Dimensionality and Reliability of the Intentions to Seeking Counseling Inventory with International Students

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ABSTRACT

To date, the Intentions to Seek Counseling Inventory (ISCI) is the most widely used instrument to measure psychological help-seeking intentions. However, the ISCI is yet to be validated with international students. In this study, we examine the dimensionality and reliability of the ISCI by performing exploratory factor analysis, Cronbach alpha reliability analysis, and split-half reliability analysis in a sample of international students ($N = 183$). We find a two-factor, 15-item assessment that explains 49.92% of the common variance. Our findings provide support for the use of ISCI with international students, albeit with different dimensionality. Implications of the findings for both research and practice are discussed.

Keywords: dimensionality, exploratory factor analysis, help-seeking intentions, Intentions to Seek Counseling Inventory, international students

International students are individuals who travel to another country to complete their educational goals within a set time frame (Moores & Popadiuk, 2011). The number of international students traveling to the United States has been increasing, from 671,616 students in the 2008–2009 academic year to 1,095,299 in the 2018–2019 academic year (Institute of International Education [IIE], 2020). In response to the increasing numbers of international students coming to the United States, researchers have worked to record the unique struggles of these students (Hechanova-Alampay et al., 2012), and these struggles can be

categorized into academic and nonacademic challenges (Khanal & Gaulee, 2019). Some academic struggles among international students include English language proficiency (Tang et al., 2018), different classroom learning styles (Leong, 2015), and academic cultural differences (Safipour et al., 2017). Nonacademic challenges include acculturative stress (Koo et al., 2021), homesickness (Stroebe et al., 2015), racial discrimination (J. J. Lee, 2015), and feelings of alienation (Horne et al., 2018). Additionally, due to their central goal of completing their educational degree, international students reported academic and career issues as one of their top stressors (Khanal & Gaulee, 2019). These stressors contribute to psychological concerns such as depression and anxiety (Lian & Wallace, 2020), as well as suicidal ideation (Taliaferro et al., 2020).

Despite a higher likelihood of experiencing unique stressors, international students have been found to underutilize on-campus counseling services (Poyrazli, 2015; Yakunina & Weigold, 2011). Factors that influence international students' help-seeking behavior and intentions can be categorized into two groups: demographic variables and psychosocial factors (e.g., Hwang et al., 2014; E. J. Lee et al., 2014; Xiong & Yang, 2021). For demographic variables, researchers have found that gender, age, sexual orientation, marriage status, student's level (undergraduate or graduate), and previous experience with mental health services influence international students' help-seeking intentions (e.g., Hwang et al., 2014; Y. P. Li et al., 2013; Xiong & Yang, 2021). Some psychosocial factors that have been found to influence international students' help-seeking behavior and intentions include the severity of mental health issues (Xiong, 2018), help-seeking attitudes (E. J. Lee et al., 2014), face and stigma concerns (Young, 2017), and acculturative stress (Nguyen et al., 2019).

When researching psychological help-seeking, most researchers measure help-seeking intentions as a proxy for help-seeking behaviors (Hammer & Spiker, 2018). Help-seeking intention is defined as the probability or likelihood of seeking help (Rickwood et al., 2012). Three popular instruments typically used by researchers to measure help-seeking intentions are the Intentions to Seek Counseling Inventory (ISCI; Cash et al., 1975), Mental Help-Seeking Intention Scale (MHSIS; Hammer & Vogel, 2013; Hess & Tracey, 2013), and General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005). Among these three, the ISCI (Cash et al., 1975) is the most frequently used instrument (Hammer & Spiker, 2018), even among international student research (e.g., E. J. Lee et al., 2014; Mesidor & Sly, 2014).

Despite its use with international students, examination of the validity and reliability of the ISCI with international students is severely underdeveloped. This gap in the literature is problematic because the conception of help-seeking intentions by international students may differ from domestic students. A potentially different conceptualization would indicate different needs by international students that would require a different approach by mental health professionals. Even though institutions have bolstered support for international students' mental health (The Advisory Board Company [ABC], 2014), Koo and Nyunt (2020) asserted that it is imperative to consider cultural sensitivity when assessing international students. Thus, examining the dimensionality and

reliability of ISCI with international students is important to establish its cultural sensitivity, which can then provide a guide for culturally responsive mental health services. Furthermore, many professional organizations endorse instrument validation as an ongoing process (American Educational Research Association, American Psychological Association, National Council on Measurement in Education, & Joint Committee on Standards for Educational and Psychological Testing [AERA, APA, & NCME], 2014). In the next section, we will provide some psychometric properties of the ISCI.

