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About Us

The McMaster Undergraduate Journal of Social Psychology is a student-run organization that was founded in 2019 by Namya Tandon, a fourth-year undergraduate student in the Honours Social Psychology program at the time. Dr. Sarah Clancy serves as the faculty supervisor for the journal. She supervises the capstone research projects that Social Psychology students complete during their final year of the program. The MUJSP aims to recognize the academic excellence of final year Social Psychology students by providing them with the opportunity to have their own work published in a journal.

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Acknowledgments

The MUJSP team would like to convey our sincerest gratitude to all those involved in this year's issue. This includes all the faculty and staff members involved, the editorial board, and the authors of the featured articles.

Sarah McBride, our Graphic Designer, created our cover art using the platform "Canva" and we would like to accord it due credit.

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Navigating the 'New' Normal: Completing a Thesis Two Years into the Pandemic

A warm welcome and happy reading of the third issue of the McMaster Undergraduate Journal of Social Psychology! The 2022 publication marks a pivotal transition of the editorial team of the McMaster Undergraduate Journal of Social Psychology. After developing, cultivating, and guiding the journal and its editorial team since its' inception in 2019, Namya Tandon has stepped down as the Editor-in-Chief. Namya's contributions to the journal and research & knowledge translation activities for Social Psychology undergraduate students is inspiring and transformative. Namya has created an outlet for students to share their research and engage with other student researchers, learning about the human lived experiences of undergraduate students at McMaster, providing a platform for so many to have their voices and experiences heard, recognized, and respected. Namya has created and made such an important contribution and legacy. Namya – the entire past, present, and future editorial team, students, and readers thank you for creating the McMaster Undergraduate Journal of Social Psychology! It has been a pleasure to work alongside such an intelligent, engaged, and passionate individual since the journal's inception. Namya is currently completing her law degree at Western Ontario. The world is lucky to have such an intelligent, caring, just, and ethical person entering the law profession, ready to make a difference in the lives of others. You are inspiring! You will be greatly missed, but the entire team wishes you success in all your future endeavours.

The McMaster Undergraduate Journal of Social Psychology is pleased to welcome Raisa Jadavji, recently graduated 4th year Social Psychology Student, as the new Editor-in-Chief following Namya's departure! Raisa enters her new role with a wealth of experience and accomplishments. I've had the privilege of not only teaching Raisa in numerous courses during her undergraduate degree, but also working with Raisa when she was a teaching assistant for my Introduction to Social Psychology course. Most recently, Raisa has been a student partner, research assistant, and conference facilitator/developer on my MacPherson PALAT funded grant. Raisa is pursuing a Master of Arts in Child Study and Education at OSIE in September 2022. As a future elementary school teacher, Raisa has a passion for creating accessible, equitable, child-centered educational experiences to foster and educate children and youth. Raisa will make a positive impact and contribution to the lives of those who work, learn, and engage with her! Raisa is an intelligent, dedicated, and talented individual who will help guide the McMaster Undergraduate Journal of Social Psychology editorial team into the new era.

There have been several other transitions at the McMaster Undergraduate Journal of Social Psychology over the past year. Angelo Marmolejo is continuing to serve as a co-assistant editor (thanks Angelo!), joined now by Linette Sapper, who we warmly welcome to the editorial team. We have said goodbye to Jordan Graber who served as graphic designer since 2019 and send a warm welcome to Sarah McBride who now holds the

role. Christina Doan has remained in her role as the layout editor (thanks Christina!). The entire team sends best wishes and thanks to Namya and Jordan as they embark on new opportunities, continued thanks to returning editorial board members, and extends a warm welcome to all new editorial members of the McMaster Undergraduate Journal of Social Psychology!

Having taught the capstone course since 2014-2015, some may wonder if there are repeated research studies/topic areas or how the class has grown and changed over the years. The Social Psychology Program has experienced significant growth since my earlier years of teaching and supervising students. The most recent 2021-2022 class consisted of 19 thesis project groups with 101 enrolled students. As an educator, it is so exciting and inspiring to see a new generation of student scholars interested in pursuing a degree in Social Psychology, with a desire to learn more about and understand the diversity of the human lived experience. This year, there were four thesis papers that met the minimum standard of excellence of a grade of 85% or higher on the final thesis paper submitted for the capstone course, as per the publication criteria.

As you will discover when reading these four articles, our undergraduate students are emerging young scholars interested in exploring timely, socially relevant, and important topics impacting their fellow peers. The four studies included for publication in this issue include the following (ordered alphabetically by study title with authors alphabetically by last name): **Assessing Perceptions of Mental Health Literacy Among Undergraduate McMaster Students** by Lina D'Ambrosio, Julia Kay, Victoria Iro, Caterina Meli, Sabrina Rodrigues, and Laura Torres; **Self-Perceived Changes in Personality and Identity Due to the COVID-19 Pandemic** by Grace Gatt, Angelo Marmolejo, Sabryna Nguyen, Jessica Polsoni, and Serena Singh; **Social Media as a Stage: A Behind the Scenes Analysis of Performative Activism, "Cancel Culture," and Effective Allyship** by Amira Abdalla, Natasha D'Souza, Ria Gill, Raisa Jadavji*, and Claudia Meneguzzi; and, **You Can Count on Me: The Relationships Between Housing, Social Integration, and Adjustment Among First-Year McMaster Students** by Jessica C. Aranyush, Maiya M. Bertola, Katherine R. Cooper, Jewel Pheasant-Dumont, and Vanessa J. Richards.

As I noted in my 2021 Faculty Foreword, the pandemic changed the learning landscape of the capstone course. The 2021-2022 academic year for the capstone course ushered in what may be the 'new' normal as we experienced a mostly online learning environment like 2020-2021, but with some in-person elements. With in-person activities and classes on hold until February 2022, our class remained online for most of the academic year. For our poster session held in March 2022, groups had the option to present in-person or present virtually via Zoom. These options were offered to allow accessibility, flexibility, and learning options for the poster session best suited to the learning and personal needs of each group. Based on the number of groups that selected each option, I have decided to keep the two-option poster session format as part of the 2022-2023 capstone course design. As with past capstone thesis projects completed since March 2020, the students' individual and collective adaptation to change was admirable and impressive. While only a portion of the thesis papers completed during the 2021-2022 academic year are

included in this issue of the McMaster Undergraduate Journal of Social Psychology, the work completed by the entire class is commendable and should be recognized. If you would like to know more about the other projects completed during the 2021-2022 academic year, please see this link: https://socialpsychology.mcmaster.ca/news/annual-poster-session-showcase

The research studies in this third issue of the McMaster Undergraduate Journal of Social Psychology reflect different dimensions of university life and experiences, providing an outlet for those who participated in the respective studies to share their experiences on topics such as knowledge of mental health literacy, impacts on identity and personality as a result of the COVID-19 pandemic, how social media becomes a tool for performative activism, 'cancel culture' and allyship, as well as the connection between where first-year undergraduate students live and the level of integration and adjustment they experience as part of the transition to university. As with many studies conducted in the course and in the social sciences more generally, the sample sizes in these published studies are not generalizable. However, the findings in each study emphasize the importance of inclusivity of the McMaster undergraduate student population's voices, experiences, and perceptions to improve services, resources, supports, educational opportunities, and health, wellness, and well-being of our students, both in-person and through online formats such as social media, as well as in on and off campus environments.

