Comparing the Psychological Well-being of International and Domestic Students

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Abstract

Post-secondary students are an at-risk category in need of immediate assistance, as previous research indicates that they experience high levels of both stress and negative emotions in addition to having poor physical and mental well-being. Many post-secondary institutions now focus on addressing the needs of their students to better assist, support, and improve their psychological well-being. Considering that international students make up a significant and growing portion of the McMaster community, it is crucial to provide adequate support to better address the needs of this student population. The intention of this paper is to explore and compare the psychological well-being of international students and domestic students. We focused on three different dimensions of psychological well-being as they pertain to each participant. These dimensions include the following: help-seeking behaviour, social support, and relatedness. Using survey research, we utilized quantitative data and qualitative accounts to gauge how the unique experiences of each student group would account for variations in the three key dimensions. Our findings reveal that domestic students had access to more sources of support and higher knowledge regarding help-seeking resources, but, their psychological well-being was slightly lower than that of international students. This research serves as a foundation for understanding the complexity of group-specific student needs. Findings relevant to each dimension can be used to inform university initiatives that cater to mental health needs.

Introduction

We conducted a comparative study on the overall psychological well-being of international and domestic undergraduate students at McMaster University. This study was completed as a thesis project for the Honours Social Psychology Program at McMaster University. Our research team was composed of five undergraduate Honours Social Psychology students (three international students and two domestic students) under the supervision of Dr. Sarah Clancy.

Social Psychological Context

Improving the mental health status of students has become a primary concern for many higher education institutions considering the ongoing mental health crises and the increasing demands for resources. This process is further complicated by the growth in

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the number of students coming in from abroad. According to Rosa et al., (2021), the number of international students in Canada increased by 115% between 2010 and 2017. International students are naturally faced with stressors involved with acclimating to a new location such as feeling unstable and the loss of social support. They are also likely to experience additional barriers to accessing mental health care due to factors such as a lack of knowledge of resources and potential cultural gaps (Rosa et al., 2021). We recognize that international and domestic students come from diverse backgrounds and acknowledge that psychological well-being correlates with one's life satisfaction. As such, our research aims to examine and compare the positive psychological well-being of international students and domestic students as it pertains to their social support network and sense of belongingness within the McMaster community. By comparing the well-being of domestic and international students, we can evaluate the limitations of the current services offered in university settings and provide insight on how to better the system overall for both domestic and international students to develop more accessible, inclusive mental health services.

Problem and Purpose of Research

The intention of this paper is to explore and compare the psychological well-being of international and domestic students. We have done this by focusing on three different dimensions of psychological well-being as they pertain to each participant. We will be referring to psychological well-being as overall well-being with the goal of minimizing any potential psychological and social risks. These dimensions include the following: help-seeking behavior, social support, and relatedness. Domestic and international students have different lived experiences which may influence these dimensions, consequently impacting their psychological well-being in distinct ways. Gaining a more comprehensive understanding of this comparison will allow for greater acknowledgement and a wider range of perspectives to be considered when analyzing the psychological well-being of university-level students. This deeper level of understanding can help influence or shape university policies to improve the support it provides to both international and domestic students along the three dimensions discussed. By the end of this paper, we will be able to clearly identify the level of psychological well-being in international and domestic students and analyze the different factors that may influence the discrepancies or similarities that we find.

Overview of Paper

We will review the existing literature on international and domestic students' well-being and then discuss Social Identity Theory which we have operationalized as the theoretical framework for this study. In this section, we will explore the dimensions used in our study and provide an overview of the theory. We will go on to provide a step-by-step outline of the methodology we used in obtaining the data. Furthermore, we will outline our qualitative and quantitative results and explore them in our discussion section. Finally, we will conclude by addressing the limitations of our research project and significant insights found throughout our research.

<p style="text-align:center">Literature Review</p>

Current academic literature demonstrates that post-secondary students experience a high degree of stress, negative affect, and poor overall well-being, making them an at-risk group in need of urgent intervention (Linden & Stuart, 2020). Poor psychological well-being is associated with a range of psychological and behavioral consequences such as low academic performance, substance abuse, and social isolation (Linden & Stuart, 2020). Each year, universities located in the Western world receive increasing numbers of international students (Rosa et al., 2021). For instance, Rosa et al., (2021) report that between 2010 and 2017, Canadian educational institutions received close to 500,000 foreign students. Naturally, studies assessing the psychological well-being of postsecondary populations must consider the unique factors that influence international students to account for the groups' health promotion.

Acculturation

Acculturation, the process of learning and adopting the norms of the dominant culture, is one such factor that uniquely affects the psychological well-being of foreign students (Rosa et al., 2021). Indeed, the stress from adapting to a new environment can create significant impacts on general functioning, negatively affecting both mental and physical health. Acculturative stress can be characterized by feelings of isolation, homesickness and overall unhappiness (Rosa et al., 2021). Owing to cultural differences and ignorance, international students are less likely to seek out the mental health resources available on campus (Rosa et al., 2021). Even if they do commence a course of treatment or intervention, they are less likely to follow through with it (Rosa et al., 2021). In their study, Rosa et al., (2021) sought to compare the physical activity rates of international and domestic students. They hypothesized that low physical activity was associated with low emotional well-being and higher stress (Rosa et al., 2021). Interestingly, stress levels alone did not significantly predict physical activity or emotional well-being for international students (Rosa et al., 2021). In other words, lower stress was not directly correlated with higher physical activity or better emotional well-being. Aside from this caveat, Rosa et al., (2021) conclude that lower physical activity correlates with lower emotional well-being, and this pattern was more pronounced for international students.