INTENTIONS TO SEEK COUNSELING INVENTORY

The ISCI was developed by Cash et al. (1975) to measure individuals' perception of the counselor's helpfulness for 15 psychological problems (e.g., insomnia, depression). Later, the ISCI was adapted to measure the help-seeking intentions of diverse student populations. For instance, to examine the help-seeking intentions of Mexican American students, Ponce and Atkinson (1989) adapted the 15-item ISCI and added five salient concerns reported by Latinx college students, and they found that the 20-item instrument resulted in two factors: personal and social problems (13 items) and academic survival and career choice (seven items). Gim et al. (1990) further expanded the 20-item instrument from Ponce and Atkinson (1989) by adding four psychological concerns related to Asian American students. The factor analysis of this 24-item instrument resulted in three factors: relationship concerns, academic or career concerns, and health or substance abuse concerns (Gim et al., 1990).

Although there have been adaptations to the original 15-item instrument, the most widely used format of the ISCI is the 17-item version adapted by Robertson and Fitzgerald (1992). Robertson and Fitzgerald (1992) added two additional items to highlight the 17 most common issues that college students present for counseling. Multiple researchers have since used this 17-item version to examine help-seeking intentions for domestic students in the United States (e.g., Demyan & Anderson, 2012), international students, (e.g., Mesidor & Sly, 2014), and community members (e.g., Fripp & Carlson, 2017). The 17-item ISCI has been shown to demonstrate construct validity. For example, Vogel et al. (2006) found that there is a negative association between self-stigma and help-seeking intentions as measured by the ISCI. Furthermore, research supports the notion of a positive association between help-seeking attitudes and the ISCI (Kang, 2016; Kelly & Achter, 1995).

Cepeda-Benito and Short (1998) were the first to examine the factor structure of the ISCI. Factor analysis revealed three correlated factors: psychological and interpersonal concerns (10 items), academic concerns (four items), and drug use concerns (two items; Cepeda-Benito & Short, 1998). Interestingly, an examination of the factor structure of the ISCI by Pheko et al. (2013) on Botswana university students failed to yield the three correlated factors found by Cepeda-Benito and Short (1998), suggesting that the ISCI may have a different factor structure for different populations.

More recently, Hammer and Spiker (2018) examined the dimensionality, reliability, and predictive evidence of the ISCI. Using confirmatory factor analysis, Hammer and Spiker (2018) discovered that the data conformed to the three-factor structure founded by Cepeda-Benito and Short (1998). Furthermore, the internal consistency of the three subscales was adequate with psychological and interpersonal concerns (α = .87), academic concerns (α = .78), and drug use concerns (α = .92). However, results found by Hammer and Spiker (2018) may not extend to the international student population, thus necessitating the need for this research.

THE USE OF ISCI ON INTERNATIONAL STUDENTS

International students have been identified as one group of students who underutilize on-campus counseling services (Poyrazli, 2015; Yakunina & Weigold, 2011). As such, researchers have been interested in understanding their help-seeking intentions, along with psychosocial factors that affect international students' help-seeking intentions (e.g., Y. P. Li et al., 2013; Wong et al., 2013). For example, E. J. Lee et al. (2014) examined the relationship between different psychosocial variables and help-seeking intentions of Korean international students. E. J. Lee et al. (2014) found that public stigma, self-stigma, Asian cultural values, and help-seeking attitudes affect Korean international students' help-seeking intentions. They used the ISCI, and the internal consistency of the entire scale was found to be .82 (E. J. Lee et al., 2014).

In another study examining the help-seeking intentions of international students and African American students, Mesidor and Sly (2014) utilized the ISCI and found the internal consistency for the entire scale to be .86. They found that an individual's perception of their ability to perform a given behavior, in this case, to seek mental health services, was a statistically significant predictor of help-seeking intentions for their sample. However, they did not separate the two groups of participants, and therefore the internal consistency of the scale, specifically for international students, could not be ascertained.