Abdalla et al., (2022) investigated how social media is used as a mechanism for activism and advocacy, leading to 'performative activism' and "cancel culture", as termed by Saint-Louis (2021). Using an online anonymous survey to collect their data, Abdalla et al., (2022) were interested in understanding motivations for, and influences on, engaging in online activism. Interestingly, participants noted lower efficacy between online activism and significant change, along with being motivated to engage in this process because of 'cancel culture'. Education versus engagement in online activism, according to Abdalla et al., (2022), was seen to be a more suitable alternative. To be an effective ally, Abdalla et al., (2022) concluded that greater focus and reflection on personal motivations and intentions when engaging in social media activism is required to foster not only meaningful and effective allyship, but also to create, develop, and promote long-term sustainable change.

Aranyush et al., (2022) and Gatt el al., (2022) both explored the impacts of COVID-19 on different facets of the McMaster University undergraduate students' lived experiences. Aranyush et al., (2022) employed an online anonymous survey to explore the experiences of social integration and adjustment among first-year undergraduate students, assessing if any differences exist between on and off-campus students. While not all results were statistically significant, Aranyush et al., (2022) found that place of residence did impact social integration, with high reported levels among students living in shared student off-campus housing compared to those living in residence or at home with family. Importantly, the group learned students had supports in place, including emotional, instrumental, and interaction-based, particularly through their peer relationships. Gatt el

al., (2022) found over 95% of their anonymous survey participants experienced impacts to their university experience, also noting how the pandemic in turn impacted their sense of identity and personality, including habits, and changes to past-times and interests. The group did not find any significant difference and/or changes in neuroticism and extroversion in fourth to first-year students. The group also found that impacts to life transitions, such as a global pandemic, can greatly impact the life experiences, identity, and personality traits of undergraduate students.

D'Ambrosio et al., (2022) researched the perceptions of mental health literacy among McMaster University undergraduate students. Using an anonymous online survey to collect their data, the group explored the connection between one's perceived mental health literacy (how much one perceives to be literate and/or knowledgeable on mental health), attitudes towards health-seeking behaviour, and supports provided on campus through educators and support services such as the Student Wellness Center, investigating if any differences existed between faculty of study. D'Ambrosio et al., (2022) found that stigma surrounding mental health impacted health-seeking behaviour, as did one's level of mental health literacy.

All four studies noted how important supports, additional resources, and educational and knowledge translation activities on campus are to student success, health, identity, and wellness, and how these services can be improved to further provide supports to students to foster and sustain the academic, social, and overall health of the undergraduate student population.

A new edition to the 2022 edition of the McMaster Undergraduate Journal of Social Psychology is the publication of the abstracts of the presenters from the first annual Social Psychology Undergraduate Research Conference, held in January 2022. As the Principal Investigator, I received a PALAT Grant provided by the Paul R. MacPherson Institute for Leadership, Innovation & Excellence in Teaching at McMaster University (awarded for 2021-2022). The MacPherson PALAT research grant (2021-2022) supported the development of a student-run undergraduate pre-conference workshop and conference event for McMaster University undergraduate Social Psychology students, along with hiring of student research/conference assistants and the evaluation of the conference for future priority setting and planning. When I received the grant, I reached out to then-editor Namya Tandon to see if publication of the student presenters' abstracts was something the journal would be interested in. I fully acknowledged and disclosed my multiple roles as Faculty Advisor of the McMaster Undergraduate Journal of Social Psychology and grant recipient of the PALAT grant to Namya so she was able to make an informed decision with the editorial team. The team decided to go ahead with the publication of the conference abstracts. I hope you enjoy reading about the interesting papers presented at the first annual Social Psychology Undergraduate Research Conference! Please join me in congratulating all those involved in the inception, development, and presentation of their work at the conference! A special note of thanks to Claudia Meneguzzi who supported the editorial team of the McMaster Undergraduate

Journal of Social Psychology in collecting and reviewing the abstracts prior to publication.[1]

I hope you enjoy reading the important, interesting, and socially relevant social psychological research studies of the four respective groups featured in the third issue of the McMaster Undergraduate Journal of Social Psychology, along with the conference abstracts from the first annual Social Psychology Undergraduate Research Conference. The collection of work in this publication showcases the academic excellence and achievements of the students in the Social Psychology Program. The entire editorial board should be commended for their hard work and dedication on the publication of the third issue of the McMaster Undergraduate Journal of Social Psychology. I continue to be honoured to work, as Faculty Advisor, alongside intelligent, motivated, dedicated, and inspiring students: Raisa, Angelo, Christina, Linette, and Sarah, who serve as editorial board members, along with the four groups who were eligible for publication this year. Congratulations to all involved in the publication of the third issue of the McMaster Undergraduate Journal of Social Psychology - your hard work, dedication, and inspiring work is recognized, respected, and appreciated! Until next year's issue, stay safe, take care, and be well!

Sincerely and with best wishes,

Dr. Sarah Clancy, PhD
Faculty Advisor, McMaster Undergraduate Journal of Social Psychology
SOC PSY 4ZZ6 Capstone Instructor and Thesis Supervisor for all student group projects
Assistant (Teaching) Professor
Honours Social Psychology Program
Department of Health, Aging and Society
McMaster University

[1] Both Raisa Jadavji and Claudia Meneguzzi are employed as research assistants/conference organizers & facilitators, paid for by the PALAT Grant provided by the Paul R. MacPherson Institute for Leadership, Innovation & Excellence in Teaching at McMaster University

Letter from the Outgoing Editor

Dear MUJSP Readers,

Welcome to the 2022 issue of the McMaster Undergraduate Journal of Social Psychology. In this issue, you will read some of the most distinguished capstone research papers within the social psychology community at McMaster University, as well as abstracts from the Social Psychology Undergraduate Research Conference.

I would like to extend my sincere gratitude to Raisa Jadavji, the current Editor-in-Chief of the MUJSP. Raisa should be commended for her perseverance and enthusiasm as she took over this new role and led the current editorial team to publish the MUJSP's third issue, which is no small feat. I could not be happier to pass on the mantle to such a dedicated and talented student. I would also like to recognize Angelo Marmolejo and Linette Sapper, Co-Assistant Editors, Sarah McBride, Graphic Designer, and Christina Doan, Layout Editor, for their commitment to providing a forum for their fellow classmates to showcase their original work. The entire editorial team should be proud of their hard work. My thanks also to Olga Perkovic, the Open Education and Scholarship Librarian, and Gabriela Mircea, the Digital Repository Librarian. It is because of them that we can provide current McMaster undergraduate students with the opportunity to have their research published. Finally, I would like to extend my deepest appreciation to Dr. Sarah Clancy, Faculty Advisor, without whom the MUJSP would not exist. I have been incredibly fortunate to have worked with Dr. Clancy these past few years and cannot imagine how the MUJSP could have continued without her supervision. I continue to be impressed by the time and effort she dedicates into ensuring that every student of hers succeeds. On behalf of all those involved with the MUJSP, I would like to most sincerely thank her for her positivity, encouragement, and compassion.

When I started the MUJSP in 2019, I had not anticipated such an enthusiastic response. I could not have done it without the support of all those mentioned above, including the previous editorial teams. While I have thoroughly enjoyed working with such talented social psychology students these past few years, I am overjoyed to be leaving the MUJSP in such great hands.

I would like to extend a final thank you to our readers and to all that have contributed to the MUJSP in one way or another. It has been a pleasure working with all of you.