Skromanis et al., (2018) examined students' well-being by assessing their help-seeking behaviours, life satisfaction, availability of social support, and engagement in health-threatening activities. In addition to these dimensions, the authors investigated student ratings of their own physical and mental health. Results of the study indicate that, compared to domestic students, international students report lower levels of overall life satisfaction, lower levels of perceived social support, greater dissatisfaction with their living conditions, and higher engagement in health-threatening behaviours such as smoking and gambling (Skromanis et al., 2018). Furthermore, results indicated that international students were less likely than domestic students to seek assistance for issues associated with mental health, echoing the findings of Rosa et al., (2021). The researchers also found a sex-based difference in their pattern of results. Female international students were more likely to engage in help-seeking behaviour for mental health concerns compared to male international students (Skromanis et al., 2018). However, when it came to seeking assistance for relationship issues, drug/alcohol problems, money issues, or gambling issues, there were no differences between male

and female international students (Skromanis et al., 2018). Skromanis et al., (2018) argue that this sex-based difference makes international male students even more susceptible to psychosocial issues induced by acculturative and postsecondary stress. The intersection of acculturative status, postsecondary student status and gender appears to create unique difficulties for this at-risk group, thus creating the need for more specialized interventions.

Social Group Identification

Creating a social context for meaningful cross-cultural interaction between international and domestic students and increasing a sense of belongingness has become a primary concern for institutions as research has found that international post-secondary students tend to have unsatisfactory social experiences (Glass & Westmont, 2014). Furthermore, belongingness - conceptualized as feelings of connectedness to the university, the existence of a "social support network, and a balance of academic challenge and support" - appears to be a major contributor to academic success regardless of student status (p. 106). For this reason, Glass & Westmont (2014) aimed to examine the moderating effects of the feelings of belongingness and how these would affect cross-cultural interaction; therefore, impacting the academic success of students. The authors also sought to compare how such effects may differ between international and domestic students.

Data was collected from eight US universities through the usage of the Global Perspective Inventory (GPI) (Glass & Westmont, 2014). Students were assessed on sense of belongingness, "academic success, cross-cultural interaction, and [related] risk factors (e.g. discrimination, financial [issues]), protective factors (e.g. meaning in life)," and promotive factors (e.g. positive affect) (Glass & Westmont, 2014, p. 116). Other than experiences of discrimination due to cultural or ethnic background, there were no significant differences in feelings of belongingness, self-reported academic success, or engagement in co-curricular activities between student groups overall (Glass & Westmont, 2014). However, the authors did note that activities run by the international students' own cultural heritage were lacking (Glass & Westmont, 2014).

While a sense of belonging significantly impacted the academic performance and cross-cultural interaction of international and domestic students, the effect size was much greater for international students (Glass & Westmont, 2014). Similarly, the perception of diversity acceptance at their institution was crucial to a positive sense of belongingness for both student groups but demonstrated a more significant impact on international students (Glass & Westmont, 2014). This pattern may be explained by the greater amount of discrimination experienced by international students (Glass & Westmont, 2014).

In sum, this study emphasized the importance of a sense of belongingness for academic success in both groups, but highlighted the ways in which connectedness may be of particular importance for international students' motivation and social relationships (Glass & Westmont, 2014). In a similar fashion, Brunstig et al., (2021) find that international students' adjustment depends on the social support they receive from domestic students and their faculty. Obtaining social support from faculty and domestic peers is necessary to establish a sense of connectedness and belongingness with their institution; challenges to obtaining such support can have aversive consequences for the psychological well-being of international students (Brunstig et al., 2021).

Psychological Well-being

King et al., (2021), in their study, compared the psychological well-being and academic outcomes of international and domestic students at two time points. At the beginning and end of the academic year, psychological well-being and associated risk factors were assessed, while academic outcomes were sourced from university databases (King et al., 2021). Contrary to previously outlined findings, King et al., (2021) report that domestic and international students experienced comparable levels of poor well-being. Specifically, the study showed an overall decline in mental health by the end of the school year, regardless of student status (King et al., 2021). A gender effect was also found; female domestic students reported the highest levels of anxiety, depression and insomnia at both time points of the survey while female international students reported the highest levels of self-harm and suicide attempts (King et al., 2021).

While the negative effects of risk factors on academic performance were significant in both groups, international students fared lower in overall academic performance. Both groups also faced similar levels of barriers to university mental health support (King et al., 2021). The existence and development of mental illness symptoms among international students were lower or similar to that of domestic students, which contrasts existing research stating that they experience increased barriers to healthcare (King et al., 2021). This may be explained by differing levels of stigma and mental health literacy, resulting in a reluctance to report or lack of awareness of mental health problems among the student population (King et al., 2021). However, international students reported lower levels of school connectedness and academic performance, potentially due to challenges associated with adapting to a new culture and education system (King et al., 2021).

In sum, this study demonstrates that international and domestic postsecondary students experience comparable levels of poor well-being but differ in terms of symptom presentation, academic performance and community connectedness (King et al., 2021). Clough et al. (2018) report a similar trend in their study. While international and domestic students experienced identical levels of psychological distress, international students fare lower in mental health literacy and help-seeking intentions when compared to their domestic peers (Clough et al., 2018). Mental health literacy and help-seeking intentions were particularly limited for suicidal ideation among international students (Clough et al., 2018). While both groups experience considerable distress, specialized intervention pertaining to group-specific risk factors must be implemented as mental health symptoms present in different ways for each group.

Taking a different angle, Chai et al., (2012) compare the use of religion and spirituality between domestic and international students as a coping mechanism for stress. They found that ethnicity, rather than student status, predicted religious/spiritual coping (Chai et al., 2012). Specifically, Asian students were more likely than their European peers to use religion as a coping strategy for stress and distress (Chai et al., 2012). Using religious coping strategies also proved to be more effective for Asian students, as it effectively enhanced their psychological well-being and life satisfaction (Chai et al., 2012). The authors conclude that this effect represents the role of culture in determining students' overall well-being (Chai et al., 2012). Owing to the relative emphasis of spirituality and religion within Asian cultures, alignment with religious/spiritual ideologies can provide individuals with a sense of cultural affiliation and belongingness with their racial and ethnic group (Chai et al., 2012).

