate Broad Difficulty Profile
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Note. Higher scores indicate greater career decision-making difficulties.

The pattern of means indicated that Profile 1 represented students with relatively low difficulty in readiness, information, and inconsistent information. Profile 2 represented students with severe and global difficulty across all three domains, particularly lack of information. Profile 3 represented the largest subgroup and reflected broad but moderate career decision-making difficulties.

Welch's one-way ANOVA was used to compare the three profiles on relational, parenting, motivational, and self-evaluative variables because profile sizes were unequal and several variables violated the homogeneity of variance assumption. Significant profile differences emerged for social support, $F(2, 84.80) = 30.38$, $p < .001$, $\eta^2 = .144$; core self-evaluation, $F(2, 88.60) = 5.12$, $p = .008$, $\eta^2 = .036$; belongingness, $F(2, 87.30) = 20.74$, $p < .001$, $\eta^2 = .151$; authoritarian parenting, $F(2, 88.40) = 25.83$, $p < .001$, $\eta^2 = .117$; permissive parenting, $F(2, 91.20) = 15.14$, $p < .001$, $\eta^2 = .050$; intrinsic motivation, $F(2, 88.20) = 26.34$, $p < .001$, $\eta^2 = .105$; identified regulation, $F(2, 89.40) = 22.63$, $p < .001$, $\eta^2 = .079$; and amotivation, $F(2, 86.90) = 23.78$, $p < .001$, $\eta^2 = .092$. Authoritative parenting did not differ significantly across profiles, $F(2, 89.50) = 0.62$, $p = .539$, $\eta^2 = .004$.

Table 5 Welch ANOVA Comparing Profiles on Relational, Parenting, Motivational, and Self-Evaluative Variables

Variable	Welch's F	df_1	df_2	p	η^2
Social support	30.38	2	84.80	< .001	.144
Core self-evaluation	5.12	2	88.60	.008	.036
Belongingness	20.74	2	87.30	< .001	.151

Variable	Welch's <i>F</i>	<i>df</i> ₁	<i>df</i> ₂	<i>p</i>	η^2
Authoritative parenting	0.62	2	89.50	.539	.004
Authoritarian parenting	25.83	2	88.40	< .001	.117
Permissive parenting	15.14	2	91.20	< .001	.050
Intrinsic motivation	26.34	2	88.20	< .001	.105
Identified regulation	22.63	2	89.40	< .001	.079
Amotivation	23.78	2	86.90	< .001	.092

Note. Welch's ANOVA was reported for statistical significance because profile sizes were unequal and several variables violated the homogeneity of variance assumption. Effect sizes are reported as eta squared values from the standard one-way ANOVA.

Games-Howell post hoc tests were used for pairwise comparisons. The Low Difficulty Profile reported significantly higher belongingness than both the Severe Global Difficulty Profile and the Moderate Broad Difficulty Profile. The Severe Global Difficulty Profile and Moderate Broad Difficulty Profile did not differ significantly in belongingness. Social support was significantly lower in the Moderate Broad Difficulty Profile than in both the Low Difficulty and Severe Global Difficulty profiles, whereas the Low Difficulty and Severe Global Difficulty profiles did not differ significantly from each other.

For parenting styles, the Severe Global Difficulty Profile reported the highest authoritarian parenting, followed by the Moderate Broad Difficulty Profile and the Low Difficulty Profile. All three pairwise comparisons for authoritarian parenting were significant. For permissive parenting, both the Severe Global Difficulty and

Moderate Broad Difficulty profiles reported significantly higher permissive parenting than the Low Difficulty Profile, whereas the Severe Global Difficulty and Moderate Broad Difficulty profiles did not differ significantly from each other. Authoritative parenting did not significantly differentiate the profiles.

