

Brazilian International Students' Satisfaction with Migration Life in Portugal

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ABSTRACT

International students constitute an important sojourner group. The current research aimed to test the psychometric characteristics of the Satisfaction with Migration Life Scale (SWMLS) for international students and the role of different psychosocial variables in predicting SWMLS. The sample included 189 Brazilian college students who attended Portuguese institutions of higher education. Sixty-three percent were females, and 37% were males, aged between 18 and 38 years. The average length of sojourn in Portugal was 14 months. The confirmatory factor analysis revealed that the one-dimensional model of the SWMLS is adequate and possesses good internal consistency. The study found that international students are generally satisfied with their migration life. Subsequent analysis indicated that the SWMLS scores were significantly associated with other measures of financial status, perceived discrimination, cultural intelligence, sociocultural adaptation, and subjective well-being. Suggestions for future research with international students are proposed.

Keywords: international students, measurement, Portugal, satisfaction with migration life, subjective well-being

INTRODUCTION

Sojourners are “people who travel internationally to achieve a particular goal or objective with the expectation that they will return to their country of origin after the purpose of their travel has been achieved” (Safdar & Berno, 2016, p. 173). International students (IS) represent one of the largest sojourner groups. The

number of IS attending institutions of higher education increased worldwide from 2 million in 1999 to 5 million in 2016 (OECD, 2018). The majority of IS pursue their studies in Anglophone countries, with the United States, the United Kingdom, Australia, and Canada being the top destinations. Given the prevalence of English-speaking countries as the favorite IS destinations, it is not surprising that most research has been conducted in the Anglophone world. Indeed, much less investigation has been implemented in other cultural contexts, particularly in Lusophone countries (Portugal, Angola, Brazil, Cape Verde, East-Timor, Guinea-Bissau, Mozambique, and S. Tome and Principe) (Fonseca et al., 2016; França et al., 2018; Neto, 2020).

Recently, a new measure of psychological adaptation, the Satisfaction with Migration Life Scale (SWMLS), was developed with migrant workers (Neto & Fonseca, 2016). This measure was devised to assess a person's global judgment of migration satisfaction. At the present time, satisfaction with migration life is of core relevance in the higher education context for retaining IS and assuring positive word-of-mouth recommendations to other potential students. The current study will examine whether the SWMLS also presents adequate psychometric properties with international students. Then, the levels and factors related to satisfaction with the migration life of Brazilian IS enrolled in higher education in Portugal will be examined.

Brazilian international students in Portugal

Brazilian students have long been coming to Portugal to attend higher education (Santos & Filho, 2012). In this line, Iorio and Pereira (2018) noted that “international student mobility has been a part of Brazilian history since the country was a colony of Portugal, because the Portuguese crown prohibited the opening of higher education institutions in its colony” (p. 6). However, only recently has this flow experienced strong growth.

In recent years, Portugal has attracted an increasing number of IS (see Table 1). In the 2000/01 academic year, the proportion of IS attending Portuguese institutions of higher education was 3.3%, and in 2009/10, it was 5%. In 2018/19, 56,851 IS were enrolled in higher education in Portugal, representing 15.4% of higher education student enrollment (Oliveira, 2020). In that academic year, Portuguese higher education received 167 different nationalities. More than half of the IS were from Lusophone countries (55.4%), and close to a third (31%) were from the European Union. The gender distribution of international students presented a prevalence of

Table 1: Number of international students in higher education in Portugal (2009/19)

	Number of IS	% of IS in total
2009/10	19,223	5.0
2010/11	21,824	5.5
2011/12	28,656	7.3
2012/13	30,757	8.3
2013/14	33,283	9.2
2014/15	33,523	9.6
2015/16	37,559	10.7
2016/17	41,997	12.0
2017/18	49,015	13.6
2018/19	56,851	15.4

Source: Oliveira (2020).

female students (55.5%). Historically, Angolan and Cape Verdean IS had been the two largest communities; however, Brazilian IS has become the largest community since the 2008/2009 academic year. In the 2018/19 academic year, most IS were from Brazil (35.9%), followed by Angola (7%), Spain (6.8%), Italy (6.2%), Cape Verde (5.9%), and France (3.5%). Then, 20,416 Brazilian IS were enrolled in higher education.

Motivations for studying abroad constitute key factors influencing students' acculturation outcomes (Kitsantas, 2004). A variety of factors motivate Brazilian IS to study in Portugal. According to Iorio (2021), the main motivation from Brazilian IS to choose Portugal was the language. The same language is a relevant factor that contrasts with other contexts of IS migration where English is the lingua franca in education. The view that Brazil and Portugal were culturally similar and the social benefits of studying abroad were the second and third most listed reasons to choose Portugal. Prestige of the university was the fourth most listed reason for the choice of Portugal. Other motivations, such as institutional agreements, quality of education and cost, were also given. Relatives and friends already living in Portugal are a relevant source of support for these IS students. A great majority of Brazilian IS intended their stay abroad to be temporary.

LITERATURE REVIEW

The present study has two main objectives. The first objective is to analyze the psychometric properties of a recently developed measure — the Satisfaction with Migration Life Scale (SWMLS) (Neto & Fonseca, 2016) among Brazilian IS. The

second objective is to explore the relationships of migration satisfaction with several acculturation and adaptation constructs (Berry, 2017).

Subjective well-being (SWB) is characterized by the presence of positive emotions, the absence of negative emotions, and a cognitive judgment of satisfaction (Diener, 1984; Diener et al., 2018). Such a definition identifies two components of SWB, namely, affective, which is divided into positive and negative affects, and cognitive evaluations. Among these components, satisfaction with life pertains to a cognitive judgment of one's quality of life (Diener et al., 2018). Diener, Suh, Lucas and Smith (1999) suggest that although some components of wellbeing are closely correlated with each other, each component should be examined in its own right.