Summary of Literature Review

The studies outlined thus far demonstrate some of the group-based challenges that international and domestic postsecondary students face in the Western world. Some trends that are visible among international students include lower help-seeking behaviors for mental health crises and lower mental health literacy (Beks et al., 2018, Clough et al., 2018). Limited research also suggests that international students who are male experience greater risk of suicide ideation compared to their domestic and female peers (Skromanis et al., 2018). While these findings lay a commendable foundation for research assessing psychological well-being and student status, it does little to address student bodies as a whole. Acculturation, stigma, cultural relevance and expectations are some of the factors that make existing psychological health care inaccessible to international students (Minutillo et al., 2020). To address these deficits, we aim to conduct a comparative study on the psychological well-being of international and domestic students enrolled in McMaster University. Our research goal is to address psychological well-being in terms of Social Identity Theory as culture, relatedness and related social factors appear to play an important role in maintaining positive well-being. Research on student dimensions of well-being such as school relatedness and willingness to participate in class and university life remain limited. This research also aims to build on existing literature and push for mental health literacy that addresses group-specific needs within the Canadian context.

Theoretical Framework: Social Identity Theory

Outline of Theory

The theoretical framework we are using for our research project is Social Identity Theory (SIT). SIT was developed by Tajfel (1978) and Tajfel & Turner (1979) to understand individual self-identification within groups, and intergroup conflict (Islam, 2014). SIT theorizes that people develop a social identity based on the groups that they identify with which, in turn, provides them with a sense of belonging (Islam, 2014). Based on this, in-groups (us) and out-groups (them) are formed which can then lead to stereotyping and prejudice (Islam, 2014). Tajfel & Turner (1979) identified three processes in identifying whether someone is part of the in-group or out-group: (1) categorization, (2) social identification, and (3) social comparison. Categorization refers to the process of organizing people into social groups to make sense of our social environment and where we fit in with those around us (Tajfel & Turner, 1979). Social identification is when we take on the identity of the group to which we belong, and social comparison is when we compare our group to other groups (Tajfel & Turner, 1979). For our positive self-identity to be maintained we must see our own group more favorably than other groups, but this may lead to prejudice towards the out-group (Islam, 2014).

Connection to Research

Social Identity Theory is relevant to our research because it states that positive self-image, and by extension positive psychological well-being, is a direct result of inclusion within a group (Kernis & Paradise, 2002). Therefore, our research questions primarily focus on three dimensions that seek to answer how socially connected our participants are. These dimensions are (1) Relatedness, (2) Social Support, and (3) Help-Seeking Behavior. We acknowledge that these three dimensions do not cover the entire scope of

psychological well-being, with the structural constraints in mind; therefore, our research is limited but it provides some insight into the differences and similarities in psychological well-being between international and domestic students.

Relatedness

Relatedness refers to the need to feel a sense of belonging and connection with other people (Ryan & Deci, 2000). It is part of Self-Determination Theory which states that the three innate psychological needs are relatedness, autonomy, and competence (Deci & Ryan, 2012). We chose relatedness as our first dimension of measuring psychological well-being because it is a strong measure of social connectedness as it touches upon how people relate to each other and how meaningfully connected a person is to the social world around them (Deci & Ryan, 2000). Using the SIT framework, we analyze the correlation between relatedness and psychological well-being in international and domestic students. According to SIT, high relatedness is correlated with better psychological well-being because the sense of belonging created by inclusion is associated with better self-image and overall esteem (Islam, 2014). Conversely, lower relatedness is correlated with worse psychological well-being because exclusion and experiences of prejudice are associated with worse self-image (Islam, 2014).

Social Support

Social Support refers to the group of people that a person feels like they can rely on when they need help or emotional support (Cunningham & Barbee, 2000). There are three levels of social support networks: (1) macro, which includes institutions and informal contacts, (2) mezzo, which refers to the quality of the relationships in a person's life, and (3) micro, which refers to the specific qualities of the most important relationships in a person's life (Cunningham & Barbee, 2000). In our research, we are focusing on the macro and mezzo levels because they are most relevant to our study as they address social groups and how comfortable a person is with those in their life. The micro level is less relevant because we are not studying the specific qualities of one relationship in a person's life but rather their overall social support networks. We chose social support as a dimension because it looks at peoples' relationships and whether they feel generally supported both emotionally and tangibly. We have operationalized the SIT framework to analyze the correlation between social support and psychological well-being. Although the SIT framework does not touch directly upon social support, we argue that it is fair to extrapolate that students who identify with one or more groups likely have stronger social support networks than those who do not. Therefore, we use the SIT framework to analyze this dimension in regard to psychological well-being.

Help-Seeking Behaviors

Our third dimension, help-seeking behaviors, looks to explore whether undergraduate students at McMaster feel able to seek help from on-campus resources. Barriers to accessing resources include, but are not limited to: lack of knowledge, lack of connectedness with the overall community, the gap between person-resource fit, language barriers, social barriers, and stigma (Rosa et al., 2021). Student patterns of help-seeking behaviors can indicate how socially connected they are to McMaster University, and consequently their overall well-being. Whether students are accessing

these services or not may indicate to us how socially connected they are to McMaster and Hamilton in general. Furthermore, if students are accessing support that may also be indicative of their psychological well-being. In line with SIT, concepts such as prejudice and discrimination, which are consistent with out-group denomination, may be used to explain the relationship between help-seeking behaviors and psychological well-being. If a student feels part of the out-group, they may not feel able to access on-campus resources because they may not feel as though the services are relevant or helpful to them.

Summary of Theory

Social Identity Theory argues that when we identify with an in-group, we develop a sense of social belonging and this improves our positive self-identity which is associated with improved psychological well-being. Therefore, we have operationalized SIT to apply to our research dimensions: relatedness, social support, and help seeking behaviors.

