

Translation And Validation Of A Scale For Examining Job-Seeking Behavior In The Chinese Cultural Context

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Abstract

This study aimed to validate a cross-cultural measurement tool for assessing job-seeking behavior among Chinese vocational college students. Using a quantitative cross-sectional design, 512 graduating students from three Guangxi colleges completed a Wenjuanxing survey. Developed based on SDT and TPB, the scale included three core dimensions: psychological needs, social cognitive variables, and job-seeking behaviors. Content validity was examined through expert review and a pilot study, while reliability was assessed via Cronbach's α and Composite Reliability (CR). Structural validity was tested using KMO and Bartlett's tests, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Average Variance Extracted (AVE). The results showed strong psychometric properties, with overall Cronbach's α of 0.874, all subscales exceeding 0.80, and KMO of 0.948, confirming the tool's applicability and robustness.

Keywords: job-seeking behavior; vocational college students; reliability; validity; cross-cultural measurement

1. INTRODUCTION

Job-seeking behavior among students in vocational colleges is a crucial step in their transition from school to the workforce. It plays a direct role in shaping their career paths, job satisfaction, and ability to adapt socially. In recent years, as vocational education in China has expanded rapidly, millions of graduates enter the job market each year. Yet, many of them struggle during this early stage of employment. Research shows that the employment turnover rate of vocational students is higher than that of undergraduate students [1]. These challenges often reflect not only a lack of preparation but also deeper, more complex psychological factors. Others also delay employment due to choice or external pressures—what can be termed "slow employment" or "delayed employment." Such delays can hold back career progression speed and signify overall low employment preparation and self-awareness [2]. Literature shows delays to be closely linked with personal motivation, psychological stability, social pressures, and level of assistance. To better understand these matters, more researcher attention has been focused upon examining psychological and behavior processes in job-seeking. Two widely utilized conceptual models in this area are Self-Determination Theory (SDT) and Theory of Planned Behavior (TPB). SDT focuses upon the influence of autonomy in choosing behavior and posits three core requirements—autonomy, competence, and relatedness satisfaction—that are needful in soliciting inner motivation [3]. Experiencing a sense of control over their behaviors, competence in skills sets, and relatedness with other job searchers, the

students are more intrinsically motivated, and their job-seeking behavior will be more active in nature and enduring in long-term [4]. As opposed to SDT, TPB both cognitively and socially accounts for behavior. TPB hypothesizes three predictors of behavioral intentions: job-seeking attitude (how one feels about job-seeking), job-seeking subjective norm (social approval/support one perceives), and job-seeking self-efficacy (self-perceived competence in the ability to perform job-seeking activities) [5]. If job-seeking would be seen by students to be worthwhile, if one perceives others would approve/support them, and if one perceives one's ability to perform job-seeking activities, one would be more likely to perform job-seeking activities. TPB complements SDT by providing a cognitive model to account for motivation and behavior. Subsequent studies have combined SDT and TPB for a more comprehensive account of how motivation influences cognition to produce behavior. The combined model is useful in educational and career development contexts because both psychological and cognitive factors contribute to choice and persistence [6].[7].[8]. Few studies have applied this model within China, however, specifically among vocational college students, including little exploration of suitable measures for use within this context. It should be noted that while SDT and TPB have been implemented universally, their corresponding measuring instruments were designed within Western cultures. Direct use by Chinese students might lead to perplexity or misinterpretation due to cultural differences [9]. For example, "autonomy" and "obedience" might be understood differently across cultures, while reaction by students to other people's expectations might heavily rely upon family context and education. This would further suggest that local adaptation and validation would be necessary for them to be accurate and usable within a culture. This study addresses this shortcoming by attempting to scientifically quantify job-seeking conduct among vocational college students in China. It endeavors to validate a measuring instrument bringing together psychological need satisfaction, social cognitive variables, and job-seeking conduct—into the context. The instrument not only tests reliability and validity, but how it might be implemented practically in informing educational assistance and career guidance. The intention is ultimately to provide a practical, as well as theoretical, foundation to improve employment outcomes and career development within China's vocational education system. For this purpose, the study surveys students from three vocational colleges in Liuzhou, Guangxi, using a structured quantitative research design. It investigates how psychological needs and social cognition relate to different types of job-seeking behavior and rigorously tests the reliability and validity of the measurement tool. The ultimate aim is to create a scientifically grounded, culturally appropriate instrument that can support decision-making and interventions by schools, career services, and policymakers.

