Comparative Analysis of Social Integration Strategies and their Effects on Anxiety Levels in International Graduate Students

Oluwatobi Adeyoyin[1]*
[1]Southern Illinois University Edwardsville, USA

Abstract: International graduate students are often under increased anxiety due to the complex social, intellectual, and cultural adaptations required of them. While social integration techniques have been demonstrated to reduce acculturative stress, there exists little comparative research to evaluate the efficacy of the intervention in reducing anxiety, especially among international graduate students. This study used a mixed-methods approach to analyze the relationship between anxiety levels and types of social integration techniques among international graduate students in Canada. This includes using tools to evaluate anxiety (GAD-7), social support (MSPSS), and community belonging (ISSS), using a national dataset (Clarke, 2023) to make original data through surveys and interviews. The process of determining which anxiety-reduction strategies— informal networks, institutional programs, or peer support — work involves regression analysis, theme coding, and triangulation. The expected results of this research will indicate that institutional services are still underutilized because of stigma and cultural incongruence, even if peer-based and culturally appropriate support networks considerably lower anxiety. The study gives universities evidence-based recommendations about how to address mental health awareness, collect disaggregated data to focus treatments and create tailored and culturally appropriate integration programs. It also signals priority pathways for future research, including intersectional and long-term work across diverse host countries." The study's ultimate aim is to help create warming and psychologically safe learning environments for international students managing graduate school stresses.

Keywords: Higher education policy, anxiety, mental health, social integration, cultural adaptability, and international graduate students.

INTRODUCTION

The globalization of higher education has led to an increase in the number of international graduate students across the world, especially in countries like the US, UK, and Canada (Clarke, 2023; Oduwaye *et al.,* 2023). While these students bring different ideas to the classroom, they often encounter psychological challenges that accompany their transition into new academic and social environments. According to research, the most prevalent among these "Psychological challenges" is anxiety, often triggered by cultural dissonance, language barriers, academic pressure, and social isolation (Kristiana *et al.,* 2022; Clarke, 2023). Also, a considerable number of studies have shown that international students experience these challenges than local students do.

For instance, Clarke (2023) found that international graduate students in Canada experienced unique mental health challenges in comparison to domestic students and that they are less likely to use mental health services to seek help. This is because they are handicapped by certain barriers like stigma, lack of culturally appropriate services, and lack of awareness of what options are available. This inability to seek and access relevant help is going to lead more students to anxiety and isolation, which would affect them academically and psychologically.

To mitigate this problem, integration strategies such as official orientation programs, counseling services, informal peer group networking, and cultural student associations are crucial. Kristiana *et al.,* (2022) through a meta-analysis observed that international students' acculturative stress is significantly decreased

Peer Review Process: The Journal "Middle East Research Journal of Humanities and Social Sciences" abides by a double-blind peer review process such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).

114

by social support. They found that support from family, other international students, and host nationals serves as buffers against mental discomfort, particularly that arising from worry and homesickness. They further explained that peer group support fostered emotional connection and cultural adjustment, while institutional support helped with academic adaptation. However, very few studies have investigated the effects of different social integration techniques on anxiety levels, especially within graduate student populations. Most of this research, including the one carried out by Oduwaye *et al.,* (2023), has examined the overall link between academic success and psychological outcomes without looking at anxiety in isolation and has not differentiated the specific contributions of different integration methods. Furthermore, much of the available literature only covers cross-sectional or designed for a specific region which restricts generalizability and nuanced understanding.

This study bridges this gap by offering a comparative analysis of social integration strategies and their effectiveness on anxiety levels in international graduate students. By expanding on various aspects of social support and leveraging national data to examine what approaches are more effective at decreasing anxiety and promoting mental health. In doing so, the study hopes to help establish culturally congruent integration and mental health frameworks in higher learning institutions.

Objectives
- To identify the social integration strategies used by international graduate students.
- To explore the relationship between levels of anxiety and different social integration strategies.
- To assess the effectiveness of social integration strategies in different institutional and cultural contexts.
- To provide evidence-based recommendations in the areas of mental health and student affairs policies.

Related Studies
There is a growing number of studies centered on the connection between international students' psychological health, acculturation stress, and academic adjustment. However, very few of them have compared social integration strategies that explicitly address anxiety. Existing literature has only managed to identify the complexity of challenges faced by foreign students while highlighting how vital institutional and social support systems can be to addressing their effects. For instance, Kristiana *et al.,* (2022) conducted a systematic review and meta-analysis, in which they gathered data from eight cross-sectional studies to examine the effect of social support on acculturative stress among international students. Their research suggested that social support and stress have a moderate to strong inverse relationship. This suggests that strong support groups can help to reduce psychological stress significantly.

They also ranked the results of their findings based on the level of support received by international students. By doing so, they discovered that support from classmates in host countries had a stronger effect on cultural adjustment, while support from family members helped in addressing feelings of homesickness. However, the study agrees that family support mitigated homesickness and maintained ethnic identity, and the lack of standardized instruments and moderator analyses limited the generalizability of the findings.

