Psychological Evaluation

Adaptation and Psychometric Evidence of the Work Volition Scale – Student Version to Brazil

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Abstract: The Psychology of Working Theory has achieved notable prominence in career studies for its focus on how various — both individual and contextual — influence careers and job outcomes. "Volition" stands out as one of the key elements of this theory, representing the individuals' ability to make career choices despite obstacles. This study aimed to adapt and validate both internal and external structures of the Work Volition Scale – Student Version (WVS-SV) to Brazil. A total of 590 university students from public and private institutions of varied courses and semesters, mostly women (59%), took part in the study. Exploratory and confirmatory factor analyses indicated that the scale effectively measured two dimensions: volition and constraints. External evidence, including satisfaction with life and career, supported the theoretical aspects of this construct. The results indicated good psychometric properties of the scale to the Brazilian setting, contributing to a better understanding of career choices among university students.

Keywords: professional development, college students, psychometrics

Adaptação e Evidências Psicométricas da *Work Volition Scale – Student* no Brasil

Resumo: O modelo da Psicologia do Trabalhar tem se destacado nos estudos de carreira, abordando como variáveis contextuais e individuais influenciam a trajetória profissional. Um conceito-chave é a volição, que representa a capacidade de fazer escolhas de carreira diante de obstáculos. O objetivo desse estudo é adaptar e apresentar evidências de validade de estrutura interna e externa para o Brasil da Work Volition Scale – Student Version. Participaram 590 estudantes universitários de diferentes cursos e semestres, de instituições públicas e privadas, com uma predominância de mulheres (59%). As análises fatoriais exploratórias e confirmatórias mostraram uma estrutura adequada, composta por duas dimensões: restrições e volição. Além disso, identificaram-se evidências externas ao relacionar com a satisfação com a vida e a carreira. Os resultados indicam boas qualidades psicométricas da Work Volition Scale - Student Version no contexto brasileiro, contribuindo para melhorar a compreensão das escolhas de carreira entre os estudantes universitários.

Palavras-chave: desenvolvimento profissional, estudantes universitários, psicometria

Adaptación y Evidencia Psicométrica de la *Work Volition Scale – Student* en Brasil

Resumen: El modelo de Psicología del Trabajo se ha destacado en estudios de carrera, explorando cómo las variables contextuales e individuales influyen en la trayectoria profesional. Un concepto clave es la volición, que representa la capacidad de la toma de decisiones de carrera frente a obstáculos. Este estudio buscó adaptar y presentar evidencias de validez de la estructura interna y externa para Brasil de la *Work Volition Scale – Student Version*. Participaron 590 estudiantes universitarios de diversos cursos y semestres, tanto de instituciones públicas como privadas, con predominio de mujeres (59%). Los análisis factoriales exploratorios y confirmatorios demostraron una estructura adecuada con dos dimensiones: restricciones y volición. Además, se identificaron evidencias externas al relacionarlas con la satisfacción en la vida y la carrera. Los resultados indican buenas cualidades psicométricas de la *Work Volition Scale – Student Version* en el contexto brasileño, contribuyendo a una mejor comprensión de las elecciones de carrera entre los estudiantes universitarios.

Palabras clave: desarrollo professional, estudiantes universitarios, psicometría

According to Masdonati et al. (2022), contemporary career theories have evolved from focusing solely on individual factors to reflecting on how contextual determinants play a role in career pathways. This scenario contributes to the prominence of the Psychology of Working Theory (Duffy et al., 2016) in career studies which, by focusing on sociocultural factors, seeks to recognize conditioning factors for access to decent work (Pires et al., 2020).

The Psychology of Working Theory addresses how predictors that compose its model can influence access to decent work. The predictors are classified at a system level, such as experiences of marginalization and constraints; racism can be indicated as a good example of such predictor in Brazil. There is also the individual level, such as the capacity of volition, or making choices and career adaptability (Duffy et al., 2016). Economic constraints are mainly defined by family-borne resources. They affect the ability of families and individuals to invest and seek economic resources to facilitate access to decent work (Blustein, 2019). Still according to the author, experiences of marginalization are related to the relegation of people or groups to a position of less power within society. Experiencing marginalization is a critical factor, constituting a major barrier to achieving decent work.

