



Contents lists available at ScienceDirect

International Journal of Intercultural Relations

journal homepage: www.elsevier.com/locate/ijintrel

Predictors of undergraduate international student psychosocial adjustment to US universities: A systematic review from 2009-2018



Nelson C. Brunsting^{a,*}, Corinne Zachry^{b,1}, Risa Takeuchi^{c,2}

^a Center for Global Programs and Studies, Wake Forest University, Winston-Salem, NC, USA

^b Department of Psychology, Wake Forest University, Winston-Salem, NC, USA

^c College of Arts and Sciences, Wake Forest University, Winston-Salem, NC, USA

ARTICLE INFO

Keywords:

International student
Undergraduate
Emotional adjustment
Social adjustment
Colleges and universities
United States

ABSTRACT

The most recent literature review of predictors of international student adjustment in institutions of higher education in the United States (U.S.) included studies from 1990 to 2009 (Zhang & Goodson, 2011). The current review was designed to understand the strengths and gaps of the literature on undergraduate international student adjustment to U.S. universities. Thirty quantitative studies reporting psychosocial outcomes for international undergraduate students at U.S. universities were identified. Acculturative stress, psychological adjustment, social belonging, depression, and anxiety were the most commonly researched outcomes. Recommendations are provided for extension of theoretical frameworks, next steps for researchers, and implications for students, faculty, and staff at U.S. universities.

In the 2016-17 academic year, over 439,000 undergraduate international students were enrolled in U.S. universities (IIE, 2017). Although the majority of international undergraduate students graduate from their institutions, many experience challenges adjusting to the new environment, including acculturative stress, depression, and lack of belonging (Glass, 2012; Smith & Khawaja, 2011; Wang et al., 2012). Not only are these psychosocial issues critical outcomes in and of themselves, but recent research also has illuminated the interlocking nature of international students' adjustment at U.S. universities with other outcomes including academic achievement, academic integration, and suicidal ideation (Han, Pistole, & Caldwell, 2017; Korobova & Starobin, 2015; Lowinger et al., 2016).

The needs of international undergraduate students have thus far outpaced the capacity of researchers to provide university faculty and staff with evidence-based practices and interventions to assist in their university transition and adjustment. Indeed, no intervention studies were included in the most recent systematic literature review of predictors of international student psychosocial adjustment to U.S. universities was conducted in 2011 (Zhang & Goodson, 2011), which included studies published between 1990 and 2009. Since 2009, U.S. university international undergraduate student enrollment has risen 63%, and the countries of origin have shifted dramatically, with China and Saudi Arabia each sending almost five times as many undergraduate students in 2017 as they did in 2009, displacing South Korea as the top country of origin for undergraduate international students at U.S. universities (IIE, 2009; IIE, 2017). These changing demographics as well as increased research attention on international students necessitates an updated literature review of predictors of international students' psychosocial adjustment outcomes, including both psychological and sociocultural adjustment. Following Ward and Kennedy (1999), psychological adjustment refers to psychological well-being (e.g., well-

* Corresponding author at: 017 Reynolda Hall, Wake Forest University, Winston-Salem, NC, 27109, USA.

E-mail addresses: brunstnc@wfu.edu (N.C. Brunsting), zachce16@wfu.edu (C. Zachry).

¹ 017 Reynolda Hall, Wake Forest University, Winston-Salem, NC, 27109, USA.

² PO Box 28340, Wake Forest University, Winston-Salem, NC 27109, USA.

being, depression, anxiety), and sociocultural adjustment is defined as “the ability to ‘fit in’, to acquire culturally appropriate skills, and to negotiate interactive aspects of the host environment” (e.g., belonging, social support).

The current review is designed to meet this gap by providing a systematic literature review of studies including predictors of psychosocial outcomes of international students at U.S. universities. However, the current review deviates from Zhang and Goodson (2011) and other prior reviews by focusing on the adjustment outcomes of undergraduate international students. Recent research has illuminated differences in psychosocial outcomes for undergraduate and graduate students (Han et al., 2017; Kim & Ra, 2015; Li, Liu, Wei, & Lan, 2013). These findings align with life course theory in that relationships between predictors and psychosocial outcomes during times of transition are moderated by individuals’ age, social cohort, and life experience during those transitions (Elder & Shanahan, 2006). Research attention to international student adjustment has also increased in the past decade: an electronic search in April 2018 of *international student adjustment* on PsycINFO and Academic Search Premier yielded 744 peer reviewed articles from 2009-present compared to 237 from 1999-2008. Thus, the literature on international student adjustment has grown to the point where a literature review focused solely on undergraduate students is not only warranted by theory and recent empirical studies, but also feasible in terms of the number of studies published in the last decade having reached a critical mass.

Previous literature reviews

Five reviews of literature on international student adjustment have been published between 2011 and 2016 (de Araujo, 2011; Mesidor & Sly, 2016; Smith & Khawaja, 2011; Yan & Berliner, 2011; Zhang & Goodson, 2011). The current review aligns closely with that of Zhang and Goodson (2011), as it focuses on predictors of international student psychosocial adjustment. The other reviews provide useful recommendations, but do not diminish the relevance of the current article as they either did not report findings separately for graduate and undergraduate students (Mesidor & Sly, 2016), had samples outside U.S. (Smith & Khawaja, 2011), focused solely on Chinese international students (Yan & Berliner, 2011), or did not include studies after 2010 (de Araujo, 2011). Below, we briefly detail the inclusion parameters of each review before integrating their findings.

Zhang and Goodson (2011) conducted an extensive review of studies published from 1990 to 2009 on psychological adjustment of international undergraduate and graduate students in the United States. Of the 64 studies they identified as containing data on psychological outcomes, 33 studies reported predictors of psychological well-being and 37 reported predictors of sociocultural adjustment. The review revealed that stress, social support, English language proficiency, region/country of origin, length of residence in the United States, acculturation, social interactions with Americans, self-efficacy, gender, and personality are the most reported predictors.

Mesidor and Sly (2016) completed a literature review of the factors contributing to the academic, cultural, social and psychological adjustments of international students. The review included a wide range studies published from 1968 to 2015 relating to cultural adjustment, social adaptation and academic adjustment, psychological adjustment and counseling utilization. Based on the literature, Mesidor and Sly concluded that international students’ early life experiences, resilience, self-efficacy, spiritual, social support, coping style, personality, emotional and cultural intelligence are critical features influencing their adjustment. Two reviews (Smith & Khawaja, 2011; Yan & Berliner, 2011) were conducted to understand the range of motivations, acculturation trends and adjustment difficulties of international students. Yan and Berliner incorporated a broad range of studies on Chinese international students at U.S. universities, including four studies from 1981 to 1998 focused on psychosocial outcomes. These studies revealed that Chinese students’ motivation to study abroad is maximized by the government’s policy to send them to the United States for educational opportunities despite most students being unprepared for cultural adjustments. Smith and Khawaja (2011) identified 19 studies of sociocultural factors contributing to acculturation stress from 1989 to 2010 of international students in Western countries; however, many of the studies reviewed have samples containing international students at institutions in the United States. The authors grouped identified studies based on the stressors examined, including: linguistic, academic, sociocultural, discriminatory, and practical. After reviewing 21 articles concerning adjustment issues by international students attending U.S. universities and colleges published between 1991–2010, de Araujo (2011) found that English proficiency, social support, length of stay in the United States, perceived discrimination or prejudice, establishing relationships with Americans, and homesickness are the most significant factors relating to adjustment.

