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The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience and their Experiences of Diversity and Inclusion

Manvir Ahluwalia, *Western University*

Supervisor: Irwin, Jennifer D., *The University of Western Ontario*

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Abstract

This study's primary purpose was to assess, quantitatively, the relationship between Ontario undergraduates' levels of resilience and experiences of diversity and inclusion, and to identify demographic factors most associated with these outcomes. The secondary purpose was to explore, qualitatively, students' experiences of diversity and inclusion and their perspectives on how these experiences influenced their resilience. Demographic questions, three scales, and (focus group and individual) interviews were used. Undergraduates (n = 276) from 19 Ontario universities completed the survey. Pearson's correlation revealed a positive relationship between resilience and experiences of diversity and feelings of inclusion. Demographics indicative of equity-deserving group membership were most associated with levels of resilience, experiences of diversity, and feelings of inclusion. Through interviews (n = 25), students described mostly positive experiences of diversity at university, with room for improvement regarding inclusion experiences. These findings can inform meaningful institutional practices to advance undergraduates' experiences of diversity and inclusion.

Keywords: resilience, diversity, inclusion, university students, equity-deserving

Summary for Lay Audience

Undergraduate students' stressors during and following the transition from high school to university can include moving away from family and friends to a new campus, managing expenses, and maintaining an increased academic workload. These stressors can deplete students' resilience (i.e., their ability to bounce back in the face of adversity). Despite undergraduates experiencing similar stressors to each other, their levels of resilience are influenced by individual and environmental factors. By recognizing various influences on resilience levels, the experiences of equity-deserving students (i.e., students from communities that have been historically disadvantaged and underrepresented) are of heightened concern due to the adversity that individuals of diverse identities face. Diversity refers to the presence of differences within a specific group, while inclusion occurs when individuals sense that their identities and ideas are accepted, they feel a part of a larger society, and feel that their opinions are welcomed. Given the positive outcomes associated with diversity and inclusion, undergraduates' experiences of diversity and inclusion might influence students' resilience. Therefore, the purpose of the current study was to assess the relationship between Ontario undergraduate university students' levels of resilience and their experiences of diversity and inclusion, and to identify demographic factors most associated with these outcomes. This study also explored Ontario undergraduate university students' experiences of diversity and inclusion and their perspectives on how these experiences influenced their resilience. Data were collected using quantitative (demographic questions, three scales) and qualitative (focus group and individual interviews) methods. Undergraduate students (n = 276) from 19 universities across Ontario completed the survey. Students in this study had levels of resilience that were positively correlated with their experiences of diversity and feelings of inclusion. Intersectional

demographic characteristics that identify equity-deserving group membership were most associated with levels of resilience, experiences of diversity, and feelings of inclusion. Through interviews, students described mostly positive experiences of diversity at university and noted room for improvement pertaining to their experiences of inclusion. These findings should be considered to inform meaningful institutional practices that can advance the integrated experiences of diversity and inclusion among undergraduate university students and improve their levels of resilience.

Co-Authorship Statement

Specific study objectives and research questions were developed by Manvir Ahluwalia and Dr. Jennifer Irwin. The study was conducted by Manvir Ahluwalia with the support of Dr. Jennifer Irwin, Dr. Shauna Burke, and Dr. Alexandra Levine.

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Chapter 1: Introduction

The importance of resilience in young adults is becoming increasingly recognized in health promotion research, given associations found between low resilience and poor mental health and well-being (Beckstein et al., 2022; Mesman et al., 2021; Srivastava, 2011). Resilience can be understood as a dynamic process wherein environmental and psychosocial factors interact to enable an individual to survive, grow, and thrive despite exposure to stress and/or adversity (Howell et al., 2018; Munoz et al., 2017; Prime et al., 2020). A particular cohort of young adults that experience varying levels of resilience are undergraduate university students who face unique stressors during and following the transition from high school to university (Fullerton et al., 2021). These stressors include important life changes such as moving away from family and friends, navigating a new campus environment, meeting new people, managing expenses, and maintaining an increased academic workload (Henri et al., 2018). According to Hartson et al. (2021), financial pressures, food insecurity, and housing instability can also contribute to students' stress. Additionally, these researchers noted that many undergraduate students (i.e., often aged 18 to 26 years; Hartson et al., 2021) are in a developmental transition period, making them more susceptible to early stages of chronic illnesses (e.g., prediabetes, prehypertension, and higher weight) and the onset of several mental health challenges (e.g., mood disorders, substance disorders; Hartson et al., 2021). Young adults in university tend to experience higher levels of stress and adversity, compared to middle and older adults and their non-student counterparts (Abiola et al., 2017; Fullerton et al., 2021; Hartson et al., 2021; Saleh et al., 2017). Thus, resilience among undergraduate university students is crucial to consider.

Despite university students experiencing similar stressors to each other, it has been found that their levels of resilience are influenced by factors associated with the individual and their

environments (Ungar et al., 2013). By recognizing contextual influences on resilience levels, the experiences of equity-deserving students (i.e., students from communities that have been historically disadvantaged and underrepresented; Western University's Office of Equity, Diversity & Inclusion, 2023) are of heightened concern due to the adversity that individuals of diverse identities face (Tamtik & Geunter, 2019). To ensure the definitions of terms commonly used within this thesis are transparent, please note that equity is defined as the "removal of systemic barriers, enabling all individuals to have equitable opportunity to access and benefit from the program," which encompasses experiences of diversity and inclusion within social institutions (Government of Canada, 2023, What is "EDI?" section). Diversity refers to the presence of differences within a specific group (Olzmann, 2020), while inclusion occurs when individuals sense that their identities and ideas are accepted, they feel a part of a larger society, and feel that their opinions are welcomed (Moore et al., 2020; Tan, 2019). Undergraduate university students' experiences of diversity and inclusion can provide comprehensive insights into equity at the institutional level (Tan, 2019), and might also reflect unique challenges to students' resilience.

Chapter 2: Literature Review

The following literature review provides background information to both introduce and support the rationale for this study focused on the relationship between Ontario undergraduate university students' levels of resilience and their experiences of diversity and inclusion. To begin, an overview of resilience is presented, followed by the theoretical foundations that guide an understanding of resilience and the factors that influence resilience levels. Subsequently, resilience is highlighted in the context of undergraduate university students. Next, an overview of diversity is presented, and what is known about undergraduate university students' experiences of diversity is described. Then, an overview of inclusion is presented, and the current literature focused on undergraduate university students' experiences of inclusion is highlighted. The importance of studying the relationship between undergraduate university students' levels of resilience and their experiences of diversity and inclusion is then discussed. Finally, the purpose of this study is presented.

Resilience

The term 'resilience' stems from studies conducted in the 1970s on children who were seen to thrive in the face of extreme adversity (Garmezy, 1971; Rutter, 1979; Werner et al., 1971). In a discussion of the origins of resilience, Masten (2001) explained that personal resilience was traditionally considered a unique characteristic, in which only extraordinary individuals had the ability to bounce back from stress and/or adversity. Since the 1970s, researchers have found that resilience can also be attributed to basic development systems (Bonanno, 2004; Masten, 2001; Prince-Embury, 2007). These developmental systems include the sense of mastery (i.e., positive expectations regarding self-efficacy), the sense of relatedness (i.e., the perceived sense of social support), and emotional reactivity (i.e., the threshold of

tolerance an individual has before stress and/or adversity occurs; Prince-Embury, 2007). Prince-Embury (2007) conceptualized resilience as being a balance of perceived personal resources (i.e., sense of mastery and sense of relatedness) relative to perceived vulnerabilities (i.e., emotional reactivity). Furthermore, Rutter (2012) used the steeling effect (i.e., exposure to stress may be followed by increased resistance to stress) to indicate that one's level of resilience may increase over time as a result of exposure to stress and/or adversity. According to Rutter (2012), the steeling effect was conceptualized through research by Lyons et al. (2009), who studied mother–infant separations in squirrel monkeys and found that brief stress exposure led to decreased reactivity to stress over time. In humans, Stacey et al. (1970) found that children's brief separations from their parents (e.g., sleepovers with friends) fostered resilience when those children were faced with other stressors. As such, resilience is emphasized as a protective factor that can reduce the potential for stress reactivity (Hartson et al., 2021).

Resilient Attributes

There are many personal attributes associated with resilience. Individuals with high levels of resilience tend to use action-oriented approaches to solve problems, use positive emotions to recover from negative emotional experiences, and have secure attachment styles (Rutter, 1985; Tugade & Fredrickson, 2004). Compared to individuals with lower levels of resilience, individuals with high levels of resilience can bounce back easier from stress and/or adversity, and their tenacity and plasticity make them more capable of adapting to change (Stanley et al., 2018). According to Stanley et al. (2018), high levels of resilience can lead to determination and hope, which can be manifested through goal orientation and optimism for the future. Likewise, Richardson (2002) described numerous resilience-related qualities as including social responsibility, adaptability, and an orientation towards achievement. Specific to youth, resilience

has been associated with a strong ability to self-regulate and a willingness to extend oneself to others, along with creativity, humour, and curiosity (Buckner et al., 2003; Tugade & Fredrickson, 2004).

The Social-Ecological Framework of Resilience

Theories can help guide researchers in their understanding of why certain concepts and relationships should be explored (Garvey & Jones, 2021). A theoretical framework acts as a foundation for a study by providing a lens through which researchers can methodologically approach the research objective and analyze the data (Grant & Osanloo, 2014). While several theoretical frameworks specific to resilience exist (e.g., the individual differences model of resilience by Mancini and Bonanno [2009]; the metatheory of resilience by Richardson [2002]), the social-ecological interpretation of resilience (Ungar et al., 2013) has been chosen as the theoretical framework to inform the proposed study. This framework's consideration of resilience as it relates to the complex and interacting roles between and among individuals and their various environments (Ungar et al., 2013) makes it a good fit for exploring university students' experiences of diversity and inclusion, as detailed below.

Origins of the Social-Ecological Interpretation of Resilience. The social-ecological interpretation of resilience (Ungar et al., 2013) is an adaptation of the bio-psycho-social-ecological systems theory advanced by Bronfenbrenner (1979). Urie Bronfenbrenner created the ecological systems model in the 1970s to examine child development, which was later adapted into the bio-psycho-social-ecological systems theory to account for various contextual influences on children's development (Beckett et al., 2006). This theory recognizes that there are multiple interrelated systems in an individual's environment that shape and influence behaviour (Bronfenbrenner, 1979). Within this theory, Ungar et al. (2013) proposed that while resilience

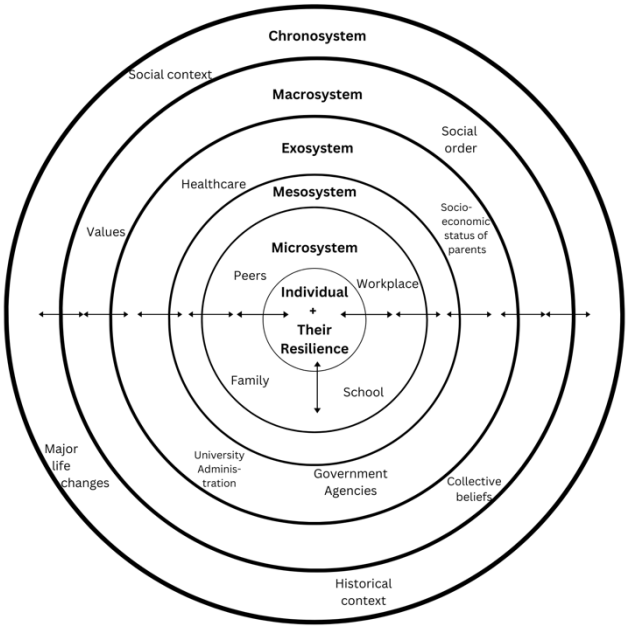
can be assessed at an individual level, it should also be examined in terms of the quality of the interaction between an individual and their environment (i.e., their social context). Using this social-ecological interpretation, the authors explained that resilience is the "capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being," allowing them to bounce back in the context of stress and/or adversity (Ungar, 2008, p. 225). The authors also noted that both individual and collective capacities need to be considered in order to secure these resources in culturally meaningful ways (Ungar et al., 2013).

Systemic Levels in the Social-Ecological Interpretation of Resilience. There are five interconnected systems within the social-ecological interpretation of resilience (Bronfenbrenner, 1979), and each system is deemed to be of equal importance (see Figure 1). The individual and their level of resilience are at the centre of these systems, and the individual and the systems can directly or indirectly influence each other (Ungar et al., 2013). Microsystems refer to activities, roles, and interpersonal relationships in which an individual is directly involved (e.g., family, school, workplace, peer groups, and religious organizations) and provide an important influence on the individual (Bronfenbrenner, 1979). According to Ungar et al. (2013), positive microsystemic processes can moderate stressful events and lead to higher levels of resilience. Mesosystems are mutual interactions between microsystems, in which certain microsystems can exchange resources to enhance an individual's growth and mitigate risk exposure (e.g., a teacher meeting with a student's parent to discuss academic progress; Ungar, 2012). Exosystems are the distal social structures that indirectly influence the individual and shape the quality of interactions at the meso- and micro-levels, and can include health care services, the socioeconomic status of the individual and/or of their parents, and government agencies

(Bronfenbrenner, 1979). Structural barriers at this level can lead to negative outcomes (e.g., poor access to health care, unemployment, housing concerns; MacKenzie et al., 2011). Macrosystems influence the norms in the individual's environment and refer to the cultural backdrop that exists for an individual at a given time, including the values, collective beliefs, and social order of a particular society (Ungar et al., 2013). Finally, chronosystems refer to the environmental changes that occur in an individual's lifetime within a socio-historical context (e.g., major life transitions, or changes to social, economic, and/or political contexts; Ungar et al., 2013).

Figure 1

An Adapted Diagram of Bronfenbrenner's Bio-psycho-social-ecological Systems Theory



Note. Adapted from "Influence of a lifestyle intervention in preschool children on physiological and psychological parameters (Ballabeina): Study design of a cluster randomized controlled trial," by I. Niederer, Kriemler, S., Zahner, L., Bürgi, F., Ebenegger, V., Hartmann, T., Meyer, U., Schindler, C., Nydegger, A., Marques-Vidal, P., and J. J. Puder, 2009, BMC Public Health, 9(1), p. 94 (https://doi.org/10.1186/1471-2458-9-94). CC BY-NC.

Principles in the Social-Ecological Interpretation of Resilience. The social-ecological interpretation of resilience includes three principles. Firstly, Ungar et al. (2013) emphasized the principle of *equifinality*, which indicates that all systems are important to consider but one system, or an aspect of a system, can become more influential on an individual's level of resilience, depending on a specific circumstance. For example, Obradović et al. (2010) found that while a student's grade point average (GPA) can be associated with individual capacity, GPA can also be influenced by microsystems, such as the parental impact on a child's readiness for school, which demonstrates equifinality in a broader context (Ungar et al., 2013). The second principle is *differential impact*, through which protective and promotive factors that influence individuals vary in impact across contexts and time (Ungar et al., 2013). To illustrate, a promotive factor, such as self-efficacy (i.e., the confidence individuals have to perform certain behaviours that lead to attaining personal goals; Bandura, 1982), may produce a small positive effect across an entire population at a time of generally low adversity, and it might have a larger effect or no effect on an individual's level of resilience during times of adversity (Ungar et al., 2013). Particularly in the socio-historical context of differential impact, Dei et al. (1997) explained that while failing to graduate is typically perceived as disadvantageous by the overall population, many equity-deserving students tended to drop out of school as an adaptive protective strategy that increased their levels of resilience in the face of adversity caused by systemic barriers and poor opportunity structures. Thirdly, the principle of *cultural moderation* indicates that the way an individual negotiates for resources is influenced by culture, which is a result of cultural heterogeneity (Chen & Rubin, 2011; Ungar et al., 2013). Ultimately, culture can influence the beliefs that individuals have, which further shape their understanding of resilience and their behaviours (Rogoff, 2003; Ungar et al., 2013). Through this social-ecological

interpretation, it is evident that an individual-level approach to understanding resilience is insufficient. Rather, to capture the complexity of unique experiences among university students, resilience should be explored in the context of various systems.

Social-Ecological Influences on Resilience

According to the social-ecological interpretation of resilience discussed above, it is evident that levels of resilience are influenced by a variety of factors including demographics (e.g., age, sex, gender, race, and ethnicity), sociocultural contexts, and social relationships (Dehvan et al., 2018). Ungar (2008) explored resilience across cultures and highlighted that resilience research has largely focused on a Western-based context with a lack of consideration for how community and cultural factors contribute to resilience in different populations. Specifically, it was noted that "there has been little cross-cultural validation of findings," (Ungar, 2008, p. 219) and limited research on the cultural factors associated with resilience outside of the Western context (Boyden & Mann, 2005; Ungar, 2008). While dimensions of resilience, such as self-efficacy, secure attachments, and social support, are relevant to both minority and majority world cultures, one cannot assume homogeneity of experiences (Ungar, 2008). In a study conducted with youth (N = 1,451) in 14 locations around the world, Ungar (2008) explained that the interpretation of resilience is negotiated between individuals and their communities, which also creates a difference in the narratives of resilience. For instance, while an individual in an Innu federal reserve in Canada may express their resilience in terms of personal agency, an individual in South Africa may express their resilience in terms of their reliance on religious beliefs, as per the cultural moderation principle (Ungar, 2008; Ungar et al., 2013). In a review of the literature on Indigenous youth and resilience, Fleming and Ledogar (2008) discussed the need for more studies on the role of culture as a resource for resilience to build an understanding

of youth who do not live in strong cultural communities (e.g., urban youth). At a microsystemic level, Herrman et al. (2011) found that community factors, such as good schools, community services, sports and artistic opportunities, and a lack of exposure to violence positively contributed to individuals' resilience.

It is noted in the social-ecological interpretation of resilience that patterns of coping and the social context of an individual can vary over their life span, further indicating that resilience is dynamic and predicted by several variables (Ungar et al., 2013). According to Ungar et al. (2013), as exposure to stressors increase, an individual's resilience depends more on the quality of the environment and the well-being resources that are available to them. Specifically, for populations that experience marginalization and are often exposed to high levels of stress, environmental factors may be more influential than individual characteristics (Ungar et al., 2013). In the context of childhood, Wu et al. (2013) explained that severe adverse events at a young age can negatively impact the development of stress response systems, which decreases the likelihood of a resilient adulthood. As such, promoting resilience during child-rearing through supportive environments, attentive and responsible parenting, and prosocial attachments can positively influence a child's resilience, which is likely to carry into adulthood (Wu et al., 2013). In the context of adulthood, Dehvan et al. (2018) found that high levels of resilience were crucial in settings with high levels of stress; high resilience levels helped to prevent physical and mental health problems among psychiatric nurses ($N = 60$) and allowed them to effectively evaluate stressful situations and use effective coping mechanisms. Different stressors can arise based on an individual's life stage (Dehvan et al., 2018; Wu et al., 2013). Since undergraduate university students are in a distinct life stage, the stressors they face and their resilience in response to these stressors are likely to be specific to this cohort (Fullerton et al., 2021).

Resilience of Undergraduate Students

In a scoping review that examined what is known about the relationship between the resilience and mental health of undergraduate students, Ahluwalia et al. (2023) included 13 articles and found that a sample of undergraduate students in India (N = 462; Singh & Bandyopadhyay, 2021) reported high levels of resilience, while samples of undergraduate students in Ireland (N = 30; Roulston et al., 2018) and the United States (N = 551; Harris, 2021) reported moderate levels of resilience. In contrast, samples of undergraduate students in South Africa (N = 160; Laher et al., 2021) and Brazil (N= 48; Pasa Mondelo & Remor, 2021) reported low levels of resilience. Further, Chung et al. (2017) examined resilience in first-year undergraduate students (N = 422) in Australia and found that traditional university students (i.e., students with typical demographic characteristics in terms of age, employment status, and marital status) reported lower levels of resilience when compared to non-traditional students. The studies focused on undergraduate university students' levels of resilience show varying levels of resilience and point to the need for further investigation in this area (Ahluwalia et al., 2023; Brewer et al., 2019).

The Role of Resilience in University Settings

Resilience contributes to the ways that undergraduate students respond to their university environments (Hartley, 2011). Holdsworth et al. (2018) explained that since stress and adversity are linked with opportunity, the success of students can, in part, be determined by their levels of resilience. As some students may struggle in the face of stress and/or adversity, other students may thrive, leading to better responses to opportunities, and ultimately, to experiencing more success (Holdsworth et al., 2018). For instance, students with high levels of resilience might seek out additional and challenging academic opportunities (e.g., research positions), which may lead

to academic success as these students are able to better manage stressful situations and multiple responsibilities, compared to students with lower levels of resilience (Holdsworth et al., 2018). Resilience in academic settings, which can be reflected through self-efficacy, planning, control, low anxiety, and persistence, has been found to lead to an increased likelihood of educational success (Cassidy, 2016; Fullerton et al., 2021). The relationship between resilience and educational success is further supported by Chow and Choi (2019), who found that higher levels of resilience contributed to higher grade point averages among undergraduate students (N = 416) in China. Higher levels of resilience can also be applied to success in social settings as Fullerton et al. (2021) examined resilience in undergraduate students (N = 306) in Australia and found that resilient undergraduate students were more confident within their peer groups, resulting in better overall mental health and well-being, compared to students with lower levels of resilience (Fullerton et al., 2021).

Individual Differences and the Resilience of Undergraduate Students

Individual differences influence undergraduate students' experiences of resilience. Wu et al. (2020) explored resilience in Chinese undergraduate students (N = 1,743) and found a significant relationship between resilience and demographic characteristics. The researchers highlighted that female students had more positive coping styles than their male counterparts, indicating higher levels of resilience. This was noted to be attributed to females typically utilizing more social support and emotion-focused coping, versus males who are perceived to utilize insufficient positive coping strategies (Wu et al., 2020). In contrast, Erdogan et al. (2015) conducted a study to examine the effect of gender on university students' resilience in Turkey (N = 596) and found that men reported significantly higher levels of resilience than women. The authors attributed this gender difference to the effects of societal gender norms, with the

explanation that Turkish society is considered to be male-dominated, with men being expected to endure more hardship with lower emotional reactivity, compared to women (Erdogan et al., 2015). Turner et al. (2021) compared the levels of resilience in undergraduate students (N = 366) in multiple countries. They found that students in Hong Kong had low levels of resilience, while students in Singapore had high levels of resilience. Turner et al. (2021) noted that Hong Kong's cultural norms of discouraging help-seeking behaviour, along with what the authors described as a lack of academic and personal resources available to the undergraduate students in the study, helped to explain their levels of resilience. Meanwhile, the Singapore Ministry of Education (2006) put forth a development plan to introduce resilience training as a civic and moral value within their culture-related educational framework, likely contributing to the higher levels of self-reported resilience of undergraduate students in Singapore (Turner et al., 2021). Holdsworth et al. (2018) also emphasized that a difference exists in the level of understanding of resilience between undergraduate students in their early and later years of study as they are likely to have different life experiences. The authors explained that most upper-year students used multiple concepts from their own experiences to provide complex definitions of resilience (e.g., noting that resilience involves understanding one's emotions, utilizing coping strategies, learning new skills), compared to first-year students who understood resilience in more simplistic terms (i.e., bouncing back in the face of adversity; Holdsworth et al., 2018).