The individual predictors of the Psychology of Working model are volition and career adaptability, aspects that can increase the likelihood of people achieving a decent work (Kim et al., 2022). Duffy et al. (2012) define volition — the construct studied in this research — as the individual perception of choice in making career decisions, despite the personal and systemic barriers encountered.

In knowledge-based societies, qualifications play a central role as determinants of entry into the labor market (Medvide et al., 2019; Organisation for Economic Cooperation and Development [OECD], 2016). Among population groups, university students are a distinct segment of potential job candidates, as the university environment endorses extracurricular programs with chances for distinct qualifications (e.g., analytical skills, critical thinking) (Cheung et al., 2020).

In the Brazilian context, the profile of university students is considered diverse, especially after the 2000s, with the implementation of public policies that have allowed the inclusion of people from different social classes and ages who already had an occupation (Lima & Campos, 2020).

Women represent the majority of enrolments in undergraduate and graduate courses, totaling 57.2% (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira [INEP], 2019). Also, they account for the majority of newcomers, totaling 55.2%, as well as those completing their courses, with a 61.4% rate. Women constitute the majority in 13 out of 20 courses with the highest enrollment numbers (INEP, 2019). However, such data does not indicate that their university experience is the same as of male students, since women experience different forms of violence, such as aggressive hazing, racism and homophobia, sexual and moral harassment, physical aggression, and humiliation with sexist connotations (Tassinari et al., 2022).

University students have a perception of greater freedom compared to other groups (e.g., professionals) when making career choices (Cheung et al., 2020). However, in real career adversity, students need to make concessions and experience frustrations caused by conflicting values, indecision and the influence of external

factors (Kwon et al., 2019). In other words, considering the Brazilian socioeconomic context, social inequality is the external factor with the most relevant impact on university students' perception of career choice.

The Work Volition Scale-Student Version (WVS-SV), developed by Duffy et al. (2012), is used to measure volition i.e., it measures the degree to which students feel able to make career choices despite environmental constraints. The instrument was adapted in its first version with university students in the United States and 379 undergraduate students responded, of which 42.7% were men ($N = 162$) and 56.2% women ($N = 213$) and 1.1% did not report their gender. The WVS-SV contains a nine-item volition subscale and a seven-item constraints subscale, with Likert-scale responses ranging from one (strongly disagree) to seven (strongly agree).

The WVS-SV was also adapted in Türkiye by Buyukgoze-Kavas et al. (2015), including 492 students with adjusted items for the volition ($\alpha = .79$) and constraints ($\alpha = .83$) dimensions. The authors investigated the relation between the construct and well-being, as well as the correlation with satisfaction with life. Another adaptation was carried out in South Korea by Kwon et al. (2019), with a sample of 251 participants (Cronbach's alpha coefficients for volition = .76; and for constraints = .78). The scale was also adapted in Hong Kong by Cheung et al. (2020), including 376 participants, with adequate accuracies for volition ($\alpha = .85$) and constraints ($\alpha = .86$). Thus, to investigate the experience of volition among Brazilian university students from different undergraduate courses and social classes in public and private institutions, this study aimed to adapt and present evidence of the validity of the internal and external structure of the WVS-SV for Brazil. In line with this objective, six hypotheses were formulated:

H1: the adaptation of the instrument to the Brazilian context will have two dimensions (volition and constraints), which should present accuracy outcomes similar to those found in the original measure by Duffy et al. (2012) in the United States, and in countries with different sociodemographic characteristics that hold local adaptations, such as Türkiye (Buyukgoze-Kavas et al., 2015), South Korea (Kwon et al., 2019), and Hong Kong (Cheung et al., 2020);

H2: via the measurement invariance procedure, it is hoped to test whether the measurement does not vary between groups. As the groups were constituted by gender, it is hoped that the instrument has invariant psychometric properties for men and women.