We hope you enjoy exploring the exceptional research projects and abstracts featured in this issue.

Best,
Namya Tandon

Outgoing Editor-in-Chief

Letter from the Editor

Dear MUJSP Readers,

Welcome to this year's issue of the McMaster Undergraduate Journal of Social Psychology! In our third year of publication, the journal continues to be a space to reflect on and share the outstanding achievements of students in their final year of the Honours Social Psychology Program. This year, we have four capstone research projects that met the standard of excellence for this journal. Within this issue, you will discover a diverse range of topics including mental health literacy, the impact of the COVID-19 pandemic on individual identity, social media activism, and the relationship between housing and social integration.

I am very thrilled to be sharing this issue with you as the new Editor-in-Chief for the MUJSP, after having the pleasure of being an Assistant Editor for the journal last year. Being part of this team has been a rewarding experience and this journal has played an important role in defining my undergraduate career and my interest in the research world. I hope that the journal continues to motivate other students to cultivate and share their own accomplishments.

The MUJSP has also welcomed a new addition this year – the publication of abstracts that were presented this year at the Inaugural Social Psychology Undergraduate Research Conference that took place in January 2022. The conference was an opportunity for students in the Honours Social Psychology Program to share their own work, while also developing their communication and research skills in an inclusive environment. I was fortunate to be one of the conference organizers and was able to observe first-hand the importance of a space for students to share their interests and commitment to research with others. As part of their participation in the conference, presenters submitted their abstracts for publication in this year's issue of the MUJSP. We invite you to read these abstracts and explore truly engaging and insightful research.

The publication of these important research endeavours would not be possible without our wonderful editorial team. First and foremost, I want to extend my sincere gratitude to Namya Tandon, our MUJSP Founder and outgoing Editor-in-Chief. Namya has created an opportunity for students to share their hard work with others and feel part of a wider community, an opportunity that not all students have access to. Namya, on behalf of our editorial team, thank you for your thoughtfulness and determination - you are an inspiration to all of us. We hope we can continue to uphold your vision for the journal.

Appreciation must also be conveyed to our co-assistant editors, Angelo Marmolejo and Linette Sapper, our layout editor, Christina Doan, and our graphic designer, Sarah McBride for their continued diligence and dedication to the MUJSP. I would also like to convey a special thank you to Claudia Meneguzzi, one of the conference organizers, who assisted with the organization and collection of abstracts and consent forms for the publication of the abstracts. Lastly, I would like to extend my utmost gratitude to our faculty advisor of the MUJSP, Dr. Sarah Clancy, who has supported the team every step of the

way. We are very grateful for her guidance, encouragement, and kindness, without which this issue of the journal would not have been possible.

We hope you enjoy the thought-provoking and exciting research prepared by our students. We appreciate your time and continued support. Happy reading!

Sincerely,
Raisa Jadavji
Editor-in-Chief

Assessing Perceptions of Mental Health Literacy Among Undergraduate McMaster Students

Lina D'Ambrosio[1], Victoria Iro[1], Julia Kay[1], Caterina Meli[1], Sabrina Rodrigues[1], Laura Torres[1]

Abstract

The presence of stigma and lack of knowledge surrounding mental health is prevalent among university students but has not been researched in depth among the academic community. The present study examines perceptions of mental health literacy among undergraduate students at McMaster University to understand the impact of mental health literacy on attitudes towards seeking help for mental health problems and whether these attitudes differ by faculty. An anonymous, online survey was administered to understand these topics through questions about students' perceptions of mental health literacy and levels of mental health care provided by professors and on-campus wellness services. 70 undergraduate students completed the survey, and we analyzed the quantitative data against the theoretical frameworks of symbolic interactionism and social constructionism to assess how personal interactions and social contexts impact attitudes towards mental health. The results suggested discrepancies in perceptions of mental health literacy and available care between faculties, however, similar perceptions of stigma were reported by all respondents. It was also found that attitudes towards mental health care services on campus were influenced by levels of mental health literacy. This research provides a foundation for future studies on faculty-specific attitudes towards mental health and provides insight into productive changes that can be made by McMaster University to improve help-seeking attitudes among undergraduate students.

Introduction

Mental disorders and associated symptoms remain prevalent among the broader population of university students. Mental health literacy is defined as the knowledge and beliefs regarding mental disorders, allowing for the ability to recognize, manage, and prevent (Miles et al., 2020). Encompassed in this definition are skills in identifying symptoms of mental disorders, understanding causes or risk factors, general beliefs about mental health, and access to support services, such as the Student Wellness Centre at McMaster University (Jorm, 2015). There have been programs implemented through the Student Wellness Centre to reduce stigma and improve mental health literacy in the community, including strategies and help booklets (McMaster University, n.d.). As a result of this, a large focus of study was on the efficacy of these strategies in impacting perceptions of mental health literacy. This formed the basis of our research and developed an overarching goal of understanding perceptions of mental health

[1] Undergraduate Student, Honours Social Psychology Program, Faculty of Social Sciences, McMaster University, Hamilton, Ontario, Canada

literacy in an attempt to propose strategies for future research to be conducted within the McMaster student population.

Increased levels of mental health literacy within universities aid in early recognition and interventions for mental health issues before they are exacerbated. This is supported by the growing concern about mental health in students and evidence that shows that more than 30% of first year students reported experiences of at least one of the “mood, anxiety, or substance disorders” which were addressed in a study by the World Health Organization (Miles et al., 2020). With increased prevalence of mental health concerns in university students and the onset of mood or substance disorders in young adulthood, it is crucial to increase all factors of mental health literacy within schools.

While our topic of research is mental health literacy among McMaster students, the goal of improving it must take into consideration how certain components of social and educational contexts inform an individual’s perception of mental health literacy. Furthermore, this research study provided a unique opportunity to assess whether mental health literacy differs according to faculty and use this information to enact personalized interventions for students. Additionally, understanding the impact of stigma on students’ perceptions of mental health literacy aided in evaluating whether there should be programs set in place to reduce stigma among our target population. In addition to the complex effects that individuals and groups have on each other’s perceptions of reality, stigma holds a large space in the study of social psychology, which is why this topic was so important to research through a social psychological lens.

This research paper begins with a statement of the major problems that we researched and how they impacted the purpose of this study and our subsequent research questions. Our included literature review highlights current research in the field of mental health in university students. This provided an understanding of the gaps in the current discourse within academia and how we aimed to use our research to add to the discourse. The next section is an outline of two theoretical frameworks that were used to evaluate our findings: mild social constructionism and symbolic interactionism. The paper will then outline the methodology utilized to conduct the research before disclosing the findings in the results section. There will be a discussion of major themes pertaining to our findings and how they relate to the current literature on the topic in relation to our research questions, followed by a conclusion that involves the limitations and significant insights of the completed research.

Statement of Problem and Purpose of Research

Within our overarching research topic of perceptions of mental health literacy among students at McMaster University, we conducted research to learn more about specific problems that will be outlined below. One of the dominant problems that we studied surrounds the perceptions of mental health literacy among students between faculties. For example, there is relevant literature to prove that mental health literacy is lower in faculties outside of social sciences (Miles et al., 2020). In addition, up to 25% of students in engineering with mental wellness problems engage in help-seeking behaviours, compared with up to 35% of business students with mental wellness issues (Lipson et al., 2016). This problem was especially important to research because it is worth noting whether faculties with higher rates of mental disorders had equally high perceptions of mental health literacy. If they did not, this research is paramount to begin evaluating and incorporating interventions within these specific fields to help students potentially

recognize and prevent severe mental health issues before they reach a peak. The purpose of researching this topic was to understand where mental health literacy is less prevalent, which can aid in future developments within faculties to address this problem effectively.