2. LITERATURE REVIEW

2.1. The Role of Psychological Needs in Behavior from the SDT Perspective

In Self-Determination Theory (SDT), individual psychological needs are considered important drivers of behavior [10]. Recent studies indicate that job-seeking motivation exists along a continuum ranging from external pressures to internal interests. Individuals may engage in job-seeking either due to external demands such as family expectations or economic necessity, or driven by internal factors like personal interests and values [11].[12].[13]. Within the Chinese cultural context, although policies advocate individual career autonomy, family involvement through emotional ties, cultural assets, and social networks often leads job seekers into a state of nominal autonomy but actual dependence [14]. In comparison, South Korea places greater emphasis on intrinsic motivation through skill mastery [15]. These cultural variations highlight the importance of translating and validating job-seeking behavior scales

specifically for the Chinese context, clarifying how psychological needs influence local job-seeking motivation and behavior, thus informing tailored career guidance and policy interventions

2.2. Social-Cognitive Variables from the TPB Perspective

The Theory of Planned Behavior (TPB), developed by Ajzen [5], has become widely used to explain job-seeking behaviors. TPB emphasizes three social-cognitive variables—attitude, subjective norm, and perceived behavioral control—which jointly influence intentions and actions [16].[9].[17]. Attitude represents an individual's view of outcomes. For instance, vocational students expecting benefits from certification will approach job-seeking more positively. Subjective norm reflects expectations from significant others. Particularly in collectivist cultures like China, family opinions greatly shape students' career decisions [18].[19]. Perceived behavioral control indicates one's self-assessed ability to act effectively; students with internship experiences often feel more confident about job searches. Recent studies have expanded TPB applications, exploring complex interactions like mediation or moderation among variables. Attitude, for example, may indirectly influence job-seeking intentions by enhancing perceived control. TPB is also valuable in cross-cultural comparisons, illustrating variations in how cultures prioritize subjective norms or perceived control. This emphasizes the importance of translating and validating measurement scales specifically for the Chinese context, enhancing tailored career counseling and policy strategies.

2.3. Localization in the Chinese Cultural Context While SDT and TPB are widely applied internationally, their use in China—especially among vocational students—is still limited. Most domestic research focuses on undergraduate populations, overlooking the distinct challenges faced by vocational students. Compared to undergraduates, vocational students often face more severe employment pressures, have weaker social support systems, and lower levels of career awareness, making targeted measurement tools even more essential [21]. Cultural factors such as saving face, parental authority, and institutional systems like academic tracking through the college entrance exam also shape students' job-seeking behaviors. Some students choose highly prestigious but personally unsuitable careers to meet parental expectations, which weakens their autonomy and intrinsic motivation [22]. Others delay job-seeking out of fear of failure. These cultural dynamics are not easily captured by the original SDT and TPB models, which calls for localized revisions and adaptations [23].

2.4. The Need for Localized and Validated Measurement Tools

To effectively understand and guide vocational students' job-seeking behavior in China, it is vital to develop measurement tools with strong reliability and cultural relevance. Although many internationally developed scales are theoretically sound, their direct application in the Chinese context often runs into language and cultural mismatches—particularly in constructs like psychological needs and subjective norms, where cross-cultural interpretations may differ [24].

2.5. Operationalizing Dimensions and Indicators of Job-Seeking

More accurate definitions are required for job-seeking behavior dimensions to allow valid measurement. Prior studies identify a number of significant dimensions including frequency, intensity, breadth, and quality of job-seeking behavior [25]. These dimensions are highly interrelated. Some students may, for example, use frequency but lack direction and preparation and, by reason thereof, obtain poor outcomes. Other students with quality job-seeking abilities may use fewer applications but with better outcome. A

comprehensive instrument, therefore, must measure each of the four dimensions along with behavioral intention and actual performance in order to form a complete cycle from motivation to behavior to outcome [26].

2.6. Deficiencies in Current Tools

There are a few SDT and TPB derived measures, for instance, BPNSFS for frustration/satisfaction need, and TPB-derived questionnaires translated to Chinese populations by Song and others [24]. , but few are helpful in vocational contexts. Either they have very abstract statement formats, or they are not job search-specific, rendering them unhelpful in measuring actual behavior or psychological states. Especially, most scales focus primarily upon intention or cognitive appraisal without evaluating unique behaviors, such as internet job website use, information searching, or interview preparation. The use of this makes them ineffective when evaluating actual job-seeking behavior in naturalistic contexts. Most scales are also English translations, and poor or unnatural phrasing can detract from local reliability along with validity [27]. This necessitates creating new, culturally grounded measures capturing language use, behavior, and psychological reality in vocation students.

2.7. Theoretical Foundation and Innovations in Instrument Development in This Study

Based on said analysis, this study utilizes BPNSFS, TPB variable measures, as well as Chinese Job-Seeking Behavior Scale [28]. The said measures are included by translating them thoroughly, modifying them semantically, as well as consulting experts. They are rewritten for both theoretical adequacy and cultural appropriateness. The focus here is to develop a job-seeking behavior measuring instrument grounded in real-life experience, promote research, and offer career guidance with vocational education applicability. In conclusion, SDT and TPB offer valuable theoretical frameworks for understanding vocational students' job-seeking behavior. Their integration allows for a more comprehensive view of behavioral mechanisms. However, current tools still face limitations in terms of language, structure, and relevance. This study aims to refine and localize existing scales to create a practical, theoretically grounded, and culturally appropriate cross-cultural measurement tool—one that supports both research and educational practice.

3. METHODS

3.1. Research Design

This study adopted a quantitative, cross-sectional design aimed at revising and preliminarily validating a measurement tool for assessing job-seeking behavior among vocational college students. Following the standard approach for cross-cultural research, the study focused on evaluating the tool's language suitability, cultural relevance, practical usability, and reliability within the intended population.

