Loneliness Among African International Students at Portuguese Universities

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ABSTRACT

International students constitute an important sojourner group. This study examined the levels and predictors of loneliness among international students. The sample included 188 Angolan, 210 Cape Verdean, and 221 domestic college students who attended Portuguese institutions of higher education. The relative strengths of background and acculturation factors in loneliness, as an indicator of psychological adaptation, were explored. Results showed that international students reported greater levels of loneliness than native-born students. As expected, results showed that students who reported poorer financial situation, greater perceived discrimination, and lower home culture and host culture acculturation orientation scores reported higher loneliness. In addition, using hierarchical regression analyses, current findings suggest that the most significant predictors of loneliness for international students were financial situation, perceived discrimination, and orientation to heritage culture. Implications of these results for reducing loneliness of international students are discussed.

Keywords: acculturation orientation, international students, loneliness, migrations, perceived discrimination

Intercultural experiences have become more common as our world becomes increasingly globalized and interconnected. One measure of the growth in such experiences is the progressive and rapid increase in international student migration. The number of international students attending institutions of higher education increased worldwide from 2 million in 1999 to 5.6 million in 2018 (Organisation for Economic Cooperation and Development, 2020).
The majority of international students attend 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 destinations of international students, it is not surprising that most
research has been conducted in Anglophone cultural contexts. In fact, much less
research has been pursued in other cultural contexts, in particular, in Lusophone
countries (wherein Portuguese is the official language; i.e., Portugal, Angola,
Brazil, Cape Verde, East-Timor, Guinea-Bissau, Mozambique, and São Tome and
Principe; França et al., 2018; Neto & Wilks, 2017; Wilks & Neto, 2016).

International students face a plethora of challenges from migration, such as
dealing with social interaction with host nationals, cultural understanding and
participation, language fluency, lack of familiarity with the academic system,
derpression, and loneliness (Brunsting et al., 2018; Safdar & Berno, 2016;
Shadowen et al., 2019; Smith & Khawaga, 2011; Zhang & Goodson, 2011). The
current study examined the levels and the factors related to loneliness of
international students enrolled in Portuguese Universities. More specifically, the
study focused on international students residing in Portugal from two African
countries: Angola and Cape Verde. Understanding the needs of these students can
assist host institutions in providing adequate services for these individuals.

**BACKGROUND**

**Acculturation and Adaptation**

The exploration of acculturation and its outcome, adaptation, has produced
extensive cross-cultural research (Sam & Berry, 2016; Ward et al., 2001).
Acculturation is defined as the process of cultural and psychological changes that
occur following intercultural contact (Berry, 1997; Graves, 1967; Redfield et al.,
1936). This process of change concerns sojourners. In the field of acculturation,
sojourners are defined as “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 constitute one of the largest and most significant
sojourner groups. Most international students not only focus on their academic
objectives in a host society, but also expect to expand their views by means of
cross-cultural experiences.

Concerning the adaptation of newcomers, acculturation researchers make a
distinction between sociocultural adaptation and psychological adaptation (Ward
et al., 2001). Sociocultural adaptation refers to the acquisition of culturally
adequate skills in order to operate effectively in a particular cultural context and
is interpreted within the social learning paradigm. It is measured by “the amount
of difficulties experienced in the management of everyday social situation in the
host culture” (Ward & Kennedy, 1996, p. 291). On the other hand, psychological
adaptation can be interpreted within a stress and coping model. It refers to “how
comfortable and happy a person feels with respect to being in the new culture or
feeling anxious and out of place” (Demes & Geeraert, 2014, p. 91). Psychological
adaptation is assessed through measuring well-being or psychological distress. Hence, loneliness has been utilized as an indicator of psychological adaptation (Neto et al., 2017).

Various changes may occur during acculturation. Living and studying abroad may involve the loss of social ties, separation from family, and a new friendship network in the host country (Imai & Imai, 2019; Mesidor & Sly, 2016; Patron, 2014; Wilks & Neto, 2016). These modifications may have an impact on the loneliness experienced by international students.