Although the use of ISCI's total score has been common (e.g., E. J. Lee et al., 2014; Mesidor & Sly, 2014), there has not been any study that supports the use of the ISCI as a unidimensional scale (Hammer & Spiker, 2018). In fact, when examining the dimensionality of ISCI, Hammer and Spiker (2018) found that the one-factor ISCI did not fit the data well. As such, results utilizing ISCI's total score as an indication for help-seeking intentions need to be interpreted with caution. In lieu of using ISCI's total score, some researchers use subscale scores. For example, Yakunina and Weigold (2011) examined Asian international students' intention to seek counseling by utilizing the scores on the 10-item Psychological and Interpersonal subscale. They reported the internal consistency of this subscale to be .86.

Based on our review of the literature, research conducted on international students utilizing the ISCI total or subscale scores yielded internal consistency ranging from .82 to .86 (Kang, 2016; Mesidor & Sly, 2014). Although the ISCI has been utilized with international students, we did not find any study that

examined its dimensionality and reliability as it applies to international students. Due to the importance of understanding the help-seeking intentions of international students, counselors and researchers should have access to instruments that are valid and reliable. Kane (2016) asserted that validity needs to be considered every time an instrument is used. Hammer and Spiker (2018) further asserted that a help-seeking intentions instrument with strong psychometric properties could heighten the consistency and quality of future research on this topic. Lastly, the validation of an instrument may be time sensitive as culture continues to evolve (Knekta et al., 2019). Validating the ISCI, which was created decades ago, will help recalibrate this instrument for continued usage with international students. The findings of this study can shed light on ways help-seeking intentions are conceptualized by international students, thus, potentially improving outreach efforts.

PRESENT STUDY

We sought to answer two questions about the ISCI as it is applied to international students. First, what dimensionality (i.e., factor structure) does the ISCI exhibit? Understanding an instrument's dimensionality provides researchers with a way to conceptualize and score the measurement, which holds important implications for testing validity and reliability (DeVellis, 2016). Second, how reliable is the ISCI and each of its subscales? Reliability provides researchers with the ability to detect the true degree of association between help-seeking intentions and other variables of interest (Osborne, 2003).

METHOD

Participants

We recruited participants from five universities in the Northeast region of the United States. A total of 235 international students participated in this study. To be eligible for this study, they must (a) be a current international student with a valid student visa (at the time of the study), (b) be at least 18 years old, and (c) understand English. We embedded manipulation checks in the instrument to assess participants' attentiveness. After cleaning the dataset for missing data and failed manipulation checks, the number of valid responses resulted in 183 respondents. Garson (2008) recommended at least 10 participants per item for exploratory factor analysis (EFA). Thus, our sample of 183 students surpassed the threshold of 170 participants needed.

Participants' ages ranged from 18 to 46 years, with a mean of 22.7 years (*SD* = 4.94). All participants indicated that they were at least "somewhat proficient" in the English language. There were 65 males (35.5%) and 118 females (64.5%). In terms of previous use of mental health support, 71 individuals (38.8%) reported having seen a mental health professional, and 112 individuals (61.2%) reported not having seen a mental health professional. Students hailed from 50 different countries, and most of the participants reported coming from

China (*n* = 39, 22.2%), India (*n* = 37, 20.2%), and Vietnam (*n* = 24, 13.1%). Participants' length of stay in the United States ranged from less than 1 year to 19 years, with a mean of 3.12 years (*SD* = 2.69).

Procedure

This research was part of a larger study examining international students' help-seeking intentions. We sent an email to the universities' international student advisors requesting permission to recruit participants. Once approved, we sent a second email to the advisors to be disseminated to their international student body. This recruitment email consisted of an invitation to participate, the purpose of the study, and a Qualtrics link. The Qualtrics survey included an informed consent form, a demographic questionnaire, and a few instruments, including the ISCI. We also conducted in-person recruitment by attending international student events on campus. Data collection was completed solely via Qualtrics. To check for participants' attentiveness in completing the survey, three instructional manipulation checks (e.g., Rate "3" for this question) were embedded into the battery of assessments. Oppenheimer and colleagues (2009) found that excluding participants who failed the instructional manipulation checks increased data quality and statistical power. This study was approved by the Institutional Review Board for human subjects.