Diversity

Diversity refers to the presence of differences, which can include, but are not limited to, differences in racial identity, ethnicity, religious affiliation and spiritual beliefs, level of ability/disability, socioeconomic status, gender identity and expression, and sexual orientation (Olzmann, 2020; Servaes et al., 2022). At a macrosystemic level in Canada, policies for diversity

are grounded in the Canadian legal framework and constitutional values (e.g., the Canadian Human Rights Act [1977], the Charter of Rights and Freedoms [1982], and the Canadian Multiculturalism Act (1988; Chan, 2005; Tamtik & Guenter, 2019)). Each of these legislations establishes principles and values for Canadian society (e.g., equality, equity, social justice, respect for others, kindness) that accept and promote diverse communities. According to Statistics Canada (2016), 27% of Canadian youth (i.e., 15 to 30 years old) identify as members of a visibly racialized group, and this is a continuously rising statistic. Intersectionality refers to combinations of social identities that can impact experiences of oppression or privilege within multiple systems (Crenshaw, 1989). Intersectionality is critical in the context of diversity, as more than one identity (e.g., race, gender, ethnicity) can simultaneously influence the way an individual experiences the world (Servaes et al., 2022). Further, many aspects of diversity are also considered social determinants of health (e.g., socioeconomic status, gender, race, culture; Government of Canada, 2022), which can contribute to health inequalities (Servaes et al., 2022). This relationship can be illustrated through the unequal impact of the COVID-19 pandemic as people of racialized identities in the United States and Canada have experienced worse health outcomes, compared to people of non-racialized identities (DeSimone, 2022). Individuals can have negative attitudes and/or perceptions toward people with identities that differ from their own, which can result in implicit biases that influence interactions with others (Blair et al., 2011). The biases that are prevalent within communities can be replicated in any social institution (e.g., schools, workplaces, and health systems), and can manifest as institutional discrimination, which ultimately leads to poor outcomes for equity-deserving people (Lim et al., 2022).

Diversity of Undergraduate Students

Higher education is an investment for many undergraduate students, allowing them to develop social and cultural capital and access opportunities (Kromydas, 2017). For instance, census data in Canada demonstrated that graduates from universities earn higher wages compared to those without undergraduate degrees (Statistics Canada, 2017). Over the last 50 years, the academic environment in Canada has drastically changed from being historically dominated by White men to more diversity in terms of students' gender identities, sexual orientations, racial identities, ethnicity, socioeconomic statuses, nationalities, and ability and disability statuses (Michalski et al., 2017). Brunet and Galarneau (2022) highlighted that approximately 30% of students who received a bachelor's degree from a Canadian university between 2014 and 2017 identified as members of a visible minority group. Further, there are currently more than 64,000 international students enrolled in Ontario universities (Council of Ontario Universities, 2022). While there is a lack of demographic/self-identification data available on undergraduate students, these statistics provide insight into the racial and cultural diversity of students in universities in Ontario.

Barriers for Equity-Deserving Students in Higher Education

Despite the increase in the diversity of undergraduate students, equity-deserving populations continue to face barriers at an exosystemic level while accessing universities (Banks & Dohy, 2019). In particular, students from low-income families in Canada (i.e., one component of socioeconomic status) experience difficulties with affording high costs of tuition, rendering them less likely to attend university or to continue in their undergraduate programs, compared to students from higher-income families (Finnie et al., 2011; Michalski et al., 2017). Barriers to higher education in Canada are further perpetuated towards students from rural communities,

those with English as a second language, and Indigenous students (Michalski et al., 2017). These findings are consistent with an article by Dutta et al. (2021) that focused on reviewing key factors in promoting cultural diversity in undergraduate students in the United Kingdom. The authors highlighted that students from lower socioeconomic backgrounds were underrepresented in universities, with high rates of discontinuation among Black students due to less positive learning environments and an increased likelihood of racial harassment (Dutta et al., 2021). First-generation students (i.e., students from families with no prior history of attending post-secondary education) were also more likely to experience challenges with accessing universities, given that the level of parental education may predict the academic success of their children (Turcotte, 2011). Evidently, these experiences have a negative impact on intergenerational educational mobility (i.e., the extent to which children's educational outcomes are related to those of their parents; Michalski et al., 2017). According to Engle et al. (2006), first-generation students in the United States are more likely to identify as women, be older than typical undergraduate students, come from low-income families, be African American or Hispanic, and/or have dependent children - these characteristics help reflect the role of intersectionality when it comes to attending university.

Outcomes of Diversity in Universities

With a change to their macrosystems, many students are exposed to new perspectives in university through interactions with students of diverse identities and backgrounds (i.e., interactional diversity; Gurin et al., 2004). According to Gottfredson et al. (2008), many students who have attended more racially diverse undergraduate institutions have had more positive educational outcomes (e.g., academic skills, cultural awareness, and thinking complexity), compared to students who attended schools with less diversity. Tamam and Krauss (2017)

examined ethnic-related diversity engagement in Malaysian undergraduate students (N = 447) and found differences in intercultural sensitivity. The researchers explained that interethnic interactions are fundamental to the development of undergraduate students as students learn to understand and appreciate cultural differences. These interactions in the university setting also promote effective and confident intercultural communication (Tamam & Krauss, 2017). Similarly, Casillas Arellano et al. (2009) explored students' experiences (N = 307) with interactional diversity in institutions of higher education located near the United States and Mexico international border, as there is increased diversity in these schools. The researchers emphasized that cross-cultural interactions are beneficial because students are encouraged to critically evaluate their understanding and attitudes towards race dynamics within their schools and the larger society. Despite its benefits, the researchers found that students were only engaging in cross-ethnic interactions in classrooms rather than choosing to have these interactions outside of school, indicating a lack of genuine interactions (Casillas Arellano et al., 2009). The quality and genuineness of interactions between students and their peers are important to consider; to comprehensively understand students' experiences of diversity at the meso- and exo- levels, the social-ecological interpretation of resilience underscores the necessity for these interactions to be genuine (Ungar et al., 2013).

Inclusion

While diversity may exist in a particular environment, inclusion is equally, if not more, important (Amado et al., 2013). Inclusion requires intentional efforts to ensure that diverse individuals and groups are able to take part in society (Tan, 2019). According to the United Nations Department of Economic and Social Affairs (2016), inclusion is both a process and a goal, in which the participation of people in society is improved by enhancing opportunities and

access to resources, and amplifying their voices. By understanding experiences of inclusion, the quality of interactions within various systems (e.g., schools, peer groups) is also recognized (Ungar et al., 2013). Collins (2003) explained that social inclusion is a principle of justice as it shares egalitarian ideas regarding distributive patterns and is concerned with equitable outcomes rather than life chances. In 1890, William James noted that inclusion was a fundamental need possessed by human beings (Riordan, 2014). At a macrosystemic level, inclusion was first implemented in the policy discourse in France in the mid-1970s when people experiencing poverty began to be described as 'excluded', rather than economically disadvantaged (Silver, 1995). This discourse was later adopted by the European Union in the 1980s within policies to address patterns of social disadvantages and marginalization (Allman, 2013; Rawal, 2008).

Inclusion provides many benefits for all individuals at multiple systems. Acquavita et al. (2009) examined social workers (N = 119) in the United States and found that increased job satisfaction was strongly correlated with actionable efforts of inclusion, highlighting the importance of inclusivity in the workplace and institutions alike. Forlin et al. (2004) examined inclusion in five Western Australian schools and found that educational inclusion is correlated with improved psychological, social, and cognitive outcomes for students with and without disabilities. As such, individuals in Australia have been advocating for greater inclusion of students with disabilities into elementary school communities, and schools were encouraged to implement programs to reduce exclusionary pressures on equity-deserving students (Forlin, 2004). More recently, Vyrastekova (2021) emphasized the importance of inclusion for children and young adults with disabilities because they are more likely to be dependent on friendships that arise at versus outside of school; children with disabilities may face physical restrictions, preventing them from participating in a variety of extracurricular activities, such as sports.

Undergraduate Students' Experiences of Inclusion

Facilitators of Inclusion in Universities

Many undergraduate students of diverse identities have made active efforts to enhance their experiences of inclusion (Ford et al., 2021; Girolamo & Ghali, 2021; Phipps, 2020). In a study by Abe et al. (1998), international students (N = 60) in the United States engaged in peer support programs within their universities, in which they were paired with domestic students who helped them navigate campus activities. The researchers found that this engagement positively influenced social adjustment (Abe et al., 1998; Andrade, 2006). Briggs et al. (2012) identified that participating in orientation week activities offered to first-year students (N = 26) in England was helpful for students to acclimate to the university environment as it was a chance to meet new people. While exploring the factors that promote a sense of belonging for science and engineering undergraduate students from underrepresented racial groups in the United States (N = 3,670), Chang et al. (2014) found that exposure to racial minority support systems, family support, teacher encouragement, and engagement in unique college experiences (e.g., research opportunities) increased students' sense of belonging. Specifically, the authors reported that joining a departmental club during a student's first year increased their sense of belonging and likelihood to persist within their academic program by more than 150% (Chang et al., 2014). Sherry et al. (2010) also examined the experiences of international students (N = 121) studying in the United States. Through open-ended survey questions, participants commonly reported that connecting with students of similar backgrounds through student-led cultural clubs positively impacted their experience of inclusion (Sherry et al., 2010). In the context of students with low socio-economic status (N = 20) in the United Kingdom, O'Sullivan et al. (2019) found that peer role models promoted inclusion and motivated students through their academic journeys. Living

in residence halls was also found to enhance undergraduate students' (N = 333) experiences of inclusion in the United States (Barnett, 2010).

Inclusion for Equity-Deserving Undergraduate Students

While there is an increase in diverse undergraduate student populations and active efforts to enhance inclusion, many students continue to experience a lack of belonging and inclusion in these academic settings (Bhopal, 2017). Discrimination and stigmatization can lead to the alienation of those who fail to conform to norms or the status quo and, as such, are especially recognizable forms of social exclusion (Allman, 2013). In Canadian post-secondary institutions, it was reported that 47% of students witnessed or experienced discrimination, underscoring the reality that diversity does not guarantee inclusion (Burczycka, 2020). Several campus climate studies based in the United States have suggested that gender-diverse students (i.e., students whose gender identity does not match the perceived gender norm; United Nations, 2023) are at higher risk for harassment and discrimination at universities, compared to their cis-heterosexual counterparts (Evangelista et al., 2022). Wagaman et al. (2018) explained that many gender-diverse social work students experienced the classroom as cis- and hetero-normative, reporting homophobic experiences in their programs. This can lead to gender-diverse students having to self-silence their identities to avoid unfair expectations (Wagaman, et al., 2018). According to a 2015 campus survey of more than 4,800 students of colour that was conducted at a university in the United States, significant experiences of racism in the form of racial microaggressions and stereotyping were reported (Kwon et al., 2019). The researchers found that racial segregation was further exhibited through limited interactions between international and domestic students. Intraethnic othering (i.e., a form of internalized racism, through which ethnic individuals are prejudiced against others of the same ethnicity; Hwang, 2021) was also prevalent as Asian

American students were found to distance themselves from Asian international students (Kwon et al., 2019). These experiences can lead to students facing belonging uncertainty, in which equity-deserving students are uncertain about the quality of their social bonds at micro- and meso-levels (Walton & Cohen, 2007). Belonging uncertainty from a lack of inclusion can negatively impact the school performance of these students who experience less achievement motivation while expending energy to determine where they belong in the university context (Cerezo & Bergfeld, 2013).

The Importance of Exploring the Relationship Between Undergraduate University Students' Resilience and their Experiences of Diversity, Inclusion

To date, researchers have reported varying levels of resilience among the undergraduate university student population (Ahluwalia et al., 2023), and have underscored that levels of resilience are influenced by multiple factors, such as individual differences, social support, and cultural norms (Holdsworth et al., 2018; Turner et al., 2021; Wu et al., 2020). Researchers have also reported that the diversity of undergraduate students is increasing and, similar to resilience, experiences of diversity also vary widely (Michalski et al., 2017). Undergraduate students' experiences of inclusion have also been found to vary, and this variation is important because more positive experiences of inclusion can increase students' sense of belonging and lead to positive outcomes in several domains (e.g., academically, socially, and psychologically; Chang et al., 2014). Amado et al. (2013) suggested that undergraduate students' experiences of inclusion build upon their experiences of diversity, as there is overlap between the presence of unique identities and the quality of students' interactions with each other. It is also understood that resilience helps undergraduate students bounce back from a multitude of challenges at the different systemic levels in their environments (Ungar et al., 2013). However, it is unclear if

relationships exist between undergraduate university students' levels of resilience and their experiences of diversity and inclusion. Aligning with Universities Canada's (2017) and the Ontario Confederation of University Faculty Associations' (2023) commitment to equity, diversity, and inclusion, an investigation exploring the resilience of undergraduate university students and their experiences of diversity and inclusion is warranted. More specifically, exploring this relationship allows researchers and university personnel to better understand the resilience levels of equity-deserving students while amplifying their experiences and advocating for equitable and accessible resources to improve the undergraduate student experience.

Study Purpose and Hypotheses

It is evident that experiences of diversity and inclusion are important to consider in the exploration of resilience due to the interaction of multiple systemic levels, as explained through the social-ecological interpretation of resilience. As such, the three-fold primary purpose of this cross-sectional study was to assess, quantitatively: (a) the relationship between Ontario undergraduate university students' experiences of diversity and their levels of resilience; (b) the relationship between this population's feelings of inclusion and their levels of resilience; and (c) which demographic factors were most associated with this population's levels of resilience, experiences of diversity, and experiences of inclusion. The hypothesis was that greater interactional diversity would be correlated with higher levels of resilience in Ontario undergraduate university students. It was also hypothesized that greater feelings of inclusion would be correlated with higher levels of resilience in Ontario undergraduate university students. Additionally, the hypothesis was that the intersectional demographic characteristics that identify

equity-deserving group membership[1] would be most associated with this population's levels of resilience, experiences of diversity, and experiences of inclusion. The secondary purpose of this study was to explore, qualitatively, Ontario undergraduate university students' experiences of diversity and inclusion and their perspectives on how these experiences influenced their resilience. Through this qualitative exploration, the researchers anticipated learning about a wide range of student perceptions regarding diversity, inclusion, and resilience.

[1] Intersectional demographics indicative of equity-deserving group membership refer to the demographics identifying students from communities that have been historically disadvantaged and underrepresented based on gender identity, sexual orientation, racial identity, ability and disability status, and/or socioeconomic status (Western University's Office of Equity, Diversity & Inclusion, 2023).

Chapter 3: Methods

The following methods section provides detailed descriptions of the study design, eligibility criteria, recruitment process, data collection tools, and data analysis methods for the study.

Positionality of the Researcher

To provide transparency and help readers to better understand the perspective of the researchers, we note that the study was conducted using a transformative paradigm, which is an advocacy stance for positive social and/or individual changes for equity-deserving populations with attention to power, privilege, and voice (Mertens, 2003; Shannon-Baker, 2016). Mertens (2003) used the transformative paradigm to address that research is influenced by the researchers' worldviews and implicit values. As such, I, the primary author of this study, recognize my position as a South Asian Canadian woman and a first-generation graduate student in shaping knowledge-producing practices. By completing an undergraduate university program in Ontario as an equity-deserving student, I acknowledge that my positionality influenced this study to some extent with both insider and outsider familiarity of participants' experiences. The researchers' stance in the transformative paradigm was reflected through the data collection and analysis procedures, which aimed to report detailed research findings while limiting any biases that may have arisen due to personal worldviews and experiences.

Study Design and Procedure

A cross-sectional mixed methods research design was used to gain an extensive understanding of the study purpose, because the utilization of only one approach was not sufficient (per Shannon-Baker, 2016). The researchers perceived that the relationship between Ontario undergraduate university students' experiences of diversity, inclusion, and their

resilience could best be explored comprehensively through both quantitative and qualitative methods. A Qualtrics (https://www.qualtrics.com) survey was used to host all quantitative data collection tools for this study. This survey contained the letter of information (Appendix A), and a form with questions regarding eligibility and consent for participation. Upon confirmation of eligibility and consent, participants were enrolled in the study and directed to the survey. Participants were invited to provide their contact information to be contacted through email with further instructions about participation in focus groups interviews or semi-structured individual interviews (hereafter, referred to as interviews), hosted virtually through Zoom, a video conferencing software (Zoom Video Communication Inc., 2023). Interviews were conducted between one week to one month after survey participants expressed interest in participating in the qualitative research.

Sample Size

The desired sample size for quantitative data was determined using G*Power Software (version 3.1; Faul et al., 2009). To achieve a power of 80% ($p < 0.05$), the recruitment targeted a total sample size of at least 193 full-time undergraduate university students in Ontario. The inclusion of a minimum of 193 participants was deemed sufficient based on recommendations for the Pearson product-moment correlation coefficient (Pearson's correlation; *r*) to achieve a small effect size of 0.20 (Cohen, 1988). For qualitative data (i.e., interviews), a minimum of 20 participants was the recruitment target, as recommended by Dworkin (2012) and Hennink and Kaiser (2022).

Eligibility Criteria

Inclusion Criteria

Participants were eligible to participate in this study if they: (a) were registered as a full-time undergraduate student at an Ontario university; (b) were able to read, write, and speak in English; and (c) had reliable internet access to complete the study questionnaires and/or interview.

Exclusion Criteria

Participants were not be eligible to participate in this study if they: (a) were registered as a part-time student; (b) were registered at a university outside of Ontario; (c) were registered at a college; (d) were registered in a professional or graduate program; (e) were unable to read, write, and/or speak in English; and/or (f) did not have reliable internet access. In Canada, the diversity of the population varies between and among provinces across the country, which is reflected through the experiences of diversity of their respective undergraduate student bodies (Universities Canada, 2019). Therefore, the study was limited to Ontario undergraduate university students. University students were also the focus of this study due to varying program lengths and different overall learning experiences in Ontario colleges, and professional or graduate programs (Kerr, 2018). Part-time students were excluded to help limit confounding variables (e.g., full-time employment, distance education, longer program length; Yunus et al., 2015).

Recruitment

Upon receiving approval by the host institution's Non-Medical Research Ethics Board (#123286; Appendix B), recruitment and data collection occurred from September 25th to December 1st, 2023. Recruitment graphics were circulated on social media pages and groups

affiliated with Ontario universities (e.g., Facebook, Twitter, LinkedIn, Instagram, TikTok, Reddit; Appendix C), and personal posts were made on social media by the research team. At the host institution, two mass-emails were sent to all full-time undergraduate students (Appendix D). Participants were also recruited by announcements from course instructors at the host institution. To facilitate these announcements, the primary author of this study compiled a list of all course instructors from the host institution teaching any undergraduate courses for the Fall 2023 semester. A total of 651 course instructors were contacted via email and asked to share the recruitment graphic with their undergraduate class(es). The requests to both the student groups and course instructors did not ask for a response; therefore, it is unknown how many complied with the request. The recruitment graphic included key details of the study, contact information of the lead researcher and principal investigator, and a link to a Qualtrics survey. A QR code was also embedded on recruitment graphics, which interested individuals could scan to access the Qualtrics survey. In addition to these recruitment strategies, snowball sampling was also used, which is a holistic technique often employed by researchers when recruiting equity-deserving populations (Woodley & Lockard, 2016). After participating in the study, participants were sent an e-mail asking them to share recruitment details with other Ontario undergraduate university students. This strategy uses existing social networks to promote comfortability and trust in a research environment that may be unfamiliar for some students (Rotondi et al., 2017).

Data Collection

Demographic Information

Participants were asked demographic questions pertaining to their age, gender identity, sexual orientation, racial identity and ethnicity, ability and disability status, parental education, income level, employment status, university of registration, year of study, and field of study

(e.g., social sciences, health sciences, engineering, business; see Appendix E). Comprehensive and inclusive demographic questions were created based on guidelines recommended by Chen and Gardner (2022), Fernandez et al. (2016), and Hughes et al. (2016).

Measurement Tools to Address Primary Objectives

Connor-Davidson Resilience Scale 25 (CD-RISC-25; Connor & Davidson, 2003). To measure students' levels of resilience, the CD-RISC-25 was used (Connor & Davidson, 2003; Appendix F). This is a 25-item scale, in which each item is scored from 0 (not true at all) to 4 (true nearly all the time), and the scores from all 25 items were summed to provide the total score (Davidson, 2022). The CD-RISC-25 was previously validated (Cronbach's $\alpha = 0.89$) in a sample of 244 undergraduate students in the United States (Julian et al., 2022). According to Davidson (2022), the items in the CD-RISC-25 describe various aspects of resilience, specifically hardiness (i.e., a personality trait that describes individuals who are healthy despite stressful conditions; Kowalski & Schermer, 2019; items 5, 10, 11, 12, 22, 23, 24), coping (i.e., items 2, 7, 13, 15, 18), adaptability/flexibility (i.e., items 1, 4, 8), meaningfulness/purpose (i.e., items 3, 9, 20, 21), optimism (i.e., items 6, 16), regulation of emotion and cognition (i.e., items 14, 19), and self-efficacy (i.e., items 17, 25). Quartiles are used to interpret the total scores: the first quartile (Q1) represents those who are the least resilient (i.e., scores ranging from zero to 73), the second (Q2) and third (Q3) quartiles represent intermediate resilience (i.e., scores ranging from 74 to 82 and 83 to 90, respectively), and the fourth quartile (Q4) represents those who are the most resilient (i.e., scores ranging from 91 to 100; Connor & Davidson, 2003). Lower scores indicate lower levels of resilience, while higher scores indicate higher levels of resilience (Davidson, 2022).

Adapted Interactional Diversity Scale (Loes et al., 2012). An adapted version of the Interactional Diversity Scale was used to assess students' experiences of diversity, particularly the extent of students' participation in diversity-oriented experiences and their discussions with diverse peers (i.e., interactional diversity; Loes et al., 2012; Appendix G). Prior to completing this scale, it was noted in the survey that students may refer to both in-person or virtual interactions for the purpose of this study, to account for changes in university environments due to the COVID-19 pandemic. The Interactional Diversity Scale was previously validated (Cronbach's $\alpha = 0.80$) and includes nine items asking participants to indicate how often (ranging from 1 [never] to 5 [very often]) they have experienced each statement (e.g., "How often have you had serious conversations with students from a different racial identity or ethnicity?"; Loes et al., 2012). Item 2 in this scale asks respondents the extent to which their institution encourages contact among students from different economic, social, racial, and ethnic backgrounds. To reflect diverse experiences more fully in the current study, the term 'gender-diverse' was added to this item. Similarly, 'race' was changed to 'racial identity' in item 3 to recognize the role of self-identification. Because experiences of gender identity and sexual orientation were not included in the original scale, for the purpose of this study, one additional item was added to ask respondents how often they had serious conversations with students from a different gender identity or sexual orientation, resulting in a total of 10 items. Further, Loes et al. (2012) referred to institutions of higher education in the United States (e.g., research universities, regional universities, liberal arts universities) as colleges, while these institutions in Ontario are referred to as universities. Taking this terminology into account, 'college' was changed to 'university' in items 8, 9, and 10. Further considering that data collection would take place at the beginning of the school year, 'this academic year' in item six was changed to include both this academic year

and/or the previous academic year to account for more relevant experiences. Scores of all ten items were summed for a total possible score of 50, and higher scores represent greater interactional diversity (C. Loes, personal communication, February 1, 2023).

Inclusion of Other in the Self (IOS) Scale (Aron et al., 1992). The IOS scale was used to assess students' feelings of inclusion, as this one-item scale measures how close respondents feel to another person or group (i.e., participants' peers; Aron et al., 1992; Appendix H). To account for feelings of inclusion at multiple levels in the university context, the scale was utilized three times through which participants were asked which picture best described their relationship with peers: (1) at their university; (2) in their field of study; and (3) within a university-affiliated student group. Students were asked to indicate at least one university-affiliated student group they are involved in, if applicable, prior to responding to the third question. This scale utilizes Venn diagrams to describe various degrees of inclusion. The diagrams are labelled from 1 (no overlap) to 7 (most overlap), and the number that is chosen by the participant is their score for that question. The total possible score is 7 and higher scores represent greater feelings of inclusion (Stanford SPARQ, 2017). According to Russell et al. (1989), it is not possible to conduct item analyses on a one-item scale; however, Aron et al. (1992) used approximate methods to test the reliability of the IOS scale in a sample of 208 university students aged 18 to 47 years old in the United States and found an alpha of 0.93. The IOS scale has been used in several populations including children, teenagers, and adults (Stanford SPARQ, 2017).