3.2. Participants, and Data Collection

Using a descriptive, observational approach, the study recruited participants from three vocational colleges in Liuzhou, Guangxi. Eligible participants met the following criteria: (1) they were final-year students expected to graduate in 2025, and (2) they voluntarily agreed to participate and completed the full questionnaire. There were no exclusion criteria. Data were collected through an online survey hosted on the Wenjuanxing platform. Researchers worked in coordination with each college's career guidance office and relied on the support of academic advisors and class teachers to distribute the questionnaire

link and QR code through campus announcements and class chat groups. All participants read an introduction to the study and gave informed consent electronically before beginning. The survey system restricted entries to one per participant and included logic checks to prevent incomplete or invalid responses. The data collection period ran from November 1 to December 10, 2024. A total of 512 valid responses were collected, representing a 91.0% response rate. Once exported, the data were anonymized by removing any personally identifying information.

3.3. Instrument Development

3.3.1. Original Structure of the Questionnaire

The questionnaire was developed based on internationally accepted frameworks, integrating constructs from SDT and TPB. It was designed to measure three core dimensions: psychological need states, social cognitive variables, and job-seeking behavior.

3.3.2. The finalized instrument included:

Psychological Needs: 24 items adapted from the Chinese version of the BPNSFS, assessing both the satisfaction and frustration of autonomy, competence, and relatedness. Social Cognitive Variables: 14 items covering job-seeking attitude, job-seeking subjective norm, and job-seeking self-efficacy. Job-Seeking Behavior: 12 items assessing both active job-seeking behaviors and preparatory job-seeking behaviors. Items were rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), with several items reverse-coded. The total time to complete the questionnaire was designed to be under 15 minutes; pilot studying showed an average of 11 minutes and 30 seconds.

3.4. Translation and Cultural Adaptation – Content Validity

The language and cultural adaptation followed a five-step process proposed by Beaton et al. [29]: Two independent translations of the original English questionnaire were conducted—one by an educational researcher with a background in psychometrics and the other by a language specialist. The research team synthesized both versions into a unified draft. A native English speaker performed a back-translation, which was then checked against the original for semantic consistency. Three subject-matter experts in education and career development reviewed the draft and provided item-specific feedback and revisions. A pilot study was conducted with 40 students, recording average completion times and assessing item clarity. Based on their feedback, any ambiguous language or structure was revised to create the final version. To assess content validity, three experts—one career counselor, and two educational measurement scholars—independently rated each item's clarity, logic, and cultural appropriateness on a 5-point scale. Items

rated 4 or above were considered acceptable. The content validity index (CVI) for all items exceeded 0.80, meeting international standards for instrument development [30].

In the pilot study, participants also completed a feedback form rating the questionnaire's logic, clarity, and ease of response. They were invited to mark any items they found unclear. This feedback informed the final refinements.

3.5. Statistical Data Analysis

Data were processed and analyzed using SPSS 26 and AMOS 26. Analyses included assessments of both reliability and validity, covering item testing, construct verification, and model fit evaluation. These steps provided a comprehensive foundation for confirming the tool's theoretical soundness and practical applicability.

3.5.1. Reliability

Internal consistency was assessed using Cronbach's alpha. Values above 0.80 were considered good [31].[32]. To further assess the reliability of the underlying constructs, composite reliability (CR) was calculated, with 0.70 or higher indicating acceptable levels [32].Cronbach's alpha for each subscale was computed within SPSS 26, and each item's contribution to overall consistency was inspected through the "Alpha if Item Deleted" statistic. CR was also estimated from standardized factor loadings to be a supportive measure for future confirmatory modeling. Corrected Item-Total Correlation (CITC) scores above 0.40 were used to determine each item's discrimination and consistency with the total scale.

3.5.2. Validity

Data adequacy for factor analysis was assessed using Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test. A value above 0.70 was acceptable for KMO, while a significant Bartlett's test at $p < 0.05$ was considered to indicate significant item correlations [33].Maximum likelihood was utilized in EFA. Factor loadings were assigned at 0.40 for construct validation purposes [34]. CFA was then done using structural equation modeling to analyze model fit after EFA. Convergent validity was assessed using Average Variance Extracted (AVE) at a value of 0.50 and more [35].

3.6. Data Management and Quality Control

Data were anonymised after collection and were stored in a password-encrypted hard drive. Double entry was employed to validate data entry accuracy and formatting. Correct response was confirmed through Wenjuanxing's internal consistency, while a requirement for a minimum response time of 5 minutes served to screen out careless entries. Pilot and full surveys were hand-screened to filter out entries with extremely large numbers of missing data points and suspect response patterns.

3.7. Ethical Considerations

This study received approval from the Guangxi University of Science and Technology Institutional Ethics Committee. Study purpose, confidentiality, and right to withdraw were described in the informed consent statement viewed by participants online. No identification information was collected, and participants' privacy was maintained at every step in data collection. All research was conducted strictly in line with the

Declaration of Helsinki and with the Ministry of Education, People's Republic of China's Ethical Guiding Principles for Research in Institutions of Higher Education.