With regard to theory, Zhang and Goodson (2011) noted that most studies adopted psychological theories, with Ward and colleagues’ (Ward & Kennedy, 1999; Ward & Rana-Deuba, 1999) adjustment framework the most utilized theory. Ward and colleagues posited that personality, social support, and transition stress are salient predictors of psychological adjustment, and that individuals’ intercultural communication and social skills are the main drivers of sociocultural adjustment. However, Zhang and Goodson noted that the evidence in the literature base did not align completely with Ward and Kennedy: rather than some factors predicting psychological adjustment (e.g., social support and personality) and other factors predicting sociocultural adjustment (e.g., social skills learning and language fluency), factors often predicted both psychological and sociocultural adjustment.

All five recent reviews recommended that future research be conducted to address under-investigated individual-level factors (e.g., individual characteristics and perceptions), while two included a focus on moderation and mediation between these factors and group level factors (Yan & Berliner, 2011; Zhang & Goodson, 2011). Smith and Khawaja (2011) noted that social support and stronger social ties appear to have a protective effect on international students’ acculturative stress and issued a call for increased research on potential interventions to increase international students’ social ties and social support. de Araujo (2011) advocated for a focus understanding how the individual-level factor of language skills – reading, writing, speaking, and listening – might affect adjustment of international students. Last, de Araujo highlighted the scarcity of studies focusing solely on undergraduate international students as well as the sharp increases in undergraduate international students studying in the United States, increasing the impetus to

investigate separately the adjustment processes of undergraduate and graduate students.

All five of the recent literature reviews include studies with samples of international graduate and undergraduate students and do not disaggregate their outcomes; however, a distinction is made in the current study for two reasons. First, although undergraduate and graduate international students face some similar challenges, they are often at very different life stages (e.g., 18-years-old and single compared to 35-years-old with a spouse and children) in their life course, which influences the adjustment supports and challenges they experience (Elder & Shanahan, 2006). The empirical research appears to align with the theory. Graduate students report less depression, less stress, and higher social integration than undergraduate students (Han et al., 2017; Li et al., 2013); students pursuing graduate degrees were significantly more likely to use more emotion-oriented coping strategies and have higher work avoidance than their undergraduate counterparts (Kim & Ra, 2015).

The current review

The current review focuses on studies of typical psychosocial adjustment outcomes in university settings, including campus belonging, friendship number and quality, perceived social support, loneliness, depression, and anxiety. The systematic literature review is designed to answer the following research questions:

- 1 What are the predictors of international undergraduate student psychosocial adjustment to colleges and universities in the United States from 2009 to present?
- 2 What are the gaps of the research literature on international undergraduate student psychosocial adjustment?

Method

To identify studies of undergraduate international student psychosocial adjustment to U.S. universities, we conducted a

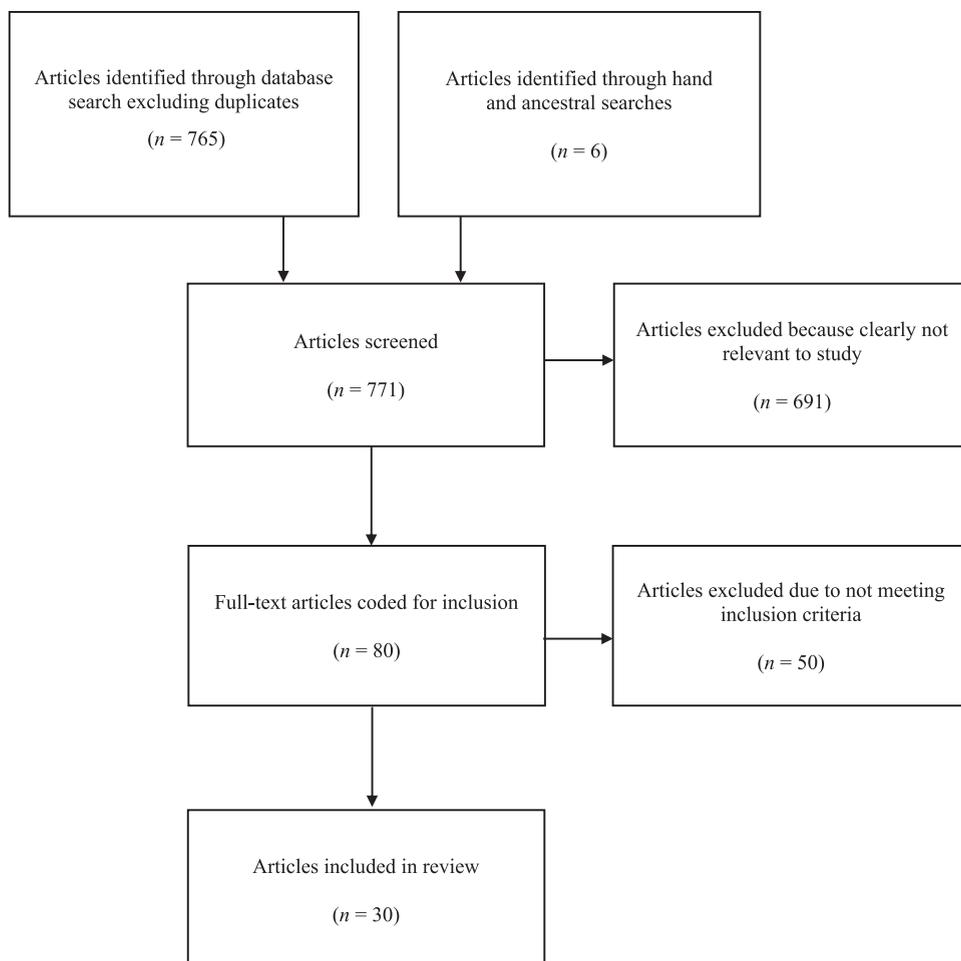


Fig. 1. Flow diagram for process of article selection.

systematic search using a multiple-gated process including electronic, ancestral, and hand searches (see Fig. 1). Inclusion criteria were determined by the authors to be used for selection of articles for the current review. For article selection, potential articles were coded independently by the authors to determine inclusion eligibility using a binary coding scheme (e.g., met/not met). Inter-rater reliability was calculated by multiplying the number of agreements between coders by 100 and dividing by the total number of articles coded.

Inclusion/exclusion criteria

Articles included in this review met all inclusion criteria: (a) include a sample of undergraduate international students at a college or university in the United States, (b) contain quantitative predictors of psychosocial outcomes for the undergraduate international students, (c) present data in a clear manner to reduce chances of misinterpretation, and (d) be published in a peer-reviewed journal between 2009 and 2017.

Undergraduate international students at U.S. universities

Due in part to issues of sample size, many studies of international students contain samples with both undergraduate and graduate students at U.S. universities. To meet inclusion criteria, studies needed to either (a) contain a sample with at least 33% undergraduate international students or (b) report outcomes separately for undergraduate international students. For studies which did not identify whether students were graduate or undergraduate students, the mean age of the student population needed to be 25 years old or younger, as this age corresponded closely with the mean age of studies with roughly 30–40% undergraduate international students (e.g., Bai, 2016; Yakunina, Weigold, & Weigold, 2013). The 33% cutoff was selected as it represents one percentage point above the proportion of a sample population that is above or below one standard deviation on any given normally distributed characteristic or outcome.

