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Patterns of Career Decision-Making Difficulties in 16 Countries: A Person-Centered Investigation

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Classifying clients into career indecision types can facilitate tailoring interventions to each client's specific needs. The present research examined a typology of career indecision on 50 data sets (N = 31,527) representing diverse populations from 16 countries on five continents. Latent profile analyses of participants' responses on the Career Decision-Making Difficulties Questionnaire (CDDQ) revealed seven replicable career indecision types across samples: *unmotivated*, *unrealistic*, *generally uninformed*, *occupations-uninformed*, *conflicted-uninformed*, *externally conflicted*, and *internally conflicted*. Age emerged as a negligible predictor of career indecision types, whereas gender predicted membership in the *unmotivated* type, with men twice more likely to be unmotivated than women. The seven types were similarly predictive of career decision status, decision certainty, and decision self-efficacy. These results largely support using the CDDQ to differentially diagnose career indecision types based on 10 causes of career indecision in different countries, life stages, and genders. Classifying individuals based on their patterns of career decision-making difficulties supports tailoring individual career counseling or group interventions to clients' needs.

Public Significance Statement
Analyzing 50 samples from 16 countries on five continents, we found that individuals can be classified into seven career indecision types based on the causes of their career decision-making difficulties. By identifying clients' career indecision types, career counselors and psychologists can tailor the counseling process to address clients' specific needs, resulting in a more effective counseling experience for clients.

Keywords: career indecision, career decision-making difficulties, person-centered research, latent profile analysis, career counseling

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Diagnosing clients' problems is an essential step in providing effective counseling services tailored to client's specific needs. In career counseling, the dominant approach for diagnosing problems involves applying multidimensional assessments to identify the causes of clients' indecision (Brown & Rector, 2008; Gati et al., 1996; Xu & Bhang, 2019). However, this approach has limitations, such as the lack of validated guidelines for prioritizing problems of comparable saliency and the complexity involved in integrating multiple scores into a coherent diagnosis. An alternative approach, which resolves some of the challenges of translating multiple scores

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into diagnostic insights, involves differentially diagnosing clients into career indecision types (e.g., Kelly & Pulver, 2003; Milot-Lapointe et al., 2022; Rochlen et al., 2004). A recent study demonstrated the utility of the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati et al., 1996), a multidimensional measure of 10 specific causes of career indecision, for diagnosing replicable types of career indecision in two large U.S. samples (Levin et al., 2022). However, the applicability and generalizability of this CDDQ-based typology in other countries remain to be examined.

In the present research, we sought to investigate the applicability and generalizability of a CDDQ-based differential diagnosis of career problems among individuals from diverse countries. Using latent profile analysis (LPA), we aimed to identify homogeneous groups of individuals with similar patterns of causes of career indecision while confirming their presence and relevance in different countries. Specifically, we analyzed data from 50 samples and 16 countries to identify indecision types and then validated the derived typology by exploring the associations of types with demographic predictors (age and gender) and career decision-related outcomes (using three indicators of career decidedness). By doing so, we aimed to provide a more comprehensive understanding of the applicability and generalizability of a CDDQ-based typology for classifying individuals in different countries into career indecision types.

Career Indecision: A Framework for the Diagnosis of Career Problems

The need for procedures to diagnose career problems was recognized decades ago (see Jones & Lohmann, 1998; Osipow, 1999; Osipow & Winer, 1996). Campbell and Cellini (1981) proposed four categories of career problems: (a) problems in decision making, (b) problems in implementing plans, (c) problems in organizational performance, and (d) problems in organizational adaptation. In the vocational literature, problems associated with career choices and their implementation—Campbell and Cellini's (1981) first two categories—were often combined under the term *career indecision*, defined as the inability "to make an appropriate and required degree of commitment to an educational or vocational direction" (Osipow, 1999, p. 234). This definition suggests that both undecided and decided individuals can experience indecision and that indecision could induce uncertainty or delay in implementing a decision.

Various assessments were developed over the years to evaluate the nature and severity of career indecision. For example, items included in the Career Decision Scale (CDS; Osipow et al., 1976), among the first career indecision assessments, were derived from clients' problem statements relating, among other causes of indecision, to self-knowledge, external conflicts, and vocational exploration. Later assessments considered a wider variety of causes of career indecision, including cognitive (e.g., needs for occupational or self-knowledge; Chartrand et al., 1994), emotional (e.g., anxiety or low self-esteem; Saka et al., 2008), and personality-related (e.g., generalized indecisiveness; Jones & Lohmann, 1998) causes.

Parallel to the development of career indecision assessments, considerable effort was devoted to designing procedures for a differential diagnosis of career problems by clustering clients into career indecision types. For example, reviewing the career indecision types described in 15 clustering and nonclustering studies, Gordon (1998) described three types of decided students (*very decided*, *somewhat decided*, and *unstable decided*) and four types of undecided students (*tentatively undecided*, *developmentally undecided*, *seriously undecided*, and *chronically indecisive*). In comparison, Kelly and Pulver's (2003) review of eight clustering studies provided a more parsimonious, threefold typology of career indecision. Their first type included relatively decided individuals experiencing little career indecision and who do not seem to need career counseling (e.g., *happy and work oriented* in Lucas & Epperson, 1988; *confident-decided* in Wanberg & Muchinsky, 1992). Kelly and Pulver's (2003) second type corresponded to developmental indecision, which is considered to be the result of lack of information (LI) or motivation (e.g., *undecided and limited interests* in Lucas & Epperson, 1988; *indifferent-undecided* in Wanberg & Muchinsky, 1992). Finally, Kelly and Pulver's (2003) third type corresponded to chronic indecision, which is considered to be the result of a lack of information as well as emotional and personality factors such as anxiety, low self-esteem, or dependence on others (e.g., *anxious and unclear on goals* in Lucas & Epperson, 1988; *anxious-undecided* in Wanberg & Muchinsky, 1992). Table 1 presents the types reported in these two literature reviews and eight representative clustering studies (see Supplemental Material A for an overview of 24 previous clustering studies).

The syntheses of Kelly and Pulver (2003) and Gordon (1998) suggest classifying individuals into three or seven primary types based on the causes of their career indecision and their degree of decidedness. However, previous clustering studies often yielded inconsistent findings, namely in the number and characteristics of the identified types. Interestingly, inconsistencies emerged even in studies clustering the same set of variables (Lucas & Epperson, 1988, 1990) as well as in studies clustering multiple scores derived from a single measure, such as the CDS (Argyropoulou et al., 2007; Rojewski, 1994; Savickas & Jarjoura, 1991) and the Career Factors Inventory (Akos et al., 2004; Chartrand et al., 1994). These inconsistencies, indicative of the relatively low reliability of the derived typologies, may explain why studies investigating the predictive validity of career indecision types failed to document meaningful differential effectiveness of interventions for different career indecision types (Kelly & Pulver, 2003; Milot-Lapointe et al., 2022; Rochlen et al., 2004). This state of affairs underscores the need for a more reliable and valid method to classify clients into career indecision types.