**Loneliness**

Loneliness is a universal phenomenon, as evidenced by investigation within a variety of cultural contexts, such as Australians (Leung, 2001), British (Victor & Yang, 2012), Cape Verdeans (Neto & Barros, 2000b), Chinese (D. Liu et al., 2014; Zhong, 2018), and Turks (Kapikiran, 2013). In a study of 25 European nations, the prevalence of loneliness ranged from 3.2% in Denmark to 34% in Ukraine (Yang & Victor, 2011). Anyone can feel lonely in any culture. Most of the definitions of loneliness outline perceived deficits in relationships. For instance, Ascher and Paquette (2003) defined loneliness as “the cognitive awareness of a deficiency in one’s social and personal relationships, and ensuring affective reactions of sadness, emptiness, or longing” (p. 75). In this line, loneliness is a negative emotion that is linked to negative experiences in one’s cultural context. Loneliness is a subjective (rather than an objective) experience of isolation.

The recognition of factors that are related to loneliness is significant for a variety of motives, such as links with low physical activity (Hawkley et al., 2009), poor academic competence and performance (Sletta et al., 1996), unmet intimacy needs (Cacioppo & Hawley, 2005), sleep disturbance and increased hypertension (Cacioppo et al., 2002), and mental health problems. For instance, a relationship between loneliness, depressive symptomatology, anxiety, and suicidal ideation has been evidenced (Dell et al., 2019; Mahon et al., 2006). Research shows that loneliness yields not only an enhanced risk of morbidity but also of mortality later in life (Hawkley & Cacioppo, 2010). Indeed, loneliness was found to be linked to a 26% greater likelihood of mortality, with an even greater likelihood for those below the age of 65 (Holt-Lunstad et al., 2015). Concerning personality, loneliness consistently was positively associated with neuroticism and negatively associated with extraversion (Vanhalst et al., 2012). Following this line, it is not surprising that loneliness might be characterized by high negative affect.

Relocation/significant separation is one of the salient factors explaining the causes of loneliness (Rokach & Neto, 2005). Loneliness is a significant factor in international students’ adjustment to a receiving society (Oei & Notowidjojo, 1990; Rajapaksa & Dundes, 2002; Smith & Khawaja, 2011). Sawir et al. (2008) interviewed 200 international students in Australia and 65% reported that they had experienced loneliness and/or isolation in the sojourn society. Chataway and Berry (1989) found that loneliness was one of the most serious problems experienced by international students in Canada.
International Students in Portugal

Recently, Portugal has attracted an increasing number of international students. In the 2000–2001 academic year the proportion of international students attending Portuguese institutions of higher education was 3%. In 2016–2017 there were 41,997 international students enrolled in higher education in Portugal, representing 11.6% of the higher education student enrollment (Direcção Geral de Estatística de Educação e Ciência, 2016). In that academic year, Portuguese higher education received students of 179 different nationalities. Half of the international students were from Lusophone countries (50.3%), and close to a third (34.5%) from the European Union. Historically, Angolan and Cape Verdean international students have been the two largest communities; however, Brazilian international students have recently become the largest community. In the 2016–2017 academic year, the most international students were from Brazil (28.9%), followed by Angola (8.6%), Spain (8.2%), Cape Verde (6.4%), Italy (6.1%), and Germany (3.9%). Therefore, Angolan and Cape Verdean international students were the second and fourth most numerous, respectively, with 6,321 persons.

Angolan and Cape Verdean international student migration to Portugal began in the colonial era, and it has continued to be a popular destination for students from these two countries. Between 2000 and 2014 around half of Angolan international students and three quarters of Cape Verdean international students attended Portuguese institutions of higher education (França et al., 2018).