H3: Duffy et al. (2015) state that volition is associated with making career decisions with a greater perception of confidence, as well as predicting positive academic results among university students. Thus, the volition dimension is expected to be positively related to career satisfaction, in line with the relation found in the version for professionals adapted for the Brazilian context (Pires & Andrade, 2022), as well as in the version for students applied in Türkiye by Buyukgoze-Kavas et al. (2015).

H4: conversely, volitional capacity is affected by economic deprivation and can predict low academic satisfaction (Allan et al., 2023). Therefore, the constraints dimension is expected to be negatively related to career satisfaction in our sample of Brazilian students.

H5: Ahn et al. (2017), when researching volition for adult workers, showed that individuals with greater volition are more likely to hold positive feelings about choices related to their careers, which may endorse greater satisfaction with life and work. Thus, the volition dimension is expected to be positively associated with satisfaction with life.

H6: on the other hand, a negative association is expected with the constraints dimension, since a person with low volition perceives few job opportunities and is instead focused on external and structural limitations. This reflects a working relationship that is not linked to personal preferences, but mainly guided by the fulfillment of survival needs (Duffy et al., 2016; Kwon et al., 2019).

Method

Participants

The sample consisted of 590 participants, 348 women (59%) and 242 men (41%). Participants were aged from 18 to 63 (M = 25.9), and mostly lived in the southeast (91.3%) and northeast (7.4%) regions of Brazil. As for the type of the institution, 57% of the participants studied at private institutions and 43% at public ones. Regarding ethnicity/skin-color, 49.3% declared themselves White, 10.6% Black, 33.2% Mixed-race and the remaining 4.8% as Yellow, Indigenous or did not know how to answer. As for income, 57.4% indicated a monthly income up to Brazilian Reais (BRL) 1,567; 27.7% up to BRL 3,100; and 15% over BRL 3,100. As for the students' family monthly income, there was a wide variation, with 28% from BRL 1,567 to BRL 3,135; 17% from BRL 3,135 to BRL 4,702; 14.9% from 4,702 to BRL 6,270; 11% from BRL 6,270 to 10,450; 7% from BRL10,450 to BRL 15,675; and the remainder with an income above BRL 15,675 per month.

Instruments

This study used instruments already adapted for the Brazilian context for constructs relevant to the axiological network, such as satisfaction with life, career, and a sociodemographic questionnaire.

Work Volition Scale Student Version – by Duffy et al. (2012). The adapted version of the volition scale for students is composed of 16 items and two dimensions: volition (e.g., "Once I enter the labor market, I will easily find a new job if I want to"; α= .78) and constraints ("I feel like my family situation limits the types of jobs I might pursue"; α = .89) The instrument has a Likert scale of agreement, ranging from one (strongly disagree) to seven (strongly agree).

Career Satisfaction Scale. This scale was adapted by Silva and Andrade (2016) and is composed of four items. An example of an item is: "I'm satisfied with the success I have achieved in my career." It is a Likert-like scale ranging from one (very dissatisfied) to five (very satisfied). (x²/gl: 3.9, CFI: .98, TLI: .96, SRMR = .02, RMSEA = .71, .040 – 1.05).

Satisfaction with Life Scale. This scale has five items and was adapted by Giacomoni and Hutz (1997). Example item: "I am satisfied with my life." It is a Likert scale of agreement in which one (does not characterize me) and five (fully characterizes me, x²/gl= .7, CFI: .99, TLI: .97, SRMR = .056, RMSEA = .09, .04 – 1.40).

Procedures

Data collection. Initially, authorization was requested from the authors of the original instrument, Duffy et al. (2012), to proceed with the cross-cultural adaptation. Once permission was granted, the items were translated from English into Brazilian Portuguese in two versions. After translation, the versions were separated and analyzed by professionals in the field of Career and Professional Guidance, who proposed adjustments seeking the most appropriate way to conceptualize items, according to the procedure indicated by the International Test Commission (ITC, 2017) for adapting measures. Figure 1 shows the translation of the items.

Data collection began online, as social activities were restricted during the COVID-19 pandemic, using the Surveymonkey online platform. When face-to-face activities returned, data was collected at public and private higher education institutions in the states of Espírito Santo and Rio de Janeiro. Finally, data from the face-to-face collection was entered manually and placed in the same database as the online collection.