Various explanations have been suggested for the inconsistency, poor replicability, and low predictive validity of the reported typologies of career indecision. These include the clustering of unreliable scores (e.g., in the case of the CDS, see Osipow & Winer, 1996), the use of traditional cluster analytical techniques that are sensitive to sample characteristics and lack clear guidelines for selecting the optimal number of profiles (Hofmans et al., 2020; Spurk et al., 2020), and the clustering of large and nonoverlapping sets of variables giving rise to different types depending on the variables used to derive the types (Brown & Rector, 2008; Kelly & Pulver, 2003). Krieshok (1998) concluded that

> many have addressed this issue [regarding types of career indecision], but the lack of consistent findings makes it the clearest example of something the field wishes would yield some certainty (so that it could inform practice), but that has not yet reached the certainty stage. (p. 216)

Table 1
The Compatibility Among Career Indecision Types Reported in Previous Literature Reviews and Clustering Studies

Source	Career indecision types						
Literature reviews							
Kelly and Pulver (2003)[a]	Decided			Developmentally undecided		Chronically indecisive	
Gordon (1998)	Very decided	Somewhat decided	Unstable decided	Tentatively undecided[b]	Developmentally undecided[b]	Seriously undecided[c]	Chronically indecisive[c]
Empirical findings[d]							
Lucas and Epperson (1988)		Happy and work oriented		Happy and playful	Undecided and limited interests	Caught in a dilemma	Anxious and unclear on goals
Wanberg and Muchinsky (1992)	Confident-decided	—	Concerned-decided	Undecided-indifferent		Undecided-anxious	
Chartrand et al. (1994)		—		Ready to decide	Developmentally undecided	Indecisive	Choice anxious
Rojewski (1994)		—		Crystallizing preferences	Transitional indecision	Chronic indecision	
Guay et al. (2006)		Decided		Developmental indecision		Chronic indecision	
Feldt et al. (2011)		Very decided		Developmentally undecided		Seriously undecided	
Santos and Ferreira (2012)		Career decided and confident		Developmentally undecided		Chronically undecided	
Levin et al. (2022)	—	Unrealistic	Indecisive	Unmotivated	Uninformed	Conflicted	

[a] Derived from a synthesis of previous career indecision typology research (pp. 445–446). [b] These two types differ quantitatively based on their degree of decidedness. [c] These two types differ quantitatively based on their anxiety levels (moderate vs. excessive). [d] A representative set of clustering studies conducted among both undecided and decided participants.

A recent effort to address some of the shortcomings of previous clustering studies investigated the utility of a CDDQ-based typology of career indecision types (Levin et al., 2022). The CDDQ is typically used as a multidimensional assessment of 10 causes of career indecision grouped into three major clusters: (a) lack of readiness (comprising lack of motivation, general indecisiveness, and dysfunctional beliefs); (b) lack of information (comprising lacking information about the career decision-making process, the self, occupations, and ways of obtaining additional information); and (c) inconsistent information (comprising unreliable information, internal conflict, and external conflict). Yet, using LPA, Levin et al. (2022) demonstrated that the CDDQ can also be used for classifying clients into five career indecision types—*unmotivated*, *indecisive*, *unrealistic*, *uninformed*, and *conflicted*—in two U.S. samples. These five types represent distinct patterns of co-occurring causes of career indecision. Specifically, the *unmotivated*, *indecisive*, and *unrealistic* types were characterized by a single salient difficulty relating to a lack of motivation, general indecisiveness, or dysfunctional beliefs. Then, whereas the *uninformed* and *conflicted* types included individuals lacking information in multiple domains, individuals in the *conflicted* type also reported salient external conflicts. These recent findings support using the CDDQ as a differential diagnostic tool in the United States.

Yet, the applicability and generalizability of Levin et al.'s (2022) CDDQ-based typology in other countries remain to be tested. In this regard, 23 of the 24 previous clustering studies on career indecision were conducted in either North America or Europe, with none examining the replicability of types across countries (see Supplemental Material A for an overview of the studies). In fact, Gordon's (1998) and Kelly and Pulver's (2003) syntheses preceded the publication of any study conducted outside the United States. Nevertheless, Kelly and Pulver's (2003) typology—differentiating among decided, developmentally undecided, and chronically indecisive individuals—appears compatible with studies conducted later in Canada (Guay et al., 2006), Greece (Argyropoulou et al., 2007), and Portugal (Santos & Ferreira, 2012), thus supporting the likely generalizability and applicability of indecision types across countries.

Moreover, although some have challenged the cross-cultural equivalence of career indecision (Xu & Bhang, 2019), recent studies provide ample evidence for the equivalence of the factor structure of career indecision in different countries as measured by contemporary assessments, such as the CDDQ (Levin et al., 2020, 2023) and the Career Indecision Profile (Xu & He, 2022). These findings notwithstanding, some studies found that individuals in Asian and African countries are more prone to career indecision than individuals in the United States or Europe (Atitsogbe et al., 2018; Levin et al., 2020; Willner et al., 2015). Thus, these findings suggest that although the factor structure of career indecision rather replicates in different countries, career indecision may still manifest differently in different contexts.

The Present Study

The main goal of the present study was to test the applicability and generalizability of a CDDQ-based procedure for differentially diagnosing career problems among individuals from diverse countries. This goal responds to calls for validating the relevance of career assessments to different cultural contexts (Xu & Bhang,

2019; Xu & He, 2022). Attending to practical considerations, we sought to develop a typology of career indecision that could be implemented efficiently using a single assessment. We utilized LPA to identify indecision types derived from the 10 causes of career indecision as measured by the CDDQ within and across 16 countries. We selected the CDDQ because (a) it is among the most administered and psychometrically sound assessments of career indecision (Xu & Bhang, 2019); (b) it offers a comprehensive assessment of various cognitive (e.g., lack of information), emotional (e.g., lack of motivation), and personality-related (e.g., general indecisiveness) causes of career indecision; and (c) its factor structure has been validated across countries, age groups, and genders (Atitsogbe et al., 2018; Levin et al., 2020, 2023). Despite the exploratory nature of clustering, we expected to detect between three (Kelly & Pulver, 2003) and seven (Gordon, 1998) career indecision types across countries. As Table 1 depicts and considering Levin et al.'s (2022) CDDQ-based typology, two types of seemingly "decided" individuals are likely to be detected, with some individuals making a decision based on unrealistic expectations (*unrealistic*) and others generally struggling with decision making (*indecisive*). Then, two "developmental" indecision types were envisioned to emerge, with some individuals not sufficiently motivated to decide (*unmotivated*) while others needing to engage in exploratory activities (*uninformed*). Finally, although Levin et al. (2022) reported only one "chronic" indecision type (*conflicted*), two chronic indecision types were reported in previous studies, with some experiencing indecision due to internal conflicts while others being externally conflicted and seeking the approval of others.

In addition to identifying career indecision types, we tested the validity of the derived typology by examining whether age and gender predict the likelihood of being classified into specific types. Regarding age, theoretical accounts suggest that developmental indecision-related types (i.e., associated with the lack of motivation or information) should be more prevalent among younger individuals, in contrast to chronic indecision-related types (i.e., associated with emotional and personality difficulties) that should become more prevalent with age (Brown & Rector, 2008; Kelly & Pulver, 2003; Osipow, 1999). These expectations, however, received only little support in previous research. For example, Di Fabio et al. (2015) found that personality explains a larger percentage of the variance in career indecision than age. Similarly, Levin et al. (2020) referred to the relatively small effect sizes reported for age differences in the literature and argued that specific stages and individual differences likely influence career indecision more than age. In clustering research, Levin et al. (2022) reported that age did not predict membership in career decision types. We thus expected that age would not differentiate among indecision types. Regarding gender, one of the most consistent gender differences reported in previous studies is that men are more likely than women to lack motivation for career decision making (Atitsogbe et al., 2018; Levin et al., 2020). In clustering research, Meldahl and Muchinsky (1997) found that women, rather than men, were more likely to be classified in types associated with decisiveness (Meldahl & Muchinsky, 1997), but Levin et al. (2022) found that women were more likely than men to be classified as indecisive than *unmotivated*. In light of these findings, we hypothesized that gender would mainly emerge as a predictor of the likelihood of being classified into types related to lack of motivation.