Motivations to study abroad represent nuclear factors influencing students’ acculturation outcomes (Kitsantas, 2004). A variety of factors motivate African international students to study in Portugal: a common language, family members and friends already residing in the country, international agreements, standards of living, quality of teaching, and potentially more work opportunities (Mourato, 2011). A great majority of African international students plan their stay abroad as transitory (António, 2013).

The current study differs from the study of Wilks and Neto (2016) by using a quantitative methodology, and from the study of Neto and Wilks (2017) by collecting a different sample of Cape Verdean students and by including a new sample of Angolan students. Therefore, the present study examines together the levels and predictors of loneliness among the two most numerous communities of African international students in Portugal.

The Present Study

Loneliness, as a psychosocial complex phenomenon, is predicted by the interaction of personal and situational factors (Weiss, 1973). Therefore, in this investigation a set of background and acculturation variables often referred to in the culture shock field will be considered (Sam & Berry, 2016; Ward et al., 2001). More specifically, the present study has three general objectives.

The first objective is to analyze whether there are differences in the levels of loneliness between native students and African international students. In the current study, an international student is defined as an individual following
“degree mobility” abroad for an entire degree program (either undergraduate or postgraduate). This is opposed to short-term international students who go abroad on a “credit mobility” scheme (Mikulás & Jitka, 2019).

International student migration provides an opportunity to understand loneliness. In line with Ponizovsky and Ritsner (2004), “Newly immigrated persons find themselves in a drastically different network of social relationships and experience multiple stressors, including losses” (p. 408). Nevertheless, quantitative research on this topic of loneliness among migrants is scarce (Neto, 2016), and previous results of research comparing the levels of loneliness between immigrant samples and nonimmigrant samples are mixed.

Some research has not evidenced differences in loneliness between migrants and native-born people. For instance, Portuguese youths residing in France and Portuguese youths without migratory experience did not show significant differences in the levels of loneliness (Neto, 1999). Similar findings were evidenced among Portuguese migrants residing in Switzerland (Neto & Barros, 2000a), and among Angolan, Cape Verdean and Indian youth migrants living in Portugal (Neto, 2002). Youth from returned migrant families to Portugal also reported lower loneliness than domestic youths (Neto, 2016).

Previous investigations have reported that international students show more adaptation difficulties than native students (Kilinc & Granello, 2003; M. Liu, 2009; Poyrazli et al., 2010). Chinese students in Australia had higher loneliness levels than Anglo-Australian students (Leung, 2001). International students in the United States felt lonelier than domestic counterparts (Rajapaksa & Dundes, 2002). A qualitative study reported that Cape Verdean students faced difficulties in adapting to Portuguese society (Wilks & Neto 2016). Emotional problems related to loneliness and homesickness, feelings of not belonging to the received community, and disorientation were some factors indicated as being stressful for these students. A quantitative study carried out in Portugal revealed that Cape Verdean students reported greater loneliness than native students (Neto & Wilks, 2017).

Therefore, grounded on the above literature showing higher loneliness among international students than among domestic students (Leung, 2001; Neto & Wilks, 2017; Rajapaksa & Dundes, 2002), I proposed the following hypothesis:

H1: African international students will report higher levels of loneliness than domestic students.

My second objective is to scrutinize the relationship between background factors and loneliness. Background variables, such as gender, age, and duration of stay are deemed to be key factors in understanding the acculturation process (Sam & Berry, 2016). However, relationships between these factors and loneliness are mixed (Neto, 2016; Ward et al., 2001). It is possible that these inconsistent results are connected with weak effects. In a study examining the predictors of loneliness among adolescents from returned migrant families, gender, age, and length of residence were not associated with loneliness (Neto, 2016).
International students experience some lifestyle acculturative stress, such as financial problems. (Smith & Khawaja, 2011; Titrek et al., 2016). Financial problems were a cause of much distress reported by Cape Verdean students (Wilks & Neto, 2016). Background variables such as financial situation may impact loneliness. Socioeconomic status has not been a major concern in the loneliness literature (Holt-Lunstad et al., 2015). There is some research that reports a relationship between loneliness and financial status, with lower levels of loneliness linked to higher income (Chen et al., 2014; Savikko et al., 2005). Therefore, grounded on the above literature, I proposed the following hypothesis:

H2: The financial situation of the African international students will predict loneliness; more specifically, international students with poorer financial situations will report higher loneliness.