Methodology

Research Question

Throughout this research, our aim is to comparatively explore the psychological well-being of international and domestic students by analyzing it on three dimensions – help-seeking behavior, social support, and relatedness. Current literature outlines some of the deficits in university support as it relates to international students. Using a comparative study, we can further explore how culture, relatedness and related social factors play an important role in maintaining positive psychological well-being. The literature review provided current research on the topic, but there is a lack of comparative studies exploring differences in the psychological well-being of international students and domestic students in conjunction with social factors that potentially affect them.

Ethical Considerations

The research was approved by the McMaster Research Ethics Board (MREB#: 0327). We have taken many steps to attempt to limit the number of ethical risks that may arise when collecting information from human participants. As such, we have ensured that the risks of our research do not outweigh those experienced in everyday life. However, there may still be some issues which merit consideration. There is a possibility for social risk if anonymity is not maintained. Despite the desire to protect anonymity, as our research took place using an online survey, participants may have decided to complete the survey in a public area which may have breached their privacy. Furthermore, as many participants may have been recruited through social media posts, their engagement with posts about the research study may have implied their involvement – therefore, revealing their identity as a participant to others. We have done our best to mitigate this by instructing participants through our letter of information to complete the survey in a private location and to not share their participation or their answers with others. Participants may have also faced psychological risks during the survey such as feelings of discomfort, worry, or embarrassment due to survey questions relating to introspectively analyzing emotions and feelings of support in the community. To mitigate this potential risk, participants were able to withdraw at any point in the survey or skip a question they did not wish to respond to.

Research Process
Step 1: MREB

To initiate the research process, it was essential to submit an application to the McMaster University Research Ethics Board to be able to involve human participants in research. This application was submitted on October 20th, 2022. This application was submitted with all required documentation – including appendices.

Step 2: Constructing the Survey
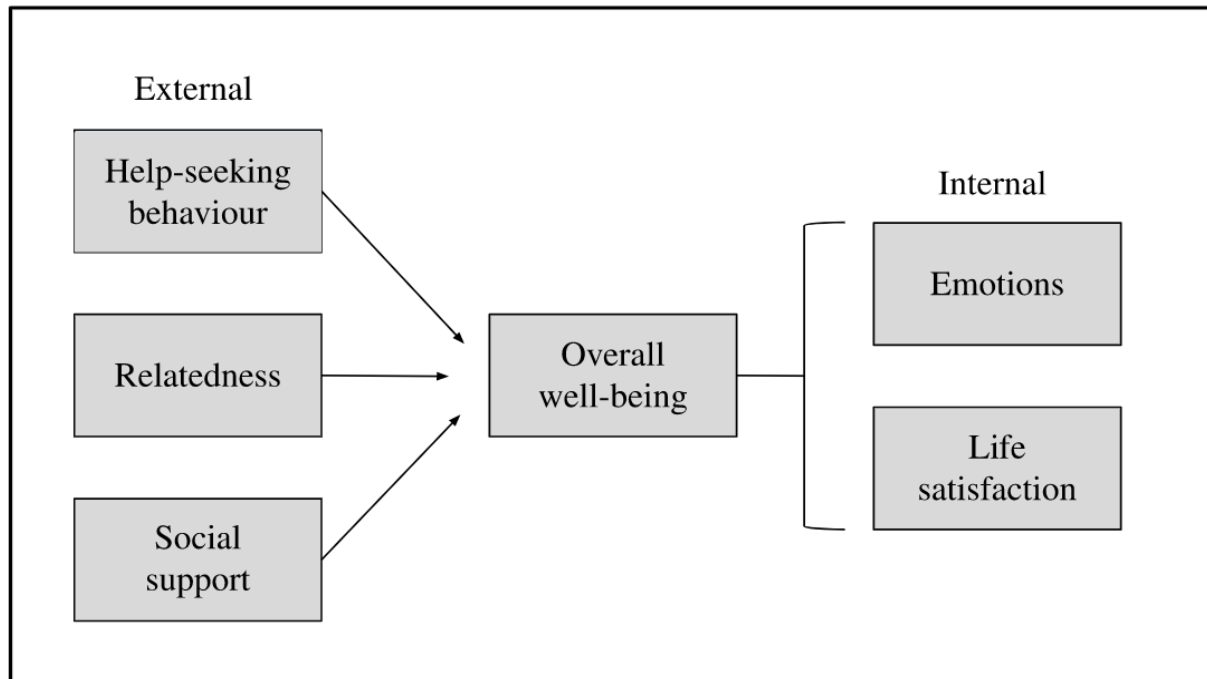
Our research focused on how different dimensions (external forces) affect overall well-being (internal representations). These dimensions are help-seeking behaviour, relatedness, and social support. Overall well-being was broken down into two different aspects – emotions/affect and general life satisfaction. The interaction of these dimensions and overall well-being were then explored comparatively between international and domestic students to gauge any existing differences and attempt to define the origin of these discrepancies in experiences.

We began constructing our survey by breaking down questions into different sections that would target each dimension specifically, as well as each component of overall well-being. Through the responses to each question, we sought to find correlations between responses to the questions focusing on external forces and those on internal representations to determine relationships between them. Open-ended questions then provided further detailed information allowing for a more comprehensive understanding of individual experiences of international and domestic students. The survey was expected to take no longer than 15 minutes in length in order to reduce question fatigue or a lack of interest in completion.

Survey questionnaires have the benefits of having low cost and high flexibility as participants are able to complete them at their desired or preferred time of the day, in an area where they may be more comfortable. The questionnaire was made up of open-ended and closed-ended questions. Open-ended questions provided our research with

more substantial information on the individual experiences of participants which they explained in their own words. The closed-ended questions presented in a variety of different formats – binary answer, Likert scale, and a list of options with single/multiple answers – allowed for data which was statistically analyzed to find patterns, trends, and correlations which are crucial for the format of this comparative study.