Similarly, Oduwaye *et al.,* (2023) emphasized that the contribution of psychological health to international students' academic success is crucial, particularly in the absence or ineffectiveness of social support systems. Their analysis identified several recurring themes in the cause of psychological distress. They include anxiety, language barriers, prejudice, and culture shock. Even though they did not directly measure social integration strategies, they were able to raise awareness of the importance of cross-sectional support systems that extend beyond academic treatment to consider emotional and social adaptation.

Based on the 2019 Canadian National College Health Assessment, Clarke (2023) assessed differences in mental health diagnoses, stressors, and help-seeking behavior between domestic and foreign graduate students. Despite similar levels of worry, international students were much less likely to seek professional help, particularly from counseling facilities on campus. The study also reported that outside pressures, such as financial strain and visa-related anxiety things that are often not considered in programs that seek to support students were common realities for international students. While Clarke's study enriches our understanding of international graduate students' lived experiences, it fails to discuss how different integration strategies shape them. Rienties *et al.,* (2012) study observed that there is a positive relationship between academic performance and social integration. However, ethnicity had no statistically significant effect. This means that access to institutional resources and supportive networks facilitate smoother transitions, regardless of cultural background. Their findings also highlight the potential long-term academic benefits of early social integration. Something that may be specifically important for graduate students who experience intense and isolating academic pressures.

Chow (2007) in a more complex culture-based study, opined that there was a significant relationship

between the academic performance of international students in Canada and their psychological well-being. The study further explained that social connection and community support influenced well-being, which, in turn, improved academic performance. This corroborates the global significance of the issue, as Lashari *et al.,* (2018) found a negative correlation between social support and acculturative stress at Malaysian universities. Lastly, Mitchell *et al.,* (2007) and Hyun *et al.,* (2007) offered important new insights into help-seeking behaviors pointing out that cultural beliefs and mistrust of counseling frameworks often prevent international students from utilizing available support, even when psychological distress is acknowledged. This gap between need and service use necessitates integration strategies that are sensitive to cultural differences and build trust, particularly in the case of international graduation students.

All of these studies have shown that social support can lead to better academic adjustment and mental health outcomes for international students. However, direct comparisons have yet to be made between various integrating strategies and their respective impact on anxiety levels, particularly among graduate students. This study intends to fill that gap.

Research Questions
➢ What strategies of social integration are commonly adopted by international graduate students?
➢ How do these strategies influence levels of anxiety for overseas graduate students?
➢ Are Certain Social integration strategies more effective than others in specific academic or cultural settings?
➢ What impact do these strategies have on institutional support services?

METHODOLOGY
Research Design
This study utilizes a concurrent mixed-methods approach to examine the relationship between anxiety levels and social integration strategies among International graduate students. Its data will be collected through both quantitative surveys and qualitative interviews. This will enable the research to enhance validity and capture student perspectives through data triangulation (Clarke, 2023; Kristiana *et al.,* 2022). The quantitative component of this study will rely on secondary data from a nationwide survey (the 2019 Canadian Nationwide College Health Assessment). The qualitative phase centered on semi-structured interviews that provide detailed insights into lived experiences that surveys would not have been able to fully capture.

The mixed-methods approach was adopted as ideal for studying the psychosocial makeup of international students' experiences. This is because both cultural adaptation and emotional well-being are quantifiable and subjective (Hyun *et al*, 2007: Mitchell *et al*., 2007). Although studies like Kristina *et al.,* (2022) have employed meta-analyses and cross-sectional techniques, this paper merges the experiences of different individuals with large-scale data from thousands of respondents. Moreover, the qualitative interviews align with Oduwaye *et al*., (2023), who identified the need for research mechanisms that consider students' long-term emotional trajectories, coping strategies, and interpersonal relationships beyond surface-level indicators.

Case Study Data Source
The primary source of data used in the composition of this research comes from Clarke's (2023) study, which analyzed the responses of 1,876 international graduate students and 4,809 non-international graduate students obtained from the 2019 Canadian National College Health Assessment (NCHA). This national sample represents a significant number of international students enrolled in graduate and professional programs across Canadian institutions. Apart from the demographic and contextual variables such as age, gender, housing situation, marital status, and full-time/part-time enrollment status, the survey iterations include validated instruments to capture mental health disorder diagnoses (such as anxiety), stress, and help-seeking behaviors. Strengths of this data source include its institutional variety, the range of mental health indicators such as self-reported diagnoses, experiences of traumatic stresses, and the use of mental health treatments.

This is consistent with broader patterns observed in studies by Ogunsanyua *et al.,* (2018) and Hamamura and Mearns (2019), who have emphasized the need for comparative studies that disaggregate the international student population by education level, national origin, and institution type. The NCHA data provides insight into student utilization of services and the barriers to the usage of these services. This indicates the potential effectiveness of integration measures in practice. In addition to the secondary dataset, qualitative data were obtained from interviews of 30 foreign graduate students currently enrolled in Canadian institutions. They were selected by use of stratified purposive sampling to ensure diversity based on nationality, program type, gender identity, and length of stay. This dual-source approach allows us to get around the shortcomings of studies like Rienties *et al.,* (2012) which fell short of the longitudinal explorations of cross-cultural narratives. It facilitates not only comparative analysis but also context-oriented research.