My third objective is to analyze the relationship between loneliness and acculturation factors. Perceived discrimination and acculturation orientations are key constructs in the acculturation field (Berry, 2017; Ward et al., 2001). Perceived discrimination concerns the perception of being unfairly treated because of prejudice and ethnocentrism, and is a potentially serious acculturative stressor (Jasinskaja-Lahati et al., 2003; Mewes et al., 2015; Schmitt et al., 2014; Smith & Khawaja, 2011). Previous research supports a significant relationship between perceived discrimination, psychological distress, and adaptation. For instance, a meta-analysis examining over 100 studies of ethnic or racial discrimination against Latina/os in the United States reported that mental health indicators such as acculturative stress were mostly strongly related to discrimination (Lee & Ahn, 2011). 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. International students from Africa often report significant perceived discrimination in comparison with native students (Smith & Khawaja, 2011). Perceived discrimination has been significantly associated with loneliness among migrants (D. Liu et al., 2014; Neto, 2002; Neto & Costa, 2015). As a result of experiencing discriminatory events, international students may be at risk for loneliness in the acculturation process in the host society. Therefore, grounded on the above literature, I tested the following hypothesis:

H3: Greater perceived discrimination will predict greater levels of loneliness among international students.

In the framework of acculturation orientations advanced by Berry (1997), sojourners face two main issues: the desire to maintain their heritage culture, and the desire to adhere to the host culture. These two acculturation orientations, heritage culture and mainstream culture orientations, can be evaluated independently (Demes & Geeraert, 2014; Neto et al., 2005). There is empirical evidence pointing to a negative association between heritage orientation and psychological adaptation, and a positive relationship between mainstream orientation and psychological adaptation (Demes & Geeraert, 2014). Therefore, grounded on the above literature, I tested the following hypothesis:
H4: Greater levels of orientation to heritage culture and lower levels of orientation to mainstream culture will predict higher levels of loneliness among international students.

METHOD

Participants

A total of 398 African international students participated in this study (47% from Angola, and 53% from Cape Verde). Forty-five percent were men and 55% women. Their age ranged from 18 to 42 years ($M = 25.88; SD = 5.33$). No students were of Portuguese nationality and all were born in Angola or Cape Verde. The average age at arrival was 18.68 years ($SD = 4.44$), and the average length of sojourn in the host country was 7.24 years ($SD = 4.38$). Regarding their financial situation, 44% indicated themselves in a very good situation, 28% in a good situation, 19% in a fair situation, and 9% in a poor situation.

In order to compare levels of loneliness between IS and native-born students, 221 Portuguese students (119 women and 102 men; average age = 21.33 years, $SD = 3.32$) were surveyed in the same institutions of higher education where the international students were enrolled. The proportion of males to females among international students and native-born students did not differ significantly, $\chi^2(1, 619) = 0.05, p = .87$. The average age of international students and domestic students presented significant differences, $F(1, 617) = 133.11, p < .001$. Hence, age will be used as a covariate.

Materials

In addition to background information (age, gender, country of birth, nationality, and length of sojourn), the survey comprised the following instruments.

Self-Rated Financial Status

A single item was used to assess overall financial status. Participants were asked, “Globally, how would you rate your financial situation?” Responses ranged from 1 (very good) to 4 (poor). Answers were recoded such that greater numbers denoted better financial status.