Step 3: Recruitment

Our target population for this research was international and domestic undergraduate students studying at McMaster University who are 18 years of age or older. A pre-approved list of MSU student-led clubs were contacted about sharing our research with the members. We sought permission from the clubs to post a recruitment script on their social media page (i.e., Instagram and/or Facebook) or to email the script to potential participants. We intended to use SONA to reach students without club affiliations, however, we were unable to do so due to time constraints and administrative difficulties.

Additionally, we posted physical flyers on pre-approved areas around McMaster University buildings to attempt to attract those individuals who may not have any club involvement as well. Using the recruitment method of physical flyers around the McMaster University campus is reflective of simple random sampling as every member of the population has an equal chance of being selected to participate due to their presence on campus. There may have been a certain degree of snowball sampling, a subtype of convenience sampling, as those individuals who are a part of clubs may have shared the research project with others around them who are also students at the university.

Step 4: Data Collection

All data collected was saved to the LimeSurvey database and remained anonymous and unidentifiable. The survey was opened for data collection on November 14th of 2022 and remained available for potential participants until February 17th of 2023. Now that data analysis has been completed, we have ensured all data was deleted from all researcher's devices and servers.

Data Analysis

For the analysis of our collected data, the combination of methods used aided in exploring a statistically significant relationship between the difference in student status (international or domestic) and psychological well-being while allowing for more descriptive pieces of data demonstrating individual experiences of participants which more significantly described the correlations, patterns, and trends observable in statistics.

Through the responses to each question, the intention was to find correlations between responses to the questions focusing on external forces and those on internal representations to determine relationships between them. Qualitative data collected from the open-ended questions served as direct quotes to offer a more explicit representation of correlations found between the dimensions of external forces and the internal manifestations that they affect. We analyzed our qualitative data by looking for trends in what participants wrote and connecting those to gather a more comprehensive overview of our data.

Statistical analysis was done using the software program, Jamovi. To assess the ways in which relatedness, help-seeking behavior, and social support influenced overall well-being, individual participant scores for each variable were calculated. Participant scores were then aggregated into a group average for each variable based on international or domestic student status. T-tests were used to test for significant differences in overall well-being and the above three external variables. Differences between groups were similarly analyzed in regards to the specific answers they gave for each external variable in order to foster a better understanding of the relationship between such dimensions and overall well-being for both groups. Correlation matrices were utilized to reveal significant correlations between the three dimension and overall well-being for international and domestic students separately.

Data Collection and Analysis Timeline

Task	Date
Email drafts for clubs	October 20th, 2022
Tentative recruitment starts and survey opening – emails sent out & flyers put up	November, 2022
Survey closes	February 17th, 2023
Data analysis commences	February 20th, 2023
Data analysis finishes	March 17th, 2023
Data synthesis completion	March 24th, 2023

Methodology Summary

To research the overall well-being of domestic and international undergraduate McMaster students, we recruited participants to participate in a quantitative survey using posters and social media posts. After collecting data using the MREB approved platform LimeSurvey, we analyzed our data using Jamovi to test for correlations between the three external variables and overall well-being as well as significant differences between international and domestic students. Qualitative data was analyzed manually for patterns in responses and then connected to the rest of our research to assess overall trends in data.

Results

Relevant participant demographics

We had a total of 25 participants ($n = 7$ international and 18 domestic). Most participants in both the international (57%) and the domestic group (83%) identified as

women. The majority of international students (85.7%) came from countries with more collectivist cultures. Similarly, the majority of our international student sample (85.7%) felt that the culture of their country of origin was dissimilar to Canada's culture (Table 1).

Overall Well-being between International and Domestic Students

Tables 2 and 3 show the between-group t-tests for significant group differences and the means and standard deviations for each factor for both domestic and international students respectively. Contrary to our hypothesis, international students' overall well-being was slightly higher on average (M = 2.95, SD = 0.52) than domestic students (M = 2.91, SD = 0.60). This was also the case for students' sense of relatedness with international students scoring a bit higher (M = 2.36, SD = 0.56) than domestic students (M=2.28, SD=0.68). Feelings of social support were higher among domestic students (M = 3.42, SD = 0.58) than international students (M = 2.96, SD = 0.73). However, these differences were not statistically significant. The only significant difference was found in help-seeking behavior (t[23]=2.83, p=.010), which was significantly higher among domestic students (M = 1.72, SD = 0.23) than international students (M = 1.43, SD = 0.21).

Table 1

Participant Demographics

	Domestic Students		International Students	
	n=	%	n=	%
Year of Study				
1	2	11	0	0
2	3	17	1	14
3	4	22	3	43
4	8	44	3	43
5	0	0	0	0
6	1	6	0	0
Gender				
Female/Woman	15	83	4	57
Male/Man	2	11	3	43
Other	1	6	0	0
Country of Origin				
Canada	18	100	-	-
China	-	-	2	29
Poland	-	-	1	14
South Korea	-	-	2	29
India	-	-	1	14
Vietnam	-	-	1	14
Cultural Similarity				
Yes	11	61	1	14
No	6	33	6	86
No Answer	1	6	0	0

Table 2
Between-group T-Tests for Overall Well-being and Three External Variables

		Statistic	df	p
Overall Well-being	Student's t	-0.175	23.0	0.863
Help-seeking Behavior	Student's t	2.818	23.0	0.010
Relatedness	Student's t	-0.276	23.0	0.785
Social Support	Student's t	1.642	23.0	0.114