Data Collection to Address the Secondary Objective

Interviews. Focus groups and semi-structured individual interviews took place on Zoom (Zoom Video Communication Inc., 2023) and were moderated by the lead researcher using a list

of 10 guiding questions (see Appendix I). A research assistant was trained and served as the assistant moderator during focus groups. The guiding questions were pilot-tested with undergraduate university students at the host institution (n = 6) to evaluate the meaning and relevance of the questions, and to revise the structure of the questions to improve clarity (per Breen, 2006; Chenail, 2014). Participants were assigned to focus groups based on the order in which they signed up. To accommodate participants' schedules, those unable to attend a focus group time were offered an option to participate in a one-on-one semi-structured interview with the lead researcher. The duration of each focus group was approximately 45 to 60 minutes, while the duration of each individual interview was approximately 20 to 30 minutes; however, each interview was allocated an additional 30 minutes to encourage detailed discussions without limited time constraints (Nyumba et al., 2018). Since generating transcripts from only audio recordings of interviews can be difficult due to the possibility of 'crosstalk' or multiple participants speaking at a time (Nicholls, 2009), participants were asked to have their video and audio recorded for transcription purposes. Meetings were recorded to the cloud, so the audio was automatically transcribed via Zoom, which was further edited by members of the research team as needed to ensure accuracy and to implement intelligent verbatim transcription (i.e., removal of utterances, repetitions, and irrelevant noises; McMullin, 2023; Zoom Video Communication Inc., 2022). Quality assurance criteria per Lincoln and Guba (1985) were applied throughout the study to support data trustworthiness (see Table 1).

Table 1

Data Trustworthiness Measures

Quality assurance criteria	Strategies applied in the study
Credibility	During the interviews, participants' responses were reflected back to confirm that responses were understood and recorded correctly by the researcher.

	Following each interview, moderators engaged in peer debriefing with a member of the research team who was not involved in the study to ensure an accurate interpretation of data and to explore any potential biases (Lincoln & Guba, 1985).
Dependability	The lead researcher recorded the research process in detail with notes of interpretations and any changes to the research plan for an audit trail. Quotations that reflected each theme were also recorded (Lincoln & Guba, 1985; Patton, 2014).
Confirmability	The lead researcher and a research assistant independently completed inductive content analysis. Together, the researchers discussed any discrepancies and established the final themes (Lincoln & Guba, 1985; Patton, 2014). The lead researcher also engaged in reflexivity to evaluate any biases (Lincoln & Guba, 1985; Thomas & Irwin, 2009).
Transferability	All components of the research process, including methods, procedures, and analyses, were accurately and comprehensively documented to allow other researchers to determine if the findings from this study are transferable to other contexts (Lincoln & Guba, 1985).

Data Analysis

Quantitative Analysis

The three validated scales used to assess the primary objectives of this study (i.e., CD-RISC-25, Interactional Diversity Scale, IOS Scale) were scored as instructed by the tools' authors. Descriptive statistics (i.e., means, standard deviations, ranges, and frequencies) were used to analyze the demographic data and the data obtained from the three scales. A series of two Pearson's correlations were used to determine any statistically significant correlations between levels of resilience and experiences of diversity, and between levels of resilience and feelings of inclusion. Levels of resilience were also analyzed in terms of the scale's seven sub-categories (i.e., hardiness, coping, adaptability/flexibility, meaningfulness/purpose, optimism, regulation of

emotion and cognition, self-efficacy; Davidson, 2022) to determine any statistically significant correlations between the sub-categories and experiences of diversity and/or inclusion. Gender-based Analysis Plus (GBA+) is an intersectional analysis that goes beyond sex and gender differences to consider other factors (e.g., racial identity, socioeconomic status, sexual orientation) that may impact the population of focus (Government of Canada, 2021). Based on recommendations from GBA+, multiple regression was used to determine which demographic factors were most associated with participants' levels of resilience, experiences of diversity, and feelings of inclusion. All computations were performed using IBM SPSS Statistics (version 27).

Qualitative Analysis

Transcriptions from the interviews were analyzed using inductive content analysis to find emergent themes (Patton, 2014). Inductive content analysis involved five steps: (1) reading and becoming familiar with the data; (2) the first round of coding, which involved identifying and labelling 'big picture' broad categories within the data; (3) the second round of coding, which involved thoroughly reading through the data in the broad categories and identifying sub-categories; (4) refining the sub-categories through a comparative process to ensure distinction and avoid overlap between the categories; (5) synthesizing and interpreting the data to answer to the research question (Vears & Gillam, 2022). To support data confirmability, inductive content analysis was completed independently and simultaneously by the lead researcher and a research assistant (Lincoln & Guba, 1985; see Table 1). The researchers reviewed the codes and decided the final themes together, as researchers' knowledge and perceptions were needed to determine appropriate themes (Braun & Clarke, 2006).

Chapter 4: Results

In the following results chapter, the quantitative findings will first be presented. Specifically, participants' demographic characteristics and their levels of resilience, experiences of diversity, and feelings of inclusion will be highlighted. The correlation between participants' levels of resilience and experiences of diversity, as well as the correlation between their levels of resilience and feelings of inclusion, will also be presented. Subsequently, the associations between participants' demographic characteristics and the above-noted outcomes will be noted. Then, the qualitative findings will be presented, including information specific to participants from the interviews. The themes that emerged from these interviews will also be presented, along with illustrative quotations.

Quantitative Findings

Demographics

The online survey was completed by 276 undergraduate university students with a mean age of 20.0 years (*SD* = 2.7). More than half of the participants identified as an equity-deserving racial identity (*n* = 162; 51.9%) and the majority of participants identified as a woman (*n* = 191; 69.2%) and heterosexual (*n* = 161; 58.3%). Many students reported having a disability and/or illness (n = 227; 61.9%), and of these students, 105 (28.7%) reported having a mental health condition. It was most common for students to report that either one or two of their parents/guardians had completed a bachelor's degree (36.6% and 38.4%, respectively). An average family income level of either middle (*n* = 105; 38.0%) or upper-middle income (*n* = 100; 36.2%) was most often chosen by participants. More than half of the students also reported being unemployed (*n* = 160; 58.0%) and attending Western University (*n* = 156; 56.5%). Although there was a large distribution of participants across year and field of study, the highest

compliment came from first (*n* = 79; 28.6%) and third years (*n* = 69; 25.0%), and health sciences (*n* = 66; 19.5%), biological sciences (*n* = 59; 17.5%), and social sciences (*n* = 56; 16.6%). A comprehensive overview of participants' demographic characteristics can be found in Table 2.

Table 2

Demographic Information of Ontario Undergraduate University Student Participants

Participant Characteristics (*n = 276)*	*n*	%
Age, *M* (*SD*)	20.0 (2.7)	
Gender Identity		
Woman	191	69.2
Man	54	19.6
Genderqueer	4	1.5
Non-binary	18	6.5
Gender non-conforming	2	0.7
Fluid	2	0.7
I prefer to self-describe	4	1.5
Transgender Identity		
Yes	22	8.0
No	252	91.3
Sexual Orientation		
Heterosexual	161	58.3
Gay or Lesbian	17	6.2
Bisexual	61	22.1
Asexual	11	4.0
Pansexual	8	2.9
A sexual orientation not listed above	5	1.8
I prefer to self-describe	6	2.2
Racial Identity		
African/Black	13	4.2
East Asian	35	11.3
European/White	146	46.9
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	4	1.3
Latin, South, or Central American	11	3.5
Polynesian	1	0.3
South Asian	59	19.0
Southeast Asian	15	4.8

West Asian	13	4.2
Indigenous within Canada	9	2.9
I prefer to self-describe	2	0.6
Ability and Disability Status		
Sensory disability	21	5.7
Learning disability	56	15.3
Long-term medical illness	21	5.7
Mobility disability	10	2.7
Mental health condition	105	28.7
Temporary disability due to illness or injury	3	0.8
A disability not listed above	9	2.5
I have a disability but prefer not to disclose it	2	0.5
I do not have a disability	133	36.3
Parent/Guardian A's Highest Education Achieved		
Did not complete high school	6	2.1
Graduated from high school	35	12.7
Attended college and/or university, but did not complete a degree	20	7.2
Completed an associate's degree	19	6.9
Completed a bachelor's degree	101	36.6
Completed a master's degree	67	24.2
Completed a doctoral or professional degree	24	8.7
Unknown	4	1.5
Parent/Guardian B's Highest Education Achieved		
Did not complete high school	18	6.5
Graduated from high school	38	13.8
Attended college and/or university, but did not complete a degree	25	9.1
Completed an associate's degree	25	9.1
Completed a bachelor's degree	106	38.4
Completed a master's degree	39	14.1
Completed a doctoral or professional degree	18	6.5
Unknown	6	2.2
Family Income Level		
Low income	12	4.3
Lower-middle income	42	15.2
Middle income	105	38.0
Upper-middle income	100	36.2
High income	16	5.8
Employment Status		

Employed full-time	12	4.3
Employed part-time	97	35.1
Unemployed	160	58.0
University		
Algoma University	2	0.7
Brock University	1	0.4
Carleton University	10	3.6
Lakehead University	3	1.1
Laurentian University	5	1.8
McMaster University	4	1.5
Nipissing University	14	5.1
Ontario Tech University	2	0.7
Queen's University	2	0.7
Toronto Metropolitan University	9	3.3
Trent University	4	1.5
University of Guelph	20	7.2
University of Ottawa	7	2.5
University of Toronto	2	0.7
University of Waterloo	20	7.2
University of Windsor	4	1.5
Western University	156	56.5
Wilfrid Laurier University	1	0.4
York University	8	2.9
Year of Study		
First year	79	28.6
Second year	51	18.5
Third year	69	25.0
Fourth year	64	23.2
Other	13	4.7
Field of Study		
Biological sciences	59	17.5
Business studies	28	8.3
Computer science	12	3.6
Creative arts and/or design	6	1.8
Education studies	6	1.8
Engineering	26	7.7
Health sciences	66	19.5
Historical, philosophical, and/or religious studies	6	1.8
Languages, linguistics, literatures, cultures, and/or societies	17	5.0
Media and communication studies	3	0.9

Physical sciences	14	4.1
Social sciences	56	16.6
A field not listed above	38	11.2

Note. The total sample size was 276 participants; not all categories summed to equal the total sample due to missing data. Some participants selected "I prefer not to respond" for each category. Age was collected as a continuous variable.

Participants' Levels of Resilience, Experiences of Diversity, and Feelings of Inclusion

To assess the relationship between participants' experiences of diversity and levels of resilience, as well as their feelings of inclusion and levels of resilience, the mean scores of each scale were first computed. The mean score for participants' levels of resilience using the CD-RISC-25 was 66.5 (*SD* = 12.1), which is in the first quartile and indicates those who are least resilient (i.e., zero to 73; Davidson, 2022). In terms of the sub-categories of the CD-RISC-25, the mean score for participants': hardiness was 19.3 (*SD* = 4.4); coping was 13.6 (*SD* = 2.8); adaptability/flexibility was 8.6 (*SD* = 1.9); meaningfulness/purpose was 9.1 (*SD* = 3.1); optimism was 4.8 (*SD* = 1.6); regulation of emotion and cognition was 5.2 (*SD* = 1.6); and self-efficacy was 6.0 (*SD* = 1.5). The mean score for participants' experiences of interactional diversity using the Interactional Diversity Scale was 30.0 (*SD* = 6.8) out of a possible score of 50. The mean scores for participants' feelings of inclusion at their university and in their field of study were both 3.8 (*SD* = 1.5) out of a possible score of 7. Participants (*n* = 189) reported being involved in university-affiliated student groups including intramurals, identity-based clubs (e.g., Black Students Association, Pride Club, Sikh Students Association), varsity sports, academic clubs (e.g., Anthropology Society, Psychology Association, Science Students Association), and leadership-based clubs (e.g., student councils). The mean score for participants' feelings of inclusion within a university-affiliated student group was 4.0 (*SD* = 1.8) out of a possible score

of 7. The total number of respondents, mean scores, standard deviations, range of scores for the scales, and the frequency of options selected for individual items can be found in Table 3.

Table 3

Participants' Levels of Resilience, Experiences of Diversity, and Experiences of Inclusion

Scale	Total *n*	Mean (SD)	Range	Frequency *n* (%)	
Connor-Davidson Resilience Scale 25 (CD-RISC 25)[a]					
Hardiness	250	19.3 (4.4)	6-28		
Past successes give me confidence in dealing with new challenges and difficulties.	250			Not true at all (0)	5 (2.0)
				Rarely true (1)	17 (6.8)
				Sometimes true (2)	52 (20.8)
				Often true (3)	105 (42.0)
				True nearly all the time (4)	71 (28.4)
I give my best effort no matter what the outcome may be.	250			Not true at all (0)	1 (0.4)
				Rarely true (1)	8 (3.2)
				Sometimes true (2)	57 (22.8)
				Often true (3)	111 (44.4)
				True nearly all the time (4)	73 (29.2)
I believe I can achieve my goals, even if there are obstacles.	250			Not true at all (0)	1 (0.4)
				Rarely true (1)	15 (6.0)
				Sometimes true (2)	49 (19.6)
				Often true (3)	97 (38.8)
				True nearly all the time (4)	88 (35.2)
Even when things look hopeless, I don't give up.	250			Not true at all (0)	4 (1.6)
				Rarely true (1)	19 (7.6)
				Sometimes true (2)	63 (25.2)
				Often true (3)	113 (45.2)
				True nearly all the time (4)	51 (20.4)
I feel in control of my life.	250			Not true at all (0)	8 (3.2)
				Rarely true (1)	43 (17.2)
				Sometimes true (2)	99 (39.6)
				Often true (3)	65 (26.0)
				True nearly all the time (4)	35 (14.0)
I like challenges.	250			Not true at all (0)	9 (3.6)
				Rarely true (1)	25 (10.0)
				Sometimes true (2)	90 (36.0)
				Often true (3)	102 (40.8)
				True nearly all the time (4)	24 (9.6)

I work to attain my goals no matter what roadblocks I encounter along the way.	250			Not true at all (0)	2 (0.8)
				Rarely true (1)	12 (4.8)
				Sometimes true (2)	59 (23.6)
				Often true (3)	114 (45.6)
				True nearly all the time (4)	63 (25.2)
Coping	250	13.6 (2.8)	6-20		
I have at least one close and secure relationship that helps me when I am stressed.	250			Not true at all (0)	4 (1.6)
				Rarely true (1)	8 (3.2)
				Sometimes true (2)	26 (10.4)
				Often true (3)	56 (22.4)
				True nearly all the time (4)	156 (62.4)
Having to cope with stress can make me stronger.	250			Not true at all (0)	5 (2.0)
				Rarely true (1)	28 (11.2)
				Sometimes true (2)	81 (32.4)
				Often true (3)	92 (36.8)
				True nearly all the time (4)	44 (17.6)
During times of stress/crisis, I know where to turn for help.	250			Not true at all (0)	7 (2.8)
				Rarely true (1)	42 (16.8)
				Sometimes true (2)	71 (28.4)
				Often true (3)	76 (30.4)
				True nearly all the time (4)	54 (21.6)
I prefer to take the lead in solving problems rather than letting others make all the decisions.	250			Not true at all (0)	5 (2.0)
				Rarely true (1)	15 (6.0)
				Sometimes true (2)	67 (26.8)
				Often true (3)	110 (44.0)
				True nearly all the time (4)	53 (21.2)
I can make unpopular or difficult decisions that affect other people, if it is necessary.	250			Not true at all (0)	9 (3.6)
				Rarely true (1)	43 (17.2)
				Sometimes true (2)	86 (34.4)
				Often true (3)	72 (28.8)
				True nearly all the time (4)	40 (16.0)
Adaptability/Flexibility	250	8.6 (1.9)	3-12		
I am able to adapt when changes occur.	250			Not true at all (0)	1 (0.4)
				Rarely true (1)	8 (3.2)
				Sometimes true (2)	52 (20.8)
				Often true (3)	132 (52.8)
				True nearly all the time (4)	57 (22.8)
I can deal with whatever comes my way.	250			Not true at all (0)	2 (0.8)
				Rarely true (1)	4 (1.6)
				Sometimes true (2)	70 (28.0)

				Often true (3)	121 (48.4)
				True nearly all the time (4)	53 (21.2)
I tend to bounce back after illness, injury, or other hardships.	250			Not true at all (0)	5 (2.0)
				Rarely true (1)	12 (4.8)
				Sometimes true (2)	79 (31.6)
				Often true (3)	97 (38.8)
				True nearly all the time (4)	57 (22.8)
Meaningfulness/Purpose	250	9.1 (3.1)	1-16		
When there are no clear solutions to my problems, sometimes fate or God can help.	250			Not true at all (0)	71 (28.4)
				Rarely true (1)	57 (22.8)
				Sometimes true (2)	65 (26.0)
				Often true (3)	24 (9.6)
				True nearly all the time (4)	33 (13.2)
Good or bad, I believe that most things happen for a reason.	250			Not true at all (0)	24 (9.6)
				Rarely true (1)	32 (12.8)
				Sometimes true (2)	47 (18.8)
				Often true (3)	65 (26.0)
				True nearly all the time (4)	82 (32.8)
In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	250			Not true at all (0)	8 (3.2)
				Rarely true (1)	25 (10.0)
				Sometimes true (2)	81 (32.4)
				Often true (3)	101 (40.4)
				True nearly all the time (4)	35 (14.0)
I have a strong sense of purpose in life.	250			Not true at all (0)	15 (6.0)
				Rarely true (1)	41 (16.4)
				Sometimes true (2)	68 (27.2)
				Often true (3)	74 (29.6)
				True nearly all the time (4)	52 (20.8)
Optimism	250	4.8 (1.6)	0-8		
I try to see the humorous side of things when I am faced with problems.	250			Not true at all (0)	6 (2.4)
				Rarely true (1)	35 (14.0)
				Sometimes true (2)	64 (25.6)
				Often true (3)	77 (30.8)
				True nearly all the time (4)	68 (27.2)
I am not easily discouraged by failure.	250			Not true at all (0)	19 (7.6)
				Rarely true (1)	54 (21.6)
				Sometimes true (2)	92 (36.8)
				Often true (3)	55 (22.0)
				True nearly all the time (4)	30 (12.0)

Regulation of emotion and cognition	250	5.2 (1.6)	0-8		
Under pressure, I stay focused and think clearly.	250			Not true at all (0)	8 (3.2)
				Rarely true (1)	24 (9.6)
				Sometimes true (2)	80 (32.0)
				Often true (3)	101 (40.4)
				True nearly all the time (4)	37 (14.8)
I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	250			Not true at all (0)	9 (3.6)
				Rarely true (1)	23 (9.2)
				Sometimes true (2)	70 (28.0)
				Often true (3)	94 (37.6)
				True nearly all the time (4)	54 (21.6)
Self-efficacy	250	6.0 (1.5)	1-8		
I think of myself as a strong person when dealing with life's challenges and difficulties.	250			Not true at all (0)	1 (0.4)
				Rarely true (1)	20 (8.0)
				Sometimes true (2)	56 (22.4)
				Often true (3)	107 (42.8)
				True nearly all the time (4)	66 (26.4)
I take pride in my achievements.	250			Not true at all (0)	4 (1.6)
				Rarely true (1)	12 (4.8)
				Sometimes true (2)	33 (13.2)
				Often true (3)	91 (36.4)
				True nearly all the time (4)	110 (44.0)
Total	250	66.5 (12.1)	34-97		
Interactional Diversity Scale[b]					
What is the extent to which your institution encourages contact among students from different economic, social, racial, ethnic, gender-diverse backgrounds?	236			Never (1)	2 (0.8)
				Rarely (2)	32 (13.6)
				Sometimes (3)	66 (28.0)
				Often (4)	92 (39.0)
				Very often (5)	44 (18.6)
How often have you…					
… had serious discussions with student affairs professionals whose political, social, or religious opinions were different from your own?	236			Never (1)	53 (22.5)
				Rarely (2)	72 (30.5)
				Sometimes (3)	67 (28.4)
				Often (4)	35 (14.8)
				Very often (5)	9 (3.8)

… had serious conversations with students from a different racial identity or ethnicity?	236	Never (1)	7 (3.0)
		Rarely (2)	24 (10.2)
		Sometimes (3)	49 (20.8)
		Often (4)	71 (30.1)
		Very often (5)	85 (36.0)
… had serious conversations with students from a different gender identity or sexual orientation?	236	Never (1)	17 (7.2)
		Rarely (2)	28 (11.9)
		Sometimes (3)	39 (16.5)
		Often (4)	68 (28.8)
		Very often (5)	84 (35.6)
… had serious conversations with students who are very different from you in religious beliefs, political opinions, or personal values?	236	Never (1)	6 (2.5)
		Rarely (2)	43 (18.2)
		Sometimes (3)	67 (28.4)
		Often (4)	59 (25.0)
		Very often (5)	61 (25.8)
… participated in a racial or cultural awareness workshop during this academic year and/or the previous academic year?	236	Never (1)	100 (42.4)
		Rarely (2)	55 (23.3)
		Sometimes (3)	53 (22.5)
		Often (4)	19 (8.1)
		Very often (5)	9 (3.8)
… attended a debate or lecture on a current political/social issue?	236	Never (1)	108 (45.8)
		Rarely (2)	55 (23.3)
		Sometimes (3)	38 (16.1)
		Often (4)	23 (9.7)
		Very often (5)	12 (5.1)
… had discussions regarding inter-group relations with diverse students while attending this university?	236	Never (1)	66 (28.0)
		Rarely (2)	58 (24.6)
		Sometimes (3)	53 (22.5)
		Often (4)	32 (13.6)
		Very often (5)	27 (11.4)
… had meaningful and honest discussions about issues related to social justice with diverse students while attending this university?	236	Never (1)	38 (16.1)
		Rarely (2)	46 (19.5)
		Sometimes (3)	70 (29.7)
		Often (4)	41 (17.4)
		Very often (5)	41 (17.4)
… shared personal feelings and problems with diverse students	236	Never (1)	39 (16.5)
		Rarely (2)	38 (16.1)
		Sometimes (3)	60 (25.4)
		Often (4)	60 (25.4)

while attending this university?				Very often (5)	39 (16.5)
Total	236	30.0 (6.8)	12-46		
Inclusion of Other in the Self Scale (IOS Scale)[c]					
Which picture best describes your relationship with peers at your university?	233	3.8 (1.5)	1-7	No overlap (1)	8 (3.4)
				Little overlap (2)	42 (18.0)
				Some overlap (3)	62 (26.6)
				Equal overlap (4)	50 (21.5)
				Strong overlap (5)	39 (16.7)
				Very strong overlap (6)	21 (9.0)
				Most overlap (7)	11 (4.7)
Which picture best describes your relationship with peers in your field of study?	233	3.8 (1.5)	1-7	No overlap (1)	8 (3.4)
				Little overlap (2)	43 (18.5)
				Some overlap (3)	68 (29.2)
				Equal overlap (4)	40 (17.2)
				Strong overlap (5)	39 (16.7)
				Very strong overlap (6)	24 (10.3)
				Most overlap (7)	11 (4.7)
Which picture best describes your relationship with your peers at this university-affiliated student group?	189	4.0 (1.8)	1-7	No overlap (1)	22 (11.6)
				Little overlap (2)	18 (9.5)
				Some overlap (3)	37 (19.6)
				Equal overlap (4)	35 (18.5)
				Strong overlap (5)	34 (18.0)
				Very strong overlap (6)	27 (14.3)
				Most overlap (7)	16 (8.5)

[a]Scale from "Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC)," by K.M. Connor and J. R. T. Davidson, 2003, *Depression and Anxiety, 18*(2), 76-82 (https://doi.org/10.1002/da.10113). [b]Adapted scale from "Effects of diversity experiences on critical thinking skills: Who benefits?," by C. Loes, E. Pascarella, and P. Umbach, 2012, *The Journal of Higher Education, 83*(1), 1–25, (https://doi.org/10.1080/00221546.2012.11777232).