Finally, we tested the utility of the identified types in predicting indicators of career decidedness. Career decidedness is among the most widely used indicators of career indecision types (see Gordon, 1998; Kelly & Pulver, 2003), but it has been operationalized using various criteria, including whether individuals declared an academic major (Larson et al., 1988), reported being decided (Wanberg & Muchinsky, 1992), or made concrete career plans (Guay et al., 2006). However, Levin et al. (2022) argued that in diagnosing career problems, the causes of indecision should be distinguished from their consequences. Thus, to validate the identified types and test their utility in predicting relevant outcomes, we examined whether the career indecision types differed in three career decidedness-related outcomes: career decision status (range of considered alternatives [RCA]), decision certainty (the degree of certainty in choice), and career decision self-efficacy (confidence in having the necessary skills for career decision making). Previous studies found that types characterized by a lack of information exhibit lower levels of decidedness (e.g., Levin et al., 2022; Multon et al., 2007), decision certainty (e.g., Multon et al., 2007; Rojewski, 1994), and career decision self-efficacy (e.g., Feldt et al., 2011; Guay et al., 2006) than other types. Based on these findings, we hypothesized that types associated with the lack of information would be the least decided, certain, and confident.

Method

Archival Data Request

To gather relevant data sets, we contacted researchers with access to CDDQ data through several channels: (a) tapping a list of researchers who had requested and signed the CDDQ usage agreement, (b) using keyword searches in APA PsycNET and Google Scholar, (c) inspecting reference lists of identified studies, and (d) asking contacted researchers to distribute our request among relevant colleagues. In what follows, we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study. As recommended (Nylund et al., 2007; Spurk et al., 2020), all available data sets resulting in a combined country sample of over 500 participants were included in the analyses. Consequently, we pooled the analyzed data from 50 studies conducted by the authors (12 studies) or other research teams (38 studies). We verified that an institutional review board had approved all studies (see Supplemental Material H for details on the sources and procedures of the included samples; data are available at https://osf.io/fz2se/, Levin et al., 2023; analysis codes are included in Supplemental Materials E1–E4). None of these studies applied clustering methods to identify career indecision types.

Participants

The 50 samples included data from 33,978 participants from 16 countries. In two countries, data were collected in two languages: Canada (English and French) and Israel (Arabic and Hebrew). Thus, participants were divided into 18 country-language samples. We carried out a series of preliminary validity checks to ensure that only data of participants who completed the CDDQ with sufficient attention were analyzed. The data of 2,451 participants were excluded for several reasons: 745 (2.2%) due to incomplete CDDQ

data (one or more missing responses), 187 (0.6%) due to selecting the same one or two responses, and 1,519 (4.5%) because their responses to two validity items indicated questionable attention. Across samples ($N = 31,527$), the age range of the 27,011 (85.7%) participants with valid age data was 13–62 ($M = 20.38 \pm 6.18$). Of the 31,331 (99.1%) participants with gender data, 62.2% identified as women, 37.7% as men, and five participants indicated "mixed" or "other" as their gender. Table 2 reports the characteristics of each of the 18 samples.

Instruments

The Career Decision-Making Difficulties Questionnaire

Participants' causes of career indecision were assessed using nine translations of the 34-item version of the CDDQ (Gati et al., 1996). The CDDQ assesses 10 causes of career indecision, grouped into three major clusters: (a) lack of readiness (lack of motivation, general indecisiveness, and dysfunctional beliefs); (b) lack of information (lacking information about the career decision-making process, the self, occupations, and ways of obtaining additional information); (c) inconsistent information (unreliable information, internal conflicts, and external conflicts). Previous studies provided supporting evidence for the hypothesized factor structure, reliability, and measurement equivalence of the CDDQ, as measured by the nine utilized translations across different countries and languages (Atitsogbe et al., 2018; Levin et al., 2020, 2023). The 34 items were presented on a 9-point Likert-type numerical scale with word anchors only at the endpoints (*does not describe me* to *describes me well*). Scale scores are calculated as the means of items; higher scores indicate more severe decision-making difficulties (for further information about the psychometric properties of the CDDQ, see Gati & Levin, 2014; Xu & Bhang, 2019).

Career Decision Status

Nine studies ($n = 7,888$) included data on career decision status, measured with the RCA question (Saka et al., 2008). Participants were asked to select one of six statements that best describes their current career decision status: (a) "I do not even have a general direction," (b) "I have only a general direction," (c) "I am deliberating among a small number of specific occupations," (d) "I am considering a specific occupation, but I would like to explore other options before I make my decision," (e) "I know which occupation I am interested in, but I would like to feel sure of my choice," and (f) "I am already sure of the occupation I want." The RCA has been useful in measuring progress toward making a career decision (Saka et al., 2008), measuring career decidedness (Buzzetta et al., 2017), and assessing intervention effectiveness (Buzzetta et al., 2017; Gati et al., 2013).

Decision Certainty

Seventeen studies ($n = 3,788$) included data on participants' decision certainty. Specifically, participants who had made an educational or vocational choice were asked to indicate their confidence in their choice on a 9-point Likert-type numerical scale with word anchors only at the endpoints (*very not confident* to *very confident*). Hartung (1995) noted that measures of career indecision typically assess career certainty with one or two items. Such an item is included in the CDDQ, but we located only one published study that analyzed participants' reported decision

Table 2
Sample Characteristics and LPA Solutions for the 18 Country-Language Samples

		Sample characteristics			LPA (within samples)			Profile RFs (across samples)						
Region	Country	$N_{participants}$	Age	Women | Men[a]	$K_{>5\%}$	K_{final}	Entropy	P1	P2	P3	P4	P5	P6	P7
Africa	South Africa	1,472	21.46 ± 5.99	65% | 35%	6	6	0.83	9%	34%	19%	12%	10%	9%	7%
	Togo	536	18.72 ± 2.63	43% | 57%	5	**4**	0.73	8%	34%	9%	22%	9%	15%	4%
America	Canada (English)	4,045	25.44 ± 8.31	69% | 31%	6	6	0.80	5%	13%	35%	8%	17%	7%	15%
	Canada (French)	877	17.40 ± 0.59	60% | 40%	9	**6**	0.87	7%	34%	17%	8%	10%	12%	11%
	United States	794	20.03 ± 3.52	66% | 33%	5	5	0.85	7%	42%	12%	6%	13%	10%	10%
Asia	China	964	23.31 ± 4.46	64% | 36%	8	**7**	0.79	12%	15%	27%	9%	18%	9%	9%
	India	572	25.17 ± 7.62	31% | 37%	5	5	0.81	8%	23%	24%	7%	18%	17%	4%
	Malaysia	945	18.92 ± 2.88	59% | 41%	7	**6**	0.81	8%	23%	26%	11%	14%	13%	6%
	South Korea	1,319	19.20 ± 2.91	59% | 39%	4	4	0.77	4%	17%	25%	15%	25%	7%	7%
Australia	Australia	4,600	18.12 ± 6.75	61% | 39%	7	7	0.78	8%	17%	33%	5%	16%	9%	12%
Europe	Croatia	1,198	16.94 ± 1.47	66% | 33%	6	6	0.81	10%	29%	19%	19%	3%	8%	11%
	France	1,805	18.78 ± 2.41	71% | 29%	7	7	0.77	14%	29%	23%	13%	5%	7%	9%
	Greece	2,393	17.52 ± 3.67	64% | 36%	7	7	0.80	8%	30%	14%	28%	7%	8%	6%
	Poland	639	18.47 ± 2.61	60% | 40%	7	7	0.82	16%	22%	17%	13%	11%	9%	11%
	Switzerland	1,500	18.83 ± 4.27	56% | 44%	9	9	0.77	14%	24%	26%	12%	6%	6%	12%
Middle East	Israel (Arabic)	1,203	17.04 ± 0.33	56% | 38%	5	5	0.86	3%	43%	18%	16%	10%	7%	3%
	Israel (Hebrew)	3,678	23.47 ± 5.69	64% | 36%	9	**7**	0.81	2%	13%	43%	8%	13%	4%	16%
	Turkey	2,987	15.37 ± 1.04	54% | 46%	5	5	0.82	4%	57%	6%	11%	7%	13%	2%