Data analysis. The data was treated for errors (e.g., incorrect typing) or omissions. Subsequently, an exploratory factor analysis (EFA) was carried out on the total sample of participants using Factor software, aiming at assessing the factor structure of the WVS-SV scale. The Bartlett's test of sphericity ($p < .05$) and the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy greater than .80 were used as satisfactory criteria for factoring the data (Ferrando & Lorenzo-Seva, 2018). The stability of the factors was assessed using the H index, where high H values (> .80) indicated a defined latent variable that is more likely to be stable in other studies (Ferrando & Lorenzo-Seva, 2018). In addition, to measure the quality of the factor estimates, values above .90 were considered for the FDI and .80 for the ORION (Ferrando & Lorenzo-Seva-2018).

After the exploratory procedure, the data was subjected to confirmatory factor analysis (CFA) to check whether the two-factor structure was plausible, employing the JASP program (version 1.6) to the total sample. The model fit indices were those recommended by Brown (2015) and Hair et al. (2006). Thus, chi-square (χ^2) was expected to be close to zero and not significant, as well as the ratio between χ^2

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and the degrees of freedom; confidence fit index (CFI) and Tucker-Lewis index (TLI), with values between .95 and 1.00; root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) with expected values of less than .80. The estimation method was Robust Diagonally Weighted Least Squares (RDWLS). Furthermore, multi-group analyses (AFCMG) were conducted to verify the factorial invariance of the instrument. The analysis of invariance was chosen to indicate more refined psychometric characteristics of the instrument, as indicated by Putnick & Bornstein (2016). The group chosen was gender of the participants in the total sample. The invariance models were evaluated with the respective EFA fit quality indices and the invariance of the measure indicated by the difference in CFI between models (ΔCFI < .01).

Figure 1

Original and adapted items of Work Volition – SV

Factor	Original item	Adapted item
F1	1. What I want has little impact on my future job choice	1. O que eu realmente quero tem pouco impacto na minha escolha de trabalho no futuro.
F1	2. In order to provide for my family, I will have to take jobs I do not enjoy	2. Para sustentar minha família, terei que aceitar trabalhos que não gosto.
F1	3. Due to discrimination, I do not feel I have complete control over my ability to get a job.	3. Devido à discriminação, não sinto que tenho controle total sobre minha capacidade de conseguir um trabalho.
F1	4. Due to my financial situation, once I get a job I couldn't change jobs even if I wanted	4. Devido a minha situação financeira caso eu consiga um trabalho, eu não poderei trocá-lo mesmo que eu queira.
F1	5. I feel that my family situation limits the types of jobs I might pursue	5. Sinto que a minha situação familiar limita os tipos de trabalho que posso exercer
F1	6. I worry that my life circumstances will prevent me from achieving my long term career goals	6. Preocupo-me com a possibilidade de as circunstâncias de minha vida me impedirem de alcançar meus objetivos profissionais de longo prazo.
F1	7. Due to my financial situation, I will need to take any job I can find.	7. Devido à minha situação financeira, terei de aceitar qualquer trabalho que encontrar
F2	8. The only thing that matters in choosing a job is to make ends meet.	8. A única coisa que importa na escolha de um trabalho é pagar.
F2	9. I know I won't like my future job, but it will be impossible for me to find a new one	9. Sei que não vou gostar do meu futuro emprego, mas para mim será impossível encontrar um novo.
F2	10. I will be able to change jobs if I want to.	10. Eu serei capaz de mudar de trabalho se eu quiser
F2	11. Discrimination will not affect my ability to choose a job	11. A discriminação não afetará minha capacidade de escolher um trabalho
F2	12. Once I enter the work world, I will easily find a new job if I want to.	12. E assim que entrar no mundo do trabalho, encontrarei facilmente um novo emprego, se quiser.
F2	13. I will be able to choose jobs that I want.	13. Serei capaz de escolher os empregos que desejo.
F2	14. I will learn how to find my own way in the world of work.	14. Aprenderei como encontrar meu próprio caminho no mundo do trabalho.
F2	15. I feel total control over my future job choices.	15. Sinto controle total sobre minhas futuras escolhas de trabalho.
F2	16. will be able to do the kind of work I want to, despite external barriers.	16. Serei capaz de fazer o tipo de trabalho que desejo, apesar das barreiras externas.