[c]Scale from "Inclusion of Other in the Self Scale and the structure of interpersonal closeness," by A. Aron, E. N. Aron, and D. Smollan, 1992, *Journal of Personality and Social Psychology, 63*(4), 596–612, (https://doi.org/10.1037/0022-3514.63.4.596).

Correlations Among Resilience, Diversity, and Inclusion

Results from the Pearson's correlations revealed statistically significant positive correlations between participants' levels of resilience and: their experiences of interactional diversity ($r(234) = .142$, $p = .03$); feelings of inclusion at university ($r(231) = .204$, $p = .002$); feelings of inclusion in their field of study ($r(231) = .213$, $p = .001$); and feelings of inclusion within their university-affiliated student group ($r(187) = .164$, $p = .024$).

The sub-categories of the CD-RISC-25 were also analyzed and Pearson's correlations revealed statistically significant positive correlations between participants' hardiness and: their feelings of inclusion at university ($r(231) = .132$, $p = .044$); and their feelings of inclusion in their field of study ($r(231) = .193$, $p = .003$). Significant positive correlations were also found between participants' coping and: their experiences of diversity ($r(234) = .157$, $p = .016$); their feelings of inclusion at university ($r(231) = .228$, $p < .001$); their feelings of inclusion in their field of study ($r(231) = .227$, $p < .001$); and their feelings of inclusion within their university-affiliated student group ($r(187) = .159$, $p = .028$). Additionally, there were statistically significant positive correlations between participants' adaptability/flexibility and: their feelings of inclusion at university ($r(231) = .152$, $p = .002$); their feelings of inclusion in their field of study ($r(231) = .174$, $p = .008$); and their feelings of inclusion within their university-affiliated student group ($r(187) = .202$, $p = .005$). Participants' meaningfulness/purpose was significantly and positively correlated with their feelings of inclusion at university ($r(231) = .187$, $p = .004$), while their regulation of emotion and cognition was significantly and positively correlated with their feelings of inclusion in their field of study ($r(231) = .131$, $p = .046$). Further, there were significant positive correlations between participants' self-efficacy and: their experiences of diversity ($r(234) = .143$, $p = .029$); their feelings of inclusion at university ($r(231) = .143$, $p <$

.029); their feelings of inclusion in their field of study ($r(231) = .182$, $p = .005$); and their feelings of inclusion within their university-affiliated student group ($r(187) = .172$, $p = .018$). Table 4 outlines all Pearson's correlation coefficients.

Table 4

Pearson's Correlations for Study Outcomes

	Resilience	Diversity	Inclusion at University	Inclusion in Field of Study	Inclusion within University-affiliated Student Group
Resilience	1	.142*	.204**	.213**	.164*
Hardiness		.113	.132*	.193**	.124
Coping		.157*	.228**	.227**	.159*
Adaptability/ Flexibility		0.061	.152*	.174**	.202**
Meaningfulness/ Purpose		0.046	.187**	0.085	0.011
Optimism		0.119	0.051	0.026	0.136
Regulation of emotion and cognition		0.085	0.071	.131*	0.087
Self-efficacy		.143*	.143*	.182**	.172*

Note. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$).

Associations Among Demographic Characteristics, Resilience, Diversity, and Inclusion

Using standard multiple regression, statistically significant associations were found between resilience and: gender identity; sexual orientation; racial identity; ability and disability status; parental/guardian education level; family income level; university; and field of study ($F(94, 148) = 1.758$, $p = .001$, adj. $R^2 = .23$; see Table 5). Specifically, in terms of gender identity, identifying as gender non-conforming was significantly associated with a lower level of resilience ($B = -74.57$, $p = .007$), compared to other gender identities. Similarly, identifying as having a mental health condition ($B = -6.67$, $p = .04$) and/or identifying as having autism or a

sleep disorder (the two disability statuses that the participants self-described when they chose ‘a disability not listed above’; B = -11.54, p = .031) was significantly associated with lower levels of resilience, while identifying as having mobility disabilities was significantly associated with higher levels of resilience (B = 19.12, p = .012), compared to participants with other ability and disability statuses. Further, not knowing one (B = -53.72, p = .017) or both (B = -52.97, p = .023) parents/guardians’ highest education achieved was significantly associated with lower levels of resilience, compared to participants with a parent/guardian who completed a bachelor’s degree. Meanwhile, identifying as pansexual (B = 25.58, p = .003), heterosexual (B = 17.21, p = .005), gay or lesbian (B = 16.85, p = .035), or bisexual (B = 15.35, p = .012) was significantly associated with a higher level of resilience, compared to identifying with other sexual orientations. Participants who identified as East Mediterranean and/or Central Asian (the two racial identities of participants who chose to self-describe, rather than choosing from the given options) were also significantly associated with a higher level of resilience (B = 12.84, p = .033), compared to participants of other racial identities. Having a high family income was significantly associated with higher levels of resilience (B = 8.89, p = .02), compared to having an upper-middle family income. In terms of university, attending Ontario Tech University (B = 19.41, p = .034), Trent University (B = 17.13, p = .043), and Nipissing University (B = 14.65, p = .007) were significantly associated with higher levels of resilience, while attending Wilfrid Laurier University (B = -49.18, p = .038) was significantly associated with lower levels of resilience, compared to attending Western University. Lastly, enrollment in engineering (B = 9.63, p = .038) was significantly associated with higher levels of resilience, while enrollment in education studies (B = -19.95, p = .038) was significantly associated with lower levels of resilience, compared to enrollment in historical, philosophical, and/or religious studies.

Table 5

Multiple Regression Results for Resilience

Resilience	*B*	95% CI for *B*		*SE B*	β	R^2	$\triangle R^2$
		LL	*UL*				
Model						.53	.23**
Constant	42.04	-3.06	87.13	22.82			
Age	.25	-.576	1.076	.418	.06		
Gender Identity							
Woman	-8.43	-44.55	27.71	18.28	-.32		
Man	-9.57	-46.25	27.12	18.56	-.31		
Genderqueer	-10.81	-50.19	28.57	19.93	-.10		
Non-binary	-24.79	-59.18	9.61	17.41	-.49		
Gender non-conforming	-74.57**	-128.92	-20.23	27.51	-.39**		
Fluid	2.87	-36.81	42.55	20.08	.02		
I prefer to self-describe	-18.00	-59.71	23.71	21.11	-.13		
Transgender Identity							
Yes	1.00	-25.89	27.89	13.61	.02		
No	3.43	-24.48	31.35	14.13	.08		
Sexual Orientation							
Heterosexual	17.21**	5.39	29.04	5.99	.71**		
Gay or Lesbian	16.85*	1.21	32.49	7.91	.32*		
Bisexual	15.35*	3.48	27.22	6.01	.53*		
Asexual	14.72	-.08	29.49	7.48	.24		
Pansexual	25.58**	9.04	42.12	8.37	.33**		
A sexual orientation not listed above	10.22	-9.01	29.46	9.74	.11		
I prefer to self-describe	5.49	-17.27	28.24	11.51	.06		
Racial Identity							
African/Black	5.09	-4.80	14.98	5.01	.08		
East Asian	-5.27	-11.87	1.33	3.34	-.15		
European/White	3.57	-2.71	9.85	3.18	.15		
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	9.78	-6.20	25.76	8.09	.09		
Latin, South, or Central American	-3.32	-12.73	6.09	4.76	-.05		
Polynesian	1.85	-20.79	24.49	11.46	.01		
South Asian	.99	-6.42	8.39	3.75	.03		
Southeast Asian	1.03	-7.73	9.80	4.44	.02		
West Asian	9.95	-1.22	21.13	5.66	.14		

Indigenous within Canada	-12.46	-25.17	.26	6.44	-.17
I prefer to self-describe	12.84*	1.08	24.60	5.95	.18*
Ability and Disability Status					
Sensory disability	3.88	-3.31	11.06	3.63	.09
Learning disability	2.42	-3.38	8.22	2.94	.08
Long-term medical illness	2.32	-6.23	10.86	4.32	.05
Mobility disability	19.12*	4.30	33.94	7.50	.28*
Mental health condition	-6.67*	-13.03	-.32	3.22	-.27*
Temporary disability due to illness or injury	13.96	-17.26	45.18	15.80	.10
A disability not listed above	-11.54*	-21.99	-1.09	5.29	-.21*
I have a disability but prefer not to disclose it	-.26	-23.94	23.41	11.98	.00
I do not have a disability	-2.53	-9.60	4.54	3.58	-.10
Parent/Guardian A's Highest Education Achieved					
Did not complete high school	-8.66	-24.90	7.58	8.22	-.08
Graduated from high school	3.74	-2.33	9.81	3.07	.10
Attended college and/or university, but did not complete a degree	-1.40	-8.71	5.91	3.70	-.03
Completed an associate's degree	-2.88	-10.18	4.42	3.69	-.06
Completed a master's degree	-.72	-5.48	4.03	2.41	-.03
Completed a doctoral or professional degree	-3.28	-10.32	3.77	3.56	-.08
Unknown	-53.72*	-97.61	-9.83	22.21	-.49*
Parent/Guardian B's Highest Education Achieved					
Did not complete high school	15.36	-11.48	42.19	13.58	.30
Graduated from high school	14.69	-11.68	41.06	13.35	.42
Attended college and/or university, but did not complete a degree	17.70	-8.35	43.75	13.18	.44
Completed an associate's degree	12.40	-13.76	38.56	13.24	.29
Completed a bachelor's degree	11.49	-14.56	37.54	13.18	.46
Completed a master's degree	12.63	-14.01	39.26	13.48	.37
Completed a doctoral or	10.40	-16.31	37.11	13.51	.21

professional degree					
Unknown	-52.97*	7.30	98.63	23.11	-.56*
Family Income Level					
Low income	-.47	-11.21	10.26	5.43	-.01
Lower-middle income	-.61	-6.85	5.63	3.16	-.02
Middle income	-.24	-4.38	3.91	2.10	-.01
High income	8.89*	1.42	16.36	3.78	.17*
Employment Status					
Employed full-time	.27	-15.11	15.65	7.78	.00
Employed part-time	-2.98	-14.65	8.68	5.90	-.12
Unemployed	-2.35	-13.70	9.00	5.74	-.10
University					
Algoma University	19.11	-7.54	45.76	13.49	.14
Carleton University	-8.63	-18.96	1.71	5.23	-.14
Lakehead University	1.30	-15.75	18.35	8.63	.01
Laurentian University	.20	-14.68	15.07	7.53	.00
McMaster University	-5.81	-20.30	8.68	7.33	-.05
Nipissing University	14.65**	4.13	25.16	5.32	.24**
Ontario Tech University	19.41*	1.47	37.34	9.08	.15*
Queen’s University	-2.78	-21.81	16.25	9.63	-.02
Toronto Metropolitan University	-7.34	-18.07	3.40	5.43	-.11
Trent University	17.13*	.59	33.67	8.37	.18*
University of Guelph	1.14	-5.14	7.42	3.18	.03
University of Ottawa	-2.53	-12.26	7.21	4.93	-.04
University of Toronto	-4.93	-29.13	19.28	12.25	-.04
University of Waterloo	-1.33	-9.15	6.49	3.96	-.03
University of Windsor	-9.68	-25.16	5.80	7.83	-.10
Wilfrid Laurier University	-49.18*	-95.60	-2.75	23.49	-.26*
York University	-3.19	-14.50	8.13	5.73	-.04
Year of Study					
Second year	2.72	-2.86	8.30	2.82	.09
Third year	-.94	-6.24	4.36	2.68	-.03
Fourth year	.43	-5.49	6.35	3.00	.02
Other	2.49	-6.38	11.36	4.49	.05
Field of Study					
Biological sciences	-3.13	-8.25	1.98	2.59	-.11
Business studies	2.10	-4.71	8.91	3.45	.05
Computer science	.23	-10.43	10.89	5.39	.00
Creative arts and/or design	-4.71	-26.07	16.65	10.81	-.04
Education studies	-19.95*	-35.50	-4.39	7.87	-.21*

Engineering	9.63*	2.12	17.14	3.80	.24*
Health sciences	1.42	-3.52	6.36	2.50	.05
Languages, linguistics, literatures, cultures, and/or societies	2.09	-7.37	11.55	4.79	.04
Media and communication studies	-8.10	-26.63	10.42	9.37	-.07
Physical sciences	-1.12	-10.12	7.88	4.55	-.02
Social sciences	-.38	-6.10	5.35	2.90	-.01
A field not listed above	-2.29	-7.71	3.13	2.74	-.07

Note. B represents the unstandardized regression coefficient; CI represents the confidence interval (*LL* is the lower limit, *UL* is the upper limit); *SE B* represents the standard error of the coefficient; β represents the standardized coefficient; R^2 represents the coefficient of determination; $\triangle R^2$ represents the adjusted R^2. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$). The following demographic characteristics were used as reference variables in this model: Parent/Guardian A completed a bachelor's degree; upper middle income; Western University; first year; and historical, philosophical, and/or religious studies.

Similar to resilience, statistically significant associations were found between diversity and: sexual orientation; racial identity; ability and disability status; family income level; employment status; and university ($F(94, 134) = 1.375$, $p = .045$, adj. $R^2 = .13$; see Table 6). In terms of sexual orientation, identifying as pansexual was significantly associated with greater interactional diversity ($B = 12.96$, $p = .011$), compared to identifying as other sexual orientations. Identifying as having learning disabilities ($B = 5.90$, $p = .001$) and/or mobility disabilities ($B = 11.45$, $p = .013$) were also significantly associated with greater interactional diversity, compared to participants with other ability and disability statuses. Likewise, being employed full-time was significantly associated with greater interactional diversity ($B = 13.44$, $p = .005$), compared to other employment statuses. Identifying as East Asian was significantly associated with poorer

interactional diversity (*B* = -5.23, *p* = .015), compared to participants of other racial identities. Having a high family income (*B* = -6.94, *p* = .003) and/or attending the University of Ottawa (*B* = -6.80, *p* = .041) were also significantly associated with poorer interactional diversity, compared to having an upper-middle family income and attending Western University, respectively.

Table 6

Multiple Regression Results for Diversity

Diversity	*B*	95% CI for *B*		*SE B*	β	R^2	$\triangle R^2$
		LL	*UL*				
Model						.49	.13*
Constant	30.56*	3.06	58.05	13.90			
Age	-.42	-.92	.07	.25	-.18		
Gender Identity							
Woman	9.22	-12.26	30.70	10.86	.63		
Man	8.06	-13.81	29.92	11.06	.48		
Genderqueer	8.51	-14.89	31.92	11.83	.14		
Non-binary	5.47	-14.94	25.88	10.32	.20		
Gender non-conforming	-12.76	-45.32	19.81	16.47	-.12		
Fluid	17.53	-9.10	44.17	13.47	.17		
I prefer to self-describe	16.75	-8.09	41.59	12.56	.23		
Transgender Identity							
Yes	-7.13	-23.26	9.00	8.16	-.27		
No	-9.17	-25.90	7.56	8.46	-.37		
Sexual Orientation							
Heterosexual	6.43	-.64	13.51	3.58	.47		
Gay or Lesbian	6.38	-3.18	15.95	4.84	.23		
Bisexual	6.02	-1.10	13.13	3.60	.37		
Asexual	6.04	-2.82	14.89	4.48	.18		
Pansexual	12.96**	3.07	22.85	5.00	.31**		
A sexual orientation not listed above	2.71	-8.74	14.16	5.79	.05		
I prefer to self-describe	8.07	-6.58	22.72	7.41	.17		
Racial Identity							
African/Black	1.70	-4.43	7.83	3.10	.05		
East Asian	-5.23*	-9.41	-1.05	2.11	-.26*		

European/White	-.66	-4.50	3.19	1.94	-.05
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	-1.33	-11.00	8.33	4.89	-.02
Latin, South, or Central American	.09	-5.61	5.79	2.88	.00
Polynesian	3.76	-9.69	17.21	6.80	.04
South Asian	.07	-4.53	4.67	2.33	.00
Southeast Asian	-.97	-6.58	4.64	2.84	-.03
West Asian	-2.55	-9.85	4.75	3.69	-.06
Indigenous within Canada	-1.94	-9.55	5.67	3.85	-.05
I prefer to self-describe	-2.04	-9.07	4.99	3.55	-.05
Ability and Disability Status					
Sensory disability	1.31	-3.06	5.67	2.21	.05
Learning disability	5.90**	2.31	9.49	1.82	.34**
Long-term medical illness	2.83	-2.32	7.98	2.60	.11
Mobility disability	11.45**	2.43	20.47	4.56	.31**
Mental health condition	3.70	-.23	7.63	1.99	.27
Temporary disability due to illness or injury	-14.71	-33.38	3.96	9.44	-.20
A disability not listed above	2.10	-4.23	8.43	3.20	.07
I have a disability but prefer not to disclose it	1.88	-12.25	16.01	7.14	.03
I do not have a disability	2.74	-1.60	7.08	2.20	.20
Parent/Guardian A's Highest Education Achieved					
Did not complete high school	6.45	-3.45	16.35	5.01	.11
Graduated from high school	-2.13	-5.87	1.62	1.89	-.10
Attended college and/or university, but did not complete a degree	1.28	-3.22	5.79	2.28	.05
Completed an associate's degree	-3.67	-8.19	.85	2.28	-.14
Completed a master's degree	2.26	-.78	5.31	1.54	.14
Completed a doctoral or professional degree	.49	-3.96	4.93	2.25	.02
Unknown	-18.15	-44.67	8.37	13.41	-.31
Parent/Guardian B's Highest Education Achieved					
Did not complete high school	-4.40	-20.67	11.86	8.22	-.15

Graduated from high school	-5.68	-21.52	10.17	8.01	-.29
Attended college and/or university, but did not complete a degree	-3.75	-19.47	11.97	7.95	-.16
Completed an associate's degree	-1.52	-17.21	14.17	7.93	-.07
Completed a bachelor's degree	-5.25	-20.86	10.35	7.89	-.38
Completed a master's degree	-5.92	-21.91	10.07	8.09	-.32
Completed a doctoral or professional degree	-4.70	-20.66	11.27	8.07	-.17
Unknown	8.97	-18.60	36.54	13.94	.17
Family Income Level					
Low income	1.76	-4.76	8.28	3.30	.06
Lower-middle income	-1.86	-5.78	2.07	1.99	-.10
Middle income	-.23	-2.91	2.44	1.35	-.02
High income	-6.94**	-11.44	-2.44	2.28	-.24**
Employment Status					
Employed full-time	13.44**	4.21	22.68	4.67	.41**
Employed part-time	7.09	-.19	14.38	3.68	.50
Unemployed	3.50	-3.59	10.58	3.58	.26
University					
Algoma University	5.98	-10.02	21.98	8.09	.08
Carleton University	-.70	-6.89	5.50	3.13	-.02
Lakehead University	-5.73	-16.00	4.55	5.20	-.10
Laurentian University	-4.48	-13.37	4.41	4.50	-.09
McMaster University	4.60	-4.09	13.29	4.39	.08
Nipissing University	-5.42	-11.91	1.07	3.28	-.16
Ontario Tech University	4.92	-5.92	15.75	5.48	.07
Queen's University	6.98	-4.42	18.39	5.77	.10
Toronto Metropolitan University	-.99	-7.54	5.55	3.31	-.03
Trent University	-3.28	-13.60	7.04	5.22	-.06
University of Guelph	-2.72	-6.58	1.13	1.95	-.11
University of Ottawa	-6.80*	-13.31	-.29	3.29	-.16*
University of Toronto	1.81	-12.86	16.49	7.42	.03
University of Waterloo	-3.40	-8.11	1.31	2.38	-.14
University of Windsor	7.14	-2.14	16.42	4.69	.14
Wilfrid Laurier University	-3.25	-31.44	24.94	14.25	-.03
York University	-2.82	-9.82	4.18	3.54	-.07
Year of Study					

Second year	2.02	-1.40	5.43	1.73	.12
Third year	1.50	-1.84	4.84	1.69	.10
Fourth year	3.66	-.07	7.39	1.89	.23
Other	-.22	-5.72	5.28	2.78	-.01
Field of Study					
Biological sciences	-2.17	-5.34	1.00	1.60	-.13
Business studies	-1.01	-5.33	3.30	2.18	-.05
Computer science	-3.29	-9.72	3.14	3.25	-.10
Creative arts and/or design	-5.60	-18.43	7.24	6.49	-.09
Education studies	4.17	-5.40	13.75	4.84	.08
Engineering	.08	-4.47	4.62	2.30	.00
Health sciences	-2.97	-6.10	.16	1.58	-.18
Languages, linguistics, literatures, cultures, and/or societies	-1.74	-7.83	4.35	3.08	-.06
Media and communication studies	7.19	-11.25	25.64	9.33	.10
Physical sciences	-2.62	-8.50	3.27	2.98	-.08
Social sciences	-2.37	-5.97	1.24	1.82	-.15
A field not listed above	.02	-3.44	3.47	1.75	.00

Note. B represents the unstandardized regression coefficient; CI represents the confidence interval (*LL* is the lower limit, *UL* is the upper limit); *SE B* represents the standard error of the coefficient; β represents the standardized coefficient; R^2 represents the coefficient of determination; $\triangle R^2$ represents the adjusted R^2. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$). The following demographic characteristics were used as reference variables in this model: Parent/Guardian A completed a bachelor's degree; upper middle income; Western University; first year; and historical, philosophical, and/or religious studies.

Statistically significant associations were found between inclusion at university and: racial identity; ability and disability status; parental/guardian education level; and field of study ($F(94, 131) = 1.032$, $p = .043$, adj. $R^2 = .01$; see Table 7). Identifying as East Asian ($B = -1.12$, $p = .024$) and/or as having temporary disabilities due to illness or injury ($B = -4.39$, $p = .047$) were

significantly associated with poorer feelings of inclusion at university, compared to participants of other racial identities and ability and disability statuses, respectively. In contrast, having one parent/guardian who completed doctoral or professional degrees (B = 1.24, p = .019) and/or being enrolled in languages, linguistics, literatures, cultures, and/or societies programs (B = 1.62, p = .026) were significantly associated with greater feelings of inclusion at university, compared to having a parent/guardian who completed a bachelor's degree and being enrolled in historical, philosophical, and/or religious studies, respectively. Furthermore, statistically significant associations were found between inclusion in the field of study and university (F(94, 131) = 0.911, p = .048, adj. R^2 = -.04; see Table 8). In particular, attending Algoma University was significantly associated with greater feelings of inclusion in the field of study (B = 4.31, p = .033), compared to attending Western University. Additionally, statistically significant associations were found between inclusion within a university-affiliated student group and: parental/guardian education level; family income level; and field of study (F(91, 91) = 1.238, p = .015, adj. R^2 = .11; see Table 9). Participants whose parent/guardian attended college and/or university, but did not complete a degree (B = 1.56, p = .025), completed a master's degree (B = 1.11, p = .031), and/or completed a doctoral or professional degree (B = 1.53, p = .033) were significantly associated with greater feelings of inclusion within a university-affiliated student group, compared to participants with a parent/guardian who completed a bachelor's degree. Enrollment in languages, linguistics, literatures, cultures, and/or societies programs (B = 2.94, p = .023) was also significantly associated with greater feelings of inclusion within a university-affiliated student group, compared to enrollment in historical, philosophical, and/or religious studies. Meanwhile, having a high family income (B = -1.62, p = .044) was significantly

associated with poorer feelings of inclusion within a university-affiliated student group, compared to having an upper-middle family income.