Life satisfaction also refers to evaluating particular life domains, such as school, family, friends (Huebner et al., 2006), and migration. Within these domains, satisfaction with migration life is "a global cognitive evaluation by the migrant of his or her migrant life in which the criteria for the judgment are up to the individual" (Neto & Fonseca, 2016, p. 47). Satisfaction with migration life constitutes another construct that can be used in the domain of psychological adaptation, i.e., psychological wellbeing or satisfaction in a new cultural context (Ward & Kennedy, 1999), in addition to usually considered indicators such as self-esteem, life satisfaction, and psychological problems (Berry et al., 2006).

To measure this construct, the SWMLS (Neto & Fonseca, 2016) was developed from the Satisfaction with Life Scale (SWLS; Diener et al., 1985). For the construction of the SWMLS, the term "life" in each of the SWLS items was replaced by "migrant life" (the items of the SWMLS can be seen in Table 2). Note that the same procedure has been undertaken to create other scales to assess particular domains of satisfaction with life, such as satisfaction with love life (Neto, 2005), satisfaction with sex life (Neto, 2012), satisfaction with academic life (Neto & Wilks, 2017), satisfaction with job life (Caycho-Rodriguez et al., 2020; Neto & Fonseca, 2018), and satisfaction with family life (Costa & Neto, 2019; Zabriske & Ward, 2013). The SWMLS aims to globally assess satisfaction with migration life and integrate its various specific facets into the evaluation.

Regarding the psychometric properties of the SWMLS, only two studies have analyzed whether the SWMLS can provide valid and reliable interpretations (Neto & Fonseca, 2016). In the first study, which included 154 Portuguese migrants in Switzerland, the five items from the SWMLS formed a single dimension that explained 75.04% of the items' variance. The items provided satisfactory reliability estimated from internal consistency (Cronbach's alpha, $\alpha = .92$ and item-total corrected correlations of each item at least .70). Furthermore, the results indicated that the SWMLS was significantly correlated with other measures of SWB, such as self-esteem, loneliness, and life satisfaction.

In another study that included 216 Portuguese migrants, Neto and Fonseca (2016) examined the model evidenced in the previous study using confirmatory factor analysis (CFA) and the relationships of satisfaction with migration life with well-being, acculturation, and sociocultural adaptation factors. The CFA of the total participants reported a satisfactory fit for the one-dimensional model ($GFI = 0.96$, $CFI = .98$, $SRMR = 0.03$, $RMSEA = .06$). Cronbach's alpha coefficient was .91. The results also supported the convergent, divergent, and discriminant validity of the SWMLS. In two other studies, as expected, migration satisfaction evidenced significant associations with job satisfaction ($r = .82$) (Neto & Fonseca, 2018) and saudade ($r = -.48$) (Neto, 2019).

Therefore, the preliminary findings above suggest that the SWMLS provides consistent measurements. Despite the results, more research is required to analyze the psychometric characteristics of the SWMLS among people with distinguishing qualities from migrant workers. Thus, the present study poses the following question: Does the SWMLS maintain its adequate psychometric evidence in international students? To answer this question, the study examined the psychometric properties of the SWMLS. Specifically, evidence-based internal structure validity, reliability, and convergent validity are analyzed.

The second objective is to scrutinize the relationship of migration satisfaction with theoretically expected constructs in the field of acculturation (Berry, 2017) such as background variables, perceived discrimination, cultural intelligence, sociocultural adaptation, and subjective well-being.

Background variables such as gender, age and duration of stay are deemed to be key factors in understanding the acculturation process (Berry, 2017). However, the relationships between these factors and satisfaction with life are mixed (Berry et al., 2006; Neto & Barros, 2007; Neto & Neto, 2017). It is possible that these inconsistent results are connected with weak effects. For example, background variables explained a small percentage of the variance in life satisfaction among second-generation Portuguese migrants living in France (Neto, 1995). However, in a recent study among African IS, financial status emerged as a significant background predictor of loneliness (Neto, 2021). More specifically, IS with poorer financial situations reported higher loneliness. Indeed, IS experience some lifestyle acculturative stress, such as financial problems (Smith & Khawaha, 2011; Titrek et al., 2016). Financial problems can have a detrimental effect on international students' psychological well-being (O'Reilly et al., 2010; Wilks & Neto, 2016). Following this line of reasoning, it can be expected that financial situation may impact migration satisfaction.

Perceived discrimination is a key feature of the acculturation process (Berry, 2017). Perceived discrimination concerns the subjective interpretation of being unfairly treated as a result of prejudice and ethnocentrism. It is a potentially serious acculturative stressor (Lee & Ahn 2011; Ward et al., 2018; Neto et al., 2019).

Consequently, the perception of occurrences as unfair was likely to be negatively linked to life satisfaction (Berry et al., 2006; Neto & Neto, 2017). Prelow et al. (2006) showed that perceived racial discrimination was linked to lower perceptions of social support, higher depression, and lower satisfaction with life among African American college students. As a result of experiencing discriminatory events, international students may experience less migration satisfaction as an acculturation outcome in sojourn society.

In addition to perceived discrimination, this investigation will also examine whether cultural intelligence (CQ) is a predictor of migration satisfaction. CQ is viewed as the capabilities of people to manage effectively in cross-cultural settings (Earley & Ang 2003). Thomas et al. (2008) defined CQ as “a system of interacting knowledge linked by cultural metacognition that allows people to adapt to, select, and shape the cultural aspects of their environment” (p. 126). With these abilities, culturally intelligent international students may be more likely to be satisfied with their life or with migration due to their ability to fit into their cross-cultural settings. Individuals with greater CQ adapt quickly to diverse cultures with minimal stress (Brislin et al., 2006). Previous research has shown that CQ is positively associated with life satisfaction (Le et al., 2018). This rationale can logically be extended to migration satisfaction. It is thus expected that this competence is a positive predictor of satisfaction with migration life.