Measures

Demographic Information

A few demographic variables were collected in this study including age, gender, previous mental health use, and English proficiency. For previous mental health use, participants either indicated they have or have not seen a mental health professional. We prompted participants' gender and age via open-ended questions. Participants reported their English proficiency via a Likert scale (1 = *not proficient* to 5 = *extremely proficient*).

Intentions to Seek Counseling Inventory

We utilized the 17-item version of the ISCI to measure participants' help-seeking intentions for various mental health issues. Items were scored on a 4-point Likert scale (1 = *very unlikely* to 4 = *very likely*) with higher scores indicating greater willingness to seek counseling. Sample items include "How likely would you be to seek counseling if you were experiencing relationship difficulty?" and "How likely would you be to seek counseling if you were experiencing depression?" The ISCI subscale scores have been found to be positively associated with help-seeking attitudes and previous help-seeking behavior, providing some evidence of convergent validity (Lannin et al., 2014; Authors et al., in review). Previous researchers reported the internal consistency for the three subscales to be α > .71 (Cepeda-Benito & Short, 1998; Hammer & Spiker, 2018).

Data Analysis

To answer the first research question on ISCI's dimensionality, we utilized factor analysis. Because the ISCI has not been validated with international students, we decided to conduct an EFA. Analyses were completed with Statistical Package for Social Sciences (SPSS) Version 25. First, we reviewed the results of Bartlett's (1954) test of sphericity and Kaiser–Meyer–Olkin (Kaiser, 1974) to clarify the factorability of the data and the sampling adequacy, respectively. We used maximum likelihood estimation as our extraction method with promax rotation. We chose the extraction and rotation methods to assist in verifying the suitable number of factors while permitting the factors to be correlated (Wamser-Nanney et al., 2020). To determine the number of factors to retain, we utilized the visual scree plot, the variance accounted for, and Horn's parallel analysis. Parallel analysis is a method in which extracted eigenvalues are compared with 100 randomly generated correlation matrices. The use of parallel analysis is considered best practice (Henson & Roberts, 2006) as it avoids overextraction by establishing an appropriate eigenvalue for factor retention (Patil et al., 2008). To conduct parallel analysis, we utilized the SPSS syntax written by O'Connor (2000). To answer the second research question, we conducted two reliability analyses: the split-half reliability test and Cronbach's alpha estimates for each factor found.

RESULTS

The Kaiser–Meyer–Olkin measure of sampling adequacy was .884, well above the recommended cutoff of .60 (Kaiser, 1974). Bartlett's test of sphericity was statistically significant with $\chi^2(136) = 1441.21$, $p < .001$. The mean communalities for all 17-items were .53. However, there were two items with low communality values (e.g., $< .40$; Costello & Osborne, 2005). We examined and evaluated the contribution of these two items to determine if the removal of these items would jeopardize the integrity of the assessment (Costello & Osborne, 2005). After determining that the removal of these items does not adversely impact the integrity of the assessment, we removed Items 1 (weight control) and 9 (choosing a major).

We reran the EFA with the remaining 15 items. The mean communalities for all 15 items was .50, with every item having a communality value of $> .40$. Table 1 shows the comparison between the initial eigenvalues and the randomly generated eigenvalues from Horn's parallel analysis. Based on the results of parallel analysis and the visual scree plot (Figure 1), we decided to retain two factors, accounting for 49.92% of the common variance.