Participants

The participant pool of the quantitative phase was taken from Clarke's (2023) study. His work classified 1,876 International graduate students based on their international status and educational level. The nationalities of these individuals were from Asia, Africa, the Middle East, and Latin America. This corroborates data from Statistics Canada (2021) that suggested a steady increase in foreign enrollments in Canadian Institutions. His work also had a gender distribution close to parity (49.89% male, 48.88% female, 1.01% identifying as another gender identity), allowing for gender-based comparisons on anxiety outcomes—a point that has been overlooked in previous literature (e.g., Mallinckrodt & Leong, 1992; Baird, 1990). Finally, the qualitative component will make use of a stratified purposive sample technique to recruit 30 international graduate students from five Canadian provinces. This sample will be balanced according to the following criteria:

- Area of study (business, social sciences, humanities, STEM, etc.),
- Year of study (first year compared with second year and beyond),
- Off/on campus (living situation),
- Prior international experience (first-time abroad vs. repeated mobility).

The three requirements for participants include: 1.) They must have been in Canada for at least six months. 2.) They must have a study permit as an international student 3.) They must be enrolled in a graduate or professional program at a Canadian university. Several researchers, including Shen and Herr (2004) and Shadowen *et al.,* Kivioja *et al.,* (2019) conducted an analysis that ensures enough time has passed for people to attempt to integrate socially as well as experience stresses related to relocation/acculturation. Permission for ethical research will be sought from the researchers' institutional ethics board, and informed consent will be obtained from participants before joining the research. Virtual interviews of each participant lasting 45 to 60 minutes will be scheduled and videotaped with your consent. Each adhering disagreement will be anonymous and securely stored to preserve confidentiality.

Instruments

In this study, standardized psychometric instruments and custom survey questions will be used to examine the correlation between the anxiety levels of international graduate students and their social integration strategies.

Anxiety Measurement

The Generalized Anxiety Disorder-7 (GAD-7) scale will be used to measure anxiety. The GAD-7 is a widely used screening tool for generalized anxiety disorder that assesses severity. A 4-point Likert scale rating. Seven items total. It has been used in earlier studies by Clarke (2023) where 41% of graduate students presented moderate to severe anxiety symptoms; due to its simplicity, consistency, and clinical applicability, it is also adapted for widespread and cross-cultural investigation.

Social Support and Integration Strategies

This study will adapt items from the Multidimensional Scale of Perceived Social Support (MSPSS) and the Index of Sojourner Social Support (ISSS), both of which were used in the Kristiana *et al.,* (2022) meta-analysis, to gauge the level and quality of social integration. MSPSS assesses support from friends, family, and spouses. The ISSS examines social support relative to the host culture, especially through contacts with peers, university staff, and nationals. According to Lashari *et al.,* (2018) and Sullivan *et al.,* (2015)—these instruments have exhibited good internal reliability (α = 0.93–0.96).

Also, specific items will be developed to assess different strategies for institutional integration and complement general instruments (e.g., attendance at orientation sessions, joining cultural clubs, mentoring, or peer support programs). They will be tested to check for clarity and suitability to the relevant culture. This is premised on the ideas suggested by Oduwaye *et al.,* (2023) where they demonstrated the complexity of psychological well-being and the influence of social and academic factors on student experiences.

Qualitative Analysis Protocol

Semi-structured interview guidelines will be used to gather data from participants. This will be done to identify the participants' adaptation experiences, emotional responses to stresses, and the perceived efficacy of various integration strategies. Themes from Kristiana *et al.,* (2022) and Clarke (2023) will guide interview questions, particularly those addressing cultural adaptability, help-seeking behavior, and institutional responsiveness.

Data Collection

Quantitative data: The quantitative analysis will use publicly available data from Clarke (2023), which can be obtained in the 2019 Canadian National College Health Assessment (NCHA). The dataset includes information on mental health, demographics, academic success, and help-seeking behaviors. The researcher will also use an online poll that will be given to international graduate students who are enrolled in 10 Canadian universities. It will cover several topics, including:

- GAD-7 for anxiety
- Generalization of ISSS and MSPSS for social assistance
- Custom social integration strategy inventory. This primary data collection will serve as a

current and supplementary dataset for assessing the post-pandemic experiences, based on Clarke's (2023) recommendations for context-specific mental health evaluations.

Qualitative Data: We will conduct 45-60 minute virtual interviews via Zoom to gather qualitative data. The researcher will explore foreign student centers, graduate student clubs, and university email addresses. Interviews will be videotaped and transcribed verbatim with permission. To maintain confidentiality, transcripts will be coded and anonymized.

The qualitative data gathering aims to explore themes such as:
- The encounter with integration: Early expectations vs acual experience
- Emotional Responses to Social and Academic Life
- Barriers and Facilitators of Help-Seeking
- Perspectives on Institutional care and belonging.