In the present study, we also focus on a specific kind of adaptation: sociocultural adaptation, which refers to one’s “ability to fit in, to acquire culturally appropriate skills, and to negotiate interactive aspects of the host environment” (Ward & Kennedy, 1999, p. 660). Previous research has shown that greater levels of adaptation difficulties are linked to poorer psychological adaptation (Wilson et al., 2013). According to cross-cultural research on sojourn experiences, sociocultural adaptation was theorized as predicting life satisfaction (Ward et al., 2001; Berry et al., 2006). In this line, it can be expected that higher sociocultural adjustment problems predict lower satisfaction with migratory life.

Finally, we will examine the relation of satisfaction with migration life with subjective well-being. Previous research has shown that life satisfaction domains are connected with well-being (Pavot & Diener, 2008; Ruiz et al., 2009). Following the empirical evidence (Neto & Fonseca, 2016), positive associations can be expected between SWMLS and life satisfaction and positive affect, while negative associations should be observed with negative affect.

Hypotheses

In sum, guided by the literature on IS acculturation, six specific hypotheses were tested:

Hypothesis 1: The SWMLS will reveal adequate psychometric characteristics among Brazilian international students.

Hypothesis 2: Financial status will impact migration satisfaction.

Hypothesis 3: Perceived discrimination will negatively predict migration satisfaction.

Hypothesis 4: Cultural intelligence will positively impact migration satisfaction.

Hypothesis 5: Sociocultural adaptation problems will negatively predict migration satisfaction.

Hypothesis 6: One or more of the indicators of subjective well-being will predict migration satisfaction.

METHOD

Participants

A total of 189 IS took part in the study, 63% of whom were women and 37% of whom were men. Their age varied between 18 and 38 years ($M = 25.99$; $SD = 6.17$). The average length of sojourn in Portugal was 14.33 months ($SD = 13.51$). Regarding their financial status, 6% indicated being in a very good situation, 51% in a good situation, 38% in a fair situation, and 5% in a poor situation. All respondents self-reported their nationality as Brazilian.

Measurement tools

Beyond the background information [age, gender (coded males = 0, females = 1), nationality, financial status, and length of stay], the survey comprised seven multi-item scales.

Financial status. The level of financial status was measured using a one-item 5-point scale (from 1 = *very good* to 5 = *very bad*).

Length of stay. The respondents were asked to specify the duration of stay (in months) they have been in the sojourn country as IS.

Satisfaction with Migration Life (SWMLS). It was developed by Neto and Fonseca (2016) to evaluate overall satisfaction with one's migration life. The SWMLS includes five items (e.g., "In most ways my migrant life is close to my ideal") that are responded to on a 7-point scale from 1 ("*strongly disagree*") to 7 ("*strongly agree*"). Greater scores indicate higher satisfaction with migration life.

Perceived discrimination. This scale evaluates the direct experience of discrimination, containing five statements (e.g., "I have been teased or insulted because of my Chinese background") (Berry et al. 2006; Neto 2006). Each statement was answered on a 5-point scale from 1 ("*strongly disagree*") to 5 ("*strongly agree*"). Greater scores indicate higher perceived discrimination. In this study, the Cronbach coefficient alpha was .82.

Cultural intelligence. Cultural intelligence was assessed by means of the 10 items of the SFCQ created by Thomas et al. (2015). This measure comprises statements to measure cultural knowledge, cultural skills, and cultural

metacognition. Cultural knowledge was evaluated with two statements. A sample statement is “I know the ways in which cultures around the world are different”. Cultural skills were evaluated with five statements. A sample statement is “I enjoy talking with people from different cultures”. Cultural metacognition was evaluated with three statements. A sample statement is “I am aware of the cultural knowledge I use when I am interacting with someone from another culture”. Statements were responded to on a 5-point scale (1 = “*Very slightly or not at all*”, 5 = “*Extremely well*”). We used the Portuguese adaptation of the SFCQ scale (Neto et al., 2021). In this study, the Cronbach’s alpha was .81.

Sociocultural adaptation. This was evaluated by means of the Sociocultural Adaptation Scale (SCAS, Ward & Kennedy, 1999; Sequeira Neto, 2014). Respondents reported how much difficulty (from “*no difficulty*”, 1 to “*extreme difficulty*”, 5) they experienced in twenty social situations (e.g., “finding food you enjoy”, “making friends”). Greater scores denote higher levels of difficulty. In this study, the Cronbach’s alpha was .88.

Subjective well-being. The Portuguese version of the Satisfaction with Life Scale (SWLS; Diener et al., 1985) was utilized (Neto, 1995; Munoz Sastre et al., 2003). The SWLS includes five items (e.g., “The conditions of my life are excellent”). Responses are given on a 7-point scale. The Portuguese version of the Positive and Negative Affect Schedules (PANAS, Watson et al., 1988) was also utilized (Simões, 1993). The PANAS includes two sets of ten adjectives describing emotional states, ten positive (e.g., alert) and ten negative (e.g., afraid). Respondents answer on a 5-point scale how often they generally experience each emotion (1 = *Very slightly or Not at all*, 5 = *Extremely*). In this study, the Cronbach alphas were .91 (SWLS), .88 (positive affects), and .86 (negative affects).

Procedure

One research assistant recruited students at the University of Porto. The sample was of convenience and recruited by means of the snowball method (connections among the participants). The use of a convenience sample is suitable in cross-cultural investigation, namely, when the researcher does not have access to an accurate list of the entire population, as was the case at the time of the study (Lonner & Berry, 1986). This kind of sample presents advantages and disadvantages, as noted by Lonner and Berry (1986): “Their accessibility makes them very cost-effective, in terms of both money and time; however, all such samples depart to an unknown degree from true representativeness” (p. 87). Participants responded to a paper-and-pencil questionnaire in a quiet location in the presence of the research assistant. A Portuguese version of the questionnaire was used (the official language of Brazil).