University locations were also restricted to the United States. Although it is important to note that there are many similarities between colleges and universities in the U.S. and those of other English-speaking countries (e.g., Australia, Canada, New Zealand, Singapore, United Kingdom), there are cultural, structural (e.g., tutorials, existence of Honors years, etc.), and research productivity differences between universities by country (Marginson, 2006). The recent growth in the field allows for further differentiation of student outcomes by region.

Predictors of psychosocial outcomes

Following Zhang and Goodson (2011), predictors of psychosocial outcomes needed to be quantitative to allow for easy interpretation. Thus, qualitative studies did not meet inclusion criteria. Psychosocial outcomes were represented by a range of constructs: campus belonging, social support, friendships, anxiety, happiness and depression. Other outcomes were excluded from criteria, including academic procrastination (Lowinger, He, Li, & Chang, 2014), stigma tolerance (Masuda et al., 2009), career self-efficacy (In, 2016), and personal development (Bista, 2015).

Present interpretable data

To merit inclusion, articles needed to contain a defined data analytic plan. Young (2011) presented conclusions based on quantitative findings; however, no data or analyses are presented or recorded, making independent interpretation of the data impossible.

Published between 2009 and April 2018

The purpose of the current study was to build upon the literature base reviewed by Zhang and Goodson (2011), which included 64 studies of international undergraduate (and graduate) students from 1990 to 2008. Their inclusion criteria were “studies reporting factors significantly associated with international undergraduate and graduate students’ psychosocial adjustments in the US”; psychosocial outcomes included psychological adjustment and sociocultural adjustment (Zhang & Goodson, 2011).

Electronic, hand, and ancestral searches

The authors conducted an electronic search in April 2018 of the following databases: Academic Search Premier, ERIC, PsycINFO, PscyARTICLES, and SportDiscus. All possible combinations and derivations of the search terms were used: (Field 1) international student, (Field 2) undergraduate college student, (Field 3) United States, and (Field 4) socio-emotional outcome, belonging, social support, acculturative stress, social adjustment, emotional adjustment, connectedness, well-being, happiness, anxiety, depression, or social integration. Limiters of the search included peer-reviewed only, studies published 2009 to present, and exclude dissertations. The electronic search yielded 880 articles. After duplicates were removed by EBSCOHost, 765 articles remained. The titles and abstracts of the 765 articles were read independently by multiple authors to determine whether the article had the potential to meet inclusion criteria. Inter-rater percent agreement was 95%. All articles coded yes by either the first or second author (or both) were retained. A full-text review of the 80 retained articles was conducted in order to verify that the article met inclusion criteria. All 80 retained articles were read two authors using met/not met coding scheme. Inter-rater agreement was 93% in the second pass, and a consensus model was used to determine inclusion for articles which did not receive initial agreement. The authors conducted a hand search of all journals which published two or more articles identified through the electronic and ancestral searches (i.e., *Asian American Journal of Psychology*, *Journal of International Students*, and *Journal of Student Affairs Research and Practice*).

Table 1
Literature review overview matrix.

Authors	Sample characteristics	Dependent Variables	Theoretical framework	Study design	Analytic methods	Findings (predictors)
Lee, Yun, Yoo, and Nelson (2010)	n = 107 Korean UGs; 73% adopted/US born/early immigrants, 27% int'l students	Ethnic identity, positive affect	Ethnic identity development theory; social identity theory	Cross-sectional	One-way ANOVA	Korean-born US citizenship predicted higher ethnic identity and positive affect than Korean int'l students
Tochkov et al. (2010)	n = 75; 53% Indian (M age = 22) 47% US	Homesickness	Not listed	Cross-sectional	Multiple regression	Predictors of increased homesickness: male, anxiety, and depression. Predictors of decreased homesickness: financial aid, job seeking, length of residence in US.
Kim (2011)	n = 97 int'l, 99% UG; 76% Asian, 9% European, 8% South/Central Am.	Acculturative stress	Acculturation Theory	Cross-sectional	Multiple regression	English proficiency negatively predicted acculturative stress, while academic stress and neuroticism positively predicted acculturative stress.
Kovtun (2011)	n = 41 int'l, 19 in quasi-experimental group; 79% Chinese, 11% South Korean, 5% Japanese, 5% Brazilian	Adaptation to US university	Transition theory; Cross-cultural adaptation model	Quasi-experimental, pre-test post-test	Paired samples t-test, MANOVA	Students in the quasi-experimental group made significant gains in understanding diversity, and comfort with people of different races and sexual orientations.
Muto, Hayes and Jeffcoat (2011)	n = 70 Japanese int'l M age = 23.6 years	Depression, anxiety and stress	Not listed	Intervention; Pre-test and post-test	HLM, mixed-model repeated measures	Bibliotherapy workbook intervention significantly improved scores on depression, anxiety, and stress for intervention group.
Phua and Jin (2011)	n = 114 int'l from colleges across US 18% Indian 14% South Korean 12% Chinese	Social capital	Social Identity Theory	Cross-sectional	Multiple regression	Social Networking Site (SNS) usage, identification with college community and collective self-esteem predicted increases in bridging social capital and bonding social capital in both the U.S. and participants' home countries.
Glass (2012)	n = 437 int'l UG from 38 US institutions; 65% API, 15% Latino 10% European, 7% African, 3% multiracial	Sense of campus belonging	Not listed	Cross-sectional	Multiple regression	Three campus experiences predicted campus belonging: courses with intercultural dialogue, teamwork-focused leadership workshops, and in-group cultural events.
Mamieshivili (2012)	n = 240 int'l UGs; 50% 4-year institutions, 50% 2-year institutions	Social integration	College student departure theory	Cross-sectional	Chi-square	International students at four-year institutions showed higher levels of social integration than did international students at two-year institutions.
Wei, Wang, Heppner, and Du (2012)	n = 383 int'l, M age = 24.9; 88% Chinese, 11% Taiwanese, 1% Hong Kong	Posttraumatic stress symptoms (PTSS)	Acculturation theory	Cross-sectional	Hierarchical regression	Stress and racial discrimination predicted higher levels of PTSS. Ethnic social connectedness moderated the relationship between racial discrimination and PTSS.
Li, Liu, Wei, and Lan (2013)	n = 170 Chinese int'l students: 30 UG	Psychological well-being, stress, depression	Acculturation theory	Cross-sectional	Multiple regression	Cultural assimilation was the strongest predictor of psychological well-being. International undergraduate students reported higher levels of stress and depression than graduate students.
Longerbeam, DiStefano, and Lixin (2013)	n = 361 UG Chinese int'l students from five US universities	Perception of campus and community climate	Contact hypothesis	Cross-sectional	Multiple regression	Positive interactions with U.S. students and faculty were associated with more positive perceptions of the campus and community climates.
Wang, Wong, and Fu (2013)	n = 466 int'l, 25% UG; 53% Chinese, 15% Indian, 8% Korean	Suicidal ideation	Suicidal ideation	Cross-sectional	Hierarchical multiple regression	Maladaptive perfectionism and perceived discrimination predicted suicidal ideation.