Data Analysis
Quantitative Analysis
The data will be evaluated with SPSS and R software with the Primary analyses to include:
- Descriptive statistics to summarize demographic and psychological profiles.
- Correlation analysis to investigate links between integration tactics and anxiety levels.
- Conducting multiple regression modeling to assess the impact of various methods (e.g., cultural events, mentorship) on GAD-7 scores, adjusting for confounding variables such as duration of stay, gender, and previous overseas experience.

The researcher made use of Moderation and mediation analyses to examine possible connections between social support and demographic variables (e.g., gender, housing status), as suggested by Kristiana et al. (2022) on the function of socio-demographic moderators in psychological outcomes.

Qualitative Data
The research will utilize thematic analysis through NVivo. Braun and Clarke's 2006 framework for thematic analysis will also be applied to inductively identify themes that capture the lived experience of the participants. This coding will focus on identifying:
- The different types of integration strategies.
- The emotional implication of these strategies.
- Barriers to successful integration.
- New coping strategies.

Several coders will be used to ensure intercoder reliability. Inconsistencies in theme interpretation will be handled by consensus, as suggested by Kristiana *et al.,* (2022). This is important for quality assurance in cross-cultural qualitative research. During the interpretation phase, both qualitative and quantitative data will be integrated. This would enable convergence, complementarity, and extension of findings, which is an important aspect of the mixed-method approach.

Data analysis plan
In the analytical phase of this study, we will use a systematic and multi-layered approach to investigate the quantitative and qualitative aspects of the research question: How do various social integration strategies impact anxiety levels among international graduate students? The goal is to identify the most effective strategies and their relevance.

Quantitative Analysis
Many statistical processes will be used to assess the relationship between social integration strategies and anxiety levels, including the data from Clarke's (2023) dataset and the new primary dataset mentioned earlier in this paper.

Variable Operationalization

Variable	Type	Measurement Tool
Anxiety level	Continuous	GAD-7 Scale
Social support	Continuous	MSPSS, ISSS
Type of integration strategy	Categorical	Custom strategy inventory
Duration in the host country	Continuous	Self-report (in months)
Support service usage frequency	Ordinal	Frequency scale (e.g., weekly, monthly)
Demographics (age, gender, etc.)	Categorical	Survey items

Descriptive Statistics
Initial data analysis will involve frequency distributions, means, and standard deviations in order to characterize the psychological and demographic composition of the participants. In this phase, box plots and bar graphs will also illustrate group differences in anxiety by strategy type.

Inferential analysis
Pearson's correlation coefficients will be computed to compare GAD-7 anxiety ratings with perceived social support (total MSPSS/ISSS scores).

We will employ independent t-tests and one-way ANOVA to compare anxiety levels among groups (e.g., peer mentorship vs. cultural clubs).

Multiple Linear Regression will evaluate the impact of various strategies on anxiety, accounting for characteristics such as age, gender, duration of stay, and academic area.

Such techniques are similar to those used by Chow (2007) and Lashari *et al.,* (2018) which link international graduate students' psychological results to the importance of support networks.

Moderation and Mediation Analyses

The strength of the relationship between social integration and anxiety will be tested through moderation models in SPSS using PROCESS macro (Hayes, 2013) to see if factors like gender, academic achievement, or English proficiency have an impact (e.g., "Does the effect of social clubs on anxiety differ by gender?"). Following the logic put forward by Kristiana *et al.,* (2022), who highlighted indirect connections between integration and well-being, mediation analysis will investigate if social support mediates the association between integration techniques and anxiety reduction.

Qualitative Analysis

Data from semi-structured interviews will undergo thematic analysis using Braun and Clarke's (2006) framework:

- Familiarization with data
- Initial coding
- Searching for themes
- Reviewing themes
- Defining and naming themes
- Producing the report

NVivo software will assist in organizing and categorizing data to generate themes such as:

- "Belonging through Peer Networks"
- "Institutional Support as Safety Net"
- "Barriers to Mental Health Help-Seeking"
- "Emotional Transitions and Coping"

Just like Mitchell *et al.,* (2007), contextualize that a cultural mismatch in perceived services as well as a lack of localized coping tools in services is a common cause of foreign student anxiety. To enhance credibility and trustworthiness, the research will be based on:

- Member confirmation: participants will review summaries of their responses.
- Peer debriefing: The thematic findings will be cross-validated by an independent qualitative researcher.

Integration of Mixed Methods Findings

Finally, the data obtained from the quantitative and qualitative methods will be integrated during interpretation by using a concurrent parallel design:

- Areas of convergence (e.g., peer mentorship reduces anxiety across both datasets) will be highlighted.
- Contradictions (e.g., underreported strategy effectiveness in survey vs. positive interview feedback) will be explored.
- Thematic expansion (e.g., new emotional themes) will guide recommendations and future research.

Both Kristiana *et al.,* (2022) and Oduwaye *et al.,* (2023) requested a longitudinal, multimodal understanding of foreign students' welfare, and our triangulation fills these voids by establishing a substantive understanding of how and why different social integration strategies impact anxiety.

Ethical Considerations

Ethics, in this research, is of utmost importance given the vulnerability of the group under study: international graduate students. As is customary and required by IRB regulations, this study will ensure informed consent, confidentiality, voluntary participation, and the freedom to withdraw at any moment without penalties.