Note. LPA = latent profile analysis; K = number of profiles; RF = relative frequency; P1 = unmotivated; P2 = unrealistic; P3 = generally uninformed; P4 = occupations-uninformed; P5 = conflicted-uninformed; P6 = externally conflicted; P7 = internally conflicted. Final LPA solutions with fewer profiles than initially identified (based on minimal relative frequency) are presented in bold.
[a] Percentages of women and men are only reported; four participants indicated "other" in Switzerland and one "mixed" in the United States; Detailed information is provided in Supplemental Material H.

certainty. Specifically, among Greek students, the causes of indecision explained 33% of the variance in participants' decision certainty (Vaiopoulou et al., 2019). In addition, the test–retest reliability of a similar item was found to be $r = .79$ and was associated with the congruence between vocational interests and choice (Tracey, 2010).

Career Decision Self-Efficacy

Eleven studies ($n = 4{,}012$) included data on participants' career decision self-efficacy, measured by the Career Decision Self-Efficacy Scale–Short Form (CDSE-SF; Betz et al., 1996). The 25 items of the CDSE-SF measure participants' confidence in five career decision-making skills: accurate self-appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving. The 25 items were presented on a 5-point Likert-type numerical scale with word anchors only at the endpoints (*no competence at all* to *complete competence*). We considered only the CDSE-SF total score in the present study. Strong associations with career certainty, indecision, and vocational identity supported the validity of the CDSE-SF (e.g., Betz et al., 1996; for a recent meta-analysis, see Udayar et al., 2020). Betz et al. (1996) reported a reliability estimate of .94 for the total CDSE-SF score. In the present study, the reliability of the total score varied between .80 and .91 (*Mdn* = .88).

Results

Analyses were conducted in five main stages. Following Levin et al. (2020), in the first stage, we computed 10 ipsative scores for each participant (see details on the computation procedure in Supplemental Material C). Ipsative scores capture intraindividual differences and minimize response bias (Cheung & Chan, 2002). The ipsative scores were then standardized across participants and served as LPA indicators. In addition, each country-language sample was randomly split into two subsamples to enable estimating the replicability of solutions.

Multigroup Latent Profile Analysis Within Country-Language Samples

In the second analysis stage, we sought to identify the optimal number of profiles in each of the 18 country-language samples. A challenge in LPA is determining the optimal profile solution, namely the number of profiles that provides the optimal classification of individuals into groups. Three criteria often used for model selection are (a) the statistical adequacy, (b) the profiles' meaning, and (c) the solutions' theoretical conformity (Hofmans et al., 2020; Spurk et al., 2020). However, these criteria do not always indicate a clear conclusion or a replicable solution. Thus, we integrated (d) replicability as an additional criterion for identifying the optimal number of profiles by implementing multigroup LPA (Morin et al., 2016) to directly estimate profile solutions while equating specific parameters across the relevant samples. Specifically, to identify the optimal profile solution in each country-language sample, we conducted 18 series of multigroup LPA models, using Mplus 8.7, specifying models with 2–10 profiles of distributional similarity between the two random subsamples. The distributional similarity is estimated by constraining within-profile indicator means, variances, and profile frequencies (Morin et al., 2016; Mplus code is presented in Supplemental Material E1). The models were estimated using 1,000 random start values to avoid model convergence on a local maximum. We ensured that the maximal log-likelihood value was obtained at least 3 times.

We identified the optimal profile solutions by following a multistep procedure (see details in Supplemental Material B). After confirming there were no error messages, we located the largest k-profile solution with profiles of minimum relative frequency (RF) of 5% to maximize the parsimony and meaningfulness of the profiles. In doing so, we adhered to standard practices, rejecting solutions that included profiles with fewer than 25 participants at the level of each country-language sample (and above the preferable rule of thumb of RF > 1%; Lubke & Neale, 2006; Spurk et al., 2020). As presented in the middle section of Table 2 in column $K_{>5\%}$, based on profile RFs, the initial solutions for each country-language sample ranged between four and nine profiles each. Second, we inspected the Akaike's information criterion (AIC), Bayesian information criterion (BIC), and sample size–adjusted Bayesian information criterion (SABIC) values to ensure they decreased with the addition of profiles. BIC values increased in only the Togolese sample between the four- and five-profile solutions, indicating the five-profile solution should be rejected in this sample. Third, we examined the qualitative distinctiveness of profiles within the 18 country-language samples manually and by clustering the centroids of the 115 retained profiles from the second step across the 18 samples. These examinations revealed that four samples included two or more profiles that differed quantitatively but not qualitatively: Canada–French, China, Israel–Hebrew, and Malaysia; thus, in these samples, a more parsimonious solution with fewer profiles was preferred. Finally, we evaluated the classification quality of the retained solutions. The chosen profile solutions—between four and nine profiles (see Table 2, column K_{final})—had entropy values within the acceptable range (*Mdn* = .81, range = .73–.87).[1]

Across the 18 country-language samples, 10 different profiles emerged. We labeled these 10 profiles according to their most salient CDDQ cluster or scale scores: (a) *lack of motivation*, (b) *dysfunctional beliefs*, (c) *lack of information*, (d) *lack of information about occupations*, (e) *external conflicts-lack of information*, (f) *external conflicts*, (g) *general indecisiveness-unreliable information-internal conflicts*, (h) *general indecisiveness-lack of information about the self-internal conflicts*, (i) *general indecisiveness*, and (j) *lack of information about the process and about the self.* Columns K and RF on the right in Table 3 present the number of samples in which these 10 profiles emerged and their RFs across samples, respectively. Interestingly, as hypothesized, all country-language

[1] Compared to the analytical approach implemented in the main analyses, the results of 18 series of one-sample LPA models (i.e., one for each country-language sample) were less informative for model selection. First, in these alternative one-sample LPAs, AIC, BIC, and SABIC values consistently decreased with the addition of profiles. Second, all 180 estimated models provided significant bootstrapped likelihood ratio test values. Third, the inspection of RFs supported choosing the same profile solution in 14 samples or selecting solutions with additional profiles in the Chinese, French, Greek, and U.S. samples. Fourth, the estimated profile indicators were identical across the solutions deemed optimal across the two analytical approaches. Thus, the estimation approach implemented in the main analyses either replicated the results of one-sample LPAs or supported choosing more parsimonious solutions.