Table 1: Comparison Between Initial Extracted Eigenvalues and Parallel Analysis' Randomly Generated Eigenvalues

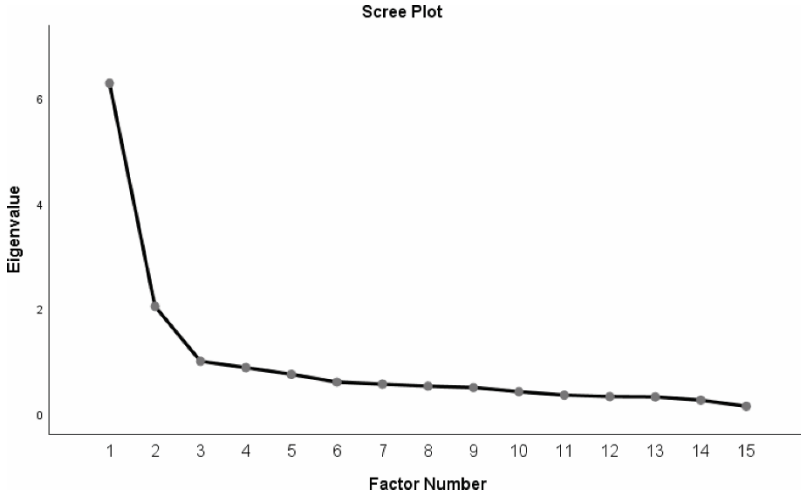| Factor	Initial eigenvalues	Parallel analysis' eigenvalues
1	6.283	1.648
2	2.044	1.473
3	1.000	1.372
4	0.880	1.283

Figure 1: Eigenvalue from the 15-Item Intentions to Seek Counseling Inventory (ISCI) Factor Analysis.

The first factor consists of 11 items, and they are issues related to both intra- and interpersonal relationships as well as academic concerns. The 11 items are relationship difficulties (Item 3), conflict with parents (Item 6), speech anxiety (Item 7), difficulties dating (Item 8), difficulty in sleeping (Item 10), feelings of inferiority (Item 12), test anxiety (Item 13), difficulty with friends (Item 14), academic work procrastination (Item 15), self-understanding (Item 16), and loneliness (Item 17). We decided to name the first factor as the Relationship and Academic subscale. The Relationship and Academic subscale accounted for 23.3% of the common variance.

The second factor consists of four items surrounding issues of health and substance use. These items are issues related to excessive alcohol use (Item 2), concerns about sexuality (Item 4), depression (Item 5), and drug problems (Item 11). We decided to name the second factor as the Health and Substance Use subscale. The Health and Substance Use subscale accounted for 26.62% of the common variance.

To examine the reliability of the ISCI, we conducted two analyses: a split-half analysis using a Spearman–Brown coefficient and a Cronbach alpha analysis on each factor. We did not conduct reliability analysis for the whole scale as there was no evidence that the scale is univariate (Hammer & Spiker, 2018). Spearman–Brown coefficients for the Relationship and Academic subscale and the Health and Substance Use subscale are .88 and .87, respectively. The alpha coefficients for the Relationship and Academic subscale and the Health and Substance Use subscale are .89 and .83, respectively. Table 2 depicts the structure and pattern coefficient, along with the mean, standard deviation, and alpha coefficient of this two-factor model.

Table 2: Structure and Pattern Coefficient Along with the Mean, Standard Deviation, and Alpha Coefficient of the Two-Factor Model

Item/factor	Structure coefficient		Pattern coefficient	
	Relationship and Academic	Health and Substance Use	Relationship and Academic	Health and Substance Use
1. Weight control	Item removed			
2. Alcohol use	0.35	0.86	−0.05	0.88
3. Relationship difficulties	0.58	0.38	0.51	0.15
4. Concerns about sexuality	0.43	0.62	0.19	0.53
5. Depression	0.50	0.62	0.28	0.49
6. Conflicts with parents	0.58	0.45	0.48	0.23
7. Speech anxiety	0.59	0.32	0.55	0.08
8. Dating	0.57	0.18	0.62	−0.10
9. Choose major	Item removed			
10. Sleeping	0.64	0.56	0.49	0.34
11. Drug problems	0.24	0.95	−0.24	1.06
12. Inferiority	0.80	0.36	0.80	0.004
13. Test anxiety	0.64	0.27	0.65	−0.02
14. Difficulties with friends	0.69	0.20	0.75	−0.14
15. Procrastination	0.65	0.24	0.68	−0.07
16. Self-understanding	0.71	0.34	0.70	0.02
17. Loneliness	0.75	0.36	0.74	0.02
Mean			2.08	2.25
Standard deviation			1.00	1.12
Number of items			11	4
Spearman–Brown coefficient			.88	.87
Alpha coefficient			.89	.83