(continued on next page)

Table 1 (continued)

Authors	Sample characteristics	Dependent Variables	Theoretical framework	Study design	Analytic methods	Findings (predictors)
Yakumina et al. (2013)	n = 386 int'l, 41% UG; 59% Asian, 16% European, 11% ME, 8% Latin Am., 4% North Am., 2% Australian, 0.2% African	Psychological adjustment	Interpersonal-psychological theory of suicidal behavior Not listed	Cross-sectional	Multiple regression	Planfulness predicted increases in psychological adjustment and acculturative stress predicted decreases in psychological adjustment. Using resources moderated the acculturative stress – psychological adjustment relationship. Asian int'l students reported higher levels of parental social support than did Asian-Ams. Parental social support predicted well-being for int'l students.
Yang, Haydon, and Miller (2013)	n = 78 UGs; 60.26% Asian-Am., 39.74% Asian int'l	Parental social support, well-being	Not listed	Cross-sectional	Hierarchical regression	There were no significant group differences in reported levels of campus belonging among international and domestic students. Discriminatory experiences had a negative effect on campus belonging for both groups. Discrepancy between perceived and expected performance and acculturative stress significantly predicted depression in East Asian int'l students.
Glass and Westmont (2014)	n = 18,628 UGs; 1398 int'l 17,230 domestic	Sense of campus belonging	Not listed	Cross-sectional	Between-subjects t-test, structural equation modeling	There were no group differences between African-Am. and int'l students for intentions to seek counseling. Positive attitudes towards mental health services, psychological stress, and perceived behavioral control predicted intention to seek counseling.
Hamamura and Laird (2014)	n = 182, 78% UG; 30.77% East Asians, 69.23% US	Depression	Not listed	Cross-sectional	Multiple regression, one-way ANOVA	Perceived racial discrimination, and subjective masculinity stress positively predicted psychological distress. Length of time in the US negatively predicted psychological distress. Masculine identity centrality moderated the relationship between perceived racial discrimination and subjective masculinity stress.
Mesidor and Sly (2014)	n = 111, 94% UG; 64.86% African-Am., 27.92% int'l, 7.21% other	Intentions to Seek Counseling	Theory of Planned Behavior	Cross-sectional	Independent samples t-test, multiple regression	Psychological distress predicted by neuroticism and academic stress, negatively predicted by academic stress control and social connectedness with US students. Sociocultural adjustment trajectory predicted by openness and academic stress control and negatively predicted by neuroticism.
Wong, Tsai, Liu, Zhu, and Wei (2014)	n = 160 male Asian int'l; M age = 24.98; 50% China, 12.5% India, 12.5% Malaysia, 6.3% South Korea, 6.3% Taiwan, 3.1% Indonesia, 1.9% Japan, 1.3% Thailand, 5.0% other	Subjective masculinity stress, psychological distress	Collective identity	Cross-sectional	Hierarchical multiple regression, moderation and mediation analyses	Emotion-oriented coping and age were significant predictors of decreased acculturative stress.
Hiral, Frazier, and Syed (2015)	n = 248 int'l, 40% UG; 88% Asian, 7% White, 3% Hispanic/Latinx, 2% Black/African	Psychological distress, sociocultural adjustment difficulties	Not listed	Longitudinal	Latent class growth analysis	
Kim and Ra (2015)	n = 170 Korean int'l students, 68% UG	Acculturative stress	Not listed	Cross-sectional	Hierarchical linear regression	

(continued on next page)

Table 1 (continued)

Authors	Sample characteristics	Dependent Variables	Theoretical framework	Study design	Analytic methods	Findings (predictors)
Sullivan and Kashubeck-West (2015)	n = 104 int'l, 54.81% UG; 59% Asian, 24% European, 7% South Am.	Acculturative stress	Acculturation theory	Cross-sectional	One-way ANOVA	Acculturation strategies predicted variations in acculturative stress, from least acculturative stress to greatest: integration, assimilation, segregation, and marginalization.
Wei et al. (2015)	n = 201 Chinese int'l, 58% UG	Depression, anxiety, PTSS	Acculturation theory	Cross-sectional	Hierarchical regression analyses	Self-esteem predicted depression and anxiety, but not PTSS. However, perceived language discrimination predicted all three outcomes: depression, anxiety, and PTSS.
Yildirim (2015)	n = 30 UGs from Turkey	Social and adjustment challenges	Not listed	Cross-sectional	Hierarchical multiple regression	English difficulty positively predicted adjustment problems, while socialization with non-Turkish students negatively predicted adjustment problems.
Bai (2016)	n = 152; 35.57% UG; 63.8% Asian, 7.2% African, 7.9% European, 12.5% ME, 6.6% Middle/South Am., 1.3% North Am.	Acculturative stress	Acculturation theory	Cross-sectional	Hierarchical regression	Perceived support by the school was a significant negative predictor of acculturative stress. English proficiency was not a significant predictor of acculturative stress.
Servaty-Seib et al. (2016)	n = 254 UGs, 18.11% int'l; Int'l sample: 46% Chinese, 20% Indian, 9% Malaysian	Suicidal ideation	Interpersonal Theory of Suicide	Cross-sectional	Hierarchical regression	Perceived burdensomeness predicted suicidal ideation; campus belongingness predicted decreases in suicidal ideation.
Bhochibhoya, Dong, and Branscum (2017)	n = 328 int'l, 43.29% UG	Social support, negative affect	Not listed	Cross-sectional	Repeated measures ANOVA	Perceived social support from home country was highest; length of time in the US positively predicted negative affect.
Han, Pistole, and Caldwell (2017)	n = 210 Asian int'l; 40.00% UG; 59.50% female	Social integration	Acculturation theory, attachment theory	Cross-sectional	Moderated multiple regression	Significant predictors of increased social integration: educational status, English proficiency, professor attachment.
Maffini (2017)	n = 2385 UGs; 80% Asian American, 20% Asian int'l	Safety perception, anxiety, depression, suicidality	Not listed	Cross-sectional	Chi-square, MANCOVA, logistic regressions	Acculturative stress negatively predicted social integration. Asian int'l students reported higher depression and lower anxiety than Asian-Am. Among int'l students, females reported higher anxiety and depression; lower grades predicted higher levels of depression.
Hansen et al. (2018)	n = 243 community college int'l; M age = 23.70; 55.80% female; 37.00% East/SE Asia, 18.50% Caribbean, 15.60% South Asia, 14.80% Europe, 7.40% South Am.	Acculturative stress	Acculturation theory	Cross-sectional	Independent sample t-test, one-way ANOVA, linear regression	Negative predictors of acculturative stress: English as a native language, moving to the US with family, and high immersion in US culture. Positive predictors of acculturative stress: South and East Asian descent and high immersion in one's native culture.
Van Home, Lin, Anson, and Jacobson (2018)	n = 58,895 UGs; 6.5% international, 93.5% domestic; int'l sample M age = 20.98, 57.07% female	Social belonging, feeling respected	Input, Environment, Output framework,	Cross-sectional	Multiple regression	Compared to domestic students, int'l students report lower levels of social belonging and feeling respected. Student interaction was significant predictor for int'l student belonging.