Note. (f1 = volition factor; f2 = constraints factor).

To assess the internal consistency of the WVS-SV, Cronbach's alpha was used, considering ideal values above .70 (Streiner & Kottner, 2014), as well as Mcdonald's omega to show the scale's reliability, with results expected from .70 to .90. Finally, a Pearson's *r* correlation analysis was conducted to show the convergent validity characteristics of the adapted instrument with the life and career satisfaction constructs outlined in the hypotheses.

Ethical Considerations

The project was approved by the Research Ethics Committee of the Universidade Federal do Espírito Santo, number CAAE 53056021.6.0000.5542, following Resolution 466/12 of the National Health Council regarding the criteria for research with humans. All participants agreed to take part in the study by signing an informed consent form.

Results

Evidence of internal structure and invariance

The dimensional nature of the scale explored using the Hull method (Ferrando & Lorenzo-Seva, 2018) indicated a two-factor structure. The results indicated the factorability of the data matrix with adequate KMO indices (.86) and significant Bartlett's test of sphericity (3081.9 gl = 120 p < .001).

The results of the WVS-SV reliability indicators showed a McDonald's omega of .90, which indicated adequate internal consistency. The Cronbach's alpha found for the volition dimension was .76 and for the constraints dimension .78, characterized as stable. The accuracy indicators in the two-factor internal structure were satisfactory (composite reliability: constraints = .85 and volition = .81). Table 1 shows the factor loadings and indices found in the exploratory procedures.

The confirmatory factor analysis found that all the WVS-SV fit indices were adequate, as shown in Table 2. Moreover, configural, metric, and scalar invariance tests showed that the measure is invariant for the three tested models (Table 2).

Table 1

Matrix with Item Factor Loadings, H Index

Items	Factor 1 (Constraints)	Fator 2 (Volition)
1.	.43	
2.	.63	
3.	.52	
4.	.74	
5.	.65	
6.	.49	
7.	.78	
8.	.67	
9.	.66	
10.		.40
11.		.43
12.		.71
13.		.79
14.		.64
15.		.70
16.		.59
Composite reliability	.85	.81
Latent H	.87	.85
Observed H	.94	.91
Omega	.90	
Cronbach's alpha	.76	.78

Note. Source: Data from the research (2023).

Table 2

Confirmatory Factor Analysis (CFA) and multi-group analysis (AFCMG)

Work Volition- SV	χ^2/gl	RMSEA (90% CI)	SRMR	TLI	CFI	ΔCFI
Uni-factor model	1.91	.04(.002 – .005)	.05	.97	.96	
Multi-group model by sex						
Types of invariance		RMSEA (90% CI)	SRMR	TLI	CFI	ΔCFI
Configural invariance		.033 [.022 – .044]	.06	.97	.982	-
Metric invariance		.040 [.030 – .49]	.06	.97	.973	.009
Scalar invariance		.041 [.032– .050]	.06	.96.8	.969	.003

Note. Source: Data from research (2023); Caption: RMSEA: root mean square error of approximation; CI: confidence interval; SRMR: standardized root mean square residual; TLI: Tucker-Lewis index; CFI: comparative fit index.

The configural model adequacy indices showed that the two-factor structure of the Brazilian version of the WVS-SV was adequate for both groups (men and women). In addition, when considering the CFI difference values between models (Putnick & Bornstein, 2017), metric and scalar invariance was also obtained (Table 2), confirming that the measure is equivalent for both male and female university students in Brazil, presenting robust psychometric properties.

Evidence of external structure

To assess the external evidence aspects of the WVS-SV, a Pearson's *r* correlation analysis was carried out, in which the associations of the volition and constraints dimensions with the career satisfaction and life satisfaction constructs were analyzed. Table 3 shows the associations found.