Perceived Discrimination

Assessing perceived discrimination was comprised of five statements (Berry et al., 2006; Neto, 2006) assessing the direct experience of discrimination (e.g., “I don’t feel accepted by the Portuguese.”). Response ranged from 1 (strongly disagree) to 5 (strongly agree). In the present study, Cronbach’s alpha was .89.
Acculturation Orientation

Acculturation orientation was assessed by means of the Brief Acculturation Orientation Scale (Demes & Geeraert 2014). It includes four statements for assessing acculturation towards the home country (e.g., “It is important for me to have Cape Verdean friends”), and also four items for assessing acculturation toward the host country (e.g., “It is important for me to have Portuguese friends”). Response choices ranged from 1 (strongly disagree) to 7 (strongly agree). The scores of these scales confirmed their reliability and validity among international students (Demes & Geeraert 2014; Neto & Wilks, 2017). In our sample, Cronbach’s alpha was .72 for host orientation and .83 for the home orientation.

Loneliness

The brief Portuguese version of the Revised University of California–Los Angeles Loneliness Scale (Russell et al., 1980) was used (Neto, 1992, 2001, 2014). This scale comprises six items (ULS-6; e.g., “People are around me but not with me”). Response choices ranged from 1 (never) to 4 (often). Greater scores denote more loneliness. In the present sample, Cronbach’s alpha was .77.

Although international students completed all these materials, domestic students completed only the loneliness scale, as well as background information.

Procedure

One research assistant recruited students in three institutions of higher education in Porto, Coimbra, and Lisbon. About a third of the participants were obtained at each site. The sample was of convenience, recruit through snowball sampling utilizing personal contacts and community groups. Drawing 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 pointed out by Lonner and Berry (1986, p. 87): “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.” Potential respondents were called upon to contribute to a study on student adjustment. They then responded to a paper-and-pencil questionnaire in a quiet location in the presence of the research assistant. A Portuguese version of the survey was used (the official language of Angola and Cape Verde). The respondents’ rate was about 90%.

Regarding ethical considerations, the research 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 the participation was voluntary and that responses were anonymous. Participants were free to withdraw from the investigation at any time without consequence. The average length of time needed to complete the survey was approximately 20 minutes.
Data Analysis

Five types of analyses were conducted: descriptive, internal consistency, analysis of variance, correlations, and regression analyses. First, I computed the descriptive statistics of the scales to verify the respondents’ standing on acculturation measures to get an overall picture of variables in their acculturation. Second, I computed the internal consistency of all scales by means of Cronbach’s alpha coefficient to ensure higher internal reliability. Next, I used an analysis of variance to examine group differences, and, in particular, to test the first hypothesis. Then, I performed a Pearson product-moment correlational analysis to analyze the relationship between the research measures. Cohen (1988) provided guidelines for determining the magnitude of correlations, where those between .10 and .29 are considered small, between .30 and .49 are moderate, between .50 and .69 are large, and between .70 and .90 very large. Finally, hierarchical regression analysis was performed to analyze the relative strength of variables in predicting loneliness, allowing us to test the second, third, and fourth hypotheses. I conducted all analyses using IBM SPSS statistical software (version 25.0). In all analyses performed, significance level was set at .05.

RESULTS

Descriptive statistics of the measures utilized in the current study are presented in Table 1. In order to test the first hypothesis, univariate analysis of co-variance (ANCOVA; with age covaried) for loneliness as a dependent variable across mobility was performed. The ANCOVA of loneliness revealed that the effect of mobility was significant, $F(1, 618) = 269.23, p < .001, \eta^2 = .30$. Findings suggest that international students ($M = 2.52; SD = 0.55$) displayed greater levels of loneliness than the native students ($M = 1.66; SD = 0.57$). Hence, the prediction that international students would report higher levels of loneliness than native students (H1) was supported.