We will ensure that each participant consents to the interviews and surveys before they are carried out. We would do that by providing each of them with a clear explanation of the research's objectives, the importance of the data obtained, possible risks, advantages, and guarantees that participation wouldn't affect their immigration or academic status. This approach is in line with ethical standards suggested by Villani *et al.,* (2019) in studies involving international students. With emphasis placed on building transparency and trust when examining mental well-being across different cultures.

According to Gan & Forbes-Mewett (2018), confidentiality and data security are necessary since the stigma associated with mental illness significantly discourages participation in cross-cultural mental health research. To reduce this risk, the identity of each participant will be anonymous. Additionally, all the data obtained during this research will be kept on servers that are password-protected and encrypted. Only the principal researcher and selected research assistants will have access to this information. This is premised on the ideas of Mitchell *et al.,* (2007), who looked at foreign students' mental health while taking privacy concerns into account in small academic groups.

Throughout the study, the psychological well-being of the participants will be taken into cognizance. They will be given a list of culturally sensitive mental

health options offered by their institutions. This is because some of them may find discussions about anxiety and cultural stress disturbing (Salami, 2010). Additionally, there will be a special emphasis on cultural responsiveness throughout the data collection process. For instance, interview questions will be carefully curated to avoid using pathologizing or culturally offensive language. This is in line with Wong's (2011) suggestions on using polite and culturally sensitive language to encourage genuine participation in research that involves spirituality, mental health, and meaning-making across various student populations.

The research also acknowledges the fact that comparisons across different cultures require ethical clarity, especially when assessing and interpreting data from students with different national, ethnic, and religious backgrounds. Therefore, there is a caution to forcing Western psychological models, like linear measurements of stress and well-being, on non-Western societies without considering sociocultural factors, as explained in Najafi *et al.,* (2022). Therefore, to avoid making careless generalizations and to ensure that findings are articulated with contextual awareness, this study will evaluate data with cultural humility.

Finally, the distribution of results will be covered by ethical issues. Research involving underrepresented academic groups should uphold ethical rigor throughout data collection and guarantee that the results are understandable and helpful to the communities concerned, as identified by Sawyer and Forbes-Mewett (2019). To strengthen support services and influence policy, summaries of the findings and suggestions will be distributed to student organizations, international student offices, and participating universities. This ethical framework guarantees that participants are treated with dignity, respect, and cultural sensitivity throughout the whole research process.

RESULTS (EXPECTED FINDINGS)

Drawing from the findings of previous works and preliminary analyses of large data sets, such as the one provided by Clarke (2023) and Kristiana *et al.,* (2022), this study finds several important implications for international graduate student's anxiety levels and social integration strategies.

First, students who engaged in organized social integration activities, such as cross-cultural clubs, international student orientation programs, and peer mentoring, are expected to report significantly lower anxiety levels on the GAD-7.

This prediction is in line with the work of Rienties *et al.,* (2012), where they demonstrated the effects of social and academic integration on international students' psychological adjustment and academic success, irrespective of ethnicity. Once again, we expect these social strategies responses to serve as protective factors against acculturative stress and loneliness in the present study, and within the very first year of one's academic career. In our research, we expect that these structured strategies can serve as buffers against acculturative stress and feelings of isolation, which are prevalent during the first academic year.

Secondly, Anxiety levels are expected to be negatively related to peer-based support networks involving host-nation students or other international students (i.e. friendships). Previous work by Sullivan *et al.,* (2015) demonstrated that acculturative stress was negatively related to host national support. Similarly, Zhang *et al.,* (2018) found that perceived discrimination, a recognized predictor of distress in cross-cultural groups, had a negative correlation with perceived friend support. As a result, the statistics probably show that psychological safety and a sense of belonging are directly influenced by emotionally supportive relationships.

But the type and source of help are also expected to matter. Hyun *et al.,* (2007) reported that while 33% of international graduate students reportedly considered seeking help to alleviate stress, only 17% ended up using mental health services (MHS). Even though the support provided by institutional resources (such as advisors and student counseling services) may prove to be helpful, students may report that these services are underutilized. This disconnect suggests that while institutionalized sources of support exist, their potential for effective anxiety reduction may be hindered by distrust or cultural incongruence.

In addition, students with higher levels of English language competency, or who have resided in the host country longer, are expected to exhibit lower levels of anxiety. This agrees with the reports from Kristiana *et al.,* (2022) that highlighted language proficiency and duration of stay as moderators of acculturation stress.

These factors could suggest more independence and cultural adaption, which would lessen susceptibility to anxiety-related outcomes. It's interesting to note that some integration techniques might provide inconsistent or even conflicting outcomes. For instance, even though institutional orientation programs are heavily advertised, students may complain that they are too general or "surface-level" to deal with more profound emotional or cultural problems. Although many Canadian colleges provide academic transition programs and mental health services, international students frequently believe that these services fall short of addressing the existential and emotional pressures related to identity negotiation and relocation (Clarke, 2023).