Table 3 shows the divergent relationship between the volition and constraints dimensions, in line with the

original instrument. Additionally, the negative relationship between the dimensions that constitute the instrument is considered weak to moderate (*r* < .40). The constraints dimension is weakly negatively associated with satisfaction with life (*r* < .40) and with career (r < .40) constructs. In the opposite direction, the career choice dimension, represented by the volition dimension, is weakly positively associated with satisfaction with life (*r* < .40) and with career (r < .40) constructs.

Table 3
Mean, standard deviation and correlation found

Parameter	Mean	SD	D_Volition	D_RestFin	Sat_C	Sat_L
D_Volição	4.70	.94	-	-	-	-
D_RestFin	1.50	3.20	-.38	-	-	-
Sat_C	.38	3.50	.33	-.31	-	.48
Sat_L	.94	4.70	.28	-.33	-	-

Note. ** *p* < .001. Caption: D_Volition (volition dimension); D_FinRest (Financial constraints dimension); Sat_C (Satisfaction with career) Sat_L(satisfaction with life).

Discussion

This study aimed to adapt and present evidence of the validity of the internal and external structure of the WVS-SV for Brazil. The instrument presented adequate outcomes for the theoretical structure of two dimensions (volition and constraints) with similar results to the original version of Duffy et al. (2012) for volition and constraints. Similar results were found in Türkiye by Buyukgoze-Kavas et al. (2015), in Hong Kong by Cheung et al. (2020) and in South Korea by Kwon et al. (2019). Such results were consistent with what was expected in H1, on the model of internal structure with two dimensions of the measure. In addition, it proved to be invariant to gender, which indicates robust psychometric qualities (H2). As for the relation with external variables, the correlation results corroborated the expected relationships, with positive external evidence of the construct with satisfaction with life and career. However, the fit index of the satisfaction with life scale was inflated, a theme for future studies.

Individuals with high volition, i.e., better prospects of choice in their career path, perceive more control over the work search process and confidence in obtaining the career they want (Cheung et al., 2020). This aspect corroborates Hypothesis 3 — which states the positive relation between volition and career satisfaction. These results are in line with those found by Buyukgoze-Kavas et al. (2015), on volition positively influencing career satisfaction, as it helps students believe that future opportunities will be available.

The volition dimension was positively related to satisfaction with life, an expected outcome as delineated in H5. This relation corroborated Kwon et al. (2019), in which a person with greater choice perceives work opportunities with few limitations, believing that they will be able to overcome any barriers, thus achieving greater satisfaction

with life. Furthermore, the results of this study advanced our understanding on how career is adaptively related to satisfaction with life among undergraduate students.

The constraints dimension was negatively related to satisfaction with career and life, which is in line with H3 and H5 regarding the effects of economic deprivation. An important point found to support H6 is how deprivation influences university students' satisfaction with life. The relation that was found reflects how differences in access to resources within and between countries are still barriers and highlights the importance of studies proposing interventions to growing inequalities and access to decent work (Rossier & Ouedraogo, 2021). In Brazil, such inequalities can be observed even after one has access to higher education, as less privileged university students experience different obstacles related to constraints, such as working and studying, whereas more privileged groups are able to exclusively dedicate to the university.

This is one of the main factors behind dropout phenomenon, as the literature indicates that students under quota programs — for those of lower socioeconomic strata — in Brazil are 11.9% more likely to drop out than non-quota students. Similarly, students who work are more likely to drop out (Sales et l., 2016). As Masdonati et al. (2022) suggested, when young adults are forced to work outside their field of study, they feel unable to employ their skills, which culminates in disappointment with their career choices.

According to studies by Teixeira et al. (2022), students who are poor, from public schools, Indigenous, Black and who do not receive institutional social support are the most likely not to complete the course. In other words, even before entering the labor market, the impact of economic and racial constraints can be seen in terms of course completion. Understanding volition in university students is important because it has become a predictor of job satisfaction and

can be used as interventions for a range of career-related outcomes (Duffy et al., 2012).