Table 7

Multiple Regression Results for Inclusion at University

Inclusion at University	*B*	95% CI for *B*		*SE B*	β	R^2	$\triangle R^2$
		LL	*UL*				
Model						.43	.01
Constant	7.75*	1.22	14.27	3.30			
Age	-.08	-.19	.04	.06	-.15		
Gender Identity							
Woman	.31	-4.71	5.33	2.54	.10		
Man	.34	-4.76	5.45	2.58	.10		
Genderqueer	-1.98	-7.44	3.47	2.76	-.15		
Non-binary	-1.32	-6.07	3.43	2.40	-.22		
Gender non-conforming	-2.60	-10.23	5.02	3.86	-.12		
Fluid	-2.63	-8.87	3.60	3.15	-.12		
I prefer to self-describe	.18	-5.71	6.07	2.98	.01		
Transgender Identity							
Yes	1.22	-2.55	5.00	1.91	.21		
No	.12	-3.81	4.05	1.99	.02		
Sexual Orientation							
Heterosexual	1.06	-.88	2.99	.98	.36		
Gay or Lesbian	.48	-1.99	2.95	1.25	.08		
Bisexual	1.00	-.92	2.92	.97	.29		
Asexual	1.06	-1.18	3.30	1.13	.15		
Pansexual	1.01	-1.51	3.54	1.28	.11		
A sexual orientation not listed above	.24	-2.56	3.05	1.42	.02		
I prefer to self-describe	.03	-3.62	3.68	1.85	.00		
Racial Identity							
African/Black	-.49	-1.92	.94	.72	-.07		
East Asian	-1.12*	-2.09	-.15	.49	-.26*		
European/White	-.29	-1.18	.61	.45	-.10		
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	.44	-1.81	2.68	1.13	.03		
Latin, South, or Central American	-.75	-2.08	.58	.67	-.10		

Polynesian	1.92	-1.21	5.04	1.58	.09
South Asian	-.27	-1.36	.81	.55	-.08
Southeast Asian	-.09	-1.41	1.23	.67	-.01
West Asian	-.86	-2.56	.84	.86	-.09
Indigenous within Canada	.19	-1.58	1.95	.89	.02
I prefer to self-describe	-.80	-2.45	.85	.83	-.09
Ability and Disability Status					
Sensory disability	.18	-.86	1.21	.52	.03
Learning disability	.18	-.67	1.02	.43	.05
Long-term medical illness	.20	-.99	1.40	.61	.04
Mobility disability	1.64	-.47	3.75	1.07	.21
Mental health condition	-.64	-1.55	.28	.46	-.21
Temporary disability due to illness or injury	-4.39*	-8.73	-.05	2.19	-.28*
A disability not listed above	-.17	-1.65	1.32	.75	-.03
I have a disability but prefer not to disclose it	-2.32	-5.69	1.04	1.70	-.15
I do not have a disability	-.38	-1.39	.63	.51	-.13
Parent/Guardian A's Highest Education Achieved					
Did not complete high school	.79	-1.52	3.09	1.17	.06
Graduated from high school	-.41	-1.29	.48	.45	-.09
Attended college and/or university, but did not complete a degree	.99	-.06	2.04	.53	.17
Completed an associate's degree	-.15	-1.21	.91	.54	-.03
Completed a master's degree	.60	-.11	1.32	.36	.17
Completed a doctoral or professional degree	1.24*	.20	2.27	.52	.25*
Unknown	-4.89	-11.05	1.27	3.11	-.38
Parent/Guardian B's Highest Education Achieved					
Did not complete high school	-2.36	-6.15	1.44	1.92	-.36
Graduated from high school	-2.57	-6.27	1.12	1.87	-.59
Attended college and/or university, but did not complete a degree	-1.59	-5.25	2.08	1.85	-.32
Completed an associate's degree	-.66	-4.31	2.99	1.85	-.13

Completed a bachelor's degree	-1.81	-5.45	1.82	1.84	-.60
Completed a master's degree	-2.57	-6.29	1.15	1.88	-.63
Completed a doctoral or professional degree	-2.65	-6.37	1.06	1.88	-.44
Unknown	3.89	-2.52	10.30	3.24	.35
Family Income Level					
Low income	-1.40	-2.93	.13	.77	-.21
Lower-middle income	-.28	-1.19	.64	.46	-.07
Middle income	-.32	-.94	.30	.31	-.11
High income	-.73	-1.77	.32	.53	-.12
Employment Status					
Employed full-time	.10	-2.06	2.25	1.09	.01
Employed part-time	-.70	-2.41	1.01	.86	-.23
Unemployed	-.88	-2.54	.79	.84	-.29
University					
Algoma University	-1.21	-4.96	2.54	1.90	-.08
Carleton University	-.08	-1.55	1.38	.74	-.01
Lakehead University	.13	-3.05	3.30	1.61	.01
Laurentian University	.36	-1.72	2.44	1.05	.03
McMaster University	-.89	-2.92	1.13	1.03	-.07
Nipissing University	-.72	-2.24	.81	.77	-.10
Ontario Tech University	-.64	-3.16	1.88	1.28	-.04
Queen's University	-.01	-2.66	2.64	1.34	.00
Toronto Metropolitan University	-.07	-1.60	1.46	.77	-.01
Trent University	-.39	-2.80	2.03	1.22	-.04
University of Guelph	-.04	-.94	.86	.45	-.01
University of Ottawa	-1.05	-2.57	.47	.77	-.12
University of Toronto	-1.86	-5.29	1.56	1.73	-.12
University of Waterloo	-.37	-1.48	.75	.56	-.07
University of Windsor	.04	-2.13	2.20	1.09	.00
Wilfrid Laurier University	1.98	-4.65	8.61	3.35	.09
York University	-.77	-2.41	.88	.83	-.09
Year of Study					
Second year	-.10	-.90	.70	.40	-.03
Third year	.12	-.66	.90	.40	.04
Fourth year	.37	-.50	1.24	.44	.11
Other	-.31	-1.62	1.00	.66	-.05
Field of Study					

Biological sciences	-.52	-1.26	.22	.38	-.15
Business studies	-.32	-1.33	.68	.51	-.07
Computer science	-.77	-2.27	.73	.76	-.10
Creative arts and/or design	.58	-2.45	3.62	1.54	.05
Education studies	-.60	-2.84	1.63	1.13	-.05
Engineering	-.02	-1.09	1.05	.54	.00
Health sciences	.01	-.73	.75	.37	.00
Languages, linguistics, literatures, cultures, and/or societies	1.62*	.20	3.03	.72	.27*
Media and communication studies	.46	-3.99	4.91	2.25	.03
Physical sciences	-.49	-1.92	.94	.72	-.07
Social sciences	.24	-.60	1.08	.43	.07
A field not listed above	-.19	-.99	.62	.41	-.05

Note. B represents the unstandardized regression coefficient; CI represents the confidence interval (*LL* is the lower limit, *UL* is the upper limit); *SE B* represents the standard error of the coefficient; β represents the standardized coefficient; R^2 represents the coefficient of determination; $\triangle R^2$ represents the adjusted R^2. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$). The following demographic characteristics were used as reference variables in this model: Parent/Guardian A completed a bachelor's degree; upper middle income; Western University; first year; and historical, philosophical, and/or religious studies.

Table 8

Multiple Regression for Inclusion in Field of Study

Inclusion in Field of Study	*B*	95% CI for *B*		*SE B*	β	R^2	$\triangle R^2$
		LL	*UL*				
Model						.40	-.04
Constant	3.59	-3.30	10.49	3.49			
Age	-.02	-.14	.10	.06	-.04		
Gender Identity							
Woman	-.56	-5.87	4.75	2.68	-.17		
Man	-.98	-6.38	4.42	2.73	-.26		

Genderqueer	-.54	-6.30	5.23	2.92	-.04
Non-binary	-.85	-5.87	4.17	2.54	-.14
Gender non-conforming	-6.09	-14.15	1.98	4.08	-.27
Fluid	-1.16	-7.74	5.43	3.33	-.05
I prefer to self-describe	1.04	-5.19	7.27	3.15	.06
Transgender Identity					
Yes	-.32	-4.32	3.67	2.02	-.06
No	.19	-3.96	4.34	2.10	.03
Sexual Orientation					
Heterosexual	2.01	-.04	4.05	1.03	.65
Gay or Lesbian	1.37	-1.24	3.98	1.32	.22
Bisexual	1.66	-.37	3.68	1.03	.46
Asexual	1.73	-.64	4.10	1.20	.24
Pansexual	1.05	-1.62	3.72	1.35	.11
A sexual orientation not listed above	-.34	-3.31	2.62	1.50	-.03
I prefer to self-describe	.84	-3.02	4.70	1.95	.08
Racial Identity					
African/Black	.10	-1.41	1.62	.77	.01
East Asian	-.52	-1.55	.50	.52	-.12
European/White	-.15	-1.10	.80	.48	-.05
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	-.61	-2.98	1.76	1.20	-.05
Latin, South, or Central American	-.29	-1.70	1.11	.71	-.04
Polynesian	-.53	-3.84	2.78	1.67	-.02
South Asian	-.13	-1.27	1.02	.58	-.03
Southeast Asian	.63	-.77	2.03	.71	.10
West Asian	-.82	-2.62	.97	.91	-.09
Indigenous within Canada	-.06	-1.93	1.81	.94	-.01
I prefer to self-describe	-.63	-2.37	1.11	.88	-.07
Ability and Disability Status					
Sensory disability	.17	-.92	1.26	.55	.03
Learning disability	-.03	-.93	.86	.45	-.01
Long-term medical illness	.23	-1.03	1.50	.64	.04
Mobility disability	1.62	-.61	3.85	1.13	.20
Mental health condition	-.10	-1.07	.87	.49	-.03
Temporary disability due to illness or injury	1.66	-2.93	6.24	2.32	.10
A disability not listed above	-.24	-1.81	1.33	.79	-.04

I have a disability but prefer not to disclose it	-1.65	-5.21	1.91	1.80	-.10
I do not have a disability	-.29	-1.35	.78	.54	-.09
Parent/Guardian A's Highest Education Achieved					
Did not complete high school	-.61	-3.05	1.82	1.23	-.05
Graduated from high school	-.57	-1.51	.36	.47	-.13
Attended college and/or university, but did not complete a degree	.84	-.27	1.95	.56	.14
Completed an associate's degree	.34	-.78	1.46	.57	.06
Completed a master's degree	.53	-.23	1.28	.38	.15
Completed a doctoral or professional degree	.93	-.16	2.03	.55	.18
Unknown	-2.11	-8.62	4.40	3.29	-.16
Parent/Guardian B's Highest Education Achieved					
Did not complete high school	-.45	-4.46	3.56	2.03	-.07
Graduated from high school	-.49	-4.40	3.41	1.97	-.11
Attended college and/or university, but did not complete a degree	.09	-3.78	3.96	1.96	.02
Completed an associate's degree	1.05	-2.81	4.91	1.95	.20
Completed a bachelor's degree	.06	-3.78	3.91	1.94	.02
Completed a master's degree	-.13	-4.06	3.81	1.99	-.03
Completed a doctoral or professional degree	-.40	-4.33	3.52	1.98	-.06
Unknown	1.29	-5.48	8.06	3.42	.11
Family Income Level					
Low income	-.61	-2.23	1.00	.82	-.09
Lower-middle income	-.46	-1.42	.51	.49	-.11
Middle income	-.30	-.96	.36	.33	-.10
High income	-.98	-2.08	.13	.56	-.15
Employment Status					
Employed full-time	.05	-1.76	1.85	.91	.01
Employed part-time	.73	-1.55	3.01	1.15	.10
Unemployed	-.18	-1.94	1.58	.89	-.06

University					
Algoma University	4.31*	.35	8.28	2.00	.27*
Carleton University	.97	-.57	2.52	.78	.13
Lakehead University	-2.63	-5.98	.73	1.70	-.16
Laurentian University	-.90	-3.10	1.30	1.11	-.08
McMaster University	1.16	-.98	3.30	1.08	.09
Nipissing University	-.45	-2.06	1.17	.81	-.06
Ontario Tech University	.94	-1.72	3.61	1.35	.06
Queen's University	-1.18	-3.98	1.62	1.42	-.07
Toronto Metropolitan University	-.43	-2.05	1.19	.82	-.05
Trent University	-1.18	-3.73	1.37	1.29	-.10
University of Guelph	.35	-.60	1.30	.48	.07
University of Ottawa	-1.34	-2.94	.26	.81	-.14
University of Toronto	-.87	-4.49	2.75	1.83	-.05
University of Waterloo	-.19	-1.37	.99	.60	-.04
University of Windsor	-.12	-2.41	2.17	1.16	-.01
Wilfrid Laurier University	-1.47	-8.47	5.54	3.54	-.06
York University	.24	-1.49	1.98	.88	.03
Year of Study					
Second year	.43	-.41	1.27	.43	.11
Third year	-.16	-.99	.66	.42	-.05
Fourth year	-.13	-1.05	.79	.47	-.04
Other	-.58	-1.96	.80	.70	-.10
Field of Study					
Biological sciences	-.16	-.95	.62	.40	-.04
Business studies	-.29	-1.35	.77	.54	-.06
Computer science	.19	-1.40	1.78	.80	.02
Creative arts and/or design	.58	-2.45	3.62	1.54	.05
Education studies	1.02	-1.35	3.38	1.19	.09
Engineering	-.35	-1.48	.77	.57	-.07
Health sciences	-.22	-1.00	.57	.40	-.06
Languages, linguistics, literatures, cultures, and/or societies	.90	-.59	2.40	.76	.14
Media and communication studies	-1.31	-6.01	3.40	2.38	-.08
Physical sciences	-.44	-1.95	1.07	.76	-.06
Social sciences	-.42	-1.31	.47	.45	-.12
A field not listed above	.03	-.82	.89	.43	.01

Note. B represents the unstandardized regression coefficient; CI represents the confidence interval (*LL* is the lower limit, *UL* is the upper limit); *SE B* represents the standard error of the coefficient; β represents the standardized coefficient; R^2 represents the coefficient of determination; $\triangle R^2$ represents the adjusted R^2. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$). The following demographic characteristics were used as reference variables in this model: Parent/Guardian A completed a bachelor's degree; upper middle income; Western University; first year; and historical, philosophical, and/or religious studies.

Table 9

Multiple Regression for Inclusion Within a University-affiliated Student Group

Inclusion at University-affiliated Student Group	*B*	95% CI for *B*		*SE B*	β	R^2	$\triangle R^2$
		LL	*UL*				
Model						.55	.11
Constant	7.17	-1.67	16.00	4.45			
Age	-.06	-.21	.09	.08	-.10		
Gender Identity							
Woman	-1.42	-7.46	4.62	3.04	-.37		
Man	-1.48	-7.57	4.60	3.06	-.33		
Genderqueer	-6.29	-13.89	1.31	3.83	-.37		
Non-binary	-1.98	-7.67	3.71	2.87	-.29		
Gender non-conforming	-6.35	-15.50	2.80	4.61	-.27		
Fluid	-2.63	-8.87	3.60	3.15	-.12		
I prefer to self-describe	1.65	-6.75	10.05	4.23	.07		
Transgender Identity							
Yes	2.19	-2.49	6.87	2.36	.31		
No	.22	-4.54	4.99	2.40	.03		
Sexual Orientation							
Heterosexual	.79	-1.81	3.39	1.31	.22		
Gay or Lesbian	.79	-1.81	3.39	1.31	.22		
Bisexual	1.10	-1.46	3.67	1.29	.27		
Asexual	.02	-3.21	3.25	1.63	.00		
Pansexual	1.44	-2.29	5.17	1.88	.13		

A sexual orientation not listed above	2.30	-1.38	5.98	1.86	.19
I prefer to self-describe	-1.79	-7.60	4.03	2.93	-.15
Racial Identity					
African/Black	-.06	-2.00	1.88	.98	-.01
East Asian	-1.31	-2.76	.14	.73	-.26
European/White	-.39	-1.64	.85	.63	-.11
Indo-Caribbean, Indo-African, Indo-Fijian, West Indian	-.10	-2.93	2.73	1.42	-.01
Latin, South, or Central American	-.47	-2.50	1.56	1.02	-.05
Polynesian	1.92	-1.21	5.04	1.58	.09
South Asian	-1.03	-2.62	.56	.80	-.24
Southeast Asian	-.49	-2.18	1.20	.85	-.07
West Asian	-1.38	-3.84	1.08	1.24	-.12
Indigenous within Canada	-2.00	-4.53	.52	1.27	-.20
I prefer to self-describe	-.92	-3.39	1.55	1.24	-.09
Ability and Disability Status					
Sensory disability	1.09	-.30	2.48	.70	.17
Learning disability	.59	-.58	1.76	.59	.13
Long-term medical illness	-.33	-2.00	1.34	.84	-.05
Mobility disability	1.23	-1.64	4.10	1.44	.14
Mental health condition	-.29	-1.51	.94	.62	-.08
Temporary disability due to illness or injury	-.29	-5.79	5.21	2.77	-.02
A disability not listed above	1.92	-.36	4.20	1.15	.24
I have a disability but prefer not to disclose it	.05	-4.61	4.72	2.35	.00
I do not have a disability	.06	-1.31	1.43	.69	.02
Parent/Guardian A's Highest Education Achieved					
Did not complete high school	.92	-1.93	3.77	1.44	.07
Graduated from high school	.28	-.90	1.46	.59	.05
Attended college and/or university, but did not complete a degree	1.56*	.20	2.93	.69	.23*
Completed an associate's degree	1.10	-.43	2.62	.77	.17
Completed a master's degree	1.11*	.10	2.13	.51	.27*
Completed a doctoral or	1.53*	.13	2.93	.70	.25*

professional degree					
Unknown	-6.99	-14.64	.67	3.85	-.51
Parent/Guardian B's Highest Education Achieved					
Did not complete high school	1.69	-3.13	6.50	2.42	.23
Graduated from high school	-.36	-5.12	4.41	2.40	-.06
Attended college and/or university, but did not complete a degree	.19	-4.44	4.81	2.33	.03
Completed an associate's degree	1.16	-3.41	5.74	2.30	.20
Completed a bachelor's degree	.60	-4.02	5.23	2.33	.17
Completed a master's degree	-.24	-4.98	4.50	2.39	-.05
Completed a doctoral or professional degree	.26	-4.49	5.01	2.39	.03
Unknown	6.90	-1.09	14.89	4.02	.58
Family Income Level					
Low income	-1.05	-3.16	1.06	1.06	-.12
Lower-middle income	-1.18	-2.37	.02	.60	-.25
Middle income	-.66	-1.48	.17	.42	-.18
High income	-1.62*	-3.20	-.04	.80	-.18*
Employment Status					
Employed full-time	1.96	-.81	4.72	1.39	.24
Employed part-time	-.35	-2.46	1.76	1.06	-.10
Unemployed	-.70	-2.79	1.39	1.05	-.20
University					
Algoma University	.67	-3.99	5.33	2.35	.04
Carleton University	.41	-1.87	2.69	1.15	.05
Lakehead University	.13	-3.05	3.30	1.61	.01
Laurentian University	1.17	-1.47	3.80	1.33	.10
McMaster University	.82	-1.63	3.27	1.23	.06
Nipissing University	-.13	-2.23	1.97	1.06	-.02
Ontario Tech University	1.32	-1.75	4.38	1.54	.08
Queen's University	1.20	-2.09	4.50	1.66	.07
Toronto Metropolitan University	1.15	-.82	3.12	.99	.13
Trent University	-.60	-4.44	3.23	1.93	-.04
University of Guelph	.64	-.56	1.84	.60	.10
University of Ottawa	.66	-1.38	2.70	1.03	.06

University of Toronto	-1.02	-5.19	3.15	2.10	-.06
University of Waterloo	.91	-.63	2.45	.78	.14
University of Windsor	1.57	-1.80	4.94	1.70	.11
Wilfrid Laurier University	-2.11	-10.64	6.43	4.30	-.09
York University	-.68	-2.88	1.51	1.10	-.06
Year of Study					
First year	-.61	-1.77	.55	.59	-.15
Second year	-1.15	-2.38	.09	.62	-.26
Third year	-.52	-1.51	.47	.50	-.13
Other	-1.05	-2.53	.44	.75	-.14
Field of Study					
Biological sciences	-1.01	-2.07	.05	.53	-.25
Business studies	-.66	-2.08	.76	.71	-.11
Computer science	-.96	-3.33	1.41	1.19	-.10
Creative arts and/or design	-1.79	-6.21	2.63	2.22	-.13
Education studies	-.66	-3.84	2.53	1.60	-.05
Engineering	-1.15	-2.58	.29	.72	-.22
Health sciences	-.16	-1.15	.83	.50	-.04
Languages, linguistics, literatures, cultures, and/or societies	2.94*	.42	5.46	1.27	.36*
Media and communication studies	.35	-5.60	6.31	3.00	.02
Physical sciences	-1.21	-3.06	.65	.93	-.16
Social sciences	-.68	-1.78	.43	.56	-.16
A field not listed above	-.35	-1.40	.69	.53	-.08

Note. B represents the unstandardized regression coefficient; CI represents the confidence interval (*LL* is the lower limit, *UL* is the upper limit); *SE B* represents the standard error of the coefficient; β represents the standardized coefficient; R^2 represents the coefficient of determination; $\triangle R^2$ represents the adjusted R^2. An asterisk (*) indicates statistical significance ($p < 0.05$). Two asterisks (**) indicate statistical significance ($p < 0.01$). The following demographic characteristics were used as reference variables in this model: Parent/Guardian A completed a bachelor's degree; upper middle income; Western University; fourth year; and historical, philosophical, and/or religious studies.

Qualitative Findings

Participants

Twenty-five participants from the survey portion of this study engaged in either one of three focus groups (ranging from two to six participants in each group) or 13 individual interviews. While data saturation was reached with 22 participants across interviews, an additional three individual interviews were conducted to confirm data saturation and include all students who expressed an interest in participating in this portion of the study. Since personal identifiers (i.e., email addresses) were not linked to demographic data for privacy reasons (i.e., as recommended by the Office of Research Ethics), the demographic information of the interview participants was unknown.

Themes

Participants' responses to the guiding questions in the interviews generated six themes (and eight sub-themes): (1) evolution of experiences of diversity and inclusion (personal experiences, impact of 2020); (2) diversity at university (diversity provides opportunities for growth); (3) inclusion at university (facilitators of inclusion, barriers to inclusion, inclusion offers support); (4) resilience at university (coping through support, forced resilience); (5) diversity and resilience; and (6) inclusion and resilience. To note, while some quotations may be relevant for more than one theme, each quotation is presented with the theme it fits best.

Evolution of Experiences of Diversity and Inclusion.