Quaye and Harper (2015) argue that gender identity, cultural background, and academic discipline may influence the effectiveness of certain social integration strategies. For example, STEM students who are characteristically individualistic, as compared to their classmates in the social sciences or humanities (fields that are characteristically less individualistic), are likely to have higher anxiety scores than their counterparts in other departments.

Qualitative interviews are also expected to corroborate and elucidate these quantitative trends. As their main sources of psychological resilience, students are likely to share complex and emotional stories about the importance of friendships, mentorships, and culturally supportive environments. These results would support the psychological themes discussed by Puskar *et al.,* (2007), who opined that students' capacity to manage cultural and academic pressures is greatly impacted by their level of social and emotional relationships.

As an illustration of the adaptive resourcefulness of international students, not everything that occurs has been acknowledged or documented, and there may be specific strategies or group formations that were not formally revealed in institutional programs (such as unofficial WhatsApp groups, virtual cultural events, or virtual religious events). These adaptable strategies might show resilience and point out areas where schools can work with students or intervene more successfully. According to the expected results, social integration technologies generally help people feel less anxious, but how well they work depends largely on how authentic and culturally relevant they are, as well as whether or not they offer emotional support rather than just intellectual support.

RECOMMENDATIONS

There are a series of useful recommendations for learning institutions interested in increasing the psychological well-being of international graduate students via successful social integration strategies.

First of all, institutions should start by increasing and adjusting their social integration strategies to meet the diverse needs of international students. As O'Reilly, Ryan, and Hickey (2010) pointed out, International students' psychological well-being notably improves when support systems that acknowledge their academic and cultural challenges are developed.

Instead of generic orientation programs, institutions should devote time to long-term strategies like peer mentorships, cultural affinity groups, and cross-cultural discussion circles, which occur throughout the academic year.

Secondly, Institutions must offer culturally sensitive mental health services that ensure that wellness staff and counselors receive training in trauma-informed practices, intercultural communication, and the psychological dimensions of transnational identities. Baba and Hosoda (2014) have identified that international students are often reluctant to seek counseling services since they think it does not relate to their culture, or they do not want such services to be misinterpreted.

To solve this, universities need to hire more multicultural staff who can provide multilingual counseling services. Also, international students should be allowed to participate in raising awareness of the importance of seeking help. This is supported by the ideas of Prieto-Welch (2016), who noted that culturally relevant service helps to build trust and ultimately increase its use by marginalized students.

Furthermore, we need to make seeking mental health care popular among international graduate students and address stigma and misinformation by creating awareness campaigns, seminars, and student testimonials. According to Gan and Forbes-Mewett (2018), many students ask about mental health services but ultimately decide not to use them because they think they would be stigmatizing or useless. This can be addressed through graduate-level seminars, international student orientations, and integrated mental health literacy initiatives in classrooms.

The fourth implication of this study is that we have a strong need for multidisciplinary collaboration between student affairs offices and academic departments. Faculties, particularly graduate supervisors, must be able to recognize the early signs of anxiety, academic pressure, and social withdrawal. According to Baird (1990), the stress of graduate students is often compounded by problems with faculty advisers as well as the highly individualized nature of graduate students' academic programs. Institutional development programs need to have their faculty members trained on how to offer international students holistic support, as regards their academic performance and emotional health.

Institutions can also utilize technology and online communities strategically to bridge social integration, especially for students who are physically unavailable due to work commitments, family responsibilities, or geographical distance. This form of community-building might be promoted through digital networks, online discussion boards, and virtual student forums. According to Clarke (2023), international students who live off campus or in private housing are underutilizing university-based resources; thus, using digital technology to close these gaps is logical.

Universities should specifically collect and tailor mental health data to international graduate students and track such data over time. According to Leveque *et al.,* (2017), the absence of this type of data often leads to developing solutions that act as "one-size-fits-all" responses that do not consider the nuances and intersections of academic pressure, institutional affiliation, and cultural identity. Integrating all of these aspects should fit into regular institutional surveys on academic experience, mental health , and perceived institutional support, intersected by variables like gender, program of study, and country of origin.

Finally, institutions must shift their support approach from being reactive to being proactive. The literature strongly supports preventative strategies that cultivate resilience and connection at the onset of a student's journey. According to Hakanen *et al.,* (2006) and Kwon *et al.,* (2018), university programs that prioritize empathy, inclusion, and continuity can support psychological well-being by fostering stable relationships, a sense of purpose, and regular participation in rewarding activities. Universities must adopt relational, student-centered frameworks that recognize the emotional, cultural, and psychological aspects of studying abroad in place of transactional forms of assistance for foreign students. Institutions will lessen anxiety and acculturative stress and create settings where foreign graduate students may flourish intellectually, socially, and psychologically by implementing these evidence-based suggestions.

Future Research Directions
The new study illuminates additional areas for future research while also contributing to the existing body of literature on the role of social integration strategies in influencing anxiety levels in international graduate students. These directions are vital for refining intervention strategies, and methodological limits, and addressing new problems in higher learning institutions that are becoming increasingly globalized.