Note. Am. = America(n); int'l = international; ME = Middle Eastern; PTSS = post-traumatic stress symptoms, SE = Southeast; UG = undergraduate; US = United States.

Results

Publishing rate

A total of 30 studies published since 2009 met the criteria for inclusion. The publishing rate from January 2009 to April 2018 is 3.32 studies per twelve months. Details about the included studies can be found in [Table 1](#), and included studies are denoted in the reference list with an asterisk. Although [Zhang and Goodson \(2011\)](#) identified 64 studies from 1990 to 2009 (3.2 per twelve months), the majority of the studies in their review included graduate students in their sample; only three studies during the 20-year timeframe had samples of solely undergraduate students compared to thirteen (41.93%) of the current review. [de Araujo's \(2011\)](#) call for additional research on undergraduate international student adjustment has been heeded, as the current review contains nineteen undergraduate-majority samples compared to the one identified in his study. This increased research output on undergraduate student adjustment is needed, and it would be useful to investigate potential factors driving this growth in research, including the increase of undergraduate international student numbers, increase in peer-reviewed publication outlets for research on international student adjustment, and more faculty and staff positions at U.S. universities focused on international student development.

Sample characteristics

One of the strengths of the field presents a massive logistical challenge for researchers of international students: students come from countries all over the world, each with their own cultures and sub-cultures which often include differences in social, emotional, and academic norms, behaviors, and expectations. The 30 studies included in this review underscore this challenge, as some studies include student participants from one country (e.g., South Korea or Turkey), others focused on particular regions (e.g., East Asia), while still others included international students from whichever countries were represented at their institutions. Eight studies included students from a range of institutions, with five ([Glass & Westmont, 2014](#); [Glass, 2012](#); [Maffini, 2017](#); [Mamisseishvili, 2012](#); [Van Horne, Lin, Anson, & Jacobson, 2018](#)) drawing from national datasets or measurement databases, one drawing from a five-university consortium for student exchange ([Longerbeam, DeStefano, & Lixin, 2013](#)), one drawing from two universities ([Wei, Wang, Heppner, & Du, 2012](#)), and one distributing a survey via social media and email to various international student groups at universities ([Phua & Jin, 2011](#)). As it is critical for universities to be able to serve students of all backgrounds, there is a need for a large corpus of research to provide population-specific information (e.g., what type of social support is most important for students of a certain culture). However, as the field is still in its infancy, it is important to attempt to first provide more generalized research about international students as a whole. As one-size-fits-all studies and interventions that can serve large portions of the international undergraduate student population are tested, we can continue to enhance understanding of culturally-specific adjustment needs.

Types of studies

Of the 30 identified studies, 27 were cross-sectional in design. Two studies used pre-post designs to assess the outcomes of interventions ([Kovtun, 2011](#); [Muto, Hayes, & Jeffcoat, 2011](#)). International students who completed a one-semester seminar course devoted to learning social norms and intercultural skills were more comfortable with people of diverse backgrounds and more likely to interact with Americans than international students who did not take the course ([Kovtun, 2011](#)). International students who completed a bibliotherapy intervention reported decreases in depression, anxiety, and stress ([Muto et al., 2011](#)). One study examined trajectories of psychological distress and sociocultural adjustment, finding that they did decline slightly across an academic year without matching the U-curve model for cultural adaptation ([Hirai, Frazier, & Syed, 2015](#)).

Theoretical frameworks

A range of theories were incorporated and tested in the 30 included studies. Only three were used in more than one study: Acculturation Theory ([Berry, 2005](#)), Social Identity Theory ([Tajfel & Turner, 1986](#)), and Interpersonal Theory of Suicide ([Joiner, 2005](#)). Since 2009, there appears to be a shift in theoretical frameworks from [Ward and Kennedy's \(1999\)](#) sociocultural adaptation framework to theories focused on acculturation and social identity. The strong base of research supporting acculturation theory outside of the university context provides an opportunity to continue to extend its application to undergraduate international students at U.S. universities. Acculturation frameworks have mainly been used to test a range of psychological well-being outcomes, including: well-being ([Li et al., 2013](#)), acculturative stress ([Bai, 2016](#); [Hansen, Shneyderman, McNamara, & Grace, 2018](#); [Kim, 2011](#); [Sullivan & Kashubeck-West, 2015](#)), post-traumatic stress symptoms ([Wei, Liang, Du, Botello, & Li, 2015](#); [Wei et al., 2012](#)), and depression and anxiety ([Wei et al., 2015](#)). Recently, [Han et al. \(2017\)](#) integrated acculturation and attachment theories to examine sociocultural adjustment, revealing that, among other variables, professor attachment predicted social integration.

Psychological well-being

Twenty-one of the 30 studies identified in the current review reported data on emotional outcomes, including depression, anxiety, Post-Traumatic Stress symptoms, suicidal ideation, acculturative stress, homesickness, well-being, psychological distress, masculinity stress, and intentions to seek counseling. A range of predictors were identified for various well-being outcomes; age, gender, belonging/social support, acculturation strategy, English ability, and racial discrimination were the most frequent. Aside from personal

characteristics and self-perceptions (e.g., age, gender, English ability), the other three predictors constitute constructs that encompass interpersonal interactions.

East Asian international students who experienced discrimination, whether racially-based or linguistically-based, had higher depression, anxiety, Post-Traumatic Stress symptoms, suicidal ideation, and psychological distress (Wei et al., 2015; Wang, Wong, & Fu, 2013; Wei et al., 2012). In a more diverse though still predominantly Asian sample of students, students with higher campus belonging reported less suicidal ideation (Servaty-Seib et al., 2016); similarly, students experiencing school support report lower acculturative stress (Bai, 2016). Acculturation strategy was investigated twice. Students pursuing integration and assimilation strategies reported the lowest acculturative stress and next lowest amount of acculturative stress respectively for a diverse sample of international students (Sullivan & Kashubeck-West, 2015). For Chinese students, those pursuing cultural assimilation (i.e., integration or assimilation strategies) experienced higher well-being than students pursuing cultural maintenance (Li et al., 2013). It appears that there is growing evidence for the influence of international students' social sphere on their psychological and emotional well-being.

Sociocultural adjustment

Thirteen of the 30 included studies addressed sociocultural outcomes, including social integration, belonging, interaction with faculty and domestic students, interacting with diverse individuals, parental social support, and social capital. Predictors and other variables associated with social outcomes included level of university (i.e., 4-year vs. 2-year), academic intervention focused on understanding U.S. social and academic norms, discrimination, belonging, social interaction, and challenges with English. The most common results documented by the included studies were positive interrelations between campus belonging, social integration, and social interaction.

In a nationwide sample of undergraduates, international students reported that three campus experiences predicted higher belonging: courses which include intercultural dialogue, collaborative/teamwork-based leadership programs, and events sponsored by their own cultural group (Glass, 2014). International students who interacted more with domestic students reported higher campus belonging (Longerbeam et al., 2013; Van Horne et al., 2018). Similarly, international students with more faculty interaction or stronger faculty relationships experienced more belonging (Han et al., 2017; Longerbeam et al., 2013). Although there is still much research needed in this area, a pattern appears to be emerging: successful intercultural interpersonal interaction, whether with domestic students, faculty, or other international students may represent a critical mechanism and context for international student belonging, which, in turn, may influence other psychosocial and academic outcomes (Korobova & Starobin, 2015; Lowinger et al., 2016).