Additionally, we aimed to address through our research the prevalence of stigma surrounding mental disorders and their related symptoms among university students. The reasoning for this research was due to the negative perceptions of mental disorders among students' motivation to address and treat mental health issues, leading us to believe that more information should and could be found to ameliorate this matter (Gulliver et al., 2010). Without adequate literature on stigmatization of mental disorders among university students, there are no opportunities to create programs or interventions that will aid in decreasing the stigma. We researched McMaster students' perceptions of stigma towards mental disorders to learn more about whether there is a need for further research to be conducted, as well as potential strategies to address this issue in the future.

While there is a wealth of data collected on perceptions of support services for mental health problems in university students, the other components of mental health literacy - knowledge and beliefs surrounding recognition and prevention of mental disorders - are otherwise unaddressed. Within the literature review, many articles note that increased mental health literacy knowledge would be helpful, but none address action to make this possible (Reavley et al., 2011). This is the main problem that we hoped to research, as it is imperative that we add to the academic discussion surrounding all components of university students' mental well-being. Building on this, we researched McMaster students' perceptions of mental health literacy in hopes of learning more about whether the perceptions of mental health literacy among McMaster students are positive or negative in nature, and whether this contributed to stigma against mental disorders on campus. We hope that our findings will lead to effective and impactful changes within the McMaster community in terms of mental health literacy.

Research Questions

Our main research question was "what are the perceptions of mental health literacy among McMaster students?" As such, our survey questions aimed to assess the level of knowledge students have about mental health literacy. We selected this particular research question because we wanted to understand how perceptions of mental health literacy impact the university's ability to meet the needs of its students.

In addition to our overarching research question, we developed questions pertaining to more specific interests of our study. Namely, we looked to understand the following questions: How does a student's faculty contribute to their perceptions of mental health literacy? Furthermore, how does the prevalence of stigma throughout McMaster University impact perceptions of mental health literacy, and what can be done to ameliorate this issue, if necessary?

Literature Review

Nine academic articles were collected and analyzed to identify common themes and chasms in the academic discourse surrounding the chosen research topic. This existing literature was gathered in an effort to convey bilateral agreements proposed on the topic of mental health literacy and student perceptions of access to mental healthcare. Mental health literacy is defined as the knowledge and beliefs regarding mental disorders,

which allows for the ability to recognize, manage, and prevent them (Reavley et al., 2011). There is substantial research in the area of mental health, however, it is evident that there are gaps in the area of student perceptions of the topic. Individuals in post-secondary education are at the peak onset for mental health problems and suffer more psychological distress than those who are not (Reavley et al., 2011, p. 45). Thus, mental health literacy and support initiatives on campuses need to be further evaluated to enhance student support during post-secondary education.

Existing literature in this area was compared, as well as an evaluation of strengths and weaknesses within the literature. Recurring and overarching patterns, including perceptions of mental health literacy, available support services, and stigma were investigated within this research topic so that we could acknowledge any literary gaps that we may seek to fill in our own primary research. It has already been noted that mental health literacy, stigma, and help-seeking behaviours all correlate because knowledge about mental health determines language chosen towards it, and how one will think about their own mental health and choose to manage it (Reavley et al., 2011, p. 45). Thus, we hope to contribute to this literature in our research by addressing these gaps.

Perceptions of Mental Health Literacy

The amalgamation of relevant research on the topic of mental health literacy shows three common themes, which include the necessity of increased knowledge in students, gender and ethnic discrepancies in mental health literacy, and differences in mental health literacy among university faculties and programs. Firstly, it is noted among the academic discourse that it is imperative to increase knowledge of mental health literacy among students in order to promote positive attitudes towards mental disorders and ways to improve mental health (Kamimura et al., 2018; Bulanda et al., 2014).

This recommendation was supported by a study done by Furnham et al. (2011), which assessed 400 university students' knowledge and recognition of specific mental disorder labels. Findings showed that there was a severe lack of knowledge about mental disorders, with only 8 out of 97 psychiatric labels being confirmed by 75% of participants as something they had heard of (Furnham et al., 2011). Moreover, when the participants were prompted to describe certain disorders and associated symptoms/signs, there were only 9 disorders for which over half of the participants were confident in doing so (Furnham et al., 2011).

As Kamimura et al. (2018) note, this knowledge will affect the perceptions of mental disorders, including susceptibility, severity, barriers and benefits to self-efficacy, and healthy behaviours. Additionally, Reavley et al. (2011) have explained that universities have a unique opportunity to enhance mental health literacy and can do so by conducting research on campuses. These initiatives will also encourage related education. As such, researchers in the United Kingdom have identified campaigns and various programs with the goal of improving understanding of mental health issues and increasing confidence in responding to the distress of others (Laidlaw et al., 2016).

Another theme that arose was the discrepancy in mental health literacy between gender and ethnicity. While this will be analyzed in further detail within the section on stigmatizing attitudes towards mental health, the perceptions of mental health literacy according to gender and ethnic categories are important to note. To begin, Miles et al. (2020) discussed that there are significant differences in mental health literacy among demographic variables such as gender, ethnicity, and age. This data has been

supported in a previous study that noted significantly lower levels of health knowledge in adolescent males, young people of colour and students in Vietnam compared to their American counterparts (Bulanda et al., 2014; Kamimura et al., 2018).

To the contrary, Miles et al. (2020) still identified that although females have higher mental health literacy and perceive greater need for treatments than their male counterparts for anxiety disorders and psychosis, there were no observable differences in perceived need for treatment of depression and related symptoms. Understanding gender and ethnic differences in mental health literacy was important to note in our research because while demographic variables were collected, we grouped participants according to faculty and affiliation with McMaster University to control for differences in demographic categories.

The final theme that was discussed in the reviewed literature surrounded the range of mental health literacy levels according to a student's university faculty. Lipson et al. (2016) provided evidence that there is a "higher likelihood of mental health problems" (p. 31) in the Humanities or Arts faculties and a lower likelihood within faculties such as Nursing, Business, and Public Health. The information about nursing is a key insight for our research because we were unable to conduct our research within the nursing faculty for ethical reasons, so the information was factored into our conclusions about discrepancies between faculty. The evidence provided by Lipson et al. (2016) was somewhat supported in another study as it was found that students who major in education or have not taken clinical psychology courses scored in the mid-range on mental health literacy tests (Miles et al., 2020). As such, the underlying reasoning for these differences in prevalence of and attitudes towards mental disorders will be discussed in further detail in the section on stigmatizing attitudes.

Reavley et al. (2011) stated that many of the existing assumptions on mental health and associated knowledge in university populations are disproportionately drawn from studies within science-related programs. This provided our research with a unique opportunity to contribute to the gap in knowledge surrounding other faculties' perceptions of mental health literacy and shaped our aim to get an accurate and equal representation of all faculties within the McMaster student population. Additionally, Reavley et al. (2011) included staff within the target population of their study. We avoided the addition of staff perceptions because we wanted our research to be completely fixed on students, so as not to skew our data collection. We used our data to provide new insights that are specific to university students, not the broader university communities at large. Finally, the K-6 questionnaire method used by Reavley et al. (2011) was beneficial for the personalized questions and beliefs, but due to ethical constraints and considerations of invading students' privacy, we were not able to utilize this method.