Note: *Categorization of items are indicated via bolding.*

DISCUSSION

In this study, we examined the dimensionality and internal consistency of the ISCI using a convenience sample of international college students. To examine the ISCI's dimensionality, we conducted an EFA. Results revealed two factors that we named the Relationship and Academic subscale and the Health and Substance

Use subscale. This first factor included items related to academic concerns such as procrastination and test anxiety. Our results were consistent with studies that found that international students rated academic and career issues as one of their top stressors (Y. P. Li et al., 2013; Poyrazli, 2015). The first factor also contained items related to relationship concerns, both intrapersonal relationships (e.g., feelings of inferiority, self-understanding) and interpersonal relationships (e.g., difficulty with friends). The importance of interpersonal relationships could be attributed to the collectivistic tendency of students' home culture as most of our participants originated from collectivistic cultures such as China, India, and Vietnam. However, the inclusion of intrapersonal dimension is of interest. There could be two reasons for this finding: (a) being acculturated to an individualistic society provided greater self-examination and (b) being confronted with individuals from diverse backgrounds catalyzed a deeper understanding of their own identity. Although interpersonal relationship is important to international students, our results reveal that clinicians cannot ignore international students' intrapersonal aspect.

Moving to the second factor, the Health and Substance Use subscale, we found that four items were grouped strongly into this category. This factor includes two items related to health (concerns about sexuality and depression) and two items related to substance use (excessive alcohol use and drug problems). Although previous research has found that international students were less likely to use recreational drugs and alcohol (Vivancos et al., 2009), it appears that participants in our study recognized the gravity of using substances as a way to cope and therefore reported their willingness to seek help if besieged by said concerns.

Similar to Cepeda-Benito and Short (1998), Item 1 (concerns with weight control) had low communality and was therefore removed. Although Cepeda-Benito and Short (1998) did not theorize why concerns with weight control had low communality, for participants in our study, it is possible that weight concerns are considered as part of their normal stressors. When comparing body image and weight control of university students from 22 countries, Wardle and colleagues (2005) found that Asian university students, both men and women, showed elevated levels of wanting to lose weight. In many Asian countries, the norm of wanting to look petite and slim is typical and therefore may not be a source of concern. If and when weight control does become a concern, it is possible that international students are more inclined to seek help elsewhere for this issue, such as from a nutritionist or a physician, rather than a mental health professional.

We found that Item 9 (choosing a major) also suffered from low communality. This result may seem contradictory as choosing a major can be part of academic concern. One plausible explanation is that international students are less inclined to seek psychological help in choosing a major. Perhaps another avenue for help-seeking, such as from an academic advisor, would be more likely for this item. It is also possible that international students rely on informal support, such as parents, to provide guidance in choosing a major.

To address the second research question, we conducted the split-half and the Cronbach alpha analyses on both factors. We found that both factors possess adequate reliability with coefficients from both analyses being above .80. This finding is in line with previous findings of Hammer and Spiker (2018). Overall, our findings provide the support that the ISCI can be utilized to measure international students' help-seeking intentions. However, caution must be exercised as the dimensionality of the ISCI found in this study differed from the commonly used three-factor model (Cepeda-Benito & Short, 1998). We recommend utilizing this two-factor model when using the ISCI with international students.

Limitations and Future Studies

There were a few limitations to this study that are worth discussing. Our sample was limited to five universities in the Northeast part of the United States. Replicating this study with samples from different parts of the United States could provide a more complete picture of the dimensionality and internal consistency of the ISCI. Furthermore, we considered international students as homogenous in this study due to our interest in this group as a whole. However, international students are a very heterogeneous group, and Clough et al. (2019) found differences between international students originating from different countries. For researchers and counselors interested in working with students from a particular country, it is recommended that the ISCI be validated with that population. Another limitation is the self-report nature of this instrument. Although we embedded validity checks, self-report instruments are susceptible to bias (Gall et al., 2006). All these considerations limit the generalizability of our findings.