Discussion

The 30 studies included in this review show the increased focus on understanding undergraduate international student psychosocial adjustment to colleges and universities in the United States. Due in part to the increase in undergraduate international student enrollment at U.S. institutions, researchers have begun to target undergraduate student adjustment. Recent findings and increased research attention is promising and provides a stronger foundation for future research and intervention.

Implications for research

We believe the field would benefit from increased attention to the following: extending and integrating theory to understand development over time; testing differences between graduate and undergraduate students; replicating results and developing additional longitudinal and intervention research; examining acculturative stress as a mediating/moderating variable; and unpacking the interactions in the students' social milieu.

It will be critical for researchers to continue developing theories and frameworks that are able to both explain cross-cultural interactions and human adjustment over time. We recommend researchers consider how developmental theories and frameworks (e.g., Bronfenbrenner's ecological model, Life Course Theory) might better inform researchers' understanding of the factors influencing international student growth and adjustment during times of transition to U.S. universities. Additionally, interaction with motivational theories might help researchers to understand why students choose to undertake certain acculturation strategies or adopt certain behaviors. For instance, Han et al. (2017), drew on both attachment theory and acculturation theory in conceptualizing the potential association between students' relationships with faculty and their social integration.

Greater consideration and inclusion of developmental and motivational theories will also inform conceptualization of research with respect to student graduate/undergraduate status or degree pursued. International undergraduate students are often at different life stages from their graduate counterparts with regard to relationship status, years lived away from home, jobs held, physical maturation, future goals, etc. These differences are no longer solely the purview of theory: multiple empirical studies in the current review revealed differences in outcomes between graduate and undergraduate students. Graduate students reported higher social integration (Han et al., 2017) and lower stress (Li et al., 2013). Similarly, older students reported less acculturative stress (Kim & Ra, 2015). It is understandable that studies include samples of both undergraduate and graduate students, both due to questions that are not degree-specific and due to the realities of obtaining a large enough sample of international students; however, we recommend that researchers test for differences based on degree pursued or undergraduate status. Although age may serve as a proxy for degree pursued status when necessary, there may be cultural differences in ages at which individuals attend university that limit its ability to accurately represent the level of degree students are pursuing.

Although it would be ideal to have more intervention studies and studies with longitudinal designs, it is reasonable that the majority of studies focused on understanding relationships among student psychosocial variables during a single timepoint. There is so much that is unstudied concerning international student adjustment that it is sensible for researchers to focus on understanding primary relationships between student characteristics, their experiences, and their adjustment outcomes. Indeed, there is still great need for replication of research findings, given that the majority of the studies had participant samples from one institution. Additionally, it can be difficult to obtain a large sample of international students for even a single timepoint, which to some degree explains the dearth of longitudinal research. However, pending replication of recent findings, it appears that the field is closer to heeding the calls of [Smith and Khawaja \(2011\)](#) and [Zhang and Goodson \(2011\)](#) for more intervention studies of undergraduate students attending U.S. institutions of higher education. Here, as in all aspects, we would do well to look globally for research and practices: intervention studies of students in Canada ([Mak, Barker, Logan, & Millman, 1999](#)) and Australia ([Smith & Khawaja, 2014](#)) could be tested with students in the U.S. Additionally, new interventions could be developed based on the studies in this review.

[Smith and Khawaja \(2011\)](#) noted the lack of longitudinal research on the influence of acculturation stress on students' psychological outcomes. Such studies would help us to understand when acculturative stress is most likely to result in negative or positive outcomes. Based on the items comprising acculturative stress (e.g., "I miss the people and my country of origin", "I am treated differently in social situations"), it might be best to reconsider the role of acculturative stress in international students' emotional adjustment to US universities. Acculturative stress may represent a more salient construct for international student emotional adjustment and psychological well-being when it is tested in interaction with other predictor variables such as resiliency, parental support, or social support from faculty. Indeed, of the studies reviewed, five examined acculturative stress as an outcome variable, while three examined it as a predictor. Stress, though challenging, is not by itself a negative outcome; indeed, humans typically have better health and adjustment when under some stress than without stress ([Chrousos & Gold, 1992](#)).

Beyond individual characteristics, perceptions of social support and belonging, and acculturation strategy, more direct measures of international students' social milieu should be sought including number of friendships, number of weekly social interactions, number of social events attended. The call issued by [Zhang and Goodson \(2011\)](#) for more macro-level factors (e.g., ethnic density at the university) continues to need research attention. Zhang and Goodson's advice has not gone unheeded; [Kim and Ra \(2015\)](#) tested for the influence of coping skills on psychological outcomes, documenting that students who practiced emotion-focused coping reported less acculturative stress. Although there is increasing evidence for the social challenges faced by undergraduate international students at U.S. universities, there are many critical questions still unasked: (a) what is the typical number of friends that international students have? How does this compare to domestic students? Does number of friends influence belonging and social interaction? (b) What is the comparative influence of the number of friends or social ties versus the strength and longevity of the friendships/social ties? (c) Is it more important for one's social and emotional well-being to have stronger friendships or more social ties (e.g., is it better to have two good friends or two groups of acquaintances)? (d) Does the type of friend or acquaintance matter? Qualitative research suggests both domestic friends and international friends are important to belonging ([Slaten, Elison, Lee, Yough, & Scalise, 2016](#)), but is one type more influential? Is it more difficult to initiate or maintain friendships with domestic students than international ones? (e) What source of social support is most important for student belonging? Faculty, staff, domestic student, other international students, or other international students from the same culture? (f) How does country of origin influence one's social interaction needs, challenges, ability, and social adjustment trajectory? (g) How does the relationship or lack thereof with roommates influence international student belonging? Will quantitative evidence coincide with recent qualitative findings of the negative interactions documented by international students with domestic roommates ([Yao, 2016](#))? and (h) How do friendships and social networks of international students change over time? How does this change impact belonging and social interaction? Based on the current review, we echo [Smith and Khawaja's \(2011\)](#) call for research on the change in international students' sociocultural adjustment over time.

It is important to note that the majority of the predictors of sociocultural outcomes are student characteristics as well as students' perceptions of their belonging, acculturation strategies, and social interactions. These are not easy targets for intervention from university offices focused on campus life or academic support. Research investigating feasible interventions for socio-cultural adjustment outcomes (e.g., increased counseling support, 1:1 mentoring, first-year seminar courses with intentional enrollments of equal proportions of international and domestic students, interculturally-focused pre-orientation programs) is much needed.

Implications for campus personnel and students

It is critical for college and university personnel, whether administration, faculty, or campus life, to appreciate the unique challenges facing undergraduate international students. Understanding the relationship between personal differences and psychosocial adjustment is a good starting point (e.g., male Indian international students experience higher levels of homesickness than female Indian international students; [Tochkov, Levine, & Sanaka, 2010](#)). However, as any international student may face adjustment challenges, university personnel should have a grounding in the skills and attitudes that enhance international student adjustment.