Support Services and Help-Seeking Behaviours

Two major themes exist in the literature on support services and help-seeking behaviours among university students: help-seeking preferences between students in different faculties and attitudes towards seeking support for mental health problems. A study by Lipson et al. (2016) found that just under 40% of undergraduate students reported receiving treatment for mental health problems in the previous year. For our study, understanding how and why students will seek help for mental health problems was imperative in analyzing the subsequent results. Scholarly studies have supported preferences towards which types of support is sought out by university students.

Further, studies such as Bulanda et al. (2014) and Armstrong et al. (2000) allude to differences in gender and ethnicity concerning attitudes towards seeking help. We anticipated finding similar disparities in our research because of this, barring differences in gender and ethnicity.

There are apparent disparities between help-seeking behaviours depending on the student's faculty. Lipson et al. (2016) stated that business and engineering students had the lowest likelihood of seeking treatment for mental health problems, while students within the faculties of social work, social sciences, and art & design were among the most likely to utilize treatments. A study by Laidlaw et al. (2016) also contributed to this perspective, noting that medical students reported perceptions of public stigma concerning seeking help for mental health struggles. Due to ethical constraints, medical students were excluded from the target populations so having this knowledge of how medical students are affected according to help-seeking behaviours will aid us in making broader conclusions about help-seeking behaviours among different faculties at McMaster University.

Seeking support and treatment for mental health problems has been a large topic of discussion in the academic community. Some notable evidence shows that although there is a higher susceptibility in young adults for developing a mental disorder, there is an equally "strong reluctance to seek professional help" (Gulliver et al., 2010, p. 1). This statement is supported by additional studies that identify that treatment services on university and college campuses are scarcely sought out with only 10% of students feeling comfortable seeking help from counsellors on campus (Reavley et al., 2011). Barriers to seeking professional help for mental health problems are discussed by Gulliver et al. (2010), with negative attitudes towards help-seeking, public stigma, and the belief that treatment will not be beneficial being among the most prominent reasons.

Instead of seeking professional help, researchers agree that there is a tendency to seek support from non-institutional forms of support, including friends and family (Gulliver et al., 2010; Reavley et al., 2011). Research by Bulanda et al. (2014) shows that in more recent years, youth programs for mental health promotion have drawn on the idea that individuals can assist their peers in managing mental health issues. Within this discussion, there were mentions of gender and ethnic differences concerning attitudes towards seeking help for mental health problems. Firstly, a study done by Armstrong et al. (2000) concluded that many young people from Muslim and Pakistani backgrounds did not feel comfortable discussing mental health issues outside of a familial context. In addition, it has been noted that girls are more willing to discuss their feelings. Armstrong et al. (2000) noted that more girls were willing to participate in the study on mental health. Consistent with this finding two decades later, Miles et al. (2020) alluded to the premise that socialization according to gender roles is a core factor in the discrepancies in gendered attitudes towards help-seeking behaviours. We chose to omit gender and ethnic differences in our research due to the anonymous nature of the survey and our desired focus on faculty.

Leahy et al. (2010) concluded that just under 50% of individuals who attend post-secondary schools experience psychological distress, insinuating that the pressure of post-secondary education can lead to higher amounts of distress. Evidently, there is a prominent need to strengthen the availability and accessibility of support services on campus. This finding contributed to the goals of our current research because, in understanding how McMaster students perceive institutions of support such as the Student Wellness Centre compared to perceptions of receiving support from peers, we

can begin to understand how to implement positive strategies to improve attitudes towards help-seeking behaviours in this specific community.

Relevant research on help-seeking behaviours among post-secondary students often encompasses students in both law school and medical school and is less frequently studied among students in other faculties (Lipson et al., 2016). Moreover, research on help-seeking patterns within the faculty of business is scarce and one study found that "rates of mental health service utilization were lowest among business students" (Lipson et al., 2016, p. 37) relative to other faculties. Thus, we conclude that few interventions have been administered to students in a variety of academic faculties, representing an "untapped possibility" (Lipson et al., 2016, p. 37) for engaging students in mental health knowledge surrounding both preventing and treating mental health concerns. As a result, our research focused on understanding the help-seeking behaviours in various faculties across the McMaster population.

Perceived Stigma Towards Mental Health Problems in University Students

The final academic discussion that will be reviewed surrounds the prevalence of stigma towards mental health problems, which in turn affects attitudes towards seeking formal and informal support. There are notable differences in stigmatizing attitudes towards mental health problems between faculties and genders (Lipson et al., 2016; Reavley et al., 2011). Additionally, there is discourse surrounding the notion that the prevalence of stigma towards mental health problems has negative consequences on actions taken to seek help for those problems (Bulanda et al., 2014).

The academic literature around the topic of stigma and how it affects perceptions of mental health between faculties is expansive. Lipson et al. (2016) identified that students within the faculty of visual arts were negatively affected by intense competition and a culture of antagonistic ambition which impacted attitudes towards discussing and seeking help for mental health problems. This finding was echoed by Laidlaw et al. (2016) who concluded that medical students reported a higher prevalence of public stigma relating to seeking help for mental health problems. Correspondingly, the stigma was linked to competitiveness and the tendency among medical students to view mental health problems as weak (Laidlaw et al., 2016). This finding was important for our current research because of the ethical constraints that prevented us from conducting research with medical and nursing students.

Furthermore, there is additional stigma towards seeking help from professional services such as counsellors on campus (Gulliver et al., 2010). A study conducted by Reavley et al. (2011) stated that stigma towards mental health issues is associated more with males and younger students, a finding that was supported by research done in 2014, which asserted that males had less knowledge about mental health and more stigma than females (Bulanda et al., 2014). In the study by Bulanda et al. (2014), it was found that females were more likely to report willingness to seek help from mental health services, with barriers for males seeking help including a desire to 'fit in' coupled with social pressure that stigmatizes and labels help-seeking behaviours as weakness.

The research done by Gulliver et al. (2010) also addressed stigma within the post-secondary student population, but their geographical location initiates a gap in our research as their review was primarily analyzing studies of rural populations and we looked at individuals coming from both rural and urban areas. Although they addressed stigma as a barrier to help-seeking behaviours, McMaster is a diverse school community

and has many local, national and international students which varied our data based on socio-economic factors and geographical environment.

Conclusion

There is limited existing research which requires participants within an age range of the university demographic, especially within North America. Previous research that focuses on student mental health has been identified to have an age gap that is too broad (6 – 13; 12 – 25 years of age), or too narrow (12 – 14 years of age) (Bulanda et al., 2014; Gulliver et al., 2010; Armstrong et al., 2000). We also found that within the limited research that does exist on the university population, there are common themes of limited sample sizing and limited diversity of students' faculties or have been conducted outside of North America (Laidlaw et al., 2016; Leahy et al., 2010). We believed this was a vital demographic due to the increased mental health rates and associative health concerns, as well as an increased need for more adequate wellness resources on university campuses and faculty-related inadequacies (Reavley et al., 2011; Lipson et al., 2016; Armstrong et al., 2000).