The volition of university students reflects the expectations about career decisions that are before them (Rossier & Ouedraogo, 2021). As it is considered a malleable construct, it can be an easier group to carry out interventions on issues such as dropout, especially in the careers of university students who face structural and practical barriers (Kwon et al., 2019). Thus, it is noteworthy that researchers on Professional Guidance can look at the data on this group and more easily access its volitional perception, as it is not yet fully immersed in the market.

This study aimed to help advance scientific knowledge of volition in the Brazilian context. As volition is part of the Psychology of Working Theory model, which is on the rise in emerging countries, it was pertinent both in relation to the theory and in providing measures with reliable evidence of the model.

The limitations of this study include the fact that most students who took part in the research live in the southeast region, which is considered to have the highest economic development in Brazil. Thus, future investigation should include a more heterogeneous sample, including states with less privileged sociodemographic characteristics and the participation of other social minorities (e.g., Indigenous, LGBTQIAPN+), who have to deal with specific constraints or barriers in their career choices (Masdonati et al., 2022), in addition to exploring group testing in these minorities.

Notably, the constraints described in the Brazilian context, which is marked by social inequality, is an important aspect for future research to delve into, especially regarding the importance of the volitional perception of professionals and students. Even with economic deprivation, it has been associated with levels of satisfaction with life and career. Hence, this study achieved good results in terms of the validity of the measure and offers an instrument with positive characteristics regarding its cross-cultural validity.

References

Ahn, J., Kim, H.-W., & Lee, J.-Y. (2017). Career calling and well-being among South Korean adult workers: Living a calling and work volition as mediators. *Psychologia*, *60*(3), 132-146. https://doi.org/10.2117/psysoc.2019-A001

Allan, B. A., Garriott, P., Ko, S.-J. S., Sterling, H. M., & Case, A. S. (2023). Classism, work volition, life satisfaction, and academic satisfaction in college students: A longitudinal study. *Journal of Diversity in Higher Education*, *16*(1), 66-75. https://doi.org/10.1037/dhe0000221

Blustein, D. L. (2019). *The importance of work in an age of uncertainty: The eroding work experience in America*. Oxford University Press.

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). Guilford.

Buyukgoze-Kavas, A., Duffy, R. D., & Douglass, R. P. (2015). Exploring links between career adaptability, work volition, and well-being among Turkish students. *Journal of Vocational Behavior*, *90*, 122-131. https://doi.org/10.1016/j.jvb.2015.08.006

Cheung, F., Ngo, H., & Leung, A. (2020). Predicting work volition among undergraduate students in the United States and Hong Kong. *Journal of Career Development*, *47*(5), 565-578. https://doi.org/10.1177/0894845318803469

Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, *63*(2), 127-148. https://doi.org/10.1037/cou0000140

Duffy, R. D., Diemer, M. A., & Jadidian, A. (2012). The development and initial validation of the Work Volition Scale–Student version. *The Counseling Psychologist*, *40*(2), 291-319. https://doi.org/10.1177/0011000011417147

Duffy, R. D., Douglass, R. P., & Autin, K. L. (2015). Career adaptability and academic satisfaction: Examining work volition and self efficacy as mediators. *Journal of Vocational Behavior*, *90*, 46-54. https://doi.org/10.1016/j.jvb.2015.07.007

Ferrando, P. J., & Lorenzo-Seva, U. (2018). Assessing the quality and appropriateness of factor solutions and factor score estimates in exploratory item factor analysis. *Educational and Psychological Measurement*, *78*(5), 762-780. https://doi.org/10.1177/0013164417719308

Hair, J. F., Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariant data analysis* (6th ed.). Pearson.

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. (2019). *Censo da Educação Superior 2018: Notas estatísticas*. https://download.inep.gov.br/educacao_superior/censo_superior/documentos/2019/censo_da_educacao_superior_2018-notas_estatisticas.pdf

Giacomoni, C. H. & Hutz, C. S. (1997). A mensuração do bem-estar subjetivo: Escala de afeto positivo e negativo e escala de satisfação de vida

International Test Commission. (2017). *The ITC guidelines for translating and adapting tests* (2nd ed.). https://www.intestcom.org/files/guideline_test_adaptation_2ed.pdf

Junior, J., Brasil, G. C., Carneiro, T.C., C & Corassa, M.A (2016). Fatores Associados à Evasão e Conclusão de Cursos de Graduação Presenciais na UFES. Revista Meta: Avaliação. https://doi.org/10.22347/2175-2753v8i24.1073.