For motivation, both the Severe Global Difficulty and Moderate Broad Difficulty profiles reported significantly higher amotivation than the Low Difficulty Profile, whereas the Severe Global Difficulty and Moderate Broad Difficulty profiles did not differ from each other. Intrinsic motivation and identified regulation showed a more complex pattern. The Low Difficulty and Severe Global Difficulty profiles both reported significantly higher intrinsic motivation and identified regulation than the Moderate Broad Difficulty Profile, whereas the Low Difficulty and Severe Global Difficulty profiles did not differ significantly from each other. For core self-evaluation, the Severe Global Difficulty Profile reported significantly higher core self-evaluation than the Moderate Broad Difficulty Profile, while the Low Difficulty Profile did not differ significantly from either group.

Table 6 Profile Differences in Relational, Parenting, Motivational, and Self-Evaluative Variables

Variable	Low Difficulty Profile M (SD)	Severe Global Difficulty Profile M (SD)	Moderate Broad Difficulty Profile M (SD)	Post hoc pattern
Social support	5.56 (1.07) ^b	5.11 (1.12) ^b	4.41 (0.98) ^a	1 = 2 > 3
Core self-evaluation	3.28 (0.47) ^{ab}	3.53 (0.73) ^b	3.20 (0.56) ^a	2 > 3; 1 = 2; 1 = 3
Belongingness	5.50 (1.19) ^b	4.58 (0.69) ^a	4.37 (0.83) ^a	1 > 2 = 3
Authoritative parenting	3.87 (0.83) ^a	3.74 (0.59) ^a	3.73 (0.71) ^a	ns
Authoritarian parenting	2.28 (0.64) ^a	3.15 (0.66) ^c	2.58 (0.65) ^b	2 > 3 > 1
Permissive parenting	1.86 (0.60) ^a	2.46 (0.91) ^b	2.38 (0.76) ^b	2 = 3 > 1
Intrinsic motivation	4.64 (1.16) ^b	5.12 (0.93) ^b	4.15 (1.03) ^a	1 = 2 > 3

Variable	Low Difficulty Profile M (SD)	Severe Global Difficulty Profile M (SD)	Moderate Broad Difficulty Profile M (SD)	Post hoc pattern
Identified regulation	5.19 (2.02) ^b	5.71 (1.26) ^b	4.44 (1.59) ^a	1 = 2 > 3
Amotivation	2.08 (1.52) ^a	3.65 (2.02) ^b	3.74 (1.64) ^b	2 = 3 > 1

Note. Different superscripts within a row indicate significant pairwise differences based on Games-Howell post hoc tests. Same superscripts indicate non-significant differences. Profile 1 = Low Difficulty Profile; Profile 2 = Severe Global Difficulty Profile; Profile 3 = Moderate Broad Difficulty Profile. ns = non-significant.

Overall, the findings indicated that the three profiles reflected distinct relational and motivational configurations. The Low Difficulty Profile showed the most adaptive pattern, with higher belongingness, higher social support, lower authoritarian and permissive parenting, and lower amotivation. The Severe Global Difficulty Profile showed the highest career decision-making difficulties and the highest authoritarian parenting, but also relatively high intrinsic motivation and identified regulation. The Moderate Broad Difficulty Profile represented the largest subgroup and was characterized by moderate career decision-making difficulties, lower social support, lower belongingness, and elevated amotivation.

Discussion

In the present research, three profiles of career decision-making difficulties emerged: Low Difficulty Profile, Moderate Broad Difficulty Profile, and Severe Global Difficulty Profile. The results corroborate the emerging body of evidence that identifies career decision-making difficulties as a heterogeneous phenomenon and not one that is consistently experienced by all students (Levin et al., 2022; Yang et al., 2024). Consistent with previous person-centered research, the findings indicate that students differ not only in the severity of career decision-making difficulties but also in the configuration of difficulties across lack of readiness, lack of information, and inconsistent information. Theoretically, the findings can be explained within the Social Cognitive Career Theory (SCCT), Self-Determination Theory (SDT), and Career Construction Theory (CCT). SCCT explains career decision-making through the interplay of self-efficacy and outcome expectations, which are shaped by contextual supports and barriers (Lent et al., 2017). And SDT outlines how quality of

motivational regulation influences persistence and engagement in career decision-making (Ryan & Deci, 2020). CCT goes further by focusing on the fact that differences in career decision-making processes can also be understood in terms of differences in career adaptability resources and identity construction processes (Savickas, 2005).