Due to the agreement among academic studies, there must be more knowledge spread about mental health literacy and its related aspects. Our current research was conducted in the hopes of gaining more insight into specific attitudes and perceptions of mental health literacy at McMaster. This was done in an attempt to begin the process of proposing appropriate interventions. Since the study exclusively assessed the perceptions of McMaster students, it is imperative to address the underlying shared meanings within the McMaster community that contribute to the perceptions of mental health literacy and stigma at large. Thus, our secondary research aids in addressing and understanding the concerns of perceptions of mental health literacy, barriers to help seeking behaviour, and stigma associated with mental health struggles among university students.

Theory

The fields of sociology and social psychology are complementary in nature. Sociology can be defined as the origins, development, and the functioning of social groups (Ellwood, 1924). Conversely, the study of social psychology encapsulates how individual factors affect the origins, development, and functioning of social groups (Ellwood, 1924). In other words, sociology is focused on how collective understanding affects individual functioning, and social psychology is focused on how individual functioning impacts the collective understanding. For this reason, it was imperative to use both a sociological framework and a social psychological framework to analyse the results of this study. Both the mild social constructionism and symbolic interactionism frameworks address how social interactions influence perceptions of reality, but symbolic interactionism is focused more on how social interactions impact an individual's reality while mild social constructionism is focused on how social interactions impact perceptions of one's social reality (Blumer, 1969; Berger & Luckmann, 1966; Sismondo, 1993). Since our research topic assessed both individual perceptions and perceptions of the sample population at large, we utilized different perspectives to understand how and why these perceptions might differ.

Mild Social Constructionism

Social constructionism is a sociological perspective coined by Peter Berger and Thomas Luckmann in 1966, which proposes that an individual's social reality is created through everyday interactions (Berger & Luckmann, 1966). Further, through these interactions, reality is reconstructed not only at an individual level, but on an institutional level; social processes form our beliefs, but our beliefs in turn form our social processes (Berger & Luckmann, 1966). Social constructionists are focused on the construction of knowledge (Andrews, 2012). This includes how knowledge emerges and how it becomes significant in a social context (Andrews, 2012). Social constructionists see all reality as subjective; the way we interact with the social world influences our perceptions of reality, meaning that individuals within a shared society will have similar perceptions of their social reality (Berger & Luckmann, 1966). However, we utilized mild (or contextual) social constructionism, which differs from the strict social constructionist theory as it maintains that while our social reality is subjective, there still exists a physical reality that is objective and real (Sismondo, 1993).

The concept of language is fundamental to the social process of constructing reality and shared meanings (Berger & Luckmann, 1966). In a society where the predominant language is English, telling someone that you feel sad conveys an understanding of the feeling that is associated with the word. If a person were to say that they felt sad to someone who did not understand English, the underlying feelings that are associated with the word would not be implied. In this sense, reality is based around societal context. Without a shared language, there would be no way of relating concepts, developing knowledge, or even understanding one's thoughts on an individual level. Everyday interactions are shaped by broader structures of culture and historical context, meaning that perceptions of reality are dynamic and constantly subject to change (Burr, 2015).

Mild social constructionism was vital in the analysis of our results due to the theoretical understanding that our social contexts play an integral role in the formation of one's perception of social reality (Burr, 2015; Sismondo, 1993). For example, someone who has never heard of or attended McMaster University would be perplexed at the abundance of maroon clothing seen on students around campus because they are not aware of the context surrounding the university's colours. Thus, our perceptions of reality are subjective because they are based on the context of our culture, time period, and society (Berger & Luckmann, 1966). This proposition was used to discuss how the social context of being a McMaster student informed respondents' perceptions of mental health literacy. Even if they know course-based websites and university staff to be objective aspects of society, a student who does not go to McMaster would not have knowledge of Avenue to Learn, a perception of whether faculty members address mental health in their lectures, or even which staff members work in each faculty. In line with the mild social constructionist perspective, an institution like the Student Wellness Centre is objectively real to anyone, but only McMaster students understand the social and contextual relevance that it has within their perception of McMaster support services.

Symbolic Interactionism

While mild social constructionism is a sociological perspective on shared meanings, a complementary social psychological perspective is the theory of symbolic interactionism. Symbolic interactionism is a theoretical framework forged by Herbert Blumer and is focused on the function that social interactions play in creating shared

meanings and symbols, which in turn help us to form an individual identity (Blumer, 1986). Symbols or meanings that are created and shared in interactions might include spoken words or letters on a page. For example, when one reads the word “cat,” they picture the fluffy four-legged feline. The three letters that make up the word do not have meaning unless one interacts with the animal that is denoted by the symbol; thus, having a bad interaction with a cat may lead to a person seeing the word and associating it with fear. This example perpetuates the theoretical framework that meaning is subjective and relies wholly on the impact that interactions with symbols have on an individual (Blumer, 1986).

The previous example highlights the three fundamental premises, defined by Erving Goffman (1959) that make up the foundation of this theory. The first states that people will act towards an object or situation based on the meaning that they have created, coupled with the second proposition that one will create those meanings through interactions with others (Goffman & Bergström, 1959). The two premises work to inform the final idea that one will maintain or modify a symbol’s meaning according to repeated interactions with the symbol (Goffman & Bergström, 1959). Referring back to the example of the word “cat,” one might have a bad initial experience with a cat and form a negative meaning around the word. If a subsequent interaction with a cat produces a more enjoyable experience, one may recreate the meaning and re-evaluate the word “cat” to have a neutral or positive connotation in the future.

Symbolic interactionism aided in the analysis of our results on the notion that human beings are social in nature and derive their identity, personality, and understandings through constant social interactions (Blumer, 1986; Goffman & Bergström, 1959). A child cannot learn to form coherent words unless they hear a parent or significant figure modelling a shared language; a teenager might modify their sense of humour based on what their peers consider to be funny. Therefore, the ways that we approach certain situations in our lives are based solely on the interactions and interpretations that come from performing them in a social context (Goffman & Bergström, 1959). We utilized this notion to understand how shared meanings among the McMaster student population create perceptions and understandings of mental health literacy. One might expect that if a student has a negative interaction with the Student Wellness Centre, they may have a perception that it is not a worthwhile resource to receive support for mental health problems. On the other hand, if a student has a positive interaction with a peer when asking for support with their mental health, they may have the perception that McMaster students do not hold a stigma towards peers with mental health problems.

Methodology

When we conducted this study, we used quantitative research as the primary method for quantitative data collection. We aimed to obtain an answer to our main research question that asked about the overall perceptions of mental health literacy at McMaster, while also investigating whether these perceptions differ between faculty. Our goal was to develop a better understanding of perceptions of mental health literacy, stigma, and support within the McMaster student population. Our research integrated students from most faculties and varying levels of academic years, from years one to five. Participants were asked to complete an online, anonymous survey conducted through LimeSurvey; a software approved the McMaster Research Ethics Board (MREB). Before publishing the survey, our research was approved by the McMaster Research Ethics Board (MREB #: 0327).

Ethical Considerations

Ethical research is of the utmost importance when conducting any study, and our top priority before conducting research was eliminating any possible risks to participating in the study. The survey was open to all undergraduate students over the age of 18; however**,** nurses and medical students who are part of the McMaster undergraduate population were not able to partake in this survey. They were explicitly excluded for the circumstance of being in the medical and helping professions, which could result in them feeling obliged to take part in the survey, in addition to these faculty-specific inclusions requiring us to have multiple ethics boards to report to.