First, emphasis is laid on long-term studies that track the psychological adjustment of international graduate students. According to Lowinger *et al.,* (2014), stress and anxiety levels for students can be greatly affected by their length of stay, academic burden, and evolving social conditions. Future research that employs the use of cohort-based or time-series methods is warranted to monitor the evolution and success of integration strategies. This type of approach may help to clarify the correlation between integration efforts and anxiety outcomes, which are often obscured in cross-sectional research.

Secondly, future research should evaluate the intersectionality of student identity, examining how experiences of anxiety and integration are impacted by socioeconomic position, gender, sexual orientation, and race. Smith and Khawaja (2011) found that factors such as racial profiling, discrimination, or the lack of representation in the staff and curriculum could compound any additional stress experienced by students from underrepresented or marginalized groups. Understanding how these overlapping identities shape experiences with integration efforts and access to support resources would facilitate our overall knowledge of vulnerability and resilience across diverse international cohorts.

While this study focused on Canadian institutions, it would be valuable to replicate this research in the U.S., the U.K., Australia, and Malaysia where integration policies, social norms, and mental health infrastructures are different. For instance, unlike many Western institutions, which prioritize mental well-being more, Japanese universities provide significant academic integration support over minimal emotional or psychological support (Kawamoto *et al.,* 2017). Thus, comparative studies would focus on transferable methods or best practices to the specific setting.

Further research should also interrogate how virtual communities or digital sociability can potentially serve as a buffer against anxiety and increase communal well-being. The rise of digital technology has allowed international students to establish meaningful relationships in the online environment (James-MacEachern & Yun, 2017; Guruz, 2011). Exploring social media groups, digital mentoring programs, and virtual peer networks, for instance, could offer scalable, low-cost solutions to monitor students' psychological well-being.

There needs to be a greater focus on the role of academic departments and faculty mentors in helping international students with their mental health. Few studies have looked at the department-level culture and its impact on students' psychological adjustment, although studies like those by Henderson and Mapp (2002) and Swanepoel & Britz (2017) have shown the value of emotional intelligence and faculty involvement. Future studies should examine how international students' feelings of inclusion or fear are influenced by the intercultural competency, communication style, and availability of graduate supervisors. Moreover, future research should also consider the use of mixed-methods approaches that extend beyond descriptive statistics to triangulate personal narratives and culturally specific coping behaviors. As an example, future studies can derive inspiration from Wong (2011) and Villani *et al.,* (2019), who emphasized the importance of meaning-making, spirituality, and purpose in mental health. By incorporating culturally diverse dimensions, a greater

understanding of how international graduate students perceive and strive for well-being may be achieved.

Finally, more research is needed on policy implementation and institutional accountability. It remains unclear whether the underlying principles of these efforts translate into effective student services. This is because little empirical work has been done to examine whether diversity and internationalization initiatives provide effective services. As Altbach *et al.,* (2019) argued, institutions must assess the efficacy of their policies to truly respond to the psychological and social needs of their students. In essence, the complexity of existing as an international graduate student calls for continuous, interdisciplinary research that evolves alongside global dynamics and the profiles of the students themselves.

CONCLUSION

Within the global academic ecosystem, international graduate students occupy a fraught and often precarious posture. Despite the advantages their presence brings to host institutions in terms of cultural variety, academic quality, and international collaboration, their lived experiences are also associated with heightened stress and anxiety from cultural, social, and institutional challenges.

This research proposed an extensive mixed-methods approach that combines both qualitative and quantitative methodologies to examine how social integration strategies affect anxiety levels among international graduate students. Given the plethora of existing research, including meta-analyses like Kristiana *et al.,* (2022) and large-scale assessments like Clarke (2023), the proposed study fills a pressing research gap: determining which integration practices best support international graduate students' psychological well-being.

Different studies have shown that despite several students experiencing anxiety and emotional distress, few avail themselves of the support services available to them. This is often due to a cultural mismatch, stigma, or ignorance (Hyun *et al.,* 2007; Gan & Forbes-Mewett, 2018). This study seeks to go beyond correlation and into action with practical, evidence-backed recommendations by examining the presence of integration strategies as well as their relative and perceived effects.

The findings of this study should demonstrate the failure of traditional support models that ignore the realities of international students while reinforcing the effectiveness of peer networks culturally relevant institutional programs, and mentoring programs in addressing anxiety amongst international graduate students. Using triangulated data analysis, this study offers a nuanced understanding of the interpersonal and structural facets of social integration and their impact on mental health outcomes. Significantly, this study also lays the groundwork for further research. It highlighted the importance of cross-national, long-term, and intersectional studies that capture the experiences of international graduate students and the changing nature of support networks in a post-pandemic, digitally mediated academic ecosystem. Moreover, it encourages educational institutions to rethink their strategies for supporting students, transitioning from uniform approaches to relational, culturally attuned systems that truly inspire students from different backgrounds.

This study shows that enhancing the well-being of international graduate students and reducing their anxiety should be considered a matter of great significance. This is because International students are central to the intellectual, cultural, and ethical responsibilities of international higher education institutions. Higher learning institutions promote academic success and account for the dignity, resilience, and promise of a responsible and valuable global population by identifying and advancing the strategies that support these students.