4. RESULTS

4.1. Pilot Study

To ensure linguistic clarity, logical consistency, and cultural relevance of the questionnaire, a pilot study was conducted prior to the formal survey. Forty students were randomly selected from the target population at three vocational colleges in Guangxi to complete the questionnaire. Preliminary reliability and validity analyses were conducted using SPSS 26.0 to assess the stability of the items and the initial alignment of the scale with its intended theoretical structure.

5. DISCUSSION

5.1.1. Preliminary Reliability Analysis

Reliability analysis of the pilot study data (Table 1) showed that the overall Cronbach's α for the questionnaire was 0.949. Subscale α values ranged from 0.873 to 0.964 (Table 2), all exceeding the 0.80 threshold, indicating high internal consistency [36]. Additionally, "Cronbach's α if item deleted" values demonstrated that all items positively contributed to the scale's reliability. Corrected Item-Total Correlation (CITC) values were all above 0.40, meeting established standards for scale development in social science research.

[Table 1:](#) Cronbach alpha of the scale

Cronbach Reliability Statistics			
Dimensions	N of Items	N of Cases	Cronbach's Alpha
Overall scale	50	40	0.949

[Table 2:](#) Cronbach alpha of each Dimensions

Cronbach Reliability Statistics						
Variables	Dimensions	Item	Corrected Item-Total Correlation(CITC)	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	
Psychological Need satisfaction	Autonomy satisfaction	AS1	0.606	0.847	0.848	0.955
		AS7	0.823	0.744		
		AS13	0.655	0.821		
		AS19	0.683	0.809		
	Relatedness satisfaction	RS3	0.782	0.900	0.916	
		RS9	0.844	0.878		
		RS15	0.832	0.882		
		RS21	0.774	0.901		
	Competence	CS5	0.694	0.854	0.873	

	satisfaction	CS1 1	0.731	0.835		
		CS1 7	0.810	0.805		
		CS2 3	0.687	0.853		
Psychological Need frustration	Autonomy frustration	AF2	0.767	0.861	0.893	0.933
		AF8	0.729	0.875		
		AF1 4	0.795	0.850		
		AF2 0	0.764	0.862		
	Relatedness frustration	RF4	0.732	0.758	0.833	
		RF1 0	0.676	0.784		
		RF1 6	0.650	0.795		
		RF2 2	0.597	0.818		
	Competence frustration	CF6	0.685	0.814	0.851	
		CF1 2	0.730	0.795		
		CF1 8	0.757	0.780		
		CF2 4	0.599	0.847		
Job-seeking attitude		A1	0.782	0.826	0.882	
		A2	0.832	0.777		
		A3	0.720	0.882		
Job-seeking Subjective norm		SN1	0.849	0.800	0.894	
		SN2	0.778	0.861		
		SN3	0.750	0.884		
Job-seeking self-efficacy		SE1	0.920	0.950	0.960	
		SE2	0.832	0.955		
		SE3	0.818	0.956		
		SE4	0.871	0.952		
		SE5	0.776	0.958		
		SE6	0.906	0.950		
		SE7	0.815	0.956		
		SE8	0.831	0.955		
Job-seeking behavior	Preparatory	B1	0.810	0.926	0.937	0.964
		B2	0.818	0.925		
		B3	0.828	0.924		
		B4	0.835	0.922		
		B5	0.770	0.930		
		B6	0.819	0.925		

	Active	B7	0.793	0.922	0.933	
		B8	0.756	0.927		
		B9	0.886	0.910		
		B10	0.773	0.924		
		B11	0.819	0.918		
		B12	0.790	0.922		

5.1.2. Preliminary Assessment of Structural Suitability

The suitability of the data for factor analysis was evaluated using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity (Table 3). All KMO values exceeded 0.720, with the job-seeking behavior dimension reaching 0.903 and the autonomy satisfaction dimension at 0.890, indicating strong adequacy for factor analysis. Bartlett's test was significant across all dimensions ($p < 0.001$), suggesting strong inter-item correlations and a solid foundation for structural analysis.

Table 3: KMO and Bartlett's Test

Aariables	KMO	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig.
santisfaction	0.890	411.156	66	0.000
frustration	0.878	324.835	66	0.000
attitude	0.720	64.241	3	0.000
Subjective norm	0.723	69.543	3	0.000
Self-efficacy	0.798	404.093	28	0.000
behavior	0.903	492.164	66	0.000

5.2. Main Study – Description of the Sample

SPSS 26.0 and AMOS 26.0 were used to conduct a comprehensive analysis of the tool's reliability and validity in the main study.

5.2.1. Description of the Sample

A total of 512 participants were recruited from three vocational colleges in Liuzhou, Guangxi. Of these, 46.3% were male and 53.7% were female. The average age was 20.84 years ($SD = 1.02$), with an age range from 19 to 24. The sample included students from a balanced mix of disciplines, including engineering, nursing, finance and management, and education, providing a broadly representative snapshot of the vocational student population (see Table 4 for details).