Regarding ethical considerations, the study was performed in agreement with the legal and ethical norms of the country. Students were acquainted with the

aims of the investigation, and they provided informed consent. All respondents were notified that participation was voluntary and that responses were anonymous. Furthermore, it was emphasized that the collected information will only be used for academic purposes. Participants were free to withdraw from the investigation at any time without consequence. Overall, the study procedures followed were in accordance with the Helsinki Declaration of 1975, as revised in 2000. Participants did not receive compensation for completing the questionnaire. The average length of time needed to complete the questionnaire was approximately 30 minutes.

Data analysis

First, descriptive statistics (means, standard deviations, variance, skewness, and kurtosis) of the SWMLS were examined. The construct validity of the SWMLS was then tested with CFA using maximum likelihood estimation. The following indexes are used in CFA: the chi-square statistic, comparative fit index (CFI), goodness of fit (GFI), standardized root mean square residual (SRMR), and the root mean squared error of approximation (RMSEA). The cutoff criteria, flexibly used, are those in Hu and Bentler (1999): a CFI of at least .90 and an RMSEA and SRMR less than .08. The average variance extracted (AVE; Fornell & Larcker, 1981) was estimated. AVE values $\geq .50$ indicate evidence of convergent validity (Hair et al., 2010). The internal consistency of the SWMLS was evaluated by CR (composite reliability) and Cronbach's alpha coefficient. Pearson's correlations were used to examine the associations between SWMLS and the other measures utilized. To demonstrate the factors affecting migration satisfaction, multiple regression analysis was performed. The analyses were carried out through IBM SPSS and AMOS (version 26.0). The criterion for statistical significance was set at .05.

RESULTS

Descriptive statistics of the SWMLS items are presented in Table 2. All items had skewness and kurtosis values lower than 1, indicating that they were normally distributed based on guidelines by Byrne and Campbell (1999). On the other hand, Mardia's multivariate kurtosis for the five items of SWMLS was 7.99 ($p < .001$). According to previous research (Kline, 2005), these values show no strong deviation from a normal distribution, assuring that they would not compromise CFA results.

Table 2: Preliminary analysis of the items in the SWMLS: descriptive statistics

Items	M	SD	CI	Sk	Ku
1 In most ways my migrant life is close to my ideal.	4.59	1.47	4.38 – 4.81	-.36	-.64
2 The conditions of my migrant life are excellent.	4.32	1.62	4.08 – 4.55	-.24	-.88
3 I am satisfied with my migrant life.	4.65	1.54	4.43 – 4.87	-.40	-.59
4 So far I have gotten the important things I want in my migrant life.	4.67	1.54	4.45 – 4.88	-.59	-.80
5 If I could live my migrant life over, I would change almost nothing.	4.31	1.69	4.07 – 4.56	-.24	-.80

SWMLS, Satisfaction With Migration Life Scale; M, average; SD, standard deviation; CI, confidence interval; Sk, skewness; Ku, kurtosis.

After descriptive statistics, the construct validity of the SWMLS was tested using CFA. CFA was tested with a one-factor structure based on the research of Neto and Fonseca (2016). The one-factor structure indicated an adequate model fit, with $\chi^2 (5) = 14,21, p = .014, \chi^2/df = 2.84, CFI = .99, GFI = .97, SRMR = .03,$ and $RMSEA = .09, [90\% CI = (.04, .16)]$. The standardized factor loadings (λ) of the items ranged from .68 to .95 and were statistically significant ($p < .001$) with a mean value of .81, which exceeds the recommended cutoff of .70 (Hair et al., 2010). Therefore, the results fit the one-order factor structure, supporting the construct validity of the scale. Figure 1 presents the standardized loadings of the SWMLS.

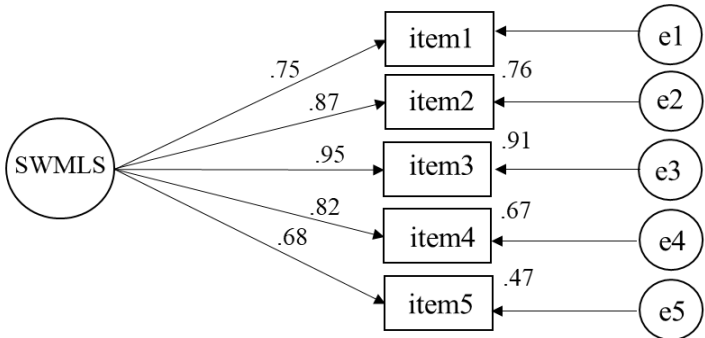


Figure 1: Confirmatory factor analysis of the unifactorial model of the SWMLS

To examine the internal consistency of the SWMLS, composite reliability was performed. The composite reliability value for the SWMLS was .91, indicating

high reliability. To examine the internal consistency of the SWMLS scores, Cronbach’s coefficient alpha and item-total correlation for each item were also calculated. Cronbach’s alpha (.91) for the SWMLS score was excellent. The corrected item-total correlations displayed values from .66 to .88. The mean interitem correlation coefficient was .67. Therefore, the results indicate that the SWMLS has adequate reliability. Hence, it is possible to proceed and test the convergent validity of the SWMLS scale.

The average variance extracted (AVE) was .67 ($AVE > .50$), which indicates the convergent validity of the scale. In other words, the items of the SWMLS measure the same construct (Fornell & Larcker, 1981). Therefore, the first hypothesis was supported, as the SWMLS presented satisfactory psychometric properties among IS.

Table 3 exhibits the bivariate correlations between the variables in the study, as well as their means and standard deviations. The average SWMLS score was 4.48 with a standard deviation of 1.35. A one-sample *t* test showed that the average score of migration satisfaction was significantly greater than the scale midpoint of 4.00 ($p < .001$). Hence, globally, these IS appeared to reveal a slightly high level of migration satisfaction.