The present research posed no risks to participants that were greater than those experienced in everyday life. However, there were ethical considerations that were made throughout the process. There were psychological risks due to the topic of research, such as the possibility of making participants feel uncomfortable by evoking triggering feelings and experiences towards their own mental health experiences. This would not only violate our ethics protocols but might have led to reduced participation and a skewed data sample. By asking participants such personal questions, it could have led to a lack of responses to the more sensitive ones. Thus, we decided to shift our questions about personal experience to asking students about their perceptions of experiences to mitigate the risk of psychological discomfort in response to the survey. We also avoided psychological risks by allowing students to withdraw from the study or skip questions if they did not feel comfortable providing responses; the only mandatory question was to receive consent from participants. We provided contact information for wellness services on campus in the letter of information to ensure that respondents were aware of available support due to the sensitive nature of the subject matter. Finally, we placed a large emphasis on how the survey questions were worded to mitigate the risk of triggering or upsetting respondents.

A social risk was that participants' anonymity could be compromised since the online format of the survey meant that completing it in public spaces could pose a risk of confidentiality. To combat this, we ensured that the survey could be paused and resumed at the will of the participant in case they wanted to move to a more comfortable or secluded location to complete it.

The ethical risk that we faced was due to our own research group being undergraduate students at McMaster. This posed a risk because there was a likelihood that our peers, friends, or classmates may complete the research and feel uncomfortable disclosing their perceptions to people that they know. They also possessed the opportunity to manipulate their responses to support our hypotheses or prior assumptions. To mitigate this risk, we ensured that participants remained completely anonymous and no personally identifiable information was collected in the demographic questions. Participants were able to select 'Prefer not to answer' for any demographic questions that they felt may compromise their anonymity. We also made sure to enlist certain members of our group that had no conflicts of interest to run the recruitment process in the case of any group members being affiliated with recruitment targets. Without compromising the diversity and validity of respondents' faculty and group affiliations, we also aimed to target student-run groups that no member held executive positions in. Our final strategy to mitigate this risk was not recruiting from student-run groups that more than one member was associated with.

Research Process

Our research began in September 2021 when the research group was formed and culminated at the beginning of April 2022 with the submission of the final paper. The first step in beginning the research was producing a topic of interest between all group members. The group met once a week to brainstorm broad research questions and interests to inform the subsequent literature review. We first investigated how much information on mental health literacy, stigma, and supports was provided by the Student Wellness Centre at McMaster to inform the angle from which we approached the research. Seeing pamphlets and some resources about stigma and mental health supports prompted us to wonder whether students were aware of or even interested in utilizing them. Upon reviewing the sparse academic literature surrounding mental health literacy and help-seeking attitudes among university students, more specific research questions and goals were cultivated.

While there is a wealth of data about mental health literacy, stigma, and help-seeking behaviours, it seemed that much of this research was not centered around university students. The studies that did include research about mental health in universities were situated outside of Canada or not specific to single university populations, which provided us with a unique opportunity to understand both how mental health literacy manifests in Canada, and within the singular population of McMaster students. This also confirmed the importance and relevance of the research topic because of the presented opportunity to fill in some gaps in the academic discourse and lay a foundation for future research to be conducted.

After completing the literature review, we created tentative research questions to provide to our supervisor, Dr. Sarah Clancy, for approval. Originally, we had the idea of conducting qualitative, exploratory research through in-person interviews, but due to the sensitive nature of the questions and the present COVID-19 health risks, a quantitative and anonymous survey was the more ethically sound approach to take. By incorporating a quantitative approach, we were able to maximize our understanding of students' perceptions and focus on the validity of the research. We chose questions that assessed perceptions of mental health environments created in the classroom by staff and faculty, and by the Student Wellness Centre. We also created questions that allowed us to investigate the perceptions of student mental health literacy through knowledge of the Diagnostic Statistical Manual, Fifth Edition (DSM-5), and perceptions of social stigma and the impact on peers on reducing it. Once the thesis and ethics proposals were submitted in October 2021, we received ethics approval by the MREB on November 12, 2021. This solidified our research questions and provided a foundation to begin the recruitment process.

Our target for participation was to have at least 75 respondents so there was more data to inform our analysis. After recruitment began, we received 70 complete responses. To avoid conflicts of interest and ethical risks, recruitment was done by group members that did not have any relations to the groups selected for recruitment.

The participants were recruited through McMaster clubs and groups that were pre-established within the McMaster Undergraduate community. Clubs were chosen based on components of diversification of race, gender, ethnicity, the year of study and faculty. First, the script was administered through via email to club administrators of student-run clubs by researchers within the group who are not affiliated with the following clubs: McMaster MedLife, McMaster Acapella Club (MMAC), Cope: A student mental health initiative, McMaster Chinese Students Association, McMaster Indian Association,

McMaster International and Exchange Club, McMaster Mindfulness Club, Big Spoon 'Lil Spoon, Black Students Association, FirstGen McMaster, Athletics and Beyond (A&B), Hispanic and Portuguese Club, McMaster Culture Connect (MCC), McMaster Association for Sports Concussions (MASC), McMaster Sports Business Association, Hillel Ontario McMaster, McMaster Aiding Women's Shelter, Pre-Veterinary Club, McMaster Institute of Transportation Engineers (Student Chapter), and Food Allergy Club.

Group administrators that we hoped would dispense the research information were sent the recruitment script. The script included the title of the study, approximate length of time, what we hoped to learn upon completing this research, examples of questions to be asked within the survey, our letter of information, a link to the survey, and all researchers' contact information. Following confirmation of participation from the student-run group administrators, researchers emailed a direct post recruitment script that communicated more information about the study to the individual members, as it was imperative that the reason for a survey be explained in full to potential participants. The link to the survey was provided as an attachment to the script.

Some obstacles that researchers overcame were long response times from administrators, directors' inclination to post the recruitment scripts, groups not having the authority to share the study topic not being with their members, as well as obtaining permission to post our individual participation recruitment scripts to the groups. Due to these obstacles, an extra proposal was made to include more student-run groups in the recruitment process, which was approved. These groups are included in the recruitment list provided above. Additionally, concerns arose when the data being received did not provide a diverse ratio of faculties. However, this was overcome by continuous outreach to various groups, which allowed for more participation, leading to a more diverse and valid data sample, as well as the addition of four new student-run clubs.

We were able to gather a total of 70 complete survey responses and 155 incomplete survey responses. We were not able to use any of the incomplete responses as they did not have any data. The frequency of faculties included in the sample are as follows: 10 respondents in Business, 12 respondents in Engineering, 9 respondents in Health Sciences, 10 respondents in Humanities, 11 respondents in Sciences, 18 respondents in Social Sciences. We composed and conducted the survey on LimeSurvey, where responses were recorded and coded prior to data analysis. We asked 13 topic-specific questions and 5 additional demographic questions, resulting in 18 questions that took an estimated 15 minutes to complete. We gathered information on accessibility and comfort in using student support services on campus, as well as students' perceptions of mental literacy within the population.

Most questions that students answered utilized a Likert scale ranging from strongly agree to strongly disagree to encapsulate thorough perceptions, and two 'Yes' or 'No' to measure binary knowledge. Multi-selection and open-ended questions were used to gather demographic data. In addition, the option 'No Answer' (NA) was available for all questions as an additional response that may best suit them in relation to the questions being provided. The students had until February 18, 2022, at 8:00pm to complete the anonymous survey before it expired. Following this, the survey was taken down and analysis began on February 21, 2022.