The predominance of the Moderate Broad Difficulty Profile suggests that many students experience moderate difficulties across multiple dimensions of the career decision-making process. This coincides with developmental perspectives of emerging adulthood as a time of continued exploration and evolving vocational clarity (Arnett, 2015; Lent & Brown, 2020). From a CCT point of view, this may be due to the fact that these adaptability resources are still maturing in adolescents' late teens (Savickas, 2013). The Severe Global Difficulty Profile indicated that the difficulties in making a career decision were widespread in all areas of career decision making. Importantly, this profile was not defined by consistently low motivational or self-evaluative resources. In contrast, students in this profile simultaneously reported relatively high levels of intrinsic motivation, identified regulation, and amotivation. This pattern may reflect motivational ambivalence rather than simple disengagement from career planning (Ryan & Deci, 2020; Savickas, 2005). The Low Difficulty Profile was the most adaptive psychosocial profile, with high belongingness, high perceived social support, and lower perceived authoritarian parenting, especially authoritarian parenting. The results are consistent with SCCT propositions of contextual supports facilitating adaptive career behavior by strengthening efficacy beliefs while also decreasing perceived barriers to career behavior (Lent et al., 2017; Metheny & McWhirter, 2013). In a CCT context, relationships that are more positive can also facilitate identity coherence and adaptive career narrative development (Savickas, 2013).

One of the interesting results was that there was a complex social support patterning by profiles. The scores for the Low Difficulty and Severe Global Difficulty profiles were not significantly different, indicating that perceived support may not be enough to decrease career decision making difficulties. This aligns with the requirements of SCCT, where support needs to be expressed as self-efficacy and decision-relevant competencies, to impact outcomes (Lent et al., 2017). Parenting styles significantly differentiated the career decision-making difficulty profiles, with authoritarian parenting having the strongest and most frequent relationship with increased career decision-making problems. This is consistent with previous studies

indicating that psychological control hinders autonomy growth and exploratory behaviors required for successful career choices (Gao et al., 2024; Alexander & Harris, 2022). No significant difference in profiles was found in authoritative parenting, however, which shows that a lack of support is less important than a presence of control.

The pattern of motivational findings was non-linear with the Low and Severe profiles having relatively high levels of autonomous motivation compared to the Moderate Broad Difficulty group. This indicates that motivation alone may be insufficient in the presence of informational constraints and structural barriers. In the context of SDT, that means a lack of association between motivating qualities and effective behavioral regulation in an environment that is limiting (Ryan & Deci, 2020). Core self-evaluations did not show a systematic pattern across profiles, suggesting that even students who have severe difficulties might have positive self-evaluations. This helps confirm that career decision-making problems are not necessarily the result of low self-worth but may be related to incongruent self-concept and career information or career structure. In general, the results confirm the importance of combining approaches that are person-centered with SCCT, SDT and CCT models. Career decision-making challenges do not seem to be a result of a single pathway of deficits, but rather a result of interplay among systems of contextual resources, motivational quality, and career narrative development.

On a practical level, interventions should be tailored to the profile. Structured career information systems and interventions designed to enhance career adaptability and narrative coherence (Savickas, 2013) could be useful for students in the Severe Global Difficulty Profile. Students in the Moderate Broad Difficulty Profile may need support in areas of social connectedness and motivational regulation, while Low Difficulty students may benefit from preventative support to enhance their exploration of careers. Although much has been gained from the study, it has some limitations, such as its cross-sectional design and the use of self-report measures. Longitudinal studies should explore the transitions between the profiles and developmental processes of changes in career decision making processes in the future.

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