Table 3: Descriptive statistics and intercorrelations of variables among international students

	1	2	3	4	5	6	7	8	Mean	SD	Cronbach alpha
1 – Financial situation	---								2.43	.72	---
2 – Length of stay	.02	---							14.33	13.51	---
3 – Perceived discrimination	.07	.05	---						2.55	.96	.82
4 – Cultural intelligence	-.07	.01	-.06	---					3.87	.52	.81
5 – Sociocultural adaptation	.01	-.09	.43***	-.07	---				2.24	.65	.88
6 – Satisfaction with life	-.28***	-.17*	-.29***	.17**	-.42***	---			4.97	1.12	.84
7 – Positive affect	-.20**	-.09	-.36***	-.28***	-.38***	.46***	---		3.30	.79	.88
8 – Negative affect	.04	.07	.39***	-.05	.45***	-.35***	-.30***	---	2.39	.82	.76
9 – Satisfaction with migration	-.27***	.05	-.38***	.15*	-.30***	.61***	.29***	-.20**	4.48	1.35	.91

Note: $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

To test the other hypotheses, we used hierarchical multiple regression analyses. Before calculating the multiple regression analyses, collinearity diagnostics were carried out. In step 1, the demographic variables (age, gender, financial status, and length of stay) were entered. Perceived discrimination, cultural intelligence, sociocultural adaptation, and subjective well-being were entered in the second step.

Before performing all regressions, collinearity diagnostics were implemented to ensure that the variance inflation factor (VIF) did not exceed 10 and the tolerance statistic exceeded .20 (Field 2017). The largest correlation predictor was far from the threshold of .80 indicated by Myers, Gamst, and Guarino (2006). These analyses suggested no problems with collinearity.

In the first step, demographics predicted 11% of the variance in migration satisfaction. Only financial status appeared to be a significant predictor ($\beta = -.28, p < .001$). Higher financial problems were associated with lower satisfaction with migration life (Table 4). These findings are in line with H₂, i.e., financial status predicts migration satisfaction.

By adding perceived discrimination in the second step, the predictor effect increases by approximately 15%. In this model, financial status remained significant ($\beta = -.26, p < .001$), and age ($\beta = -.18, p < .05$) and perceived discrimination ($\beta = -.40, p < .001$) also predicted migration satisfaction. These findings are in line with H₃, i.e., perceived discrimination negatively predicts satisfaction with migration life.

By adding the CQ variable to the demographic variables, the predictor effect increases by approximately 2%. These numbers, although small, are statistically significant ($p < .05$), confirming H₄, i.e., CQ positively predicts satisfaction with migration life.

Table 4: Hierarchical multiple regression analyses

Predictor variables	Step 1		Step 2	Step 2	Step 2
	1	2	2	2	2
Demographic factors					
Gender	-.09	-.05	-.08	-.07	-.15*
Age	-.10	-.18*	-.10	-.15*	-.10
Financial status	-.28***	-.26***	-.27***	-.31***	-.12
Length of stay	-.04	-.04	-.03	-.08	.06
Perceived discrimination		-.40***			
Cultural intelligence			-.14*		
Sociocultural adaptation				-.37***	
Subjective well-being					
Satisfaction with life					.57***
Positive affect					.05
Negative affect					-.02
Multiple R ²	.11	.26	.13	.24	.43
R ² change and significance	.11**	.15***	.02*	.13***	.32***

^a Beta standardized coefficients are reported. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

With the addition of the sociocultural adaptation variable to the demographic variables, the predictor effect increases by approximately 13%. In

this model, financial status remained significant ($\beta = -.31, p < .001$), and age (youngest) ($\beta = -.15, p < .05$) and sociocultural adaptation ($\beta = -.37, p < .001$) also predict migration satisfaction. These findings are in line with H_5 , i.e., greater sociocultural adaptation problems negatively predict satisfaction with migration life.

Finally, by adding the subjective well-being variables to the demographic variables, the predictor effect increases by approximately 32%. In this model, gender (males) ($\beta = -.15, p < .05$) and satisfaction with life ($\beta = .57, p < .001$) predicted migration satisfaction. As an indicator of SWB, satisfaction with life positively predicted satisfaction with migration life; thus, H_6 was supported.

DISCUSSION AND CONCLUSIONS

This study aimed to advance the existing knowledge on satisfaction with migration life, i.e., a personal cognitive and overall assessment of migration life based on individual perspectives or criteria. To achieve this goal, we 1) tested the psychometric properties of the SWMLS in international students and 2) tested the role of different psychosocial variables in predicting SWMLS. The six hypotheses advanced were supported by the results. Indeed, migration satisfaction was predicted by multiple factors.

The first hypothesis was supported, as the SWMLS revealed adequate psychometric characteristics among Brazilian international students. The CFA for the SWMLS demonstrated that the one-factor model tested evidenced an acceptable fit. This finding is similar to what is indicated in the original study (Neto & Fonseca, 2016) and consonant with the underlying theoretical model of the development of the SWMLS, which is unidimensional (Diener et al., 1985). The Cronbach's alpha and the composite reliability coefficients of the SWMLS were very good. Furthermore, we performed the average variance extracted (AVE) for SWMLS, and the results suggested good convergent validity evidence. Overall, the findings of the present study afford further support for the validity and reliability of the SWMLS.

The average score of the SWMLS was significantly above the neutral score, suggesting a norm of general satisfaction with migration life for the IS of this sample. This finding is in line with Furnham's (2004) observations: "It is certainly worth noting that for many students the 'overseas' experience is enormously beneficial and can shape their outlook for the rest of their lives" (p. 18).

The explained variance of demographics on migration satisfaction was relatively low. Indeed, acculturation and adaptation factors were more strongly connected with migration satisfaction than demographics. This is consistent with previous research in the field of life satisfaction (Andrews & Withey, 1976;

Diener, 1984; Neto 1995; Neto & Barros, 2007). However, the present study emphasizes the importance of financial status to migration satisfaction. The findings of the current research indicate that financial status is significantly related to migration satisfaction. Specifically, IS with poorer financial situations reported lower migration satisfaction, thereby supporting our second hypothesis. This finding agrees with previous research showing that higher emotional distress and lower health were linked to financial hardship (Roberts et al., 1999; Richardson et al., 2017).