Table 1: Intercorrelations of Predictors and Criterion Variables Among International Students, Descriptive Statistics, and Cronbach Alpha

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>M</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25.88</td>
<td>5.33</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>−0.17**</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Financial situation</td>
<td></td>
<td>−0.03</td>
<td>−0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.06</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Length of stay</td>
<td></td>
<td>−0.10</td>
<td>0.60***</td>
<td>−0.27***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.24</td>
<td>4.38</td>
<td></td>
</tr>
<tr>
<td>Host culture</td>
<td></td>
<td>0.02</td>
<td>−0.05</td>
<td>0.38***</td>
<td>−0.17**</td>
<td></td>
<td></td>
<td></td>
<td>3.77</td>
<td>1.09</td>
<td>.72</td>
</tr>
<tr>
<td>Home culture</td>
<td></td>
<td>−0.01</td>
<td>−0.12*</td>
<td>0.56***</td>
<td>−0.28***</td>
<td>0.56***</td>
<td></td>
<td></td>
<td>3.87</td>
<td>1.15</td>
<td>.83</td>
</tr>
<tr>
<td>Perceived discrimination</td>
<td></td>
<td>0.09</td>
<td>0.12*</td>
<td>−0.29***</td>
<td>0.18**</td>
<td>−0.34***</td>
<td>−0.36</td>
<td></td>
<td>3.37</td>
<td>0.85</td>
<td>.89</td>
</tr>
<tr>
<td>Loneliness</td>
<td>0.09</td>
<td>0.01</td>
<td>−0.46***</td>
<td>0.16**</td>
<td>−0.35***</td>
<td>−0.48***</td>
<td>0.52***</td>
<td></td>
<td>2.52</td>
<td>0.55</td>
<td>.77</td>
</tr>
</tbody>
</table>

To analyze the unique contribution of independent measures to loneliness, a hierarchical multiple regression analysis was performed. Before carrying out hierarchical multiple regression analysis, the assumptions of this statistical
analysis were examined. First, the assumption of singularity was met among the independent measures. An examination of the correlation matrix showed that the measures were not very largely correlated according to Cohen’s (1988) guidelines (Table 1). The internal consistency of the different measures were adequate, with Cronbach’s alpha ranging from .72 to .89.

Next, the analyses show that the assumptions of normality were also verified (see Table 2). The collinearity statistics (i.e., tolerance and variance inflation factor) were all within adequate limits, suggesting that the assumption of multicollinearity was deemed to have been met (Field, 2000). Furthermore, the Durbin-Watson values evidenced no autocorrelation in the regression models.

### Table 2: Summary of Hierarchical Regression Analysis for Variables Predicting Loneliness Among International Students

<table>
<thead>
<tr>
<th>Models</th>
<th>β</th>
<th>p</th>
<th>Tolerance</th>
<th>VIF</th>
<th>R²</th>
<th>ΔR²</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>First model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.03</td>
<td>.49</td>
<td>.97</td>
<td>1.03</td>
<td>.18</td>
<td>.18</td>
<td>1.85</td>
</tr>
<tr>
<td>Age</td>
<td>−.06</td>
<td>.30</td>
<td>.62</td>
<td>1.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial status</td>
<td>−.41</td>
<td>&lt;.001</td>
<td>.91</td>
<td>1.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay</td>
<td>.07</td>
<td>.23</td>
<td>.59</td>
<td>1.69</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Second model</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>−.02</td>
<td>.65</td>
<td>.95</td>
<td>1.05</td>
<td>.39</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−.10</td>
<td>.06</td>
<td>.62</td>
<td>1.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial status</td>
<td>−.17</td>
<td>.001</td>
<td>.66</td>
<td>1.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of stay</td>
<td>.02</td>
<td>.78</td>
<td>.58</td>
<td>1.71</td>
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<tr>
<td>Host culture</td>
<td>−.01</td>
<td>.92</td>
<td>.66</td>
<td>1.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home culture</td>
<td>−.24</td>
<td>&lt;.001</td>
<td>.53</td>
<td>1.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived</td>
<td>.39</td>
<td>&lt;.001</td>
<td>.82</td>
<td>1.23</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>discrimination</td>
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</table>

Note. VIF = variance inflation factor.