Note. H$_a$ μ $_{Dom}$ ≠ μ $_{Intl}$

Table 3
Mean and Standard Deviations for Domestic and International Students

	Group	N	Mean	Median	SD	SE
Overall Well-being	Dom	18	2.91	3.00	0.597	0.1407
	Intl	7	2.95	3.11	0.521	0.1968
Help-seeking Behavior	Dom	18	1.72	1.69	0.230	0.0542
	Intl	7	1.43	1.37	0.209	0.0791
Relatedness	Dom	18	2.28	2.13	0.675	0.1590
	Intl	7	2.36	2.25	0.556	0.2103
Social Support	Dom	18	3.42	3.50	0.575	0.1356
	Intl	7	2.96	3.00	0.728	0.2751

Correlations to Overall Well-being

Table 4 reveals the correlations between overall well-being and the three external variables split by international or domestic student status. Unlike our predictions, help-seeking behavior was negatively associated with overall well-being for both domestic and international students, but this relationship was not statistically significant. Furthermore, there seemed to be a slight positive relationship between relatedness and overall well-being, which is as we anticipated, however this was also found to be insignificant. Interestingly, social support was significantly correlated to overall well-being but only for domestic students ($r = 0.757$, p < .001).

Differences Across the Three External Variables
Help-seeking

Knowledge of campus resources was significantly higher ($t[23] = 3.22$, $p = .004$) in domestic students ($M = 1.52$, $SD = 0.24$) than international students ($M = 1.20$, $SD = 0.17$). Additionally, domestic students seemed to feel more comfortable accessing resources ($M = 2.72$, $SD = 0.90$) than international students ($M = 2.29$, $SD = 0.95$) but tended to use campus resources less ($M = 2.22$, $SD = 1.22$) than international students ($M = 2.57$, $SD = 1.27$). However, such differences in comfortability and use of campus resources were not statistically significant (Table 5).

Table 4

Correlation between overall well-being and external variables by international and domestic Students status

		Overall Well-being		Help-seeking Behavior		Relatedness		Social Support	
		Intl	Dom	Intl	Dom	Intl	Dom	Intl	Dom
Overall Well-being	Pearson's r	—	—						
	p-value	—	—						
Help-seeking Behavior	Pearson's r	-0.730	-0.203	—	—				
	p-value	0.063	0.420	—	—				
Relatedness	Pearson's r	0.244	0.331	-0.081	0.278	—	—		
	p-value	0.597	0.179	0.862	0.263	—	—		
Social Support	Pearson's r	0.716	0.757***	-0.743	-0.366	0.397	0.129	—	—
	p-value	0.071	< .001	0.056	0.135	0.378	0.609	—	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$
Note. International (Intl), Domestic (Dom)

Table 5

T-Test differences in help-seeking between international and domestic students

							95% Confidence Interval		
		Statistic	df	p	Mean difference	SE difference	Lower	Upper	Effect Size
Knowledge of resources	Student's t	3.219	23.0	0.004	0.318	0.0989	0.114	0.523	Cohen's d	1.434
Comfortable accessing resources	Student's t	1.077	23.0	0.293	0.437	0.4053	-0.402	1.275	Cohen's d	0.480
Access barriers	Student's t	-0.897	23.0	0.379	-0.111	0.1238	-0.367	0.145	Cohen's d	-0.400
Frequency of access	Student's t	-0.637	23.0	0.530	-0.349	0.5481	-1.483	0.785	Cohen's d	-0.284

Note. $H_a \ \mu_{Dom} \neq \mu_{Intl}$

Relatedness

International students scored higher than domestic student on three of the four questions asked on relatedness (Table 6). International students felt more like a part of the McMaster community (M = 3.14, SD = 0.90) and more accepted amongst their peers (M = 2.00, SD = 0) than domestic students (M = 2.89, SD = 1.02 and M = 1.89, SD = 0.32 respectively). International students also seemed to be involved in a higher number of clubs (M = 1.71, SD = 0.76) than their domestic counterpart (M = 1.67, SD = 0.97). Conversely, domestic students had a higher level of participation in student life than international students (M = 2.67, SD = 0.91 vs. M = 2.57, SD = 1.13). However, none of these differences were found to be statistically significant.

Social Support

In regard to social support, we utilized a Mann-Whitney U test to assess significance as our data did not meet the assumption of equal variance (Table 7). On average, domestic students were more likely to feel comfortable expressing their emotions (Mdn = 4 vs. Mdn = 3), and feel like they had a good support system (Mdn = 4 vs. Mdn = 3) . The above differences were not found to be statistically significant, however, domestic students were significantly more likely to have social supports in the GTA or Hamilton area (Mdn = 2, U = 39.5, p = .028) compared to international students (Mdn = 2).

Table 6
T-Test for differences in relatedness for international and domestic students

		Statistic	df	p	Mean difference	SE difference	95% Confidence Interval Lower	Upper		Effect Size
Feel like part of McMaster	Student's t	-0.575	23.0	0.571	-0.2540	0.442	-1.168	0.660	Cohen's d	-0.2560
Number of clubs	Student's t	-0.116	23.0	0.908	-0.0476	0.409	-0.895	0.799	Cohen's d	-0.0518
Level of participation	Student's t	0.220	23.0	0.828	0.0952	0.433	-0.800	0.991	Cohen's d	0.0980
Feel accepted by peers	Student's t	-0.897	23.0	0.379	-0.1111	0.124	-0.367	0.145	Cohen's d	-0.3997

Note. H_a $\mu_{Dom} \neq \mu_{Intl}$

Qualitative Results

Most of our qualitative data has been gathered from the question "How is your home culture similar or different from Canadian culture?" Main themes present in participant responses included the individualistic nature of Canadian culture, the value placed on mental health in Canadian culture, the lack of respect for the elderly in Canadian culture, and differences in gender roles. A participant from Poland wrote, "Gender roles are more traditional back home, […] There is a social chain of command across ages (elders

Table 7

Mann-Whitney U test for differences in social support between international and domestic students