The third hypothesis received support, as perceived discrimination predicted lower migration satisfaction. As expected, the more discrimination the IS perceived, the less they experienced migration satisfaction. This is consistent with previous investigations reporting that perceived discrimination is related to diminished psychological well-being (Lee & Ahn 2011; Berry, 2017; Ward et al., 2018; Tartakovsky et al., 2021). The subjective interpretation of events as discriminatory also emerged as a harmful factor for IS. This finding calls our attention to the importance of preventive work against discrimination toward IS.

This research affords new insights into CQ as an antecedent of satisfaction with migration life. The research identifies a new positive psychological resource that can impact the migration satisfaction of IS. Past investigations have shown that people with higher CQ tend to demonstrate the ability to adapt to new cultural settings and to interact adequately with culturally dissimilar others (Earley & Ang 2003; Brislin et al. 2006; Thomas et al., 2008). Extending these empirical findings, our results supported that greater CQ tended to predict greater migration satisfaction, in agreement with the fourth hypothesis.

Aside from cultural intelligence, sociocultural adaptation in the new situation in the sojourn country was also linked to satisfaction with migration life. The fifth hypothesis was supported, as sociocultural adaptation problems negatively predicted migration satisfaction. The findings indicate that when IS had higher difficulty in managing their daily life in the new social context, they felt lower migration satisfaction. Previous investigation also suggests a relation between poor behavioral intercultural competency and psychological maladjustment (Kraeh et al., 2016).

Finally, the correlations of the SWMLS with measures of subjective well-being were as we expected. Namely, life satisfaction emerged as a positive significant predictor of the SWMLS, supporting our sixth hypothesis. This is consistent with past investigations that found substantial relationships between satisfaction with overall life and its diverse domains (Bardo & Yamashita, 2014; Caycho, et al., 2018; Ruiz et al., 2009). In line with these relationships, while satisfaction with migration life and overall satisfaction with life share a common variation, they cannot be regarded as equivalent constructs (Diener et al., 1985).

Limitations

This study has several limitations. First, given the limited sample size, the findings of the present study should be interpreted cautiously. The psychometric properties of the SWMLS could be retested with data from larger samples, and structural equation modeling (SEM) could be used. Second, data were gathered only from Brazilian international students. Data could be collected from other international students and measurement invariance tested. Third, conducting a survey with self-report measures may lead to answers that are seen as socially desirable. Future investigations should aim to use other methodologies that would enable a more in-depth analysis.

Despite these limitations, this study reported that the SWMLS displays satisfactory one-dimensional structure, internal consistency, and empirical relations with other theoretically linked constructs. The SWMLS is assumed to play a role in the theoretical and applied investigation with respect to the outcomes of acculturation as an indicator of psychological adaptation. This brief and psychometrically sound tool may be used in more global frameworks of subjective well-being among IS with minimal cost and time.

REFERENCES

- Andrews, F., & Withey, S. (1976). *Social indicators of well-being: America's perception of life quality*. Plenum. <https://doi.org/10.1007/978-1-4684-2253-5>
- Bardo, A. R., & Yamashita, T. (2014). Validity of domain satisfaction across cohorts in the US. *Social Indicators Research*, 117, 367-385. <https://doi.org/10.1007/s11205-013-0351-6>
- Berry, J. (Editor) (2017). *Mutual intercultural relations*. Cambridge University Press. <https://doi.org/10.1017/9781316875032>
- Berry, J., Phinney, J., Sam, D., & Vedder, P. (Eds.) (2006). *Immigrant youth in cultural transition: Acculturation, identity and adaptation across national contexts*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780415963619>
- Brislin, R., Worthley, R., & Macnab, B. (2006). Cultural intelligence: Understanding behaviors that serve people's goals. *Group and Organization Management*, 31, 40-55. <https://doi.org/10.1177/1059601105275262>
- Byrne, B. M., & Campbell, T. L. (1999). Cross-cultural comparisons and the presumption of equivalent measurement and theoretical structure: A look beneath the surface. *Journal of Cross-Cultural Psychology*, 30, 555-574. <https://doi.org/10.1177/0022022199030005001>

- Caycho-Rodriguez, T., Neto, J., Tomás, J. M., Valencia, P. D., Ventura-Léon, J., Neto, F., Reyes-Bossio, M., Vilca, L. W. (2020). Psychometric properties of the Satisfaction with Job Life Scale in Portuguese workers; A systematic study based on the IRT and CFA modeling. *Heliyon*, 6, 203881. <https://doi.org/10.1016/j.heliyon.2020.e03881>
- Caycho-Rodríguez, T., Ventura-León, J., Barboza-Palomino, M., Reyes-Bossio, M., Gallegos, W. L. A., Cadena, C. H. G., ... & Cahua, J. C. H. (2018). Validez e invarianza factorial de una medida breve de Satisfacción con la Vida Familiar [Validity and factorial invariance of a brief measure of satisfaction with Family life]. *Universitas Psychologica*, 17, 1-17. <https://doi.org/10.11144/Javeriana.upsy17-5.vifm>
- Costa, M. P., & Neto, F. (2019). Psychometric evaluation of the Portuguese Satisfaction with Family Life Scale. *Measurement Instruments for the Social Sciences*, 1(1), 2. <https://doi.org/10.1186/s42409-019-0009-5>
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575. <https://doi.org/10.1037/0033-2909.95.3.542>
- Diener, E. R., Emmons, R. Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75. https://doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Lucas, R. E., & Oishi, S. (2018). Advances and open questions in the science of subjective well-being. *Collabra Psychology*, 4, 15. <https://doi.org/10.1525/collabra.115>
- Diener, E., Oishi, S., & Tay, L. (2018). Advances in subjective well-being research. *Nature Human Behavior*, 2, 253-260. <https://doi.org/10.1038/s41562-018-0307-6>
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276-302. <https://doi.org/10.1037/0033-2909.125.2.276>
- Earley, P. C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford University Press. <https://doi.org/10.1515/9780804766005>
- Field, A., 2017. *Discovering statistics using IBM SPSS statistics*, 5th ed. SAGE.
- Fonseca, M. L., Pereira, S., Iorio, J. C. (2016). International mobility of Brazilian students to Portugal: The role of the Brazilian government and university

strategies in Portugal. In: J. Domínguez-Mujica (eds), *Global change and human mobility: Advances in geographical and environmental sciences* (pp. 265-284). Springer. https://doi.org/10.1007/978-981-10-0050-8_14