Table 4: Respondent's Demographic Profile

Item		Frequency	Percentage (%)
Gender	Male	380	74.22
	Female	132	25.78
Major	Liberal&Arts	67	13.09
	Science	224	43.75
	Engineering	190	37.11

	Others	31	6.05
Birthplace	Town	145	28.32
	Rural	367	71.68
Current job planning	Get employed	372	72.66
	Further study	63	12.30
	Enlist in the army	14	2.73
	Entrepreneurship	19	3.71
	Unemployed	33	6.45
	Others	11	2.15
Father's education	Primaryeducation or junior middle education	305	59.57
	Senior middle education	113	22.07
	Vocational college or undergraduate	88	17.19
	Postgraduate or above	6	1.17
Mother's education	Primaryeducation or junior middle education	348	67.97
	Senior middle education	113	22.07
	Vocational college or undergraduate	46	8.98
	Postgraduate or above	5	0.98

5.2.2. Tool Feedback and Questionnaire Completion

According to backend data from the Wenjuanxing platform, the average time to complete the questionnaire was 11 minutes and 48 seconds, with approximately 95% of respondents finishing within 15 minutes. No major interruptions were reported during the completion process, and the overall response rate was high, with missing data rates below 1%. Participants generally found the item wording clear and easy to understand, with only a few isolated suggestions for phrasing adjustments on specific items.

5.2.3. Reliability

In the main study sample, the overall reliability was strong (Cronbach's $\alpha = .874$). Values above .80 are commonly interpreted as good internal consistency in established scales [37]. [38]. All corrected item-total correlations exceeded .40, and 'alpha if item deleted' did not improve for any item, indicating that each item contributed positively to reliability [36].[38].Additionally, Composite Reliability (CR) for all constructs ranged from .776 to .935, exceeding the .70 benchmark for acceptable internal consistency [39].[35]. , further supporting the consistency and construct reliability of the scale.

Table 5: Cronbach alpha of each Dimensions of the scale in Formal study

Variables	Dimensions	Item	Corrected Item-Total Correlation(CITC)	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	
Psychological Need	Autonomy satisfaction	AS1	0.723	0.836	0.871	0.911
		AS7	0.703	0.845		

satisfaction		AS13	0.757	0.825		
		AS19	0.726	0.835		
	Relatedness satisfaction	RS3	0.761	0.877	0.900	
		RS9	0.796	0.864		
		RS15	0.766	0.875		
		RS21	0.784	0.868		
	Competence satisfaction	CS5	0.719	0.826	0.865	
		CS11	0.671	0.844		
		CS17	0.715	0.827		
		CS23	0.752	0.812		
Psychological Need frustration	Autonomy frustration	AF2	0.733	0.835	0.873	0.900
		AF8	0.728	0.837		
		AF14	0.718	0.841		
		AF20	0.732	0.835		
	Relatedness frustration	RF4	0.707	0.820	0.860	
		RF10	0.683	0.831		
		RF16	0.697	0.825		
		RF22	0.736	0.808		
	Competence frustration	CF6	0.687	0.750	0.819	
		CF12	0.625	0.780		
		CF18	0.618	0.782		
		CF24	0.633	0.775		
Job-seeking attitude		A1	0.721	0.774	0.845	
		A2	0.691	0.802		
		A3	0.722	0.773		
Job-seeking Subjective norm		SN1	0.702	0.761	0.833	
		SN2	0.668	0.794		
		SN3	0.711	0.751		
Job-seeking self-efficacy		SE1	0.781	0.926	0.935	
		SE2	0.770	0.927		
		SE3	0.742	0.929		
		SE4	0.772	0.926		
		SE5	0.779	0.926		
		SE6	0.775	0.926		
		SE7	0.784	0.926		
		SE8	0.774	0.926		
Job-seeking behavior	Preparatory	B1	0.783	0.888	0.909	0.929
		B2	0.720	0.897		
		B3	0.769	0.890		
		B4	0.734	0.895		
		B5	0.720	0.897		
		B6	0.763	0.891		
	Active	B7	0.797	0.918	0.931	
		B8	0.804	0.917		
		B9	0.797	0.918		

		B10	0.797	0.918		
		B11	0.794	0.918		
		B12	0.795	0.918		

5.2.4. Validity

5.2.4.1. KMO and Bartlett's Test: The overall KMO value for the scale was 0.948, and Bartlett's test of sphericity yielded $\chi^2 = 16,404.714$ with 1,225 degrees of freedom, $p < 0.001$ (see Table 6). These results indicate that the data are highly suitable for factor extraction and structural analysis.

Table 6: KMO and Bartlett's Test

KMO		0.948
Bartlett's Test of Sphericity	Approx. Chi-Square	16404.714
	df	1225
	Sig.	0.000

5.2.4.2. Exploratory Factor Analysis (EFA)

Using principal component analysis, 11 factors with eigenvalues greater than 1 were extracted, accounting for a cumulative variance of 72.335%. All item factor loadings exceeded 0.50 (see Table 7). The rotated solution produced a clear and interpretable structure, supporting the proposed multidimensional model. The factor organization also showed strong internal consistency within dimensions, indicating well-defined relationships among items [39],[33].