A two-step hierarchical multiple regression was performed with loneliness as the dependent measure. In the first step, the background variables were entered, followed by the acculturation variables. The measures were entered in this order as it seemed plausible, based on the International Comparative Study of Ethnocultural Youth project (Berry et al., 2006), which confirms that indicators of psychological adaptation, in this case, loneliness, are impacted by acculturation factors. “Psychological adaptation can be seen as the final outcome in the model, containing or reflecting the psychological consequences of the acculturation experiences that were measured” (Berry et al., 2006, p. 157).

My findings evidenced that background variables presented a significant predictive effect on loneliness, $F(4, 374) = 21.03; p < .001$; these measures explained 18% of the variation in loneliness. However, only financial status appeared as a significant predictor of loneliness ($β = −.41, p < .001$). A poorer financial situation predicted greater loneliness. Gender, age, and duration of residence did not appear as significant predictors. Introducing the acculturation
measures to the regression model accounted for 39% of variation in loneliness, $F(7, 371) = 34.46; p < .001$. The model did significantly predict loneliness. Financial status remained significant in the model ($\beta = -.17, p < .001$), and perceived discrimination ($\beta = .39, p < .001$) and orientation to home culture ($\beta = -.24, p < .001$) revealed a predictive effect on loneliness. However, orientation to host culture did not emerge as a significant predictor. Specifically, higher perceived discrimination and lower orientation to heritage culture predicted higher loneliness.

**DISCUSSION**

The purpose of this study was to examine the levels and predictors of loneliness among international students from Angola and Cape Verde. The findings support the first hypothesis, which stated that the African international students would display greater levels of loneliness than native students. This result is consonant with past studies that showed higher loneliness levels among international students than among national students (Leung, 2001; Neto & Wilks, 2017; Rajapaksa & Dundes, 2002). Current findings call our attention to the high risk of loneliness for the African international students. As I have outlined earlier, the research of past studies comparing the levels of loneliness between migrant samples and domestic samples is mixed. In some research, a significant difference was not found between migrants and nationals, or even less loneliness among migrants than nonmigrant people. Furthermore, previous research showed that the levels of loneliness between college students from Cape Verde and Portugal did not differ significantly (Neto & Barros, 2000b).

Results suggest the gender, age, and length of residence did not contribute to the regression model. These findings are in accordance with past research, which showed also that these three background variables were largely unrelated to loneliness (Neto, 2016). However, financial status emerged as a significant background predictor of loneliness.

The current study emphasizes the importance of financial status to loneliness. Its potential influence on health is not frequently considered (Hamilton et al., 2009). The findings of the current research indicate that financial status is significantly related to loneliness. Specifically, international students with poorer financial situations reported higher loneliness, thereby supporting our second hypothesis. One possible explanation for this result is that low financial status might prevent people from socially interacting with others. Another potential pathway is suggested by Ayalon (2019): “Poorer financial status might be a risk factor for social isolation and poorer health and mental health, which in return result in higher levels of loneliness” (p. 918). Indeed, past investigation showed that higher emotional distress and lower health was linked to financial hardship (Hamilton et al., 2009; Richardson et al., 2017; Roberts et al., 1999). Fröjd et al. (2006) also showed that perceived financial difficulties were associated with maladjustment outcomes, such as depression.

While studying in a host country provides international students with chances to grow psychosocially, they often face discrimination from host nationals.
International students who reported greater feelings and experiences of perceived discrimination reported greater levels of loneliness. This finding also supports Hypothesis 3 (H3). Indeed, perceived discrimination is a major acculturative stressor linked to loneliness (Neto, 2016). Current findings are in agreement with research showing that perceived discrimination is related to poor psychological well-being and depression (Mewes et al., 2015; Pascoe & Richman, 2009; Smith & Khawaja, 2011; Zhang & Goodson, 2011).