Table 3

Compatibility of Profiles Within (Rows) and Across (Columns) Country-Language Samples

	Across samples								
Within samples	Unmotivated	Unrealistic	Generally uninformed	Occupations-uninformed	Conflicted-uninformed	Externally conflicted	Internally conflicted	RF	*K*
Rm	**73.18%**	7.36%	6.90%	2.56%	0.23%	1.40%	8.37%	4.09%	9
Rd	3.42%	**89.46%**	0.28%	3.20%	0.28%	0.89%	2.47%	24.61%	18
LI	2.75%	2.00%	**75.80%**	14.92%	1.33%	0.00%	3.20%	29.65%	18
Lo	1.90%	4.45%	12.56%	**76.85%**	1.44%	0.13%	2.68%	4.85%	6
Ie/LI	0.57%	1.20%	3.29%	3.52%	**83.38%**	5.90%	2.14%	12.16%	18
Ie	1.38%	2.80%	0.00%	0.32%	11.80%	**81.53%**	2.16%	8.95%	18
Ri/Iu/Ii	9.36%	3.41%	7.79%	7.20%	4.32%	1.38%	**66.54%**	4.84%	9
Ri/Ls/Ii	8.99%	5.84%	20.56%	0.11%	1.69%	3.26%	**59.55%**	2.82%	4
Ri	16.59%	42.68%	6.01%	7.78%	1.20%	0.97%	24.77%	5.54%	4
Lp/Ls	16.71%	9.18%	38.52%	11.73%	2.81%	0.13%	20.92%	2.49%	5
RF	6.98%	26.45%	26.08%	10.57%	12.13%	8.51%	9.28%		

Note. Rm = lack of motivation; Rd = dysfunctional beliefs; LI = lack of information; Lo = lack of information about occupations; Ie = external conflicts; Ri = general indecisiveness; Iu = unreliable information; Ii = internal conflicts; Lp = lack of information about the decision-making process; Ls = lack of information about the self; RF = relative frequency; *K* = number of samples; LPA = latent profile analysis. Values reflect column percentage (i.e., the relative frequency of individuals in each of the 10 profiles identified in individual LPA, separately for each of the seven profiles identified across samples). Frequencies above 50% are presented in bold.

samples comprised four or more profiles, four of which were common across all samples (Profiles 2, 3, 5, and 6).

Multigroup Latent Profile Analysis Across Country-Language Samples

In the third analysis stage, multigroup LPA was conducted across the 18 country-language samples to identify an optimal and replicable profile solution. Given expected variations in profile sizes, 2–10 profile solutions of dispersion similarity were estimated across the 18 samples by constraining only within-profile indicator means and variances (Morin et al., 2016; Mplus code is presented in Supplemental Material E2). Table 4 presents the minimal profile RF, fit statistics, and classification quality indices for these solutions. First, as Table 4 shows, solutions with eight or more profiles included profiles with RFs of less than 5%, thereby leading to their rejection. Second, we ensured that AIC, BIC, and SABIC values consistently decreased with the addition of profiles, which was confirmed across solutions. Third, we evaluated the qualitative distinctiveness of profiles, revealing that the seven-profile solution encompassed qualitatively distinct profiles. Thus, after ensuring the adequacy of its classification quality (entropy = .77), the seven-profile solution was determined to be the best-fitting solution and retained for further analysis.

Figure 1 depicts the mean *Z* scores of the 10 CDDQ scales (i.e., across individuals and within variables) for each of the seven profiles. Mean ipsative scores (i.e., within individuals and across variables) for the seven-profile solution are reported in Supplemental Material D. The first and second profiles were labeled *unmotivated* (7.1%) and *unrealistic* (25.8%) as they were high in lack of motivation and dysfunctional beliefs, respectively. The next two identified profiles were characterized by lacking information. Specifically, individuals in the third profile, labeled *generally uninformed* (25.2%), reported lacking information in all four domains comprising lack of information (the decision-making process, the self, occupations, and ways of obtaining additional information). The fourth profile, labeled *occupations-uninformed* (11.5%), was mostly characterized by lacking information about occupations. Last, the final three identified profiles were characterized by difficulties related to internal or external conflicts. The most pronounced difficulty of individuals in the fifth (12.0%) and sixth (8.5%) profiles, labeled *conflicted-uninformed* and *externally conflicted*, respectively, involved external conflicts. However, in addition to experiencing external conflicts, individuals in the *conflicted-uninformed* profile also reported lacking information in the four information domains, relying on unreliable information, and enduring internal conflicts. Finally, individuals in the seventh profile, labeled *internally conflicted* (9.9%), reported high internal conflicts, unreliable information, and general indecisiveness. The right side of Table 2 presents profile RFs separately for each of the 18 country-language samples.

To further evaluate the classification quality of the seven-profile solution, we calculated the RFs of individuals in each of the seven profiles identified across samples, separately for each of the 10 profiles identified within samples. Table 3 shows that when comparing the solutions within and across samples, most individuals were cross-classified into the same groups ($RF_{mean} = 78.1\%$). For example, 75.8% of those classified as lack of information in the within-samples analyses were assigned to its equivalent *generally uninformed* profile

Table 4
Fit Indices and Classification Quality Indicators for the LPA Models Across Samples

		Fit statistics					Classification quality	
K	RF_{min}	DF	LL	AIC	BIC	SABIC	Entropy	$MPCP_{min}$
2	44.49%	65	−519768.99	1039667.97	1040211.28	1040004.71	.72	.91
3	18.33%	93	−514623.62	1029433.25	1030210.60	1029915.04	.80	.90
4	9.76%	121	−512342.10	1024699.25	1025710.64	1025326.11	.82	.84
5	9.06%	149	−509814.56	1019927.11	1021172.54	1020699.02	.78	.78
6	7.66%	177	−508143.71	1016641.42	1018120.89	1017558.39	.79	.76
7	**7.12%**	**205**	**−506881.79**	**1014173.58**	**1015887.09**	**1015235.60**	**.77**	**.73**
8	4.95%	233	−505639.32	1011744.64	1013692.19	1012951.72	.77	.73
9	1.70%	261	−504521.24	1009564.49	1011746.08	1010916.63	.78	.73
10	2.69%	289	−503479.14	1007536.28	1009951.92	1009033.48	.77	.71

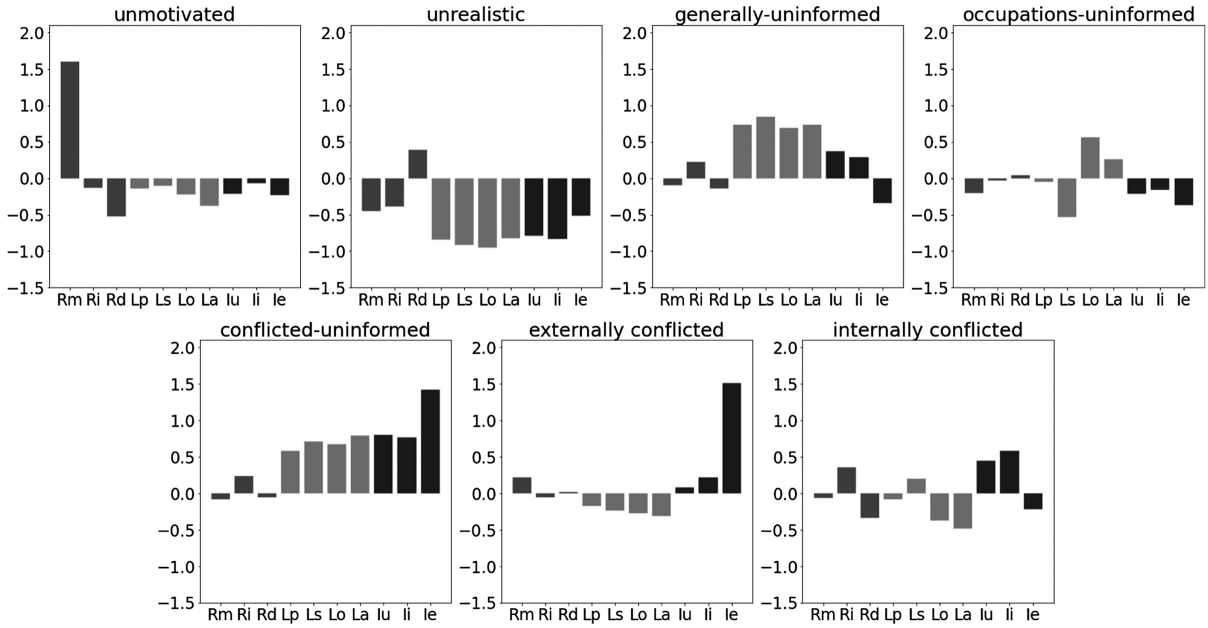
Note. LPA = latent profile analysis; *K* = number of profiles; RF = relative frequency; DF = degrees of freedom; LL = log likelihood; AIC = Akaike's information criterion; BIC = Bayesian information criterion; SABIC = sample size–adjusted Bayesian information criterion; MPCP = mean posterior classification probability. The selected profile solution is presented in bold.