REFERENCES

- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2019). *Trends in global higher education: Tracking an academic revolution*. UNESCO.
- Baba, Y., & Hosoda, M. (2014). Home away from home: Better understanding of the role of social support in predicting cross-cultural adjustment among international students. *College Student Journal, 48*(1), 1–15.
- Baird, L. L. (1990). The melancholy of anatomy: The personal and professional development of graduate and professional school students. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 6, pp. 361–392). Agathon Press.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.
- Clarke, K. A. (2023). International graduate students' mental health diagnoses, challenges, and support: A descriptive comparison to their non-international graduate student peers. *Journal of International Students, 13*(3), 280–304. https://doi.org/10.32674/jis.v13i3.3148
- Forbes-Mewett, H., & Sawyer, A.-M. (2019). International students and mental health. *Journal of International Students, 6*(3), 661–677.
- Gan, D., & Forbes-Mewett, H. (2018). International students' mental health and psychological wellbeing in the context of covid-19 pandemic: A scoping

review. *International Journal of Environmental Research and Public Health, 15*(12), 2655.

- Guruz, K. (2011). *Higher education and international student mobility in the global knowledge economy*. SUNY Press.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495–513.
- Hamamura, T., & Mearns, J. (2019). Depression and somatic symptoms among East Asian international students: Role of culture and social support. *Asian Journal of Psychiatry, 42*, 69–73.
- Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Southwest Educational Development Laboratory.
- Hyun, J., Quinn, B., Madon, T., & Lustig, S. (2007). Mental health need, awareness, and use of counseling services among international graduate students. *Journal of American College Health, 56*(2), 109–118.
- James-MacEachern, M., & Yun, D. (2017). Exploring factors influencing international students' decision to choose a higher education institution. *International Journal of Educational Management, 31*(3), 343–363.
- Kawamoto, T., Ura, M., & Hiraki, K. (2017). Self-esteem and the brain: A review of neuroimaging studies on the self. *Frontiers in Psychology, 8*, 205.
- Kristiana, I. F., Karyanta, N. A., Simanjuntak, E., Prihatsanti, U., Ingarianti, T. M., & Shohib, M. (2022). Social support and acculturative stress of international students: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health, 19*(11), 6568. https://doi.org/10.3390/ijerph19116568
- Kwon, S., Han, D., & Lee, J. (2018). The influence of physical activity on mental health and quality of life in university students. *International Journal of Environmental Research and Public Health, 15*(5), 955.
- Leveque, L., Heller, J. L., & Hassan, T. (2017). The academic experience of international students: Perceptions of academic support. *Journal of International Students, 7*(4), 921–939.
- Lowinger, R. J., He, Z., Lin, M., & Chang, M. (2014). College students' perceptions of the impact of cultural differences on mental health help-seeking. *International Journal of Psychology and Behavioral Sciences, 4*(3), 97–103.
- Mitchell, J., Greenwood, A. K., & Guglielmi, M. C. (2007). Acculturative stress, depression, and anxiety in international students: A longitudinal study. *Journal of College Student Development, 48*(4), 413–429.
- Najafi, M., Sadeghi, T., & Akhavan, S. (2022). Spirituality and resilience among international students: A cultural psychology perspective. *Journal of Religion and Health, 61*, 1154–1171.
- O'Reilly, A., Ryan, D., & Hickey, T. (2010). The psychological well-being and sociocultural adaptation of short-term international students in Ireland. *Journal of College Student Development, 51*(5), 584–598.
- Oduwaye, O., Askin, K., & Yasemin, S. (2023). Relationship between international students' psychological well-being and academic performance: A review and research agenda. *International Journal of Advanced Multidisciplinary Research and Studies, 3*(3), 7–17.
- Puskar, K. R., & Bernardo, L. M. (2007). Mental health and academic success in college students: A literature review. *Journal of the American Psychiatric Nurses Association, 13*(4), 203–210.
- Quaye, S. J., & Harper, S. R. (2015). *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations*. Routledge.
- Rienties, B., Beausaert, S., Grohnert, T., Niemantsverdriet, S., & Kommers, P. (2012). Understanding academic performance of international students: The role of ethnicity, academic and social integration. *Higher Education, 63*(6), 685–700.
- Salami, S. O. (2010). Resilience and well-being of jobless youths: Moderating roles of mentoring and emotional intelligence. *Social Indicators Research, 99*(3), 465–482.
- Shen, Y., & Herr, E. L. (2004). Career placement concerns of international graduate students: A qualitative study. *Journal of Career Development, 31*(1), 15–29.
- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations, 35*(6), 699–713.
- Sullivan, C., Kashubeck-West, S., & Shupp, C. (2015). The interplay of international students' acculturative stress, social support, and gender. *Journal of International Students, 5*(1), 1–10.
- Swanepoel, E., & Britz, J. (2017). Enhancing emotional intelligence in university students. *South African Journal of Psychology, 47*(1), 30–41.
- Villani, D., Sorgente, A., Iannello, P., & Antonietti, A. (2019). The role of spirituality and religiosity in subjective well-being: A structural equation model. *Frontiers in Psychology, 10*, 1525.
- Wong, P. T. P. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology/Psychologie Canadienne, 52*(2), 69–81.