Personal Experiences. When asked about when they became more familiar with the concepts of diversity and inclusion, many participants highlighted the evolution of their personal experiences of diversity and inclusion before and after beginning university. Many participants indicated that they came from non-diverse hometowns and experienced increased diversity upon

arriving at university. For example, one participant stated, “I went from having the same exact type of people, to put it mildly, to a whole bunch of different types of people and different races, sexual orientations, social economic statuses, and gender identities at university.” Another participant compared their experiences of dialogue around diversity and inclusion before and during university, saying:

> I grew up in a very white town and diversity wasn't really mentioned until I was in high school. It was a key word that had no meaning behind it until I got to university that I felt there was a meaning behind that word. … I feel like I didn't actually learn properly about diversity and inclusion, not just as something people say, but something people do until I got to university.

Similarly, another participant said, “In elementary school, we talked about inclusion in not quite the same sense that we talk about it [in university], but more in terms of … anti-bullying messaging, with less of a focus on diversity and inclusion.”

Impact of 2020. Many participants expressed an evolution of experiences of diversity and inclusion during and following the year 2020. One participant described the prevalence of dialogue around diversity and inclusion since 2020 and said, “Because I'm a person of colour, [diversity and inclusion] have been more social media-oriented ever since COVID-19 began. … I know there were a lot of incidences of targeted attacks at that time, as well as the [Black Lives Matter] movement, so diversity and inclusion really just spiked at that point.” A participant self-identified as Black, and shared their experiences of inclusion in 2020, stating:

> I know that 2020 was a time when a lot of people were hearing about anti-Blackness. … Being Black at [university] in 2020 was abysmal because, with Black people specifically, so many people were walking on eggshells and trying not to be called ‘racist’. … There

> was a lot of, ‘Look, guys, we’re doing the right thing’, and the right thing was talking about Martin Luther King. It was not anything that was helping actual Black students. And there was nothing that was actually telling me that there were Black people in higher spaces doing the things that they need to do to actually make the school a better place for Black students.

Another participant highlighted their experiences of changes in diversity and inclusion at their university and said, “Following the summer of 2020, there were a lot of people's minds being open to systemic racism in our society. I feel like [the university] tried really, really hard to turn things around, and we're now seeing demographic changes at the university and we're seeing attitude shifts and things like that.”

Diversity at University. Another theme that emerged from the data was the presence of diversity at university in terms of students’ identities. For example, a participant noted, “Coming to university, it was the first time I saw real diversity in terms of sexual [orientation] and gender identity, … it’s eye-opening to see a more diverse student body.” Similarly, another participant stated, “I’m at a school with a lot of different people. Throughout my experiences of living with people in residence, even with both of my roommates, … no one shares the same cultural background.” Particularly referring to graduate students in the role of teaching assistants, one participant said, “Most of our [teaching assistants] were from diverse backgrounds. … I think having those diverse faces and those diverse role models really helped us approach our [teaching assistants] and ask questions.”

Diversity Provides Opportunities for Growth. While discussing the presence of diversity at university, several participants highlighted the opportunities that diversity provides for personal growth. This sub-theme was typified when a participant said:

> One of the biggest things about the presence of diversity on campus is that it not only makes me feel more comfortable, but it also allows me to feel comfortable in learning. We all come here not knowing a lot. That's why we're in university. We want to learn things one way or another, but it's in those soft skills of learning how to understand other human beings that come from a different culture or a different background that you might not be familiar with. One of my favourite things about an increase in diversity is the conversations you get to have with so many different people, whether they are from a different country, speak a different language than you, have different skin colour than you, or have different practices and religions. My favourite thing has got to be getting to know people and what things are important to them because at the end of the day, whether you speak a different language or come from a different country, we value really similar things.

The above idea was paralleled by another participant who said, “I feel like my experiences of diversity have made me more open-minded and inclusive, and have made me think of the world as an overall picture, instead of just focusing all of the attention on me.”

Inclusion at University.

Facilitators of Inclusion. Many participants shared examples of facilitators that have made them feel more included in university. A common facilitator of inclusion was student-led clubs, as described by many participants. For example, one participant said, “I'm in a club that promotes sustainability and zero-waste lifestyles, and I definitely feel a big sense of inclusion there because it's a lot of like-minded people who want to do better things for the planet.” Similarly, another participant shared examples of identity-based clubs that facilitated their inclusion and said, “I have noticed a huge portion of clubs that are specific for [racial identities],

like a Black Students in [Science, Technology, Engineering, and Math] club and a Black Students in Business club." Another facilitator of inclusion was being asked for personal pronouns. This was exemplified by a participant who stated, "For me, personally as a queer and non-binary student at my university, teachers have really tried to make an effort to ask what pronouns I use at the start of the year and have been really respectful when I go up to them and tell them my preferred name. ... I don't feel alone [in my sexual identity at my university]." Another participant emphasized the importance of asking students' pronouns because "that action alone makes so many people feel more comfortable." Identity-based events organized by the university were also a facilitator of inclusion. A participant explained, "I was the only Sikh dude in my entire residence, a turban-wearing Sikh dude especially. … It was Diwali season and I remember I walked down to the residence dining hall, and it was fully decked out for Diwali … the university tried to provide a community." Likewise, another participant shared, "[The university] had an event to [meet other Muslim students], … we talked about our religion and had an understanding and shared education on Islam."

Barriers to Inclusion. In contrast to the facilitators of inclusion described above, many participants also shared barriers to inclusion at university. A lack of accessibility was a barrier to inclusion that was experienced by many participants. For instance, one participant discussed the challenges to physical accessibility and said, "There's a lot of stairs everywhere on campus and not a lot of ramps or elevators. And the places where there are elevators, the doors will be broken or the automatic access doors won't work." Another participant explained barriers to accessibility for those with learning disabilities and emphasized, "In order to access certain parts of [accessibility] services, you do need to have a diagnosis, … and getting a diagnosis can be inaccessible for a lot of people." Performativity (i.e., performing equity work to increase social

capital rather than for genuine change; Government of Canada, 2023) was also described as a barrier to inclusion, in which many participants felt a disconnect between university personnel's diversity versus inclusion efforts. The frustrations expressed by several participants towards their experiences of their university as having policies for being seen to support diversity and the actual experiences of diverse students not feeling meaningfully included was highlighted by one participant who said, "The issue is that representation and inclusion are different things. While my university, in particular, is making this big drive to recruit a bunch of minority students and is increasing financial aid and doing all these different things, but what's the use of that if you don't bring the students into an environment that really supports them?" Another participant expressed having negative experiences of inclusion following their university's statements regarding the ongoing Israeli–Palestinian conflict. The participant said, "There is diversity, … but [the university] hasn't made all students feel included. They didn't share that sense of inclusion when they supported one side of a political issue." Participants also expressed a disconnect between the facilitators of inclusion available for students and students' knowledge of these facilitators as a barrier to inclusion. One participant explained, "[My friend] had never been in a space where she felt her views of religion were accepted as there's a little bit of a disconnect between what we have [at the university] and what everyone knows about. … But, after I showed her all these different resources and spaces we had, she was saying that it was the first time she's been somewhere that felt like it was accommodating her." Another participant also expressed not being aware of certain opportunities for inclusion and having to seek out these opportunities. This participant stated, "I have to go out of my way to get involved and that's the only way your presence is acknowledged or of value, I guess, … you have to take that initial initiative and step."

Inclusion Offers Support. Several participants noted that experiences of inclusion at university provided them with support. This sub-theme was exemplified when one participated said:

> [Inclusion] definitely made me feel way more confident, not just in myself, but in my abilities and how I do things. … [Inclusion] has definitely made me more happy, which made me want to do more within my community and made me want to participate in school stuff more often and more regularly, instead of feeling like I'm going to be considered the outsider immediately, or I'm going to be bullied, or be called names for doing whatever I feel like. I no longer feel that way."

Another participant shared a similar sentiment, "[Inclusion] helps with morale, … I know that even if I am anywhere on campus, there's somewhere I can go where I know for a fact that I will always just feel safe and just at home."

Resilience at University.

Coping Through Support. There were participants who stated that their levels of resilience increased at university through social support from their peers. One participant described a stressful situation that they experienced in a classroom and felt low resilience. After explaining how they resolved the situation, the participant said, "I left the room and my peers had to kind of calm me down and comfort me, and that was my way to bounce back." Another participant explained that due to working two part-time jobs, they experienced difficulties making friends, which resulted in higher stress and lower resilience in their first year at university. After progressing in university and making new friends, the participant highlighted their current experience, saying, "I'm still working two jobs now, but it's a little more easier because I've made more friends and I've made more connections. … I think just opening up a

little bit about my situation helped them understand and that was how I got through [these years].” Likewise, another participant shared, “When finals are here or it’s midterm season, I'd cope with it by, sometimes, hanging out with my friends to de-stress or we’d form a study group … and then, study together so it wouldn't be as stressful. … I see my resilience improve when I'm hanging out with my friends.”

Forced Resilience. Participants underscored that university students often have a forced sense of resilience. A participant stated, “I feel like resilience is just a big part of the university life in general as there are a lot of times of stress, like exam season and midterms. … Especially around those times, your resilience level has to be pretty high because you're going to get knocked down but at the end of the day, you do eventually have to get up and keep going.” Forced resilience was especially notable among those self-identifying as equity-deserving students, resulting in even more forced resilience than their non-equity-seeking counterparts. This was particularly typified by one participant who said:

> Resilience has been a huge, huge, huge part of mine and a lot of other Black and [students of colour’s] experiences due to microaggressions alone. … I feel like there has been an extremely unfair level of resilience needed from [students of colour]. … Our levels of resilience are through the roof. While other students, like white students, straight students, etc., don't even need to think about these things. … I also need to study. I also need to do assignments. I also need to be able to go grocery shopping and take care of myself. I don't also need to fight for my life because professors want to say the N-word, because students want to say the N-word, because I feel like I'm fighting for my life all the time. I don't need to do that.”

Another participant highlighted, “I feel like being a woman in engineering specifically, you'll always have to be somewhat resilient, … you'll always have to work towards getting your voice heard. … You kind of still have to keep pushing, you still need to get the work done.”

Diversity and Resilience. While discussing diversity and resilience, many participants explained that their experiences of diversity positively influenced their levels of resilience. For instance, one participant emphasized, “I think being exposed to other people's differences and identities allows you to be more resilient yourself because you see that other people are going through things. The world we live in is so diverse, especially here in Canada, so other people may be going through the same things, especially related to your identity, so you can connect with other people.” This sentiment was paralleled by another participant who said, “I think diversity helps my resilience in the sense that people have shared experiences. You're not alone, it's not a new problem. You can have shared experiences while being diverse at the same time, so people understand where you’re coming from.” Another participant stated, “You see so many different people who get to the same place as you but in different ways. … I think that's really inspiring in terms of resilience because of how many people in a lecture hall were able to get through whatever they needed to get through to all get to the same place.”

Inclusion and Resilience. Similar to diversity and resilience, participants highlighted that their experiences of inclusion positively impacted their resilience. One participant emphasized, “Feeling included gives you a sense of community and belonging, and that feeling of community and sense of belonging helps you feel comfortable to lean on and use different groups as resources for support, and that builds resilience.” Another participant said, “[Inclusion] has made me a much stronger individual in terms of how I deal with my regular stress and resilience in general because I know that I can deal with it now and that there will be people that

have my back and will include me regardless." Another participant shared their experiences of navigating through same-sex relationships alongside their peers identifying with similar sexual orientations. They said, "Having people directly interacting with me who just implicitly understand certain parts of my experience without me having to explain it to them, provides a really useful, direct support for working through those kinds of adversities."

Chapter 5: Discussion and Conclusion

The TOGETHER Study aimed to assess, quantitatively: (a) the relationship between Ontario undergraduate university students' experiences of diversity and their levels of resilience; (b) the relationship between this population's feelings of inclusion and their levels of resilience; and (c) which demographic factors were most associated with this population's levels of resilience, experiences of diversity, and experiences of inclusion. The secondary purpose of this study was to explore, qualitatively, Ontario undergraduate university students' experiences of diversity and inclusion and their perspectives on how these experiences influenced their resilience. This chapter will first include a brief discussion focused on the findings about Ontario undergraduate university students' levels of resilience, experiences of diversity, and feelings of inclusion. Subsequently, the relationships explored through the primary and secondary purposes of this study will be discussed more thoroughly including, where relevant, through the lens of constructs from the social-ecological interpretation of resilience (Ungar et al., 2013). Then, an overview of the strengths, limitations, and future directions from this study will be highlighted. Finally, the conclusion of this research study will be presented.

Levels of Resilience, Experiences of Diversity, and Feelings of Inclusion

The low levels of participants' resilience found in the current study are concerning, particularly given that low resilience has been associated with greater anxiety, stress, and poor academic performance among undergraduate students (Ahmed & Julius, 2015; Dafogianni et al., 2022; Du et al., 2020). While a recent scoping review that included several studies focused on undergraduate students' resilience reported varying levels (Ahluwalia et al., 2023), this finding of low resilience is consistent with those reported by Gibson et al. (2020), who studied undergraduate nursing students (N = 45) in the United States. As a majority of the participants in

the current study were registered in science-related disciplines (i.e., health sciences, biological sciences, social sciences), it is possible that this similarity to the participants in the study by Gibson et al. (2020) might help to explain the comparably low levels of resilience, although additional research is needed to assess this hypothesis. With respect to diversity, participants in the current study experienced moderate interactional diversity, meaning they participated in diversity-oriented experiences and had discussions with diverse peers to some extent. Although experiences of higher interactional diversity are preferable because students are engaging with peers of diverse identities to a larger extent, it is important to note that experiences of interactional diversity reported in the current study compare favourably to previous research. For example, Loes et al. (2013) examined interactional diversity in 4,501 students in 19 colleges and universities across the United States and reported poor experiences of interactional diversity. Given the decade between the study by Loes et al. (2013) and the current study (2023-2024), this difference in findings may be explained by the increased diversity in higher education over the last decade in both the United States and Canada (United States Census Bureau, 2022; Statistics Canada, 2023), leading to greater experiences of interactional diversity among students. With respect to inclusion, the moderate feelings of inclusion experienced by participants in the current study point to them feeling somewhat included at their university, in their field of study, and within their university-affiliated student group(s). While a review of the literature revealed a lack of studies measuring feelings of inclusion among undergraduate university students, Taff and Clifton (2022) conducted a scoping review focused on inclusion and belonging in higher education settings and reported students feeling included to only a certain degree. Further research measuring feelings of inclusion in this population is needed.

Relationships Among Resilience, Diversity, and Inclusion

Given the previously established positive outcomes associated with diversity and inclusion (e.g., cultural awareness, academic skills, sense of belonging; Chang et al., 2014; Gottfredson et al., 2008), it was unsurprising and hypothesized that greater interactional diversity and greater feelings of inclusion were both correlated with higher levels of resilience. It is important to note that these findings are consistent with the qualitative findings in the current study, with many participants describing their experiences of both diversity and inclusion positively influencing their levels of resilience. More specifically, greater interactional diversity and greater feelings of inclusion were also correlated with higher self-efficacy and the ability to cope (i.e., aspects of resilience described through the Connor-Davidson Resilience Scale 25) in the current study. These findings are consistent with work by Wilczyńska et al. (2015) who found that a sense of belonging (i.e., an outcome associated with diversity and inclusion) positively influenced the ability to cope in a study of 178 individuals (aged 16-66) in Poland. Similarly, Rajchert et al. (2023) reported a positive correlation between inclusion and self-efficacy among adults (i.e., aged 18 to 68; $N = 186$) in Poland. Using the social-ecological interpretation of resilience (Ungar et al., 2013) to bring understanding to this relationship is useful in that the theory explains positive microsystemic support structures (e.g., university environments) can promote resilience in students through healthy and supportive interactions (Hamadeh Kerbage et al., 2021; Holdsworth et al., 2018). In the current study, the shared experiences and sense of belonging through experiences of diversity and inclusion that were highlighted by participants in interviews represent supportive interactions which, in turn, help to promote students' resilience.

The importance of social support as it relates to inclusion, resilience, and stress management has been underscored by several researchers. For instance, Rashid et al. (2021) identified social support as one form of inclusion among undergraduate students (N = 479) in Saudi Arabia. Additionally, Holdsworth et al. (2018) found social support to be a significant external factor associated with increased levels of resilience in university students (N = 38) in Australia. Similarly, in a study examining the relationship between academic stress and resilience among undergraduate social work students in the United States (N = 145), Wilks and Spivey (2010) reported that social support acted as a resource for effective stress management and as a protective factor among at-risk populations. Specifically, social support from friends was found to moderate the relationship between stress and resilience (Wilks & Spivey, 2010). Interestingly, this relationship was exemplified through the interviews in the current study wherein many participants shared that their resilience increased during times of stress, crediting the social support they received from friends and peers as the reason for that increase.

Associations Among Demographic Characteristics, Resilience, Diversity, and Inclusion

Compared to other demographic characteristics, those that specifically identified equity-deserving group membership were most associated with levels of resilience, experiences of diversity, and feelings of inclusion. This finding was hypothesized given that the bio-psycho-social-ecological systems theory emphasizes multi-level factors that impact individuals (Bronfenbrenner, 1979); thus, also influencing their resilience and experiences with others (Ungar et al., 2013). This interpretation also aligns with recommendations from Gender-based Analysis Plus (GBA+; Government of Canada, 2021), which was used to inform the quantitative analysis of the demographic characteristics in the current study. Through GBA+, it is important to note that intersectionality reveals that multiple demographic characteristics (e.g., gender

identity, racial identity) are not mutually exclusive and often overlap to influence individuals' experiences (Crenshaw, 1989). As such, while each demographic characteristic was analyzed independently, it is plausible that multiple aspects of participants' identities could have had varying impacts on the above-noted outcomes. To obtain a more thorough understanding of this population, demographic characteristics unrelated to equity-deserving group membership but relevant to Ontario undergraduate university students (i.e., employment status, university, field of study) were also included in this analysis. The associations between universities and students' levels of resilience, experiences of diversity, and feelings of inclusion in the current study is notable, given that some universities were associated with higher outcomes, compared to other universities. It is plausible that there are different demographic compositions at the various universities that may help to account for these findings; however, there is a lack of demographic data available on undergraduate students in Ontario. Further exploration into explaining these findings is warranted.

In terms of gender identity, the association between low levels of resilience and identifying as gender non-conforming is particularly noteworthy, especially given that individuals who are gender-diverse are often subjected to stressors unique to their identity (e.g., discrimination, stigma), thereby negatively impacting their resilience (Hidalgo et al., 2019). This finding aligns with work by Bowling et al. (2019), who explored subjective perceptions of resilience among individuals who identified as gender-diverse in the United States (aged 18-68 years; $N = 21$) and reported trauma-induced psychological distress and the use of multiple resilience-promoting strategies (e.g., reframing, meditation, hobbies) within this population, reinforcing the unique challenges experienced by these individuals. Meanwhile, the association between high levels of resilience and identifying as heterosexual, pansexual, gay or lesbian, or

bisexual in the current study is interesting, given that Krueger and Upchurch (2022; *N* = 14,470) found that adults in the United States identifying as heterosexual were more likely to be resilient, compared to individuals identifying with other sexual orientations. However, Kosciw et al. (2015) examined resilience in lesbian, gay, bisexual, and/or transgender secondary school students (aged 13-20 years; *N* = 7,816) and found that students who were more open about their sexual orientation had higher resilience as it was a protective factor against victimization, which may help to explain the findings in the current study.

Relative to mental health, it was unsurprising that identifying as having a mental health condition was associated with low levels of resilience in the current study; Chow and Choi (2019; *N* = 416) and Fullerton et al. (2021; *N* = 306) previously reported positive correlations between mental health and resilience among undergraduate student populations in China and Australia, respectively. In contrast to gender identity and mental health, an association was found between having a high family income and high levels of resilience in the current study. This finding aligns with the positive relationship between family income and resilience among college students (*N* = 1,680) in China reported by Gong et al. (2023). The relationship between income and resilience is also consistent with the social-ecological interpretation of resilience (Ungar et al., 2013), in that an individual's exosystem, which includes their socioeconomic status (i.e., income, education, occupation), has been found to influence their resilience. Similarly, an association was found between enrollment in engineering and high levels of resilience in the current study, which is consistent with work by Moreno-Hernandez and Mondisa (2021) who reported that first-year engineering undergraduate students (*N* = 167) in the United States had high self-perceived resilience as engineering programs are often considered to be more difficult than some other undergraduate programs. This finding is further supported by the experiences of

forced resilience shared through the interviews in the current study. In contrast, an association was found between enrollment in education studies and low levels of resilience in the current study. This finding aligns with work by Mansfield et al. (2016) who found that the resilience of students enrolled in pre-service teacher programs (N = 144) in Australia was concerning and emphasized the need for resilience-building resources in this population.

In addition to what has been discussed above with regard to connections found in the current study between demographic characteristics and levels of resilience, the association found between identifying as East Asian and having both poor experiences of interactional diversity and feelings of inclusion at university is notable. These poor interactions with diverse peers and the lack of feeling included are consistent with the work of Albertson (2021), who reported that East Asian international students (N = 11) at a college in the United States shared negative experiences of diversity and inclusion due to language barriers and cultural differences. While we were unable to conclude if the participants in the current study were international or domestic students, it is worth noting that Ma (2022) highlighted that students identifying as East Asian in western universities often experience marginalization and racism, which may explain the experiences shared in the current study. Meanwhile, aligning with Universities Canada's (2019) report indicating increased diversity in Canadian universities in terms of sexual diversity and ability and disability statuses, it was interesting that identifying as pansexual and/or having a learning disability or a mobility disability was associated with greater experiences of interactional diversity in the current study. This association is also consistent with the experiences shared by participants through the interviews in the current study, in which they noted the presence of diversity at university.

Despite greater experiences of diversity, an association was found between identifying as having a temporary disability due to illness or injury and poor feelings of inclusion. To help interpret this finding, it is valuable to consider Osborne's (2019) exploration of the experiences of 105 students with disabilities in universities in England, the United States, Canada, and Australia. The author found that many students did not feel comfortable disclosing their disability status to others due to potential stigma and/or did not feel accepted or accommodated by their universities, both of which led to feeling excluded. These inclusion-specific experiences are consistent with both the quantitative findings in the current study noted above and the experiences shared through the interviews, as many participants highlighted a lack of accessibility at university as a barrier to inclusion. Shaw's (2023) insights gained via exploring lecturers' (N = 31) attitudes toward disability and inclusion of students with disabilities in higher education in the United Kingdom are useful herein. The researcher explained that while universities may express a commitment to inclusive practices, lecturers in universities often experience a lack of knowledge about disabilities, along with a lack of training on disability awareness and students' needs (Shaw, 2023), an interpretation that points to the need for disability awareness and accessibility training for university personnel.

In terms of income and inclusion, the association between high family income and poor feelings of inclusion within a university-affiliated student group was surprising. It has been found that a high family income can increase access to university through reduced financial burden and increased preparedness, which, in turn, can lead to more positive experiences at university (Dahill-Brown et al., 2016; Tompsett & Knoester, 2023). However, the finding in the current study might be explained through Kahneman and Deaton's (2010) survey-study with 1,000 adults in the United States. The authors reported that high income can also be associated

with loneliness and reduced emotional quality of individuals' everyday experiences, given that above a certain level of stable income, individuals' emotional well-being may be constrained by their temperament and life circumstances (Kahneman & Deaton, 2010). Further investigation is necessary to identify more clearly this relationship between high family income and poor feelings of inclusion.