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18, 382-388. <https://doi.org/10.1177/002224378101800313>

França, T., Alves, E., & Padilla, B. (2018). Portuguese policies fostering intentional student mobility: A colonial legacy or a new strategy? *Globalization, Societies and Education*, 16, 325-338. <https://doi.org/10.1080/14767724.2018.1457431>

Furnham, A. (2004). Foreign students: Education and culture shock. *The Psychologist*, 17(1), 16-19.

Hair, J. F., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis: A global perspective*. Prentice Hall.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55. <https://doi.org/10.1080/10705519909540118>

Huebner, E.S., Suldo, S.M., & Gilman, R. (2006). Life Satisfaction. In G.G. Bear & K.M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 357-368.). National Association of School Psychologists.

Iorio, J. C. (2021). The motivations that put Portugal back on the route of Brazilian higher education students. *Globalization, Societies and Education*, 19(3), 326-342. <https://doi.org/10.1080/14767724.2020.1831903>

Iorio, J. C., & Pereira, S. (2018). Social class inequalities and international student mobility: The case of Brazilian students in the Portuguese higher education system. *Belgeo* [Online], 3. <https://doi.org/10.4000/belgeo.24193>

Kitsantas, A. (2004). Study abroad: The role of college students' goals on the development of cross-cultural skills and global understanding. *College Student Journal*, 38, 441-452.

Kline, R. B. (2005). *Methodology in the social sciences. Principles and practice of structural equation modeling* (2nd ed.). Guilford Press.

Kraeh, A., Froese, F., & Kim, S. (2016). Does sociocultural and psychological adjustment influence physical health? The case of North Korean refugees in

South Korea. *International Journal of Intercultural Relations*, 51, 54-60.
<https://doi.org/10.1016/j.ijintrel.2016.02.001>

- Le, H., Jiang, Z., & Nielsen, I. (2018). Cognitive cultural intelligence and life satisfaction of migrant workers: The roles of career engagement and social injustice. *Social Indicators Research*, 139, 237-257.
<https://doi.org/10.1007/s11205-016-1393-3>
- Lee, D., & Ahn, S. (2011). Discrimination against Latina/os: A meta-analysis of individual-level resources and outcomes. *The Counseling Psychologist*, 40, 28-65. <https://doi.org/10.1177/0011000011403326>
- Lonner, W. J., & Berry, J. W. (1986). Sampling and surveying. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 85-110). SAGE.
- Munoz Sastre, M. T., Vainsonneau, G., Neto, F., Girard, M., e Mullet, E. (2003). Forgiveness and satisfaction with life. *Journal of Happiness Studies*, 4, 323-335.
<https://doi.org/10.1023/A:1026251630478>
- Myers, L. S., Gamst, G., & Guarino, A. (2006). *Applied multivariate research*. Sage.
- Neto, F. (1995). Predictors of satisfaction with life among second generation of immigrants. *Social Indicators Research*, 35, 93-116.
<https://doi.org/10.1007/BF01079240>
- Neto, F. (2005). The satisfaction with love life scale. *Measurement and Evaluation in Counseling and Development*, 38, 2-13.
<https://doi.org/10.1080/07481756.2005.11909765>
- Neto, F. (2006). Psycho-social predictors of perceived discrimination among adolescents of immigrant background: A Portuguese study. *Journal of Ethnic and Migration Studies*, 32, 89-109.
<https://doi.org/10.1080/13691830500335507>
- Neto, F. (2012). The satisfaction with sex life scale. *Measurement and Evaluation in Counseling and Development*, 45, 18-31.
<https://doi.org/10.1177/0748175611422898>
- Neto, F. (2019). Acculturation, adaptation and saudade among Portuguese migrants. *The Journal of Psychology: Interdisciplinary and Applied*, 153, 667-679.
<https://doi.org/10.1080/00223980.2019.1590298>

- Neto, F. (2020). Subjective well-being of Angolan students in Portugal. *Journal of Studies in International Education*, 24, 456-473. <https://doi.org/10.1177/1028315319861353>
- Neto, F. (2021). Loneliness among African international students at Portuguese universities. *Journal of International Students*, 11(2), 397-416. <https://doi.org/10.32674/jis.v11i2.1379>
- Neto, F., & Barros, J. (2007). Satisfaction with life among adolescents from Portuguese immigrant families in Switzerland. *Swiss Journal of Psychology*, 66, 215-223. <https://doi.org/10.1024/1421-0185.66.4.215>
- Neto, F., & Fonseca, A. C. (2016). The Satisfaction with Migration Life Scale. *International Journal of Intercultural Relations*, 54, 47-54. <https://doi.org/10.1016/j.ijintrel.2016.07.004>
- Neto, F., & Fonseca, A. C. M. (2018). The satisfaction with job life scale among immigrants. *Psychological Studies*, 63, 209-218. <https://doi.org/10.1007/s12646-018-0449-7>
- Neto, F., & Neto, J. (2017). Intercultural relations in Portugal. In J. W. Berry (Editor). *Mutual intercultural relations* (pp. 249-266). Cambridge University Press. <https://doi.org/10.1017/9781316875032.012>
- Neto, F., & Wilks, D. (2017). Predictors of psychological adaptation of Cape Verdean students in Portugal. *Journal of College Student Development*, 58, 1087-1100. <https://doi.org/10.1353/csd.2017.0085>
- Neto, F., Pinto, M. C., & Mullet, E. (2019). Can music reduce national prejudice? A test of a cross-cultural musical education programme. *Psychology of Music*, 47, 747-756. <https://doi.org/10.1177/0305735618774867>
- Neto, J., Neto, A., & Neto, F. (2021). Psychometric properties of a Portuguese short form measure of cultural intelligence. *International Journal of Intercultural Relations*, 83, 139-150. <https://doi.org/10.1016/j.ijintrel.2021.06.005>
- O'Reilly, A., Ryan, D., & Hickey, T. (2010). The psychological well-being and sociocultural adaptation of short-term international students in Ireland. *Journal of College Student Development*, 51, 584-598. <https://doi.org/10.1353/csd.2010.0011>
- OECD (2018). *Education at a glance 2018: OECD indicators*. OECD Publishing. <https://doi.org/10.1787/eag-2018-en>