in the across-samples analyses. Fluctuations among profiles mostly occurred in profiles identified in only a few country-language samples (see the right-most column in Table 3).

Predictors of Career Indecision Types

The fourth analysis stage examined age and gender as predictors of profile membership. We employed multinomial logistic regression to test age and gender as predictors of profile classification using the three-step approach for LPA with covariates and the auxiliary R3STEP option in Mplus (Asparouhov & Muthén, 2014; Mplus code is presented in Supplemental Material E3). Table 5 shows the results of the multinomial logistic regressions for the associations with age and gender, on the one hand, and profile classification, on the other hand. Although age emerged as a statistically significant predictor, none of the 21 comparisons indicated it as a meaningful predictor of profile membership regarding effect size ($OR < 0.60$ or $OR > 1.68$). Then, for gender, identifying as a man was associated with a greater likelihood of being classified as *unmotivated* than all other profiles (OR_{range} = 1.72–3.13). Indeed, 9.4% of men were classified as *unmotivated* compared with 5.4% of women. In addition, identifying as a

Figure 1
Standardized Means of the 10 CDDQ Scales for the Seven Profiles Across Samples



Note. Rm = lack of motivation; Ri = general indecisiveness; Rd = dysfunctional beliefs; Lp = lack of information about the decision-making process; Ls = lack of information about the self; Lo = lack of information about occupations; La = lack of information about ways of obtaining additional information; Iu = unreliable information; Ii = internal conflicts; Ie = external conflicts; CDDQ = Career Decision-Making Difficulties Questionnaire.

Table 5

Results From the Categorical Latent Variable Multinomial Logistic Regression of the Associations of Age and Gender With Profiles

	1 versus 2		1 versus 3		1 versus 4		1 versus 5		1 versus 6	
Predictor	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*
Age	−0.04***	0.96	0.02**	1.02	−0.02*	0.98	0.01+	1.01	−0.01+	0.99
Gender	0.58***	**1.80**	0.77***	**2.16**	0.97***	**2.65**	0.86***	**2.36**	0.54***	**1.72**

	1 versus 7		2 versus 3		2 versus 4		2 versus 5		2 versus 6	
	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*
Age	0.04***	1.04	0.06***	1.08	0.02**	1.02	0.05***	1.05	0.03***	1.03
Gender	1.14***	**3.13**	0.19***	1.20	0.39***	1.47	0.28***	1.32	−0.04+	0.96

	2 versus 7		3 versus 4		3 versus 5		3 versus 6		3 versus 7	
	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*
Age	0.08***	1.08	−0.04***	0.96	−0.01**	0.99	−0.03***	0.97	0.02***	1.02
Gender	0.56***	**1.74**	0.20**	1.22	0.09+	1.09	−0.23***	0.80	0.37***	1.45

	4 versus 5		4 versus 6		4 versus 7		5 versus 6		5 versus 7	
	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*	Coef.	*OR*
Age	0.03***	1.03	0.01+	1.01	0.06***	1.06	−0.02**	0.98	0.03***	1.03
Gender	−0.11+	0.89	−0.43***	0.65	0.17+	1.18	−0.32***	0.73	0.28***	1.32

	6 versus 7	
	Coef.	*OR*
Age	0.05***	1.05
Gender	0.60***	**1.82**

Note. ns = nonsignificant difference; Coef. = logit coefficient; *OR* = odds ratio. Gender was coded as a dichotomous variable (1 = man, 2 = woman). Profile 1 = unmotivated; Profile 2 = unrealistic; Profile 3 = generally uninformed; Profile 4 = occupations-uninformed; Profile 5 = conflicted-uninformed; Profile 6 = externally conflicted; Profile 7 = internally conflicted. *OR*s < 0.60 and *OR*s > 1.68 are presented in bold.
* $p < .05$. ** $p < .01$. *** $p < .001$. + ns.

man was associated with a greater likelihood of being classified as *unrealistic* than *internally conflicted* (*OR* = 1.74) and *externally conflicted* than *internally conflicted* (*OR* = 1.82). All other associations with gender were negligible in terms of effect size (0.87 < *OR*s < 1.36). A series of multigroup confirmatory analyses provided support for the measurement invariance of the CDDQ across gender at the scalar level (see Supplemental Material F).

Outcomes of Career Indecision Types

The fifth and final analysis stage examined how the seven profiles differed in career decision status, decision certainty, and career decision self-efficacy. To this end, we tested an LPA model with distal outcomes using the Bolck–Croon–Hagenaars method (BCH; Bakk & Vermunt, 2016; Mplus code is presented in Supplemental Material E4) via the BCH function in Mplus. As Figure 2a shows, career decision status differed among the seven types, $\chi^2(df = 6) = 1{,}583.92$, $p < .001$. Specifically, paired comparisons revealed that career decision status was significantly lower in the *generally uninformed* profile and significantly higher in the *unrealistic* profile than in all other profiles. Among the remaining five profiles, career decision status was the lowest in the *conflicted-uninformed* profile. Then, the career decision status in the *internally conflicted* and *unmotivated* profiles was lower than in the *externally conflicted*, which, in turn, was lower than in the *occupations-uninformed* profile.