Table 7: Total Variance Explained

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.486	30.973	30.973	15.486	30.973	30.973	5.819	11.638	11.638
2	3.739	7.478	38.451	3.739	7.478	38.451	4.561	9.123	20.761
3	3.403	6.805	45.256	3.403	6.805	45.256	4.218	8.437	29.198
4	3.088	6.176	51.432	3.088	6.176	51.432	3.051	6.101	35.300
5	1.971	3.942	55.374	1.971	3.942	55.374	2.903	5.806	41.105
6	1.822	3.644	59.018	1.822	3.644	59.018	2.897	5.793	46.899
7	1.556	3.112	62.131	1.556	3.112	62.131	2.878	5.756	52.654
8	1.449	2.898	65.029	1.449	2.898	65.029	2.801	5.602	58.256

9	1.284	2.567	67.596	1.284	2.567	67.59 6	2.670	5.340	63.59 7
10	1.259	2.518	70.114	1.259	2.518	70.11 4	2.211	4.422	68.01 8
11	1.110	2.221	72.335	1.110	2.221	72.33 5	2.158	4.317	72.33 5
12	0.605	1.209	73.544						
13	0.556	1.111	74.656						
14	0.538	1.075	75.731						
15	0.530	1.059	76.790						
16	0.507	1.015	77.805						
17	0.498	0.996	78.801						
18	0.474	0.949	79.750						
19	0.465	0.930	80.680						
20	0.453	0.906	81.585						
21	0.446	0.892	82.477						
22	0.427	0.853	83.330						
23	0.421	0.842	84.172						
24	0.411	0.822	84.994						
25	0.394	0.789	85.783						
26	0.381	0.762	86.545						
27	0.374	0.748	87.293						
28	0.365	0.729	88.022						
29	0.356	0.712	88.734						
30	0.348	0.696	89.431						
31	0.336	0.672	90.102						
32	0.333	0.665	90.768						
33	0.325	0.649	91.417						
34	0.313	0.625	92.042						
35	0.304	0.607	92.649						
36	0.302	0.604	93.253						
37	0.288	0.577	93.830						
38	0.286	0.572	94.402						
39	0.277	0.555	94.956						
40	0.269	0.538	95.494						
41	0.262	0.525	96.019						
42	0.251	0.501	96.520						
43	0.241	0.482	97.002						
44	0.231	0.462	97.464						
45	0.227	0.455	97.919						
46	0.225	0.449	98.368						
47	0.221	0.441	98.809						
48	0.210	0.421	99.230						
49	0.201	0.402	99.632						
50	0.184	0.368	100.000						