[Gebhard \(2012\)](#) provides a range of emotion-focused coping strategies reported as successful by international students, including: reminders of home culture, humor, and engaging with supportive people. Reminders of home culture can include student-derived objects such as family photographs and music, but can also be implemented by college staff in administration in the form of food and art on campus. Cross-cultural interactions are often clumsy for all involved, so keeping a sense of humor can provide relief when international students take risks and make mistakes. Identifying an empathetic member of the host culture is another strategy for international students to increase their social support. Oftentimes international students are unsure about asking for help, even if it is only clarification about expectations on an assignment or what building on campus is hosting an event. Since international students

come to U.S. institutions of higher education to learn and gain information, reframing *needing help* to *asking for information* has the potential to reduce the feeling of imposing on someone else. We recommended that international students develop working relationships or friendships with more than one American faculty, staff, or student to rely on for information, both so that they can verify the accuracy of the information they receive and so that they do not overburden one person.

Many U.S. colleges and universities have instituted first-year experience courses to serve as extensions of orientation and provide additional learning and contexts for belonging for first-year students (Keup & Petshauer, 2011). We recommend that institutions consider adding information about acculturation to these first-year experience courses, as all students—both international and domestic—are adjusting to the campus culture. Inclusion of acculturation content would be useful not only for international students, but potentially help domestic students realize both their need to acculturate and the role they play in the acculturation of international students.

Recent research (Yao, 2016) has illuminated the role roommate relationships have in international student belonging. It is unsurprising how important the roommate relationship is given the amount of time spent in the dorm room each day. Although international students are typically excited to have U.S. roommates, they—similar to the U.S. students—may have unrealistic expectations of the roommate relationship. Campus life staff can help international and domestic students adjust their expectations during orientation by holding meetings with their Resident Advisor. Residence life and housing staff may also consider trainings and professional development centered on international student adjustment and acculturation. As university personnel strive to serve their international students, it is critical that research provide evidence-based recommendations to practitioners and students.

Limitations

There are a few limitations of the current study to note. First, it is possible that not all studies of undergraduate international students in US colleges and universities were identified. One of the challenges of conducting a literature review in an interdisciplinary field is the wide range of journals in which international student adjustment research is published. Another limitation of this review is inherent in organizing studies with different outcomes, predictors, and samples. The variation among sample characteristics (e.g., countries of origin, size of sample, number of universities represented) is to be expected, but makes generalization challenging. The current review only included quantitative studies, which excluded qualitative studies with findings relevant to international students' adjustment. Qualitative research is critical to better understanding the contexts in which the relationships tested by the studies in this review occur; however, the goal of the review was to understand what factors predict psychosocial outcomes. Additionally, the review is limited to studies of U.S. universities. However, given the changes to patterns of international students attending global universities in the past decade (IIE, 2017), it is critical that researchers provide detailed reviews of international student adjustment with an eye toward understanding adjustment for specific populations, host countries, and student characteristics.

Conclusions

The authors identified 30 research articles reporting psychosocial adjustment outcomes of undergraduate international students at US colleges and universities. The strengths of the literature include the diversity of country of origin of student participants across studies, the frequent application of acculturation theory to international student adjustment, and the growth of literature on linkages between personal characteristics, university experiences, and emotional outcomes. However, there is much research to conduct to further our understanding in this field and provide practitioners with evidence-based practices. Testing of the usefulness of developmental theories in integration with acculturation theory, further exploration of social experiences and outcomes of international undergraduate students, increasing the complexity of study designs, and developing new interventions represent key opportunities for next steps in research.

References

- *Bai, J. (2016). Perceived support as a predictor of acculturative stress among international students in the United States. *Journal of International Students*, 6, 93–106.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, 29, 697–712. <http://dx.doi.org/10.1016/j.ijintrel.2005.07.013>.
- *Bhochibhoya, A., Dong, Y., & Branscum, P. (2017). Sources of social support among international college students in the United States. *Journal of International Students*, 7, 671–686.
- Bista, K. (2015). The influence of country of origin and academic level on Asian students' gains of learning. *Journal of International Students*, 5, 300–305.
- Chrousos, G. P., & Gold, P. W. (1992). The concepts of stress and stress system disorders: Overview of physical and behavioral homeostasis. *Journal of the American Medical Association*, 267, 1244–1252.
- de Araujo, A. A. (2011). Adjustment issues of international students enrolled in American colleges and universities: A review of the literature. *Higher Education Studies*, 1, 2–8.
- Elder, G. H., & Shanahan, M. J. (2006). The life course and human development. In (6th ed.). R. M. Lerner, & W. Damon (Vol. Eds.), *The handbook of child psychology: Theoretical models of human development: Vol. 1*, (pp. 665–715). Hoboken, NJ: John Wiley & Sons.
- Gebhard, J. G. (2012). International students' adjustment problems and behaviors. *Journal of International Students*, 2, 184–193.
- *Glass, C. R. (2012). Educational experiences associated with international students' learning, development, and positive perceptions of campus climate. *Journal of Studies in International Education*, 16, 228–251.
- *Glass, C. R., & Westmont, C. M. (2014). Comparative effects of belongingness on the academic success and cross-cultural interactions of domestic and international students. *International Journal of Intercultural Relations*, 38, 106–119.
- *Hamamura, T., & Laird, P. G. (2014). The effect of perfectionism and acculturative stress on levels of depression experienced by East Asian international students. *Journal of Multicultural Counseling and Development*, 42, 205–217.
- *Han, S., Pistole, M. C., & Caldwell, J. M. (2017). Acculturative stress, parental and professor attachment, and college adjustment in Asian international students. *Journal of Multicultural Counseling and Development*, 45, 111–126.
- *Hansen, H. R., Shneyderman, Y., McNamara, G. S., & Grace, L. (2018). Assessing acculturative stress of international students at a U.S. Community college. *Journal of*