- Oliveira, C. (2020). *Indicadores de integração de imigrantes: Relatório estatístico anual* [Immigrant integration indicators: Annual statistical report]. Observatório das Migrações.
- Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3, 137-152. <https://doi.org/10.1080/17439760701756946>
- Prelow, H. M., Mosher, C. E., & Bowman, M. A. (2006). Perceived racial discrimination, social support, and psychological adjustment among African American college students. *Journal of Black Psychology*, 32, 442-454. <https://doi.org/10.1177/0095798406292677>
- Richardson, T., Elliot, P., Roberts, R., & Jansen, M. (2017). A longitudinal study of financial difficulties and mental health in a National sample of British undergraduate students. *Community Mental Health Journal*, 53, 344-352. <https://doi.org/10.1007/s10597-016-0052-0>
- Roberts, R., Golding, J., Towell, T., & Weinreb, I. (1999). The effects of economic circumstances on British students' mental and physical health. *Journal of American College Health*, 48, 103-109. <https://doi.org/10.1080/07448489909595681>
- Ruiz, M. F., Neto, F., Munoz Sastre, M. T., Salvatore, N., Rivière, S., & Mullet, E. (2009). Life domain satisfaction: A Portugal-France comparison. *Social Indicators Research*, 94, 173-181. <https://doi.org/10.1007/s11205-008-9359-8>
- Safdar, S., & Berno, T. (2016). Sojourners. In D. L. Sam & J. W. Berry (Eds.), *The Cambridge handbook of acculturation psychology*, second edition (pp. 181-197). Cambridge University Press. <https://doi.org/10.1017/CBO9781316219218.012>
- Santos, F., & Filho, N. A. (2012). *A quarta missão da universidade*. Editora UNB.
- Sequeira Neto, J. (2014). *Cultural competence among Ukrainian economic immigrants living in Portugal*. Unpublished master dissertation. Faculdade d Economia: Universidade do Porto.
- Simões, A. (1993). São os homens mais agressivos que as mulheres? [Are men more aggressive than women?] *Revista Portuguesa de Pedagogia*, 3, 387, 404.

- Smith, R., & Khawaja, N. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations, 35*, 699-713 <https://doi.org/10.1016/j.ijintrel.2011.08.004>
- Tartakovsky, E., Petrakov, E., & Nikulina, K. (2021). Is emigration worth the trouble? Satisfaction with life, group identifications, perceived discrimination, and socioeconomic status. *International Journal of Intercultural Relations, 80*, 195-205. <https://doi.org/10.1016/j.ijintrel.2020.11.012>
- Thomas, D. C., Elron, E., Stahl, G., Ekelund, B. Z., Ravlin, E. C., Cerdin, J. L., . . . & Maznevski, M. (2008). Cultural intelligence: Domain and assessment. *International Journal of Cross-Cultural Management, 8*, 123-143. <https://doi.org/10.1177/1470595808091787>
- Thomas, D. C., Liao, Y., Aycan, Z., Cerdin, J. L., Pekerti, A. A., Ravlin, E. C., ...& Van de Vijver, F. (2015). Cultural intelligence: a theory-based, short form measure. *Journal of International Business Studies, 46*, 1099-1118. <https://doi.org/10.1057/jibs.2014.67>
- Titrek, O., Erkiliç, A, Süre, E., Güvenç, M., & Pek, N. T. (2016). The sociocultural, financial and education problems of international postgraduate students in Turkey. *Universal Journal of Educational Research, 4*, 160-166. <https://doi.org/10.13189/ujer.2016.041320>
- Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations, 23*, 659-677. [https://doi.org/10.1016/S0147-1767\(99\)00014-0](https://doi.org/10.1016/S0147-1767(99)00014-0)
- Ward, C., Bochner, S., & Furnham, A. (2001). *The psychology of culture shock*, 2nd ed. Routledge.
- Ward, C., Gale, J., Staerkle, C., & Stuart, J. (2018). Immigration and multiculturalism in context: A framework for psychological research. *The Journal of Social Issues, 74*, 833-855. <https://doi.org/10.1111/josi.12301>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect. *Journal of Personality and Social Psychology, 54*, 1063-1070. <https://doi.org/10.1037/0022-3514.54.6.1063>
- Wilks, D. C., & Neto, F. (2016). Exploring the adaptation experiences of Cape Verdean students in Portugal. *International Journal of Educational Research, 76*, 66-75. <https://doi.org/10.1016/j.ijer.2016.01.002>

Wilson, J., Ward, C., & Fischer, R. (2013). Beyond culture learning theory: What can personality tell us about cultural competence? *Journal of Cross-Cultural Psychology, 44*, 900-927. <https://doi.org/10.1177/0022022113492889>

Zabriske, R. B., & Ward, P. (2013). Satisfaction with Family Life Scale. *Marriage & Family Review, 49*, 446-463. <https://doi.org/10.1080/01494929.2013.768321>

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