Lastly, our study indicated that the ISCI only managed to explain 49.92% of common variance, which indicates other aspects not captured by the ISCI. Since the inception of the ISCI, new mental health concerns have emerged, such as internet addiction (J. Li & Liu, 2021) and sexual harassment (Chang et al., 2021). Another consideration involves international students' unique concerns when seeking psychological help such as homesickness (Stroebe et al., 2015), racism (J. J. Lee, 2015), acculturative stress (Koo et al., 2021), and language difficulty (Tang et al., 2018). Adding current mental health concerns as well as items specific to international students and validating the improved ISCI is worth considering, as it will help to better understand international students' help-seeking intentions.

Implications for Counseling Practice and Research

The findings from this study have a few implications for both research and practice. In terms of research, it appears that the ISCI can be used for both undergraduate and graduate students from different countries of origin. In

previous studies, some researchers utilize one or two subscales (out of the three found by Cepeda-Benito & Short, 1998) when conducting their research (e.g., Pederson & Vogel, 2007). Although this practice may be appropriate for their sample, based on our findings of two subscales that had almost equal variance accounted for, utilizing both subscales is best practice when research is done with international students. Additionally, the use of the total score of ISCI should be discouraged as there has been no support for the ISCI being a unidimensional instrument (Hammer & Spiker, 2018).

Due to the diversity of international students, the use of the ISCI might need to be tailored to specific groups of international students. For example, international students for whom English is not their first language (e.g., Chinese) may be more concerned about their speech anxiety (Item 7) than international students whose English is their first language (e.g., England). Thus, mental health professionals need to consider international students' cultural backgrounds when administering and interpreting the ISCI.

Results from this study also provide some implications for practice. First, findings from this study can help with tailoring outreach programs conducted by college counseling centers. Previous research has found that international students underutilize college counseling services, partly due to low help-seeking intentions (Poyrazli, 2015; Yakunina & Weigold, 2011). One way to increase international students' help-seeking is to conduct outreach programs. Based on the factor loadings, it appears that outreach programs targeting salient issues for international students, such as alcohol use, drug use, feelings of inferiority, loneliness, and difficulty with friends, could prove to be effective in increasing their help-seeking intentions. College counseling centers can then assess the effectiveness of their outreach efforts by administering the ISCI before and after their programs.

Second, members of the university, such as professors and staff, can be trained to detect items on the ISCI to make appropriate referrals. Academic difficulties such as speech anxiety, test anxiety, and procrastination are perhaps the clearest signals available to staff and professors. Tilliman (2007) found that international students were more comfortable with approaching professors or their international student advisors when needing help. As such, training the university community on mental health signs, such as procrastination and depression, and appropriately referring international students is helpful (Redden, 2019).

Lastly, our results suggest that there may be other areas of concern not captured by the ISCI. It behooves mental health professionals to be familiar with other stressors that international students may face (e.g., loneliness, homesickness, acculturative stress, racism, etc.) and be equipped to explore these unique stressors. To build trust and demonstrate availability, college counseling centers can organize talks or workshops addressing these issues in collaboration with the international student office. College counseling centers can also consider creating support groups for international students to discuss their stressors.

CONCLUSION

In this study, we examined the validity and reliability of the ISCI on a sample of international students. We factor analyzed the results and found two dimensions, which we named the Relationship and Academic subscale and the Health and Substance Use subscale. Results from the split-half and alpha coefficient analyses suggest strong reliability when the ISCI is used with this sample of international students. Taken together, the results provide support for the use of ISCI with international students. When conducting research on international students' help-seeking intentions, we recommend utilizing the ISCI with the two factors found in our study as it may provide more accurate information. Additionally, college counseling centers can focus on salient items on the ISCI when conducting outreach to international students. Counseling centers can also use the ISCI as an outcome measure to measure the effectiveness of their outreach program. Ideally, students' help-seeking intentions would increase after the outreach program. University personnel, such as faculty, staff, athletic coaches, and academic advisors, can be trained to detect items on the ISCI (e.g., procrastination, test anxiety) and to make appropriate referrals. Lastly, college counseling centers need to be equipped to handle international students' unique stressors not captured by the ISCI such as loneliness, acculturative stress, homesickness, and racism.

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