Kim, T., Autin, K. L., & Allan, B. A. (2023). An examination of psychology of working theory with immigrant workers in the United States. *Journal of Career Assessment*, *31*(1), 190-206. https://doi.org/10.1177/10690727221105023

Kwon, J. E. (2019). Work volition and career adaptability as predictors of employability: Examining a moderated mediating process. *Sustainability*, *11*(24), 7089. https://doi.org/10.3390/su11247089

Lima, M., & Campos, L. (2020). Apresentação: Inclusão racial no ensino superior: Impactos, consequências e desafios [Introduction: Racial inclusion in higher education: Impacts, consequences and challenges]. *Novos Estudos CEBRAP*, *39*(2), 245-254. https://doi.org/10.25091/s01013300202000020001

Masdonati, J., Massoudi, K., Blustein, D. L., & Duffy, R. D. (2022). Moving Toward Decent Work: Application of the Psychology of Working Theory to the School-to-Work Transition. Journal of Career Development, 49(1), 41-59. https://doi.org/10.1177/0894845321991681

Medvide, M. B., Kozan, S., Blustein, D. L., & Kenny, M. E. (2019). School to work transition of non-college bound youth: An integration of the life design paradigm and the psychology of working theory. In J. G. Maree (Ed.), *Handbook of innovative career counselling* (pp. 157-172). Springer Nature.

Organisation for Economic Co-operation and Development. (2016). *Education at a glance 2016: OECD indicators*. https://www.oecd-ilibrary.org/education/education-at-a-glance-2016_eag-2016-en

Pires, F.M., Ribeiro, M. A & Andrade, A. L. (2020). Teoria da Psicologia do Trabalhar: uma perspectiva inclusiva para orientação de carreira. *Revista Brasileira de Orientação Profissional*, *21*(2), 203-214. https://doi.org/10.26707/1984-7270/2020v21n207

Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. Developmental Review, 41, 71-90. https://doi.org/10.1016/j.dr.2016.06.004

Rossier, J., & Ouedraogo, A. (2021). Work volition, decent work, and work fulfilment, in the formal and informal economy in Burkina Faso. *British Journal of Guidance & Counselling*, *49*(2), 255-271. https://doi.org/10.1080/03069885.2021.1879991

Sales Junior, J., Brasil, G., Carneiro, T., & Corassa, M. (2016). Fatores Associados à Evasao e Conclusao de Cursos de Graduação Presenciais na UFES. *Revista Meta: Avaliação*, *8*(24), 488 - 514. doi:http://dx.doi.org/10.22347/2175-2753v8i24.1073

Silva, M. Z, & Andrade, A. L (2016). Avaliando pensamentos negativos sobre a carreira: o desenvolvimento de uma medida (EPNC). *Revista Brasileira de Orientação Profissional*, *17*(2), 175-187. http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1679-33902016000200006&lng=pt&tlng=pt.

Streiner, D. L., & Kottner, J. (2014). Recommendations for reporting the results of studies instrument and scale development and testing. *Journal of Advanced Nursing*, *70*(9), 1970-1979. https://doi.org/10.1111/jan.12402

Tassinari, T. T., Honnef, F., Arboit, J., Langendorf, T. F., Paula, C. C., & Padoin, S. M. M. (2022). Violencia de gênero em mulheres estudantes universitárias: Evidências sobre a prevalência e sobre os fatores associados [Gender-based violence among female university students: Evidence of prevalence and associated factors]. *Acta Colombiana de Psicología*, *25*(1), 105-120. https://doi.org/10.14718/acp.2022.25.1.8

Teixeira, M. d. O. O., Nierotka, R. L., Balsanello, G., & Bonamino, A. M. C. d. (2022). *Who and where are the higher education blind students in Brazil?* Recuperado de: https://www.lareferencia.info/vufind/Record/BR_bb1869ca2278994e17ebb5c4f600039e/Details#tabnav

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