In contrast to the lack of inclusion described above, enrollment in languages, linguistics, literatures, cultures, and/or societies programs were associated with greater feelings of inclusion at university and within a university-affiliated student group in the current study. According to Cerceo et al. (2022), arts and humanities programs (e.g., languages, linguistics, literatures, cultures, societies programs) are the most effective at promoting diversity and inclusion in the long-term, compared to other programs, given the program's focus on intentional and sustained reflection and transformative thinking, which may help to explain the finding in the current study. The association between having at least one parent/guardian who completed a doctoral or professional degree and greater feelings of inclusion at university in the current study is also noteworthy, given the correlation between parents' education level and their children's experiences and success in university (Turcotte, 2015). This finding might be explained through the work of Meuleman et al. (2015), who reported that students (N = 285) who are the first in their family to attend university (i.e., first-generation students) are often subject to negative social experiences, loneliness, and isolation. First-generation students often come from equity-deserving backgrounds, have low social capital, and are unable to receive university-related guidance from family members (Stebleton & Soria, 2012; Uphoff et al., 2013); these factors can lead to difficulties acclimating to the university environment and, ultimately, experiencing a disconnect from their peers (Capannola & Johnson, 2022). These experiences contrast with those

of students with parents/guardians who have higher educational attainment (Meuleman et al., 2015), likely helping to explain the reason participants in the current study with at least one parent/guardian who has high educational attainment experienced greater feelings of inclusion compared to those with parents/guardians who have lower educational attainment.

Students' Perceptions of Diversity, Inclusion, and Resilience

As hoped, a wide range of student perceptions regarding diversity, inclusion, and resilience were generated through the current study's interviews. Revealed through the theme of *the evolution of experiences of diversity and inclusion*, it was common for students first to be introduced to diversity after coming to university, as many students reported previously living in non-diverse communities. Extending the idea of diversity at university, Hall et al. (2011) conducted a study of 927 undergraduate students in the United States and reported that interactions with diverse peers (or a lack thereof) in pre-college environments influence students' predispositions to engage with diverse peers at college. That is, students coming to university from non-diverse communities are less likely to interact with their peers of diverse identities. However, this did not seem to coincide with the current study as many students viewed the increased diversity at university as a positive experience, leading them to be more open-minded, comfortable at university, and culturally aware. This finding aligns with work by Gottfredson et al. (2008), who examined the influence of diversity on incoming law students (N = 1,963) in the United States and found that diverse experiences among students can lead to increases in cultural awareness and creativity.

Many participants in the current study also noted the impact of the significant events that occurred in 2020 on the evolution of their experiences of diversity and inclusion. It is plausible that these experiences were influenced by the COVID-19 pandemic and the Black Lives Matter

(BLM) movement (i.e., a movement for anti-Black racism to address injustices perpetrated against Black citizens primarily by the United States law enforcement; Lebron, 2023), both of which garnered the substantial attention of the masses in 2020. The BLM movement and the well-reported disproportionate impacts of the COVID-19 pandemic both highlighted the systemic challenges faced by equity-deserving communities (Arday & Jones, 2022; Draaisma, 2022) and led to increased conversations pertaining to institutional equity, diversity, and inclusion practices, globally (Bray Jr., 2023; Ebbinghaus & Huang, 2023; Johnson, 2021). While efforts have been made to increase diversity in universities (Ebbinghaus & Huang, 2023), a gap remains to include fully equity-deserving students; this shortcoming was emphasized as a barrier to inclusion through the interviews in the current study. Bell (2020) refers to this gap as "surface-level diversity," meaning that while increased diversity has become common in universities, in reality, there is a long way to go to ensure meaningful inclusion and equity. Similarly, Puritty et al. (2017) underscored the ongoing disconnect between diversity initiatives in academic institutions and the *actual* experiences of students who face discrimination, microaggressions, and structural barriers.

In addition to the evolution of experiences of diversity and inclusion, data from the interviews in the current study revealed forced resilience (i.e., having to be resilient to overcome adversity), particularly among participants considered to be equity-deserving students. Several researchers have underscored that western society has become increasingly individualistic, with societal expectations to be resilient, compared to eastern societies that often prioritize community and collectivism (Blessin et al., 2022; Humphrey & Bliuc, 2021; Ungar, 2008). Per the principle of cultural moderation explained through the social-ecological interpretation of resilience (Ungar et al., 2013), many equity-deserving students might feel the need to be resilient

due to societal expectations not to ask for help and the lack of available support. Singh (2023) explained that instead of being provided with resources to support their well-being, many equity-deserving individuals are expected to develop 'thick skin.' Furthermore, focusing on enhancing resilience alone can make individuals overly tolerant of adversity and can lead to victim-blaming, which represents the dark side of resilience (Chamorro-Premuzic & Lusk, 2017). Instead, it is important to find methods to reduce challenges and adversity for equity-deserving students. Given the positive relationship between inclusion and resilience described previously, an environment where students not only see diversity, but also feel included and safe is crucial to their overall well-being. It is valuable for university personnel to know that students in the current study felt more included at university through student-led clubs, being asked by faculty for personal pronouns, and identity-based events organized by the university. Combined with these ideas for promoting inclusion, Belando-Montoro et al. (2022)'s systematic review of university retention and participation of equity-deserving students in university settings revealed that financial support, language training, mentoring, and university support programs were also facilitators for inclusion. Together, these inclusion facilitators are crucial to incorporate into university settings in order to help support the inclusion of equity-deserving students.

Strengths, Limitations, and Future Directions

To the best of our knowledge, the current study was the first to assess the relationship between experiences of diversity, feelings of inclusion, and levels of resilience in the undergraduate student population. An important strength of this study was methodological triangulation as both quantitative and qualitative methods were used to develop a comprehensive understanding of the study findings (Denzin, 1978; Patton, 2014). Another strength of this study was achieving the needed sample size for the survey and data saturation from the interviews,

thereby enabling the generation of meaningful results. Although the various recruitment efforts to maximize participant heterogeneity were successful and represent a strength of the current study, especially regarding the findings' external validity, the majority of the sample was comprised of participants who identified as women. Since this aspect of the sample limits the generalizability of the quantitative study findings, future studies are encouraged to use stratified sampling to achieve greater gender diversity (Lee, 2010). An additional limitation pertains to the Interactional Diversity Scale, which was adapted to reflect diverse experiences more fully for the current study; however, the addition of an item and changes to wording may have impacted the validity of this scale (Heggestad et al., 2019). The logistical realities of the current study did not support assessing the validity of the adapted scale; however, doing so may be an important consideration for future studies. Another limitation of this study is that the quality and genuineness of participants' experiences of diversity could not be measured quantitatively. To account for this limitation, the qualitative findings complemented the quantitative findings and allowed for a more comprehensive understanding of the quality of experiences of diversity in that the genuineness of these experiences is an important aspect of the social-ecological interpretation of resilience (Ungar et al., 2013).

In addition to the above-noted limitations, all of the tools used in this study were self-report measures, which may have led to social desirability bias. Although an anonymous and confidential online survey was used to limit the risk of social desirability bias (Larson, 2019), it is recommended that honesty demands be employed in the future to further reduce risk (Bates, 1992). Another limitation of this study pertains to the Connor-Davidson Resilience Scale 25, which includes an item pertaining to the role of fate or God in helping to find solutions to problems. Although there is a relationship between religiosity and resilience, as supported by

Gan et al. (2023) who examined this relationship in university students (N = 185) in Singapore, students in the current study who do not believe in fate or God may have scored lower on this scale, compared to students who do believe in fate or God. Per GBA+ (Government of Canada, 2021), it is important to recognize unconscious biases and highlight that it is unfair to assume all students are theist (i.e., believe in God). Future studies should consider collecting information about religious beliefs to understand its influences on study findings. Furthermore, while several participants self-identified as being in an equity-deserving group, the full complement of demographic characteristics of interview participants and the extent to which they reflected the intersectionality of diversity cannot be identified, a limitation in and of itself. As such, sufficient details cannot be provided for other researchers to assess the potential transferability of the qualitative findings in the current study to their participants and settings. While it was intentional to unlink any personal identifiers to demographic data to maintain the privacy of participants (and recommended by the Office of Research Ethics), future studies would benefit from collecting demographic information from interview participants, even if they are recruited from the larger sample of participants who completed a survey.

Conclusions

Overall, Ontario undergraduate university students in this study had low levels of resilience. It was also found that resilience was positively correlated with their experiences of diversity and feelings of inclusion. Intersectional demographic characteristics that identify equity-deserving group membership were most associated with levels of resilience, experiences of diversity, and feelings of inclusion. Students expressed having mostly positive experiences of diversity at university, although there is room for improvement pertaining to their experiences of inclusion. While facilitators of inclusion exist and offer support, several barriers to inclusion

remain prevalent, especially for equity-deserving students. Students in the current study also felt that their experiences of diversity and inclusion positively influenced their levels of resilience. The findings from this study should be considered by university personnel to inform strategic, tailored, and meaningful institutional practices that can advance the integrated experiences of diversity and inclusion among undergraduate university students and improve their levels of resilience. A logical next step in this program of research might be to focus particular attention on the experiences and well-being of harder-to-reach equity-deserving groups.

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Appendices

Appendix A – Letter of Information

TITLE: The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Level of Resilience and their Experiences of Diversity and Inclusion

Principal Investigator: Dr. Jennifer Irwin
Co-Investigator: Mani Ahluwalia, MSc Student

INTRODUCTION AND PURPOSE

You are being invited to participate in a mixed methods study that will assess, quantitatively: (a) the relationship between Ontario undergraduate university students' experiences of diversity and their levels of resilience; (b) the relationship between this population's experiences of inclusion and their levels of resilience; and (c) which demographic factors are most associated with the highest and lowest levels of resilience, and experiences of diversity and inclusion. The secondary purpose is to explore, qualitatively, Ontario undergraduate university students' experiences of diversity and inclusion and how they perceive these experiences influence their resilience. For this study, you will be asked to complete a survey using Qualtrics, an online survey tool. This survey will consist of demographic questions, and three previously validated scales: (1) Connor-Davidson Resilience Scale 25; (2) Interactional Diversity Scale; and (3) Inclusion of Other in the Self Scale. The survey will take approximately 15 minutes to complete. All of the information and data will be de-identified and combined with data from other participants, ensuring confidentiality. After completing this, you will be asked to participate in a focus group that will be moderated by the lead researcher using Zoom, a video conferencing software. There will be a maximum of ten participants in the focus group, and it will take approximately 60 minutes to complete. The focus group will be audio and video recorded for data analysis purposes and will not be shared with anyone beyond the research team. Your responses will be kept confidential and de-identified (i.e., names will not be included in study findings). We may choose quotes from this focus group when disseminating our findings; however, quotes will also be de-identified.

Should you wish to participate in the study, please complete the Qualtrics questionnaire (https://uwo.eu.qualtrics.com/jfe/form/SV_37pzcYZWB7Q6niu) to confirm your eligibility and to provide consent for participation in this study, or contact Mani Ahluwalia directly. Once your eligibility and consent are confirmed, you will be directed to complete the survey questions through Qualtrics. If you indicate interest in participating in a focus group, information about the focus groups will be sent to you through email. If you have any further questions or you would like to know more about the study, please feel free to contact one of the researchers (Co-investigator, Mani Ahluwalia and Dr. Jennifer Irwin).

PARTICIPATION INCLUSION/EXCLUSION CRITERIA

Inclusion Criteria:

- Registered as a full-time undergraduate student at an Ontario university

- Able to read, write, and speak in English
- Have reliable internet access.

Exclusion Criteria:

- Registered as a part-time student
- Registered at a university outside of Ontario
- Registered at a college
- Registered in a professional or graduate program
- Unable to read, write, and speak in English
- Do not have reliable internet access

MEASUREMENTS

The study will examine the following:

Resilience

Connor-Davidson Resilience Scale 25: You will be asked to complete a 25-item survey assessing your level of resilience.

Diversity

The Interactional Diversity Scale: You will be asked to complete a 10-item survey assessing your extent of participation in diversity-oriented experiences and your discussions with diverse peers.

Inclusion

Inclusion of Other in the Self Scale: You will be asked to complete a 3-item survey assessing how close you feel to your peers at your university, in your field of study, and/or at a university-affiliated student group.

Demographic Questionnaire

You will be asked to complete a demographic questionnaire which will include the following information: (a) age; (b) gender identity; (c) sexual orientation; (d) racial identity; (e) ethnicity; (f) ability and disability; (g) socioeconomic status; (h) employment status; (i) university of registration; (j) year of study; and (k) field of study, to assess which demographic factors are most associated with the highest and lowest levels of resilience, and experiences of diversity and inclusion.

Focus Group

You will be asked to provide your contact information at the end of the survey if you are interested in being invited to participate in an audio and video-recorded focus group. In a group of a maximum of ten participants, you will be asked ten guiding questions by the lead researcher. Your audio and video will be recorded for transcription purposes. The audio will be

automatically transcribed via Zoom, which can further be edited as needed, using the video recording, to ensure accuracy. The files will be securely saved on Western University's Microsoft Office 365, using your unique participant ID code to ensure data is de-identified.

STUDY BENEFITS

By taking part in this study, you will be providing information about the experiences of diversity and inclusion and how these experience influence levels of resilience in Ontario undergraduate university students. The results from this study may inform future university services and programs that could benefit students. There is also the potential that participating in this study might not provide any benefits.

STUDY RISKS

There are no known risks or harms to participating in this study; however, the study deals with topics regarding diversity, inclusion, and resilience, and therefore, may provoke feelings of distress or anxiety in some participants. Please access the support resources below should you wish to discuss these feelings or emotions:

> ***Good2Tal***k - Call 1-866-925-5454 or text "GOOD2TALKON" to 686868
> Good2Talk is a free, confidential helpline for post-secondary students in Ontario. By calling Good2Talk, students can receive information and referrals about services and supports for mental health, addictions and well-being on and off-campus or speak anonymously with a professional counsellor.
>
> ***Mindbeacon - Visit: https://info.mindbeacon.com/btn542***
> Mindbeacon provides free Cognitive Behavioural Therapy available to residents of Ontario.
>
> ***7 Cups of Tea*** - Visit: https://www.7cups.com/
> 7 Cups of Tea is an app with a free anonymous and confidential chat with a trained listener for sharing things on your mind, seeking resources, or just talking!
>
> ***Connex Ontario*** - Call 1 (866) 531-2600 or text CONNEX to 247247; Visit the online chat at https://www.connexontario.ca/Chat
> Connex Ontario is a free service providing 24/7 access to information for mental health & addictions services.

YOUR PARTICIPATION

Participation in this study is voluntary. Taking part in this study is completely up to your discretion, which means you may withdraw from the study at any time. If you decide to withdraw from the study, you have the right to request the withdrawal of information collected about you. If you wish to withdraw and/or have your information removed, please contact the Principal Investigator or Co-Investigator using the information provided in the 'Contact Information' section of this document, and provide them with your self-generated unique

Participant ID. Your data can be removed up until the point of data analysis. Withdrawing from the study will not affect your academic status. If you choose to participate in the study, the questions pertaining to the validated scales (measuring resilience, diversity, and inclusion) are not able to be skipped because all items in the scales must be answered in order to obtain participants' scores, and to maintain the validity of the scales. All of the demographic questions in the survey have an option to select 'I prefer not to respond' that is applicable if you do not wish to respond to the question. Audio recording is mandatory for participation in the focus group. The focus group will also be video recorded; however, if you do not wish to have your video recorded, you may turn off your video. We may also choose quotes from this focus group when disseminating our findings; however, quotes will be de-identified.

CONFIDENTIALITY

In addition to the study data from validated scales, we will also be collecting demographic information including: (a) age; (b) gender identity; (c) sexual orientation; (d) racial identity; (e) ethnicity; (f) ability and disability; (g) socioeconomic status; (h) employment status; (i) university of registration; (j) year of study; and (k) field of study, to assess which demographic factors are most associated with the highest and lowest levels of resilience, and experiences of diversity and inclusion. The information you provide will be de-identified (i.e., you will not be required to provide your Student ID). All of the information and data will be combined with data from other participants, ensuring confidentiality. Representatives of Western University's Non-Medical Research Ethics Board may require access to your study-related records to monitor the conduct of the research.

Your participation in this study is completely confidential; however, because personal identifiers will be collected for this study, there is a risk of breach of privacy. Data collected from this study will only be accessible to the investigators and will be stored securely on Western University's Microsoft Office 365. The third-party platform, Qualtrics, will be used to complete the online survey portion of this study. Qualtrics stores all data in Ireland. Please find the Qualtrics privacy statement at the following link: https://www.qualtrics.com/privacy-statement/. As with any internet-based platform, there are inherent risks with using this platform as nothing completed over the internet is ever 100% safe. Please be advised that although the researchers of this study will take every precaution to maintain confidentiality of the data, the nature of focus groups prevents the researchers from guaranteeing confidentiality. The researchers would like to remind you to respect the privacy of your fellow participants and not repeat what is said in the focus group to others. Western University's Zoom will be used to host focus groups. The transcription feature will also be used on Western University's Zoom, in which the transcription data will be stored on the Zoom cloud server, located in Toronto, Ontario, for 7 days. Zoom's Privacy Statement can be found at: https://explore.zoom.us/en/privacy/ A master list will be maintained linking your demographic data to a unique ID, which will also be destroyed 7 years post-study, as per regulatory requirements. The results of the study will be reported without identifying you personally, thus maintaining your confidentiality. Given the combination of demographic information being collected, it is plausible that this information may be indirectly identifiable from the raw data.

DISSEMINATION OF RESULTS

By participating in this research, you agree that your results may be used for scientific purposes, including in a Master's thesis document, and publication in scientific and health-specific journals. If you wish to have your results reported back to you prior to the publication of the results, please contact the Principal Investigator or Co-Investigator using the information provided in the 'Contact Information' section of this document, and provide them with your self-generated unique Participant ID.

ALTERNATIVES TO STUDY PARTICIPATION

You may choose not to participate in this study. Should you agree to participate, answering the demographic questions on the survey is up to your discretion, as there is an option to select 'I prefer not to respond.'

If you are not comfortable engaging in a focus group or having your audio and/or video recorded, you have the option to participate in a one-on-one semi-structured interview via Zoom with the lead researcher that will take approximately 30 minutes to complete.

REIMBURSEMENT/COMPENSATION

There is no reimbursement or compensation for participating in this study.

CONTACT INFORMATION

If you have any questions regarding this study, please contact:

Principal Investigator: Dr. Jennifer Irwin
Co-Investigator: Mani Ahluwalia, MSc Student

If you have any questions about your rights as a research participant or the conduct of this study, you may contact the Office of Human Research Ethics at: 1-844-720-9816, or via email: ethics@uwo.ca

ELIGIBILITY AND CONSENT

Prior to participating in this study, you will be asked to give consent and confirm your eligibility. If you do not provide consent, you will not be able to proceed to the survey. Further, submitting the survey and/or attending a focus group is an indication of your consent to participate in the study.

I have read and agree to the Letter of Information outlined above and consent to participate in the study.
- Yes, I consent to begin the study
- No, I do not consent and I do not wish to participate

Are you a full-time undergraduate student at an Ontario university?

- Yes
- No

Are you able to read, write, and speak in English?
- Yes
- No

Do you have reliable internet access?
- Yes
- No

We encourage you to retain a copy of this Letter of Information for your records.

Appendix B – Ethics Approval Notice

Western Research

Date: 14 August 2023

To: Dr. Jennifer Irwin

Project ID: 123286

Review Reference: 2023-123286-82305

Study Title: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience, and their Experiences of Diversity and Inclusion

Study Sponsor: Western University

Application Type: HSREB Initial Application

Review Type: Delegated

Meeting Date / Full Board Reporting Date: 22/Aug/2023

Date Approval Issued: 14/Aug/2023 11:50

REB Approval Expiry Date: 14/Aug/2024

Dear Dr. Jennifer Irwin

The Western University Health Science Research Ethics Board (HSREB) has reviewed and approved the above mentioned study as described in the WREM application form, as of the HSREB Initial Approval Date noted above. This research study is to be conducted by the investigator noted above. **All other required institutional approvals and mandated training must also be obtained prior to the conduct of the study**.

Documents Approved:

Document Name	Document Type	Document Date	Document Version
Qualtrics Survey for Contact Information	Online Survey	28/Jul/2023	1
Qualtrics Survey for Focus Groups	Online Survey	28/Jul/2023	1
Qualtrics Survey with Scales	Online Survey	28/Jul/2023	1
TOGETHER Focus Group Guide	Focus Group(s) Guide	28/Jul/2023	1
Study Protocol 28:07:2023	Protocol	28/Jul/2023	1
Together Square Post	Recruitment Materials	28/Jul/2023	1
Together Long Story	Recruitment Materials	28/Jul/2023	1
Personal Social Media Recruitment	Recruitment Materials	28/Jul/2023	1
Social Media Recruitment Message	Recruitment Materials	28/Jul/2023	1
TikTok	Recruitment Materials	28/Jul/2023	1
Email to Focus Group Participants	Email Script	28/Jul/2023	1
Email to Participants Following their Participation in the Study	Email Script	28/Jul/2023	1
Invitation Email to Instructors	Email Script	28/Jul/2023	1
Mass Email Recruitment	Email Script	28/Jul/2023	1
Mass Email Recruitment for Focus Groups	Email Script	28/Jul/2023	1
Letter of Information for Surveys	Written Consent/Assent	28/Jul/2023	1
Letter of Information for Focus Groups	Written Consent/Assent	28/Jul/2023	1

REB members involved in the research project do not participate in the review, discussion or decision.

The Western University HSREB operates in compliance with, and is constituted in accordance with, the requirements of the TriCouncil Policy Statement: Ethical

Conduct for Research Involving Humans (TCPS 2); the International Conference on Harmonisation Good Clinical Practice Consolidated Guideline (ICH GCP); Part C, Division 5 of the Food and Drug Regulations; Part 4 of the Natural Health Products Regulations; Part 3 of the Medical Devices Regulations and the provisions of the Ontario Personal Health Information Protection Act (PHIPA 2004) and its applicable regulations. The HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000940.

Please do not hesitate to contact us if you have any questions.

Electronically signed by:

Ms. Erika Basile, Director, Research Ethics and Compliance on behalf of Dr. Isha DeCoito NMREB Chair, 14/Aug/2023 11:50

Reason: I am approving this document

Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations, See Electronic System Compliance Review)

Appendix C – Sample Recruitment Graphic

Appendix D – Mass Email Recruitment Script

Subject: Mass Email Recruitment

The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Level of Resilience and their Experiences of Diversity and Inclusion

Dear Student,

You are being invited to participate in a mixed methods study that will assess, quantitatively: (a) the relationship between Ontario undergraduate university students' experiences of diversity and their levels of resilience; (b) the relationship between this population's experiences of inclusion and their levels of resilience; and (c) which demographic factors are most associated with the highest and lowest levels of resilience, and experiences of diversity and inclusion. The secondary purpose is to explore, qualitatively, Ontario undergraduate university students' experiences of diversity and inclusion and how they perceive these experiences influence their resilience. For this study, you will be asked to complete a survey using Qualtrics, an online survey tool, that will take approximately 15 minutes to complete. This survey will consist of demographic questions, and three previously validated scales: (1) Interactional Diversity Scale; (2) Inclusion of Other in the Self Scale; and (3) Connor-Davidson Resilience Scale 25. All of the information and data from the survey will be combined with data from other participants, ensuring confidentiality. Following the completion of this survey, you will be provided with an option to be invited to participate in a focus group that will be moderated by the lead researcher using Zoom, a video conferencing software. There will be a maximum of ten participants in the focus group, and it will take approximately 60 minutes to complete. The focus group will be recorded for data analysis purposes and will not be shared with anyone beyond the research team.

Should you wish to participate in the study, please complete the Qualtrics questionnaire (https://uwo.eu.qualtrics.com/jfe/form/SV_37pzcYZWB7Q6niu) to confirm your eligibility and to provide consent for participation in this study, or contact Mani Ahluwalia directly. Once your eligibility and consent are confirmed, you will be directed to complete the survey questions through Qualtrics. Information about participation in focus groups will be sent to you through email, if you have indicated an interest in participating. If you have any further questions or you would like to know more about the study, please feel free to contact one of the researchers (Mani Ahluwalia; Dr. Jennifer Irwin). Thank you for your consideration.