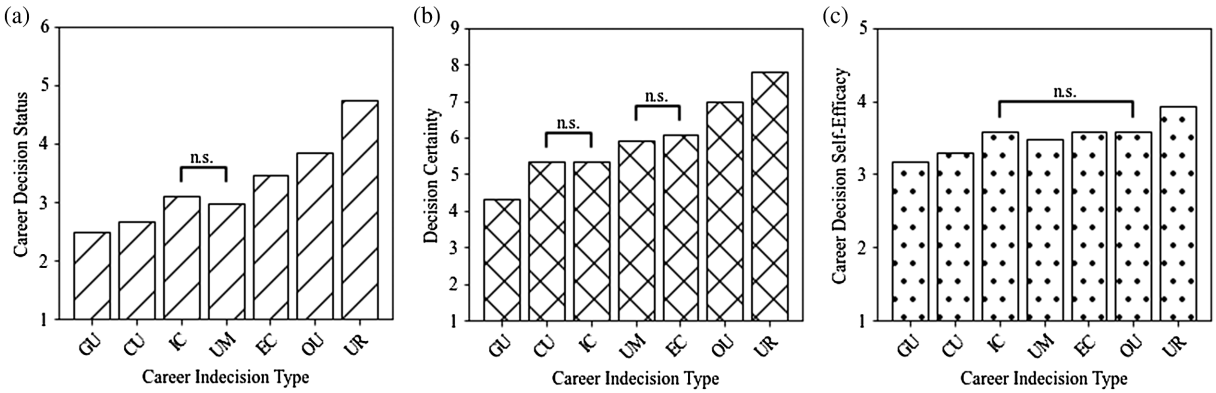
Similar differences across the profiles were also found in the mean levels of decision certainty, $\chi^2(df = 6) = 1{,}000.58$, $p < .001$, and career decision self-efficacy, $\chi^2(df = 6) = 607.25$, $p < .001$. As Figure 2b shows, decision certainty was significantly lower in the *generally uninformed* profile and significantly higher in the *unrealistic* profile than in all other profiles. Among the remaining five profiles, decision certainty was the lowest in the *conflicted-uninformed* and *internally conflicted* profiles. Decision certainty in the *unmotivated* and *externally conflicted* profiles was lower than in the *occupations-uninformed* profile. Finally, for career decision self-efficacy, as Figure 2c shows, career decision self-efficacy was significantly lower in the *generally uninformed* profile and significantly higher in the *unrealistic* profile than in all other profiles. Career decision self-efficacy was lower in the *conflicted-uninformed* profile than in the remaining four profiles, which, in turn, did not significantly differ from one another. Taken together, these findings support our hypotheses that profiles associated with a lack of information will score lowest on the three decidedness outcomes and that profiles associated with external or internal conflicts would also yield low levels in these outcomes.

Discussion

The overarching aim of this study was to advance the development of a typology of career indecision that enables a

Figure 2

Mean Level Differences of Career Decision Status (N = 7,888), Certainty (N = 3,788), and Self-Efficacy (N = 4,012) by Profiles



Note. GU = generally uninformed; CU = conflicted-uninformed; IC = internally conflicted; UM = unmotivated; EC = externally conflicted; OU = occupations-uninformed; UR = unrealistic; n.s. = nonsignificant difference.

differential diagnosis of career problems and is applicable and generalizable to diverse populations. As differential diagnosis entails classifying individuals into types based on a validated procedure (Campbell & Cellini, 1981), we examined which types could be discerned using the CDDQ (Gati et al., 1996) both within and across 18 country-language samples from countries on five continents. Across samples, the best fit-to-data solution comprised seven types: *unmotivated*, *unrealistic*, *generally uninformed*, *occupations-uninformed*, *conflicted-uninformed*, *externally conflicted*, and *internally conflicted*. Age did not emerge as a meaningful predictor of types, but gender repeatedly predicted the likelihood of being classified as *unmotivated* compared to all other types. Finally, a similar pattern of differences among the types emerged in three career decidedness outcomes: career decision status, decision certainty, and career decision self-efficacy.

The Seven Career Indecision Types

Our findings demonstrated that seven career indecision types can be identified using the 10 causes of career indecision measured by the CDDQ. Five types were each characterized by a single main cause of indecision: lack of motivation for *unmotivated*, dysfunctional beliefs for *unrealistic*, overall lack of information for *generally uninformed*, lack of information about occupations for *occupations-uninformed*, and external conflicts for *externally conflicted*. In addition, two types were characterized by multiple causes of indecision: lack of information and external conflicts for *conflicted-uninformed* and internal conflicts, unreliable information, and general indecisiveness for *internally conflicted*. Descriptions of these seven types and their similarities to types reported in previous literature are provided in Supplemental Material G.

Four of the seven career indecision types identified across countries in the present study matched Levin et al.'s (2022) CDDQ-based five types detected in two United States samples: the *unmotivated*, *unrealistic*, *generally uninformed* (*uninformed* in Levin et al., 2022), and *conflicted-uninformed* (*conflicted* in Levin et al., 2022) types. Interestingly, in the present study, Levin et al.'s (2022) five types also emerged in and replicated the five-profile solution for the United States sample (see Table 2). Nevertheless, Levin et al.'s (2022) *indecisive* type (experiencing general indecisiveness) emerged in the present study in only four country-language samples. Individuals classified as *indecisive* in these four samples were assigned in the across-samples analyses to the *unrealistic* (43%), *internally conflicted* (25%), or *unmotivated* (17%) types across samples (see Table 3, row Ri), suggesting that indecisiveness is often linked to other self-related causes of indecision. Then, we identified three types that were not reported by Levin et al. (2022): the *occupations-uninformed*, *externally conflicted*, and *internally conflicted* types. Applying multigroup LPA in the present study likely enabled identifying these additional indecision types.

The findings of the present study also complement previous studies clustering individuals to derive career indecision types based on either single measures (e.g., Chartrand et al., 1994; Guay et al., 2006; Savickas & Jarjoura, 1991) or multiple measures (e.g., Kelly & Pulver, 2003; Lucas & Epperson, 1990; Santos & Ferreira, 2012). Some studies advanced a threefold typology that included a *decided* type, a *developmentally undecided* type (typically characterized by the lack of motivation or information), and a *chronic indecisive* type (characterized by emotional or personality-related causes of indecision; Feldt et al., 2011; Guay et al., 2006; Santos & Ferreira, 2012). This threefold typology is compatible with the results of our within-sample analyses revealing that four types emerged across all samples (see Table 3, column K): the *unrealistic*, *generally uninformed*, *conflicted-uninformed*, and *externally conflicted* types. Further indicating the lack of information and interpersonal conflicts as two major differentiating factors among career indecision types (Xu & Bhang, 2019), these results also highlight dysfunctional beliefs as another important differentiating factor to consider in future research and practice (Xu, 2022).

Predictors and Outcomes of Career Indecision Types

In the present study, we examined whether age and gender are meaningful predictors of type membership. Considering the substantial differences in sample characteristics (see Table 2), we did not investigate whether one's country is predictive of type membership. However, our application of multigroup LPA ensured that the seven career indecision types identified in the

present study were applicable to individuals from all considered countries. Notwithstanding recent research on career indecision that has provided ample support for the cross-cultural equivalence of career indecision as measured by contemporary assessments (Levin et al., 2020, 2023; Xu & He, 2022), future research is needed to examine whether cultural contexts are predictive of the prevalence of career indecision types.

Aligning with previous studies (e.g., Levin et al., 2022; Rojewski, 1994), age did not emerge in the present study as a meaningful predictor of types. This finding does not support the hypothesis of age being a significant predictor of developmental indecision-related types (Brown & Rector, 2008; Osipow, 1999), namely those characterized by a lack of motivation or information (Guay et al., 2006; Kelly & Pulver, 2003; Santos & Ferreira, 2012). Rather, this finding supports the claim that indecision is related more to specific transitions than to age-related developmental patterns (Levin et al., 2020).

For gender, previous studies have reported an absence of or merely negligible gender differences in career indecision (Atitsogbe et al., 2018; Levin et al., 2020). Nevertheless, in studies that did find such differences, among the most consistent finding was that men are more likely to lack motivation than women (Levin et al., 2020, 2022; Meldahl & Muchinsky, 1997). Respectively, in the present study, the most robust gender difference was that men rather than women were almost twice as likely to be classified as *unmotivated*. This finding complements previous studies indicating that women tend to invest more effort in the career decision-making process than men (Gati et al., 2013; Levin et al., 2020).