Data Analysis

The analysis and synthesis of results was conducted using Microsoft Excel and Jamovi software. Jamovi software provided a way to perform statistical and descriptive analyses of the data, and Microsoft Excel was used to create graphs to visualize and interpret the data further. We exported the responses from LimeSurvey into a CSV (Comma Separated Value) file in order to import them into Jamovi. The only demographic question that was of interest to the research included in the data analysis was participants' faculty, which is why participant demographics were not included in the subsequent results section.

To synthesize the data, we numerically coded responses as ordinal integers before conducting descriptive analyses, independent sample t-tests, ANOVA one-way testing, and correlation tests. We then analyzed these results and relationships through incorporating visual graphs of responses to our research questions, as shown in the results section. Pie charts were imperative in analyzing the data because they provided a simple way to view what the most popular answers were for each question in average percentages, and it allowed those who were looking through the results to see a clear trend and commonalities between data samples. Bar graphs showed us exact frequencies of responses for each option in Likert-scale and Yes/No questions. This guided us in understanding and comparing the proportion of students that chose specific responses for the questions, which was especially helpful when analyzing faculty-specific information and responses contingent on knowledge of the DSM-5. This analysis provided us and readers with efficient ways to interpret the data and give us additional time for analysis as opposed to interpreting countless records of numerical data. Once the data was analyzed and themes were identified, the data was destroyed in April 2022 after the submission of the final paper.

We utilized thematic analyses as we gathered broad patterns of answers to our research questions for the target population of McMaster students from varying faculties, levels of academic study, and shared perspectives. This type of analysis helped in making quantitative inferences and critical conclusions from the general themes of each response. Furthermore, we used theoretical frameworks to provide a discursive analysis in studying the social context of our findings. Understanding the social context and assigned meanings of McMaster-specific institutions, such as contextual terms like Student Wellness Centre, assisted us in the discussion of the results. It also increased our ability to identify relationships and correlations that existed in our collected data.

Summary

The process of preparing our research, conducting the survey, and analyzing our data was integral in upholding the ethical standards of research. Each step in the research design was commenced with caution to ensure that the wellbeing and informed consent of participants was prioritized before inviting students to complete the survey. The data collection period ended in mid-February 2022, once we received 70 responses, and data analysis occurred until the final poster presentation in March 2022. The results and discussion of our data was separated into three key themes in order to streamline the interpretation and understanding of the presented research: recognizing and responding to mental health experiences, professor involvement with mental wellness, and attitudes towards on-campus support services. These themes played a pivotal role in creating provisional answers to the research questions, which were submitted in the final paper on April 1, 2022.

Results

Introduction

The graphs and tables below depict responses to survey questions relating to our overarching research goal, which was to understand the levels of mental health literacy, support, and stigma among the undergraduate population at McMaster. We were also interested in whether a student's faculty influenced their perceptions of mental health literacy, stigma, and attitudes towards seeking help for mental health problems. As a result, many of the graphs shown below demonstrate relationships between participants' faculties and their respective responses, as well as the relationship between students' levels of perceived mental health literacy (measured by knowledge of DSM-5) and their subsequent responses. The results show primary data collected from (n=70) undergraduate students over the age of 18, in the faculties of Social Sciences (25.71%), Sciences (15.71%), Humanities (14.28%), Business (14.28%), Engineering (17.14%), and Health Sciences (12.85%). As previously mentioned, demographic questions such as ethnicity and gender identity were excluded from the results as they did not hold relevance for our research questions and could compromise the anonymity of the participants.

Figures 1 and 2 represent opinions on how effective mental wellness care is from the Student Wellness Centre among students who had some knowledge and no knowledge of the DSM-5. Most students without knowledge of the DSM-5 either had neutral or negative perceptions of care from the Student Wellness Centre, with a higher portion both strongly disagreeing and strongly agreeing than respondents with knowledge of the DSM-5. Most students who had knowledge of the DSM-5 either felt neutral, disagreed, or strongly disagreed that the Student Wellness Centre provided effective care for mental wellness with a small portion agreeing.

Figure 1

Perceptions of Effective Mental Wellness Care from the Student Wellness Centre Among Students with No Knowledge of the DSM-5

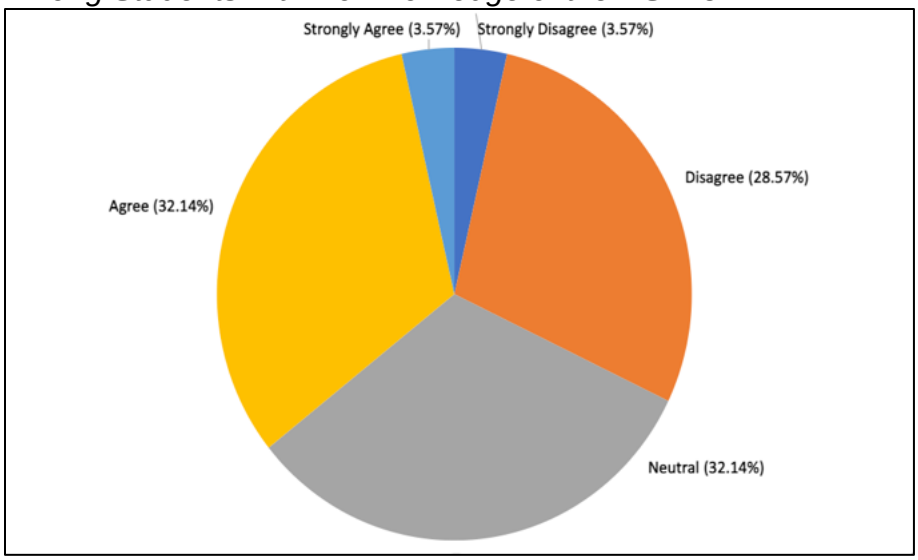


Figure 2

Perceptions of Effective Mental Wellness Care from the Student Wellness Centre Among Student with Knowledge of the DSM-5

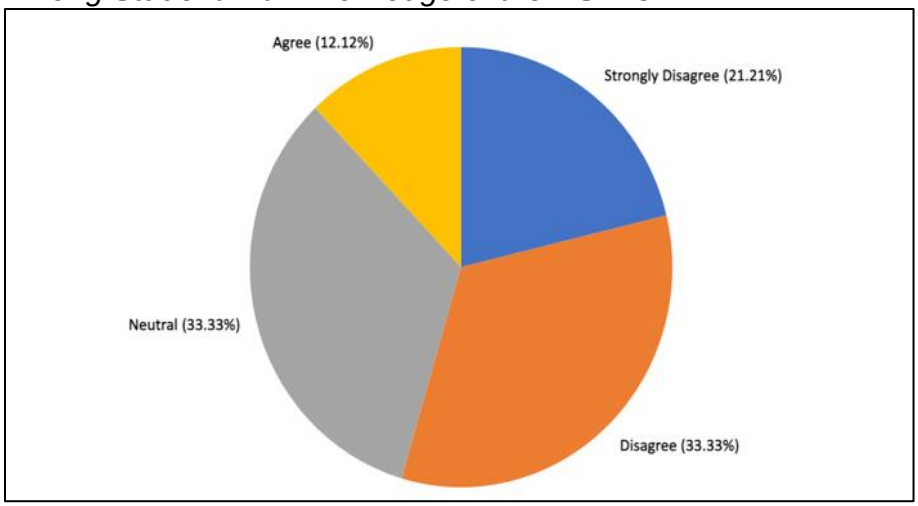