Kind regards,

Manvir (Mani) Ahluwalia, BHSc (she/her)
MSc Student – Health Promotion
Health and Rehabilitation Sciences
Western University
London, Ontario, Canada

Jennifer D. Irwin, PhD (she/her)

Professor
Faculty of Health Sciences
School of Health Studies
Arthur and Sonia Labatt Health Sciences Building
Western University. Canada
London, Ontario, CANADA
N6A 5B9

Appendix E – Demographic Questionnaire

What is your age? (years) – If you prefer not to respond, please write "N/A"
_____

Which of the following best describes your current gender identity?
☐ Woman
☐ Man
☐ Genderqueer
☐ Two Spirit
☐ Non-binary
☐ Gender non-conforming
☐ Fluid
☐ A gender not listed above _____
☐ I prefer to self-describe: _____
☐ I prefer not to respond

Do you identify as transgender?
☐ Yes
☐ No
☐ I prefer not to respond

Which of the following best describes your current sexual orientation?
☐ Heterosexual
☐ Gay or Lesbian
☐ Bisexual
☐ Asexual
☐ Pansexual
☐ A sexual orientation not listed above _____
☐ I prefer to self-describe: _____
☐ I prefer not to respond

With which racial and ethnic group(s) do you identify? *Select all that apply*
☐ African/Black (e.g., African-American, African-Canadian, Caribbean)
☐ East Asian (e.g., Chinese, Taiwanese, Japanese, Korean)
☐ European/White
☐ Indo-Caribbean, Indo-African, Indo-Fijian, West-Indian
☐ Latin, South, or Central American
☐ Polynesian (e.g., Samoans, Tongan, Tahitian Mā'ohi, Hawaiian Mā'ohi, Marquesan)
☐ South Asian (e.g., Afghan, Bangladeshi, Indian, Nepali, Pakistani, Punjabi, Sri Lankan, Tamil)
☐ Southeast Asian (e.g., Vietnamese, Thai, Cambodian, Malaysian, Filipino/a, Indonesian)

☐ West Asian (e.g., Iraqi, Jordanian, Palestinian, Saudi, Syrian, Yemeni, Iranian, Israeli, Turkish, Egyptian)
☐ Indigenous within Canada (e.g., First Nation, Métis, Inuit)
☐ I prefer to self-describe: _____
☐ I prefer not to respond

How do you describe your ability/disability status? *We are interested in this identification regardless of whether you typically request accommodations for this disability. Select all that apply.*
☐ A sensory disability (e.g., vision or hearing)
☐ A learning disability (e.g., ADHD, dyslexia)
☐ A long-term medical illness (e.g., epilepsy, cystic fibrosis)
☐ A mobility disability
☐ A mental health condition (e.g., anxiety disorders, depression)
☐ A temporary disability due to illness or injury
☐ A disability not listed above: _____
☐ I have a disability but prefer not to disclose it
☐ I do not have a disability
☐ I prefer not to respond

What is the highest level of education that your **parent/guardian A** has completed?
☐ Did not complete high school
☐ Graduated from high school
☐ Attended college and/or university, but did not complete a degree
☐ Completed an associate's degree
☐ Completed a bachelor's degree
☐ Completed a master's degree
☐ Completed a doctoral or professional degree (e.g., PhD, medical degree, law degree)
☐ Unknown
☐ I prefer not to respond

What is the highest level of education that your **parent/guardian B** has completed?
☐ Did not complete high school
☐ Graduated from high school
☐ Attended college and/or university, but did not complete a degree
☐ Completed an associate's degree
☐ Completed a bachelor's degree
☐ Completed a master's degree
☐ Completed a doctoral or professional degree (e.g., PhD, medical degree, law degree)
☐ Unknown
☐ I prefer not to respond

Which of the following currently best describes your family:
☐ Low Income
☐ Lower-Middle Income
☐ Middle Income
☐ Upper-Middle Income
☐ High Income
☐ I prefer not to respond

Which of the following best describes your employment status:
☐ I am employed full time (i.e., more than 30 hours per week)
☐ I am employed part-time (i.e., less than 30 hours per week)
☐ I am unemployed
☐ I prefer not to respond

Please indicate your university of registration:
☐ Algoma University
☐ Brock University
☐ Carleton University
☐ Lakehead University
☐ Laurentian University
☐ McMaster University
☐ Nipissing University
☐ Ontario College of Art & Design University
☐ Ontario Tech University
☐ Queen's University
☐ Redeemer University
☐ Royal Military University
☐ Toronto Metropolitan University
☐ Trent University
☐ University of Guelph
☐ University of Ottawa
☐ University of Toronto (i.e., St. George, Mississauga, Scarborough)
☐ University of Waterloo
☐ University of Windsor
☐ Western University
☐ Wilfrid Laurier University
☐ York University
☐ A university not listed: _____
☐ I prefer not to respond

What is your current year of study?
☐ First year
☐ Second year
☐ Third year
☐ Fourth year
☐ Other: _____
☐ I prefer not to respond

Please indicate your field of study: *Select all that apply*
☐ Biological Sciences
☐ Business Studies
☐ Computer Science
☐ Creative Arts and/or Design
☐ Education Studies
☐ Engineering
☐ Health Sciences
☐ Historical, Philosophical, and/or Religious Studies
☐ Languages, Linguistics, Literatures, Cultures, and/or Societies
☐ Media and Communication Studies
☐ Physical Sciences
☐ Social Sciences
☐ A field of study not listed: _____
☐ I prefer not to respond

Appendix F – Connor-Davidson Resilience Scale 25

Connor-Davidson Resilience Scale 25 (CD-RISC-25) ©

*For each item, please mark an "x" in the box below that best indicates how much you agree with the following statements as they apply to you over the last **month**. If a particular situation has not occurred recently, answer according to how you think you would have felt.*

		not true at all (0)	rarely true (1)	sometimes true (2)	often true (3)	true nearly all the time (4)
1.	I am able to adapt when changes occur.	☐	☐	☐	☐	☐
2.	I have at least one close and secure relationship that helps me when I am stressed.	☐	☐	☐	☐	☐
3.	When there are no clear solutions to my problems, sometimes fate or God can help.	☐	☐	☐	☐	☐
4.	I can deal with whatever comes my way.	☐	☐	☐	☐	☐
5.	Past successes give me confidence in dealing with new challenges and difficulties.	☐	☐	☐	☐	☐
6.	I try to see the humorous side of things when I am faced with problems.	☐	☐	☐	☐	☐
7.	Having to cope with stress can make me stronger.	☐	☐	☐	☐	☐
8.	I tend to bounce back after illness, injury, or other hardships.	☐	☐	☐	☐	☐
9.	Good or bad, I believe that most things happen for a reason.	☐	☐	☐	☐	☐
10.	I give my best effort no matter what the outcome may be.	☐	☐	☐	☐	☐
11.	I believe I can achieve my goals, even if there are obstacles.	☐	☐	☐	☐	☐
12.	Even when things look hopeless, I don't give up.	☐	☐	☐	☐	☐
13.	During times of stress/crisis, I know where to turn for help.	☐	☐	☐	☐	☐
14.	Under pressure, I stay focused and think clearly.	☐	☐	☐	☐	☐
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	☐	☐	☐	☐	☐
16.	I am not easily discouraged by failure.	☐	☐	☐	☐	☐
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.	☐	☐	☐	☐	☐
18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	☐	☐	☐	☐	☐
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	☐	☐	☐	☐	☐
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	☐	☐	☐	☐	☐
21.	I have a strong sense of purpose in life.	☐	☐	☐	☐	☐
22.	I feel in control of my life.	☐	☐	☐	☐	☐
23.	I like challenges.	☐	☐	☐	☐	☐
24.	I work to attain my goals no matter what roadblocks I encounter along the way.	☐	☐	☐	☐	☐
25.	I take pride in my achievements.	☐	☐	☐	☐	☐
Add up your score for each column		0	+ ____	+ ____	+ ____	+ ____

Add each of the column totals to obtain CD-RISC score = _____

01-01-20

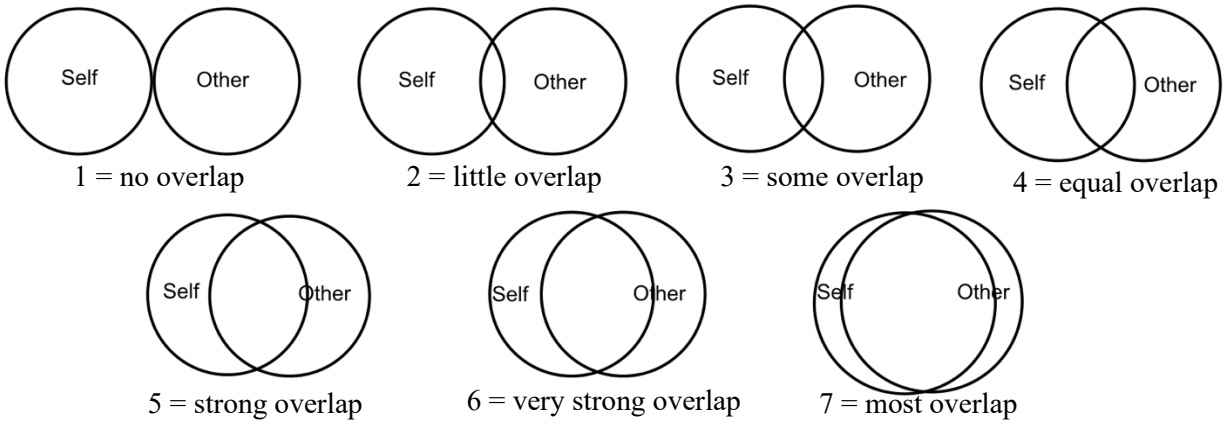
Appendix G – Interactional Diversity Scale

Characteristic		Never	Rarely	Sometimes	Often	Very Often
1.	How often have you had serious discussions with student affairs professionals whose political, social, or religious opinions were different from your own?	1	2	3	4	5
2.	What is the extent to which your institution encourages contact among students from different economic, social, racial, ethnic, gender-diverse backgrounds?	1	2	3	4	5
3.	How often have you had serious conversations with students from a different racial identity or ethnicity?	1	2	3	4	5
4.	How often have you had serious conversations with students from a different gender identity or sexual orientation?	1	2	3	4	5
5.	How often have you had serious conversations with students who are very different from you in religious beliefs, political opinions, or personal values?	1	2	3	4	5
6.	How often have you participated in a racial or cultural awareness workshop during this academic year and/or the previous academic year?	1	2	3	4	5
7.	How often have you attended a debate or lecture on a current political/social issue?	1	2	3	4	5
8.	How often have you had discussions regarding inter-	1	2	3	4	5

	group relations with diverse students while attending this university?					
9.	How often have you had meaningful and honest discussions about issues related to social justice with diverse students while attending this university?	1	2	3	4	5
10.	How often have you shared personal feelings and problems with diverse students while attending this university?	1	2	3	4	5

Appendix H – Inclusion of Other in the Self (IOS) Scale

For the following questions, please refer to the range of circles provided below. Please note that 'other' refers to your peers.



1. Which picture best describes your relationship with peers at your university?

2. Which picture best describes your relationship with peers in your field of study?

3. For this question, please indicate at least one university-affiliated student group you are involved in (e.g., intramurals, varsity sports team, hobby-based club, activism-based club, identity-based club, etc.). If none, please write 'N/A' and skip the next question.

   _____

   Which picture best describes your relationship with peers at this university-affiliated student group?

Appendix I – Interview Guide

[Introduce self and RA]

Thank you for your participation in the TOGETHER Study and for taking the time to meet today. Before we begin, I want to ask that everyone change their Zoom name to their preferred name, if it doesn't already state that, and I will invite you to include your pronouns, if you are comfortable. I will begin with a land acknowledgement.

I acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaune, Lūnaapéewak and Chonnonton Nations, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum.

I respect the longstanding relationships that Indigenous Nations have to this land, as they are the original caretakers and I acknowledge historical and ongoing injustices that Indigenous Peoples (First Nations, Métis and Inuit) endure in Canada. I want to acknowledge the privilege I have through my access to post-secondary education. As an academic and lifelong learner, I am given the opportunity to share my knowledge with others, while I know this is not always the case for my Indigenous peers. Often, their voices are excluded from these spaces due to practices grounded in intergenerational trauma, colonialism, and oppression. As an advocate for the health and wellbeing of all, I recognize that we must dismantle our current colonial practices that are entrenched in our schools, classrooms, and research. I strive to do this in the research I conduct, and in my everyday interactions. Yet, I recognize that there is still much for me to learn. I accept responsibility to contribute toward revealing and correcting miseducation as well as renewing respectful relationships with Indigenous communities.

The purpose of this focus group is to explore Ontario undergraduate university students' experiences of diversity and inclusion and how they perceive these experiences influence their resilience. For the purposes of this focus group, definitions of specific terms will be provided before I ask the questions that include those terms to ensure that everyone is on the same page. As we move along, the guiding questions will also be put into the chat for your reference.

Your participation in this focus group is voluntary and it will last approximately 60 minutes in length. I want you to know that there are no right or wrong answers, and you can refuse to answer any questions you wish. There is no expectation that everyone will have the same viewpoint and I want to emphasize that everyone's view is appreciated and respected. Before you speak, I kindly ask that you use the 'raise hand' function on Zoom, which can be found under 'reactions' at the bottom of your screen. The focus group will be recorded for data analysis purposes and will not be shared with anyone beyond the research team. Your responses will be kept confidential and de-identified, which means that your names will not be included in study findings. We may choose quotes from this focus group when disseminating our findings; however, quotes will also be de-identified.

It is helpful for us if you keep your cameras on for the duration of this focus group as it allows us to better facilitate engagement; however, we understand that this may not be possible for everyone. Before we begin does anyone have any questions?

By attending, it is implied that you are consenting to participate in this focus group. At this time, we are going to begin recording.

[Begin Recording]

Focus Group Questions

1. Diversity and inclusion have become the forefront of a lot of conversations recently. Before we get into the guiding questions for today's discussion, I would like to start by asking you to think back to when you first started hearing about these terms. When did you become more familiar with the concepts of diversity and inclusion?

We'll first start with the topic of diversity. Please note that I will put all definitions into the chat as we proceed so you do not need to memorize them, and you will be able to refer to them at any time. Diversity is the presence of differences. This can include, but is not limited to, differences that exist in terms of an individual's racial identity, ethnicity, ability and disability status, socioeconomic status, gender identity, and sexual orientation (Tan, 2019). In other words, diversity means that there is a representation of a wide range of people. I would like you to consider the presence of diversity in your university settings for these upcoming questions.

2. What have your experiences of diversity (i.e., the presence of differences) been at your university (your own experiences or experiences you've witnessed)?
    a. Positive experiences?
    b. Negative experiences?
    c. Please provide an example of this…

3. In what ways do you feel that your identity is represented at your university?
    a. Please provide an example of this…
    b. Please say more about…
    c. What would you like to add to this?

We'll now move on to the topic of inclusion. The definition of inclusion will be put in the chat, so you are able to refer to it at any time. Inclusion refers to how you feel included or feel a strong sense of belonging in a group or community. In the context of the university environment, students can feel included if their identities and ideas are accepted, they feel a part of a larger group, and feel that their opinions are welcomed (United Nations Department of Economic and Social Affairs, 2016).

4. What have your experiences of inclusion (i.e., feeling included) been at your university (either your own experiences or experiences you've witnessed)?
    a. Positive experiences?
    b. Negative experiences?
    c. Please provide an example of this…

We'll now shift to discuss the importance that these experiences may have for you.

5. What's important to you about your experiences of diversity (i.e., the presence of differences) at your university?
    a. How have your experiences of diversity influenced you as an undergraduate university student?
    b. Please provide an example of this…

6. What's important to you about your experiences of inclusion (i.e., feeling included) at your university?
    a. How have your experiences of inclusion influenced you as an undergraduate university student?
    b. Please provide an example of this…

The next topic is resilience, which is the ability that an individual has to bounce back from stress and/or adversity. Individuals can have low to moderate to high levels of resilience (Howell et al., 2018). This definition is also in the chat.

7. In what ways has resilience been a part of your personal experiences as an undergraduate university student?
    a. What's an example of a time you experienced stress and/or adversity as a university student?
    b. How do you feel your level of resilience influenced your experience at that time?
    c. How do you feel your level of resilience has influenced you in general as an undergraduate student?

We are going to shift gears a little bit and combine topics to discuss diversity, inclusion, and resilience together. I'm going to be asking first about diversity and resilience, and then about inclusion and resilience, so there might be some overlap in your responses but there also may not be any overlap so I will ask these questions separately.

8. In what ways have your experiences of diversity (i.e., the presence of differences) influenced your levels of resilience as a university student?
    a. What would you like to add to this?
    b. Please say more about…
    c. Please elaborate…

9. In what ways have your experiences of inclusion (i.e., feeling included) influenced your levels of resilience as a university student?
    a. What would you like to add to this?
    b. Please say more about…
    c. Please elaborate…

10. What else, on the topic of diversity, inclusion, and resilience among Ontario undergraduate university students, haven't I asked you that I should have?

Curriculum Vitae

1. NAME: Manvir Ahluwalia

2. EDUCATION

Degree	University	Department	Year
M.Sc.	Western University	Health and Rehabilitation Sciences – Health Promotion	2024
B.HSc. (Honours)	Western University	School of Health Studies, Faculty of Health Sciences	2022

3. SPECIALTY QUALIFICATIONS/CERTIFICATIONS

Certification	Organization	Date
Allyship in the Outdoors	The North Face	2024
Fostering Inclusivity in Workplaces and Communities	Western University	2023
Cultivating Wellbeing in Workplaces and Communities	Western University	2023
Motivational Interviewing (MI) Level 1	The Monarch System Inc.	2023
Introduction to Gender-based Analysis Plus	Women and Gender Equality Canada	2023
Anti-Racism Response Training	The Canadian Association for Graduate Studies	2023
Building Inclusivity through Anti-Racism	Western University	2022
Introduction to Evidence-Informed Decision Making	National Collaborating Centre for Methods and Tools	2022
Evaluating Knowledge Translation Strategies in Public Health	National Collaborating Centre for Methods and Tools	2022
Research & Development Management	Mitacs	2022
SafeTalk	LivingWorks Canada	2021

PH557x: Lessons From Ebola: Preventing the Next Pandemic	Harvard University	2020
TCPS 2: Core - Ethical Conduct for Research Involving Humans Course on Research Ethics	Government of Canada - Panel on Research Ethics	2019
Principles of Healthy Child Development	HIGH FIVE Canada	2019
Standard First Aid CPR C and AED	Lifesaving Society Ontario	2019

4. EMPLOYMENT HISTORY

Rank & Position	**Organization**	**Date**
Graduate Student Assistant – Dr. Trish Tucker (recruitment, data collection)	School of Occupational Therapy, Faculty of Health Sciences, Western University	Feb 2024 – Present
Graduate Teaching Assistant – HS2300B – Systemic Approach to Functional Human Gross Anatomy (*N* = 292)	School of Health Studies, Faculty of Health Sciences, Western University	Jan 2024 – Present
Policy Analyst	Division of Children and Youth, Public Health Agency of Canada	May 2023 – Present
Head Graduate Teaching Assistant – HS2250A – Health Promotion (*N* = 435)	School of Health Studies, Faculty of Health Sciences, Western University	Sept 2023 – Dec 2023
Graduate Teaching Assistant – HS2250A – Health Promotion [*N* = 435]	School of Health Studies, Faculty of Health Sciences, Western University	Sept 2022 – Dec 2022
Practicum Student	Human Environments Analysis Laboratory, Western University	Sept 2021 – Dec 2021
Mobile Laboratory Assistant	LifeLabs	May 2021 – Sept 2021
Research Assistant - Dr. Jennifer Irwin and Dr. Shauna Burke (administrative duties)	School of Health Studies, Faculty of Health Sciences, Western University	Nov 2020 – Jan 2021
Academic Tutor	Ace It Tutoring	Sept 2020 – April 2021

Camp Leader	City of Brampton	May 2019 – Sept 2019

5. HONOURS AND AWARDS

2022, 2023 - Western University's Graduate Funding Support Package
(recipient of $7000.00)

2021, 2022 - Dean's Honor List
(recognizes full-time students registered in the faculty of Health Sciences who completed a minimum of 4.0 courses during the previous fall/winter Session [September-April] and earned an average for the session of 80% or more with no failed courses)

2018 - The Western Scholarship of Excellence
(recipient of $2000.00)

6. PUBLICATIONS

a) Articles in Peer-Reviewed Journals (*N* = 1)

Ahluwalia, M., Shillington, K. J., & Irwin, J. D. (2023). The relationship between resilience and mental health of undergraduate students: A scoping review. *Journal of American College Health*, 1–14. https://doi.org/10.1080/07448481.2023.2252925

b) Abstracts, Presentations at Conferences (*N* = 4)

Ahluwalia, M., Burke, S. M., Levine, A. T., & Irwin, J. D. (2024, April 6). The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience, and their Experiences of Diversity and Inclusion. [Poster Presentation]. Advancing Gender Equity in the South Asian Diaspora Conference, Brampton, ON, Canada.

Ahluwalia, M., Burke, S. M., Levine, A. T., & Irwin, J. D. (Accepted April 2024). The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience, and their Experiences of Diversity and Inclusion. [Poster Presentation]. Child Health Symposium, London, ON, Canada.

Ahluwalia, M., Burke, S. M., Levine, A. T., & Irwin, J. D. (2024, March 15). The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience, and their Experiences of Diversity and Inclusion. [Poster Presentation]. The Western Research Forum, London, ON, Canada.

Ahluwalia, M., Burke, S. M., Levine, A. T., & Irwin, J. D. (2024, February 2). The TOGETHER Study: Exploring the Relationship Between Ontario Undergraduate University Students' Levels of Resilience, and their Experiences of Diversity and

Inclusion. [Poster Presentation]. Health and Rehabilitation Sciences Graduate Research Conference, London, ON, Canada.

c) Translational Work (*N* = 2)

Ahluwalia, M., Vasudevan, V., & Desai, A. (2024, February 13). GradCast - The Official Podcast and Radio Show of the Society of Graduate Students at Western. Podcast episode.

Ahluwalia, M. & Mann, E. (2023, November 29). Men's mental health in university settings. Podcast episode.

7. OTHER SCHOLARLY AND PROFESSIONAL ACTIVITIES

a) Extracurricular Experience

Mentor – Health and Rehabilitation Sciences, Western University	Sept 2023 - Present
Founder (community-based mental health initiative) – Asara	April 2023 - Present
Vice President of Events – Active Minds Western, Western University	May 2021 – April 2022
Vice President of Bharosa – Western Punjabi Association, Western University	Jan 2020 – April 2022
Outreach Coordinator – Purple Hands, Goodwill Industries	Sept 2019 – April 2022
Vice President of Logistics – Western's Cultural Dance Company, Western University	May 2020 – April 2021
Hospital Elderly Life Program Volunteer – Brampton Civic Hospital, William Osler Health System	July 2019 – Aug 2019

b) Workshops

Fostering Queer and Trans-Inclusive Spaces – The 519 Organization	March 2023
Racialized Community: Equity, Diversity, Inclusion Conversation – Western University	March 2023
Amplifying Black Voices in Academia – Western University	February 2023

c) Conference Participation

TA Day: Graduate Student Conference on Teaching – Western University	September 2022
Canadian Undergraduate Conference on Healthcare – Queen's University	November 2019