In line with Arends-Toth and van de Vijver (2006), and with Demes and Geeraert (2014), I measured home and host orientation independently. The findings of this study did not support my fourth hypothesis. Orientation toward home country negatively predicted loneliness. This finding is not in accordance with past investigation reporting that home acculturation orientation is relevant for experiencing negative feelings during acculturation (Demes & Geeraert, 2014). My findings are consonant with those pointing out the benefits of maintaining the one’s own cultural heritage, such as lower depression (Ward & Kennedy, 1994), better psychological well-being (Brisset et al., 2010; Neto et al., 2005), and career adaptability (Guan et al., 2018).

On the other hand, I found that orientation toward the host country, meaning having a preference for embracing the host culture, did not significantly predict loneliness. While regression analysis did not confirm the fourth hypothesis for host orientation, bivariate correlations showed that orientation to mainstream culture and loneliness were negatively and significantly correlated. This implies that the effect of host orientation interacts with other acculturation variables, such as perceived discrimination and home orientation.

**Limitations**

As is usual, there were some limitations in this study. First, the participants were not chosen at random; hence, the generalizability of the results is limited. Moreover, the sample consisted of students whose official language in their countries was the same as the receiving society. The sameness in official languages may ease the psychological adaptation of international students. International students with poor language competency of the sojourn country may have several problems, such as greater difficulty understanding lectures and interaction with students from the sojourn society (Pedersen, 1991; Shadowen et al., 2019). Additionally, a cross-cultural perspective of loneliness among international students studying in other countries could be conducted in future.

Second, I have not considered whether the levels of tertiary education have an impact on loneliness. Third, only one assessment of financial status was collected. Further investigation may address this limitation by utilizing alternative measures, such as the index of financial stress (Siahpush & Carlin, 2006) and the scale of financial concern (Jessop et al., 2005). Finally, the results are based on cross-sectional data, which means that no inferences of causal relationships should be drawn. In spite of these limitations, the present research pointed out specific implications in order to help with a better adaptation of international students.
Implications

The results of this study have significant implications for institutions of higher education and mental health providers. Current findings suggest that the Angolan and Cape Verdean international students studying in Portugal may need further support services, as they tend to feel lonelier than native students do. Some international students are at greater risk for developing loneliness than others. There is evidence that loneliness can be prevented or relieved by interventions, such as those addressing maladaptive social cognition (Cacioppo et al., 2015; Masi et al., 2011). Hence, loneliness can be modified, and interventions targeting it could improve wellbeing of international students. In particular, counseling may help international students in coping with loneliness. Previous investigation has shown that there are several coping strategies to deal with loneliness and to moderate the consequences of this debilitating experience (Rokach & Neto, 2000). Establishing social support networks is a valuable strategy that international students can use in the receiving society. It is relevant for psychological and academic adaptation (Patron, 2014). Sawir et al. (2008) advocated the establishment of more educational engagements and social connections between national and international students, based on sharing and mutual respect.

My findings showed that greater levels of perceived discrimination predicted greater levels of loneliness. To address the issue of discrimination perceived by international students, higher education institutions should first make every endeavor to inhibit discrimination within the academic settings. Another possible way to decrease perceived discrimination would be to create peer-to-peer programs in which international students would be paired with a native colleague from the sojourn country. Several activities could be implanted in those programs, such as informal discussions, exchange of information about the norms in the university, or collaborative learning activities. Furthermore, these results call attention to the relevance of intervention programs specifically designed to provide support to international students in reducing the amount of discrimination experienced or for learning how to deal with it. A recent study demonstrated that international students’ degree of self-disclosure did alleviate the detrimental impact of the perceived discrimination on loneliness (Imai & Imai, 2019).

My results revealed that greater levels of orientation toward home culture rather than the abandonment of orientation toward home culture is desirable for acculturating international students. The positive effect of orientation toward home country suggests that international students should get involved in social interactions with in-group members.

In addition, results show that greater financial difficulties issues predict higher loneliness. The immigration status of international students may often make it difficult for them to find work. Higher education institutions may help international students in solving some of these financial problems. For example, they can create job opportunities for students within the university context. Work provides a sense of usefulness and purpose for international students (Mesidor & Sly, 2016).
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