- International Students*, 8, 215–232.
- *Hirai, R., Frazier, P., & Syed, M. (2015). Psychological and sociocultural adjustment of first-year international students: Trajectories and predictors. *Journal of Counseling Psychology*, 62, 438–452.
- Institute of International Education (2009). *International student totals by place of origin, 2007/08-2008/09. Open doors report on international educational exchange* Retrieved from <http://www.iie.org/opensdoors>.
- Institute of International Education (2017). *International student totals by place of origin, 2015/16-2016/17. Open doors report on international educational exchange* Retrieved from <http://www.iie.org/opensdoors>.
- In, H. (2016). Acculturation and hope as predictors of career decision self-efficacy among Korean international undergraduate students. *Journal of Career Development*, 43, 526–540.
- Joiner, T. E. (2005). *Why people die by suicide*. Harvard University Press: Cambridge, MA.
- Keup, J. R., & Petshauer, J. W. (2011). *The first-year seminar: Designing, implementing and assessing courses to support student learning and success. Designing and administering the course, Vol. 1*. Columbia, SC: National Resource Center.
- *Kim, S.-A. (2011). Predictors of acculturative stress among international music therapy students in the United States. *Music Therapy Perspectives*, 29, 126–132.
- *Kim, W. H., & Ra, Y.-A. (2015). Acculturative stress: The experience of Korean heritage college students. *Journal of Asian Pacific Counseling*, 5, 65–76.
- Korobova, N., & Starobin, S. S. (2015). A comparative study of student engagement, satisfaction, and academic success among international and American students. *Journal of International Students*, 5, 72–85.
- *Kovtun, O. (2011). International student adaptation to a U.S. college: A mixed methods exploration of the impact of a specialized first-year course at a large Midwestern institution. *Journal of Student Affairs Research and Practice*, 48, 349–366.
- *Lee, R. M., Yun, A. B., Yoo, H. C., & Nelson, K. P. (2010). Comparing the ethnic identity and well-being of adopted Korean Americans with immigrant/U.S.-born Korean Americans and Korean international students. *Adoption Quarterly*, 13, 2–17.
- *Li, J. Q., Liu, X., Wei, T., & Lan, W. (2013). Acculturation, internet use, and psychological well-being among Chinese international students. *Journal of International Students*, 3, 155–166.
- *Longerbeam, S. D., DeStefano, T. J., & Lixin, Y. (2013). We cannot reach them?: Chinese undergraduate student perceptions of the U.S. campus climate. *Journal of Student Affairs Research and Practice*, 50, 326–344.
- Lowinger, R. J., He, Z., Li, M., & Chang, M. (2014). The impact of academic self-efficacy, acculturation difficulties, and language abilities on procrastination behavior in Chinese international students. *College Student Journal*, 48, 141–152.
- Lowinger, R. J., Kuo, B. C. H., Song, H.-A., Mahadevan, L., Kim, E., Liao, K. Y.-H., et al. (2016). Predictors of academic procrastination in Asian international college students. *Journal of Student Affairs Research and Practice*, 53, 90–104.
- *Maffini, C. S. (2017). Campus safety experiences of Asian American and Asian international college students. *Asian American Journal of Psychology* Advance online publication.
- Mak, A., Barker, M., Logan, G., & Millman, L. (1999). Benefits of cultural diversity for international and local students: Contributions from an experiential social learning program (The EXCELL Program). *International Education: The Professional Edge*, 63–76.
- *Mamiseishvili, K. (2012). International student persistence in U.S. postsecondary institutions. *Higher Education*, 64, 1–17.
- Marginson, S. (2006). Dynamics of national and global competition in higher education. *Higher Education*, 52, 1–39.
- Masuda, A., Hayes, S. C., Twohig, M. P., Lillis, J., Fletcher, L. B., & Gloster, A. T. (2009). Comparing Japanese international College students' and U.S. college students' mental-health-related stigmatizing attitudes. *Journal of Multicultural Counseling and Development*, 37, 178–189.
- *Mesidor, J. K., & Sly, K. F. (2014). Mental health help-seeking intentions among international and African American college students: An application of the theory of planned behavior. *Journal of International Students*, 4, 137–149.
- Mesidor, J. K., & Sly, K. F. (2016). Factors that contribute to the adjustment of international students. *Journal of International Students*, 6, 262–282.
- *Muto, T., Hayes, S. C., & Jeffcoat, T. (2011). The effectiveness of acceptance and commitment therapy bibliotherapy for enhancing the psychological health of Japanese college students living abroad. *Behavior Therapy*, 42(2), 323–335.
- *Phua, J., & Jin, S.-A. A. (2011). Finding a home away from home?: The use of social networking sites by Asia-Pacific students in the United States for bridging and bonding social capital. *Asian Journal of Communication*, 21, 504–519.
- *Servaty-Seib, H. L., Lockman, J., Shemwell, D., & Marks, L. R. (2016). International and domestic students, perceived burdensomeness, belongingness, and suicidal ideation. *Suicide and Life-Threatening Behavior*, 46, 141–153.
- Slaten, C. D., Elison, Z. M., Lee, J.-Y., Yough, M., & Scalise, D. (2016). Belonging on campus: A qualitative inquiry of Asian international students. *The Counseling Psychologist*, 44, 383–410.
- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations*, 35, 699–713.
- Smith, R. A., & Khawaja, N. G. (2014). A group psychological intervention to enhance the coping and acculturation of international students. *Advances in Mental Health*, 12, 110–124.
- *Sullivan, C., & Kashubeck-West, S. (2015). The interplay of international student acculturative stress, social support, and acculturation. *Journal of International Students*, 5, 1–11.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel, & W. Austin (Eds.). *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson Hall.
- *Tochkov, K., Levine, L., & Sanaka, A. (2010). Variation in the prediction of cross-cultural adjustment by Asian-Indian students in the United States. *College Student Journal*, 44, 677–689.
- *Van Horne, S., Lin, S., Anson, M., & Jacobson, W. (2018). Engagement, satisfaction, and belonging of international undergraduates at U.S. research universities. *Journal of International Students*, 8, 351–374.
- Wang, K. T., Heppner, P. P., Fu, C.-C., Zhao, R., Li, F., & Chang, C.-C. (2012). Profiles of acculturative adjustment patterns among Chinese international students. *Journal of Counseling Psychology*, 59, 424–436.
- *Wang, K. T., Wong, Y. J., & Fu, C.-C. (2013). Moderation effects of perfectionism and discrimination on interpersonal factors and suicide ideation. *Journal of Counseling Psychology*, 60, 367–378.
- Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations*, 23, 659–677.
- Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of Cross-Cultural Psychology*, 30, 422–442.
- *Wei, M., Liang, Y.-S., Du, Y., Botello, R., & Li, C.-I. (2015). Moderating effects of perceived language discrimination on mental health outcomes among Chinese international students. *Asian American Journal of Psychology*, 6, 213–222.
- *Wei, M., Wang, K. T., Heppner, P. P., & Du, Y. (2012). Ethnic and mainstream social connectedness, perceived racial discrimination, and posttraumatic stress symptoms. *Journal of Counseling Psychology*, 59, 486–493.
- *Wong, J. Y., Tsai, P.-C., Liu, T., Zhu, Q., & Wei, M. (2014). Male Asian international students' perceived racial discrimination, masculine identity, and subjective masculinity stress: A moderated mediation model. *Journal of Counseling Psychology*, 61, 560–569.
- *Yakunina, E. S., Weigold, I. K., & Weigold, A. (2013). Personal growth initiative: Relations with acculturative stress and international student adjustment. *International Perspectives in Psychology: Research, Practice, Consultation*, 2, 62–71.
- Yan, K., & Berliner, D. C. (2011). Chinese international students in the United States: Demographic trends, motivations, acculturation features and adjustment challenges. *Asia Pacific Educational Review*, 12, 173–184.
- *Yang, M., Haydon, K. C., & Miller, M. J. (2013). The relationship between intergenerational cultural conflict and social support among Asian American and Asian international female college students and their parents. *Asian American Journal of Psychology*, 4, 193–200.
- Yao, C. (2016). Unfulfilled expectations: Influence of Chinese international students' roommate relationships on sense of belonging. *Journal of International Students*, 6, 762–778.
- *Yildirim, O. (2015). English related difficulties experienced by Turkish students studying in a dual diploma ELT program in the U.S.A. *Journal of International Education Research*, 11, 107–118.
- Young, A. S. (2011). First time international college students' level of anxiety in relationship to awareness of their learning-style preferences. *Journal of International Students*, 1, 43–49.
- Zhang, J., & Goodson, P. (2011). Predictors of international students' psychological adjustment to life in the United States: A systematic review. *International Journal of Intercultural Relations*, 35, 139–162.