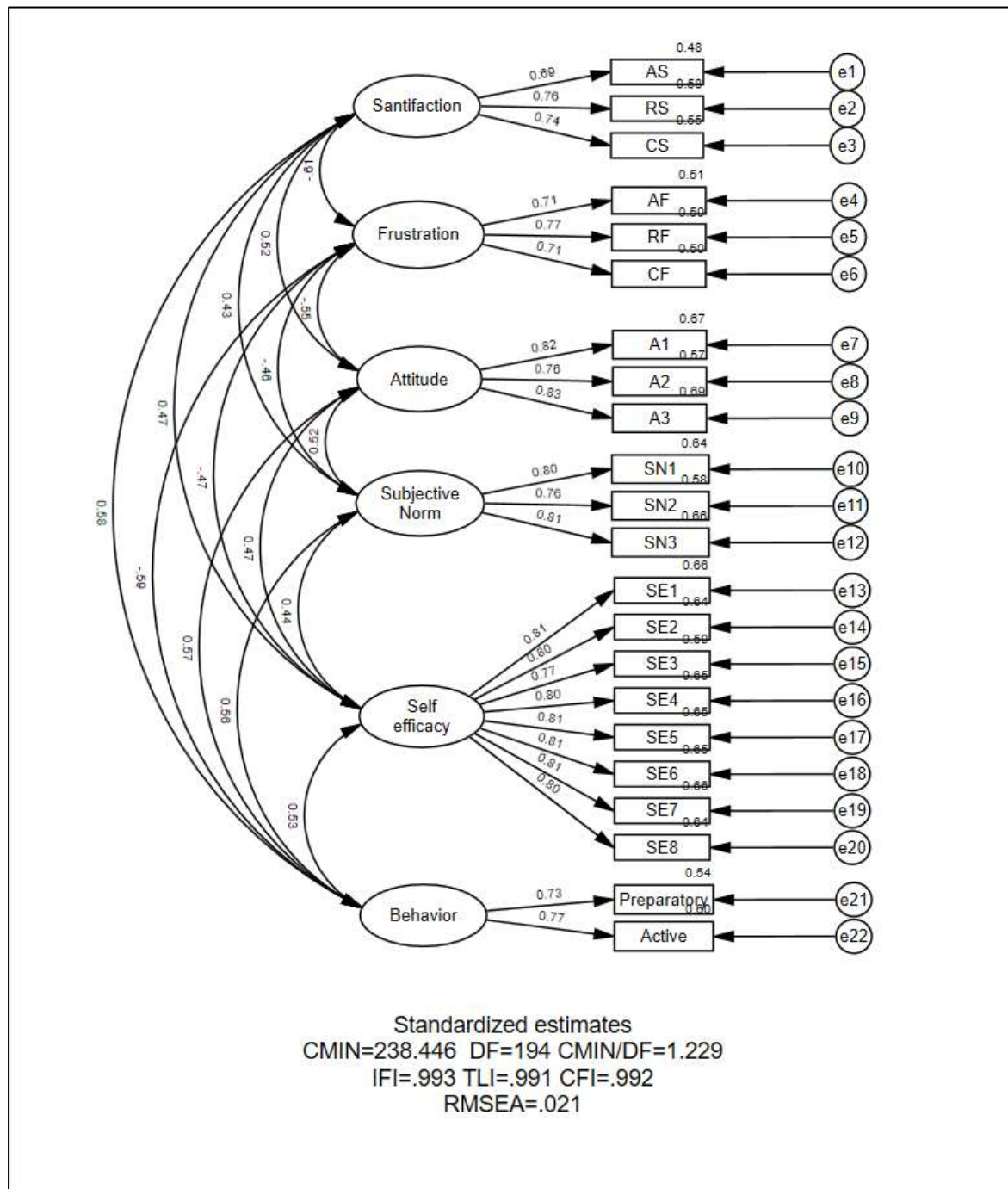


Figure 1: CFA for Independent Variables and Mediator

5.2.4.3. Convergent and Discriminant Validity

All dimensions had Average Variance Extracted (AVE) values greater than 0.50, supporting convergent validity [35],[39]. Discriminant validity was also confirmed, as the square root of each dimension's AVE exceeded the correlation coefficients between that dimension and others (see Table 8), indicating that the constructs are clearly distinguishable from one another.

Table 8: Confirmatory Factor Analysis Convergent Validity

Path	Estimate	S.E.	C.R.	P	Std.Estimate	AVE	CR
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AS	<---	satisfaction	1.000				0.690	0.536	0.776
RS	<---		1.189	0.087	13.676	***	0.760		
CS	<---		1.084	0.080	13.525	***	0.744		
AF	<---	frustration	1.000				0.712	0.534	0.775
RF	<---		1.174	0.083	14.173	***	0.771		
CF	<---		0.965	0.072	13.466	***	0.709		
A1	<---	attitude	1.000				0.817	0.645	0.845
A2	<---		0.895	0.051	17.599	***	0.758		
A3	<---		1.075	0.056	19.159	***	0.833		
SN1	<---	Subjective norm	1.000				0.799	0.627	0.834
SN2	<---		0.971	0.058	16.839	***	0.762		
SN3	<---		1.034	0.059	17.666	***	0.813		
SE1	<---	Self-efficacy	1.000				0.812	0.643	0.935
SE2	<---		0.956	0.046	20.895	***	0.801		
SE3	<---		0.991	0.050	19.759	***	0.770		
SE4	<---		1.008	0.048	20.986	***	0.804		
SE5	<---		1.036	0.049	21.141	***	0.808		
SE6	<---		1.027	0.049	21.130	***	0.808		
SE7	<---		1.035	0.049	21.309	***	0.813		
SE8	<---		1.001	0.048	20.906	***	0.802		
Preparatory	<---	behavior	1.000				0.732	0.568	0.724
Active	<---		1.162	0.089	13.003	***	0.775		

5.3. Cultural Adaptation Observation

In terms of content relevance, students responded particularly well to items under the “preparatory job-seeking behavior” dimension, such as “revising my resume” and “searching for job postings,” indicating that the behaviors closely reflect real-world job search experiences and that the cultural adaptation was effective. Expert reviewers also confirmed that none of the items showed signs of cultural mismatch or semantic ambiguity, supporting the tool’s appropriateness for use in the current context.

6. DISCUSSION

6.1. Tool Development and Cultural Localization

This measure of job-seeking behavior for this study was informed by SDT and TPB yet tailored specifically for the Chinese vocational college student environment. Cultural adaptation was a central concern, from semantic translation to structural modeling to contents development. Development conformed to Beaton et al.’s [29]. cross-cultural adaptation procedure, involving forward and backward translation, expert consultation, and pilot testing, to ensure local relevance and semantic clarity. The pilot phase also followed best practices for linguistic appropriateness and contextual relevance as recommended by Harkness et al. [41]. and Gjersing et al. [42]. , allowing for close local adaptation in wording of questions, items, and questionnaire context for increased overall usability. Contentwise, the instrument enhances psychological need and cognitive social construct measurement by offering a more differentiated distinction between job-seeking behaviors—separating them into Preparatory and active behaviors. This organization draws from Zhang’s [9]. behavioral model for undergraduate college students and presents a more holistic view for job-seeking behavior by college students. It overcomes a common weakness of the

previous instruments by introducing more clarity to the intention to action process, thus enhancing its explanatory power.

6.2. Feasibility and Practical Uses: Pilot data identified the instrument to be very user-friendly and easy to understand. Average time required for completion was about 15 minutes, while over 95% of the respondents had correct item understanding. Technical aspects such as reverse coding items and logic checks were refined upon expert review and our own learning from prior testing. The instrument also has strong practical applications. It can be used in career courses, counseling sessions, and employability training modules to measure individuals' job readiness. The standardized scoring and feedback system makes it feasible for large-scale application within institutions. Institutions can use the scores to create comprehensive student profiles, encompassing psychological characteristics, cognitive levels, and behavioral trends, enabling tiered training programs and more targeted interventions.