		Statistic	p	Mean difference	SE difference	95% Confidence Interval Lower	Upper		Effect Size
Feel they have others to depend on	Mann-Whitney U	49.0	0.363	2.95e-5		-6.31e−5	1.000	Rank biserial correlation	0.222
Social supports in GTA or Hamilton	Mann-Whitney U	39.5	0.028	3.87e-5		-8.78e−6	1.000	Rank biserial correlation	0.373
Good support system	Mann-Whitney U	50.0	0.425	4.54e-5		-1.000	1.000	Rank biserial correlation	0.206
Comfortable expressing emotions	Mann-Whitney U	37.5	0.104	1.000		-1.62e−5	1.000	Rank biserial correlation	0.405

Note. H$_a$ μ $_{Dom}$ ≠ μ $_{Intl}$

get/and expect more respect from youth). I think marriage and family values are more prevalent and are stronger back home." Furthermore, it seemed as though participants from collectivist cultures noticed the largest difference between their home culture and Canadian culture. For example, a participant from India wrote, "It is not similar, it's very different (i.e., collective vs independent)". Another participant from Pakistan wrote, "Pakistan is very collectivistic compared to the individualistic Western country Canada." There were also comments on Canada's openness. One participant from Pakistan wrote, "I feel people are a lot kinder, empathetic, and honest here in Canada. […] I feel more welcomed in Canada by random strangers even than I do in Pakistan". A participant from China wrote:

Canadian culture places more emphasis on social support and people tend to

rely on friends and other members of society when they have problems […] Also,

Canadians are willing to talk to people they don't know as well as help them, but I

think it would be weird if you saw someone in China who didn't have a very

obvious desire to ask for help but then you asked them very enthusiastically if

they needed help.

Participants also commented on whether they felt able to access services and supports in Canada. One participant from Canada wrote that the reason they do not feel comfortable accessing supports was due to a, "[l]ack of education [and] social anxiety", while another participant expressed "[n]ot knowing how to use them." Finally, one Canadian participant elected to write about why they feel excluded in the McMaster community writing, "I've struggled to find a group to fit into and often spend time alone or with one to two people. I don't feel like others like me that much." These results will be further analyzed in the discussion portion of the paper.

Discussion

Overall Well-Being

Addressing our primary research question, we have found overall well-being to be higher among international students than domestic students. This finding contradicts existing literature which suggests that international students experience poorer well-being on account of their struggles with acculturation and finding support, among other issues (Rosa et al., 2021; Skromanis et al., 2018). This finding may be attributed to the possibility that those international students who willingly chose to participate in our study felt more connected to the university. Indeed, Glass & Westmont (2014) demonstrate how feelings of belongingness to the university is central to academic performance and campus involvement. Put together, international students who feel better connected to the university are more likely to participate in on-campus initiatives, and by extension, are more likely to experience greater well-being through experiences of inclusion.

As per Social Identity Theory, we can attribute higher rates of overall well-being among international students to the availability of stronger social ties and a sense of belongingness. Furthermore, the positive effects of social identification may be more pronounced for the international student population as they are a minority group within the university.

Help-seeking

Help-seeking was found to be higher among domestic students compared to their international counterparts. Out of the three external dimensions, help-seeking was the only one that showed a statistically significant correlation with overall well-being for domestic students. In other words, there were no significant differences between international and domestic students apart from help-seeking behaviors.

Help-seeking was explored through ratings of knowledge regarding campus resources, levels of comfort with accessing these resources, and actual use of campus resources. Interestingly, we see that domestic students were better aware of campus resources and felt more comfortable accessing these resources, but actual use of campus resources was higher among international students. While the variables of comfort with access and frequency of actual use lacked statistical significance, this may be attributed to the size of our sample (Faber & Fonseca, 2014). Domestic students' higher awareness and comfort around on-campus resources can be attributed to their pre-determined comfort in socializing with the student community. Since domestic students form part of the majority group, they face fewer barriers to social identification with the university and are more likely to be aware of the kinds of support they have access to (Rosa et al., 2021). Previously, Beks et al. (2018) found that international students have lower mental health

literacy compared to their domestic counterparts. We argue that the same applies to our sample population, with deficits in awareness and comfort with access applying to resources addressing mental health among international students. That being said, international students may be more likely to access those on-campus resources that address immigration concerns and foster social inclusion. Indeed, those who arrive from foreign countries are tasked with navigating social, cultural, and legal spheres with far more urgency than domestic students as their university membership relies on it. Once again, it is also likely that the international participants in our survey are better connected with the McMaster community, and owing to their involvement, are more likely to seek out and utilize resources that apply to their needs.

Finally, most of our international student respondents were part of collectivistic cultures and this may account for lower overall rates in help-seeking behaviors. Chang et al. (2020) demonstrate how individuals belonging to collectivistic cultures are less likely to seek out help to save face and maintain group harmony. Our research reflects this point as qualitative analysis has revealed that international students find more openness in Canada around topics of mental health compared to their home country.

Relatedness

In terms of relatedness, our study found that international students fared slightly higher than their domestic counterparts. Specifically, international students scored higher on three out of four variables—how much they feel a part of McMaster community, the number of clubs they're involved in, and whether they feel accepted among their peers. The fourth aspect, participation in student life, was higher among domestic students. As per Social Identity theory (SIT), higher rates of well-being and positive self-images are induced by social group inclusion. Relatedness, being the dimension most similar to the concept of belongingness within SIT, can explain international students' higher overall rates of well-being. As previously mentioned, social group inclusion appears to be far more important for international student well-being (Brunstig et al., 2021); given this, relatedness might be the most influential dimension that accounts for higher overall well-being among international students.