To better differentiate the causes of career indecision from its consequences and to further validate the derived typology, we also investigated how the seven emerged types differed in three decidedness outcomes: career decision status, decision certainty, and career decision self-efficacy. For career decision status, two lack of information-related types (*generally uninformed*, *conflicted-uninformed*) included a larger proportion of undecided individuals. In comparison, the *internally conflicted* and *unmotivated* types were more decided but less decided than the *externally conflicted* and *occupations-uninformed* types, and especially less than the *unrealistic* type. Based on their career decision status, the seven types were arranged into four statistically different groups of types (see Figure 2a). However, in terms of decision certainty, the seven types were arranged into five groups (see Figure 2b), indicating that career indecision types explained more variability of decision certainty than of career decision status. Still, the overall pattern of differences among the seven career indecision types in career decision status and decision certainty was highly similar ($r = .96$). Finally, for career decision self-efficacy, only three groups of types emerged (see Figure 2c), but, again, the pattern of differences in self-efficacy was highly similar to that of career decision status ($r = .97$). Thus, the seven types differed on the three decidedness outcomes most similarly, with decision certainty offering the most nuanced measurement of decidedness.

Limitations and Future Research

Before discussing the implications of our research, its limitations should be acknowledged. First, to examine age and gender as predictors of types, we relied on data compiled from 50 data sets. These data sets were collected using different study designs, likely introducing confounds for which no information was available and thus could not be controlled. Future research examining the prevalence of types among groups should ensure the equivalence of the compared groups (e.g., applying the same study design to compare groups of high school students from different countries). Second, most retrieved data sets were part of cross-sectional studies, thus reflecting the scarcity of longitudinal research that can better capture causal relations. In our case, we validated the types using three concurrently measured outcomes, thus limiting the understanding of the consequences of experiencing specific indecision patterns over time. For example, individuals classified as *unrealistic* appear to be highly decided, certain of their choices, and confident in their decision-making skills. However, they may be later at greater risk of experiencing regret or a low degree of commitment (Xu, 2022). Future studies should employ a longitudinal design to test the temporal stability of the types and their consequences over time. Finally, the underlying goal of identifying indecision types is to better understand diverse career problems and how they can be treated. However, because research on previous indecision typologies failed to demonstrate the differential effectiveness of interventions across types (e.g., Kelly & Pulver, 2003; Milot-Lapointe et al., 2022), future studies are needed to evaluate the effectiveness of interventions tailored to the unique needs of specific indecision types.

Implications for Research and Practice

On a methodological level, one of the most challenging aspects to reconcile in previous clustering research (on career indecision and in general) is that types identified in one study only partially overlap with types identified in other studies. Indeed, in various studies, different types emerged even when the same set of variables were clustered (e.g., in the case of the CDS, see Argyropoulou et al., 2007; Guay et al., 2006; Rojewski, 1994; Savickas & Jarjoura, 1991). For this reason, we argue that integrating replicability as a criterion when identifying an optimal clustering solution is crucial. Accordingly, we utilized multigroup LPA to estimate replicable solutions, comparing profile solutions both within and across 18 country-language samples. In doing so, the percentage of individuals cross-classified in the same seven identified types ranged from 66% to 89% ($M = 78\%$; see Table 3). In comparison, in a study on organizational commitment employing multilevel LPA (Kabins et al., 2016), the percentage of individuals cross-classified in the same five types ranged from 14% to 66% ($M = 46\%$), reflecting less stable classifications. This comparison illuminates the advantage of multigroup LPA over multilevel LPA for deriving more stable and replicable classifications.

In the career indecision literature, efforts to differentiate between transitory developmental indecision and chronic indecision continue to occupy the counseling field (Gati & Levin, 2014; Kelly & Pulver, 2003; Xu & Bhang, 2019). Our findings challenge this dichotomous differentiation in several ways. First, for developmental indecision, three different types corresponding to previous depictions of developmental indecision (Guay et al., 2006; Kelly & Pulver, 2003; Santos & Ferreira, 2012) were identified in the present study (*unmotivated*, *generally uninformed*, and *occupation uninformed*). Similarly, three different types corresponding to previous depictions of chronic indecision (Kelly & Pulver, 2003; Lucas & Epperson, 1990; Santos & Ferreira, 2012) emerged in the present study (*conflicted-uninformed*, *internally conflicted*, and *externally conflicted*). Second,

age did not emerge as a significant predictor of types, thereby challenging the developmental explanation underlying the differentiation between developmental and chronic indecision. Third, in the present study, one quarter of individuals were classified as *unrealistic*, a type comprising many decided individuals with dysfunctional beliefs about the world of work or the career decision-making process. In this respect, the dichotomous differentiation between developmental indecision and chronic indecision appears to overlook both the potential needs of seemingly decided individuals and dysfunctional beliefs as a frequent cause of indecision. Taken together, these findings may suggest that the differentiation between developmental and chronic indecision would be better explained by the measured causes of career indecision (i.e., cognitive vs. emotional; Feldt et al., 2011; Santos & Ferreira, 2012) than by age differences. As such, these results advocate adopting a more nuanced approach to career indecision that considers multiple types of indecision beyond the dichotomy of developmental indecision versus chronic indecision.

Moreover, some studies argued that career indecision could be experienced only by undecided individuals (Larson et al., 1988; Lucas & Epperson, 1990), whereas others viewed decidedness as a differentiating factor among various types (Guay et al., 2006; Multon et al., 2007; Santos & Ferreira, 2012; Wanberg & Muchinsky, 1992). Our results systematically revealed that in terms of three measured outcomes, all seven types included both undecided and decided individuals, thereby underscoring the utility of career indecision as a construct to consider among ostensibly decided individuals. Moreover, our findings that the *generally uninformed* and *conflicted-uninformed* types were consistently the least decided imply that exploration activities are among the first steps to becoming more decided, aligning with previous results (Levin et al., 2022). The finding that individuals in the *occupations-uninformed* type, lacking information mainly about occupations, were among the most decided suggests that dealing with self-related issues (e.g., self-exploration and internal conflict) typically precedes the exploration of the world of work in career decision making.

Finally, our findings also support the utility of distinguishing between the *causes* of indecision and its *consequences*. From a theoretical standpoint, Gati et al. (1996) hypothesized that difficulties related to lack of readiness (e.g., lack of motivation, general indecisiveness, and dysfunctional beliefs) while individuals are still relatively undecided are more likely to emerge before embarking on the decision-making process. Our findings, however, showed that indecision types characterized by a lack of readiness could present themselves at any stage of the decision-making process (e.g., the *unmotivated* type) or among highly decided individuals (e.g., the *unrealistic* type). Gati et al. (1996) suggested that career indecision represents a group of problems leading to "the same final outcome (i.e., the inability to make a career decision)" (p. 521), a view shared by the dual-process theory of career decision making (Xu, 2022). However, our results align better with Campbell and Cellini's (1981) diagnostic taxonomy of career problems, differentiating between career decision making and implementation problems. Similarly, the current findings align with Osipow's (1999) postulation that indecision could be experienced by decided but insufficiently committed individuals. Therefore, advancing our understanding of career indecision and its subtypes would benefit from developing more complex, multidimensional conceptualizations of decidedness, encompassing three key components—cognitive (e.g., identifying a preferred direction), emotional (e.g., feeling confident and committed to the choice), and behavioral (e.g., implementing the decision).

Conclusions

Seven types capture the variations among individuals in the patterns of the causes of their career indecision as measured by the CDDQ across countries, age, and genders. These career indecision types include both undecided and decided individuals. Diagnosing each client's career indecision type can promote intervention planning regardless of whether clients have declared a preferred career alternative. However, further research is needed to determine which interventions suit each type. Providing counseling tailored to clients' career indecision type could facilitate helping them advance in the career decision-making process, strengthening clients' confidence and commitment, and increasing clients' satisfaction with their career choices.

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