6.3. Measurement Structure and Statistical Reliability: Reliability and structural validity analyses confirmed the tool's measurement stability. The overall Cronbach's alpha reached 0.874, with all subscales exceeding 0.83—indicating high internal consistency. Suitability tests yielded a KMO value of 0.948 and a highly significant Bartlett's test ($p < 0.001$), supporting the use of factor analysis. EFA extracted 11 distinct factors, together explaining 72.34% of the total variance—well above the conventional 50% benchmark recommended for construct validity in scale development [43]. Confirmatory Factor Analysis indicated good model fit (GFI = 0.902, CFI = 0.933, RMSEA = 0.073), suggesting that the measurement structure is both theoretically sound and empirically robust.

6.4. Applications for Educators and Policymakers: This tool not only serves as a practical evaluation instrument for educators but also offers valuable insights for implementing employment-oriented policies in vocational colleges. Teachers can use the results to tailor support strategies—For example, providing more autonomy, relational support, and planning skills to students who score low on psychological need satisfaction, or providing more practical experience to students who score low on job-seeking behavior. For administrators, it creates a foundation for data-driven employment service administration. Employment rates alone are insufficient; as Jackson and Bridgstock [44]. argue, higher education institutions must also be able to measure students' job-readiness and behavioural development. This instrument addresses that need by providing systematic, process-oriented measures that can help vocational schools update their employment guidance systems.

6.5. Implications for Vocational Education Quality: With China's current "Three Education Reform" programs requiring reforms at the curriculum, methodology, and teacher training levels, a tool like this holds paramount relevance. Its design simplicity, standardized language, and focused dimensions in assessment make it extremely suitable for incorporation within employability assessment modules in talent development programs. The subjective norm component aligns with recent studies showing that family expectations and social appraisal significantly influence vocational college students' career choices. These findings highlight the need to incorporate family education and social support into career intervention programmes to minimise passive decision-making among students [45].

6.6. Cross-Regional and Cross-Disciplinary Adaptability: It was designed specifically with no limit to any one academic major. The development sample comprised nursing, engineering, IT, and early

childhood education majors. Statistical analysis did not show any significant impact of academic major upon factor structure within the instrument, showing enough versatility across academic fields.

This interdisciplinary nature makes the instrument generalizable across other disciplines. Song et al. [24]. demonstrated TPB-related measures to be invariant across culturally disparate subgroups. Future studies would extend this instrument's utility by examining equivalence across institutions, student populations, and internship sites.

6.7. Wider Social Implications: Wu et al. [46]. indicated that standardized student assessment instruments are crucial toward developing educational equity, targeted assistance, and structural reform—particularly in vocational education and training, where complex assessment structures can assist in aligning training with the requirements of the job market. This instrument helps stakeholders understand the underlying psychological needs driving students' job-seeking behaviors. It allows universities and local governments to create dynamic profiles that align students' psychological characteristics with employer expectations, shifting employment policy from static metrics toward behavior-based insights into job readiness and motivation.

7. CONCLUSION

8. Based on SDT and TPB, this study developed and validated a job-seeking behavior scale among Chinese vocational college students. Through translation, distinct culture adaptation, structural format, and statistical assessment, it manifested enhanced linguistic clarity, logical coherence, and acceptable psychometric qualities. The three-component structure—psychological need, social cognitive variables, and job-seeking behavior—was theoretically grounded by exploratory and confirmatory factor analyses to offer both theoretical depth and utility. The instrument gives a more differentiated model than can its predecessors in distinguishing between two job-seeking behavior dimensions critical to career-oriented students: active and preparatory behaviors. The taxonomy accommodates real-life trends among career-oriented students and eliminates prior limitations in graphing behavioral processes and levels of readiness. Trends exhibited extremely high structural stability, excellent item clarity, and optimal completion time, making the instrument suitable for large-scale use. Its scores can be a starting point for career classes, one-to-one counsellor-counselee counseling, and data-oriented student profiling for selective intervention. Incorporating TPB constructs—subjective norm, attitude, and self-efficacy—the tool proves especially relevant in the Chinese cultural context. These variables help explain the social and psychological factors influencing student behavior and provide educators and administrators with insight into the roles of family expectations and environmental influences. As such, the tool supports a shift from outcome-focused employment metrics to a more integrated, behavior- and support-oriented approach to career services. Amid ongoing education reform, this tool offers clear practical value. It aligns with goals of China's "Three-Education Reform" by supporting curriculum improvement and resource allocation in employability training. Cross-disciplinary and regional testing indicates strong potential for broader adoption. Future research should expand the sample to other provinces and educational settings to further validate its generalizability. That said, several limitations remain. The sample was drawn from only three colleges in one region, limiting broader representativeness. The cross-sectional design also prevents observation of changes over time. Future studies should adopt longitudinal approaches and explore measurement consistency across subgroups such as gender, major, and academic year. In summary, this tool is a reliable, culturally adapted, and theoretically sound instrument for assessing job-seeking behavior among vocational students. It supports both research and practical efforts to improve employability education, helping

institutions better prepare students for the workforce and contribute to talent development strategies nationwide.

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