Social Support

To measure student perceptions of social support, we asked respondents to rate how much they felt like they can depend on others, quality of existing supports, comfort with expressing emotions, and whether existing supports are in proximity (GTA or Hamilton). Overall, it was found that domestic students scored higher on all four aspects of this dimension. That being said, the only aspect that showed statistical significance was proximity of support. This was an expected finding as domestic students are far more likely to have family, friends, acquaintances and other connections as they are born and raised in Canada. This is not the case for international students who migrate alone. Given the importance of social support for student well-being, it is surprising that our international sample scored lower on this dimension despite being higher on overall well-being. We reason that domestic students' active efforts to seek out help might offset some of the deficits created by a lack of support.

Broader Significance of Research

Our research presents as an important starting point for a comparative study of this nature as there are very few studies that directly compare the overall well-being of international and domestic postsecondary students within Canada. By exploring how external dimensions such as help-seeking, social support and relatedness affect life satisfaction and emotional well-being, we have also developed a unique method of analyzing student well-being. That being said, a number of limitations such as small sample size and incomplete responses make it difficult to generalize and validate several research findings made throughout this study. Indeed, the only differences with statistical significance were found in help-seeking whereby domestic students possessed greater awareness of available resources, and domestic students' greater availability of social support within proximity compared to their international counterparts. Having achieved statistical significance on these sub-dimensions, we can highlight these elements as key points of analyses in future comparative studies. Furthermore, lower ratings of help-seeking and social support among international students position these aspects as important points of intervention for the student group.

Conclusion

Summary

Through our research, we aimed to explore and compare the psychological well-being of international and domestic students. We recognize that international and domestic students come from diverse backgrounds and that their lived experiences will differently impact the dimensions that we explored. Based on the additional challenges and stressors that international students might experience, we hypothesized that international students might report lower relatedness, social support, help-seeking behaviors, therefore, demonstrating lower overall life satisfaction.

Contrary to our hypothesis and other studies, our research demonstrates that international students have slightly better overall well-being than domestic students although it was an insignificant difference. There were no statistically significant correlations between our dimensions and overall well-being for international students. For domestic students, the only statistically significant correlation was between social support and overall well-being. International students also scored higher on relatedness, however, the difference in scores was insignificant. Domestic students scored higher on social support and help-seeking behaviors but only the difference within help seeking behaviors was statistically significant. Domestic students had a significantly higher degree of knowledge of on campus resources and significantly more social support within the GTA and Hamilton. All other findings were insignificant.

Limitations

Survey

There were several potential limitations to our research. The first set of potential limitations was logistical. The time we had for this project was limited and that, in turn, limited our ability to be as thorough as possible in our data collection and analysis. It is also possible that some nuance was overlooked in our data due to the restrictive number of questions permitted on the survey. Although we have carefully considered the feasibility of the scope of our topic, there are always factors that may apply that we did not have time or room to examine.

An example of this is the potential impact of mental illness on psychological well-being. We did not have room in our research to examine the influence of mental illness, nor would we be ethically approved to do so as it would be above minimal risk, however we acknowledge that it has an impact on psychological well-being. Furthermore, nuance may have been lost due to the research being quantitative rather than qualitative. Since we studied a highly personal topic, it is possible that we may have misinterpreted responses or not gotten the full picture from the survey.

The final limitation was the opportunity for misinterpretation or misunderstanding due to cultural or language barriers. Our study was highly reliant on international students and the cultures they come from were likely to influence their answers and how they understood our questions.

Sample Size

Our sample size (n=25) made up of domestic (n=17) and international (n=8) students was somewhat representative of the ratio of students at the undergraduate level. Despite this representation, the number of participants we received restricts the conclusions that can be made about our findings. It was found that international students have a higher overall well-being than domestic students. However, it is important to consider that those students who found our survey (due to the nature of recruitment through posters around campus and club emails) would have somewhat of a higher involvement with campus life. As we expressed in our theory, those with more relatedness, social support, and help-seeking behaviours would probably have higher well-being. Due to ethical constraints, we were unable to share this survey with a wider audience, such as sharing this via email announcements directed from International Student Services. Those accessing these support services would potentially have a wider range of experiences and involvement, hence a more representative sample.

Immigration Status

International and domestic students are differentiated by their individual "official immigration status" in Canada. International students need a study permit to study, whereas domestic students (permanent residents, citizens, refugees, etc.) do not require one. In our efforts to explore the lived experiences of individuals taking part in our survey, we came across a challenge regarding these distinctions. We did not include a question asking participants to identify their status in the country. We made this decision as we acknowledge the complexity and intricacies of "official status" and how this interacts with lived experience. For example, despite a student being newly arrived in Canada, they may (officially) be considered domestic due to their immigration status, like in the case of a refugee. Although this cohort of students would be included in the domestic sample, they may have experiences which reflect those of an international student. Lived experiences, being at the forefront of our research, took precedence, hence, our decision to avoid restricting individuals to their "official status." Using questions regarding the country with which they identified the most and the reported levels of similarity between their country to Canada, we were able to deduce their status of domestic versus international. For future research stemming from this study, we would want to find a way to make those distinctions clearer between international and domestic students, while still

allowing for those experiences of newly arrived students to be highlighted within the research.

Significant Insights

This research has provided significant insights into the relationship between social support and its various effects on mental health for both domestic and international students. We have also learned more about the mediating role of social groups in increasing or decreasing feelings of school connectedness and overall belonging for both groups. As it highlights the limitations of current policies or services, our research has the potential to further the development of future mental health programs and supports for students. Our key finding, which contradicts our original hypothesis and provides a compelling and significant insight, is that international students have a greater level of overall well-being in comparison to domestic students. Furthermore, the study indicates that there are no notable variations in social support in general, with only help-seeking behavior showing a significant statistical difference.

Concluding Statements

Future research can explore dimensions of help-seeking, relatedness and social support among a larger group of university students. It would help to use recruitment methods that identify and tap into groups/clubs/organizations that are made up of international students since this portion of our sample was deficient. Additionally, future research may benefit from exploring a way to include valuable lived experiences while making a more defined distinction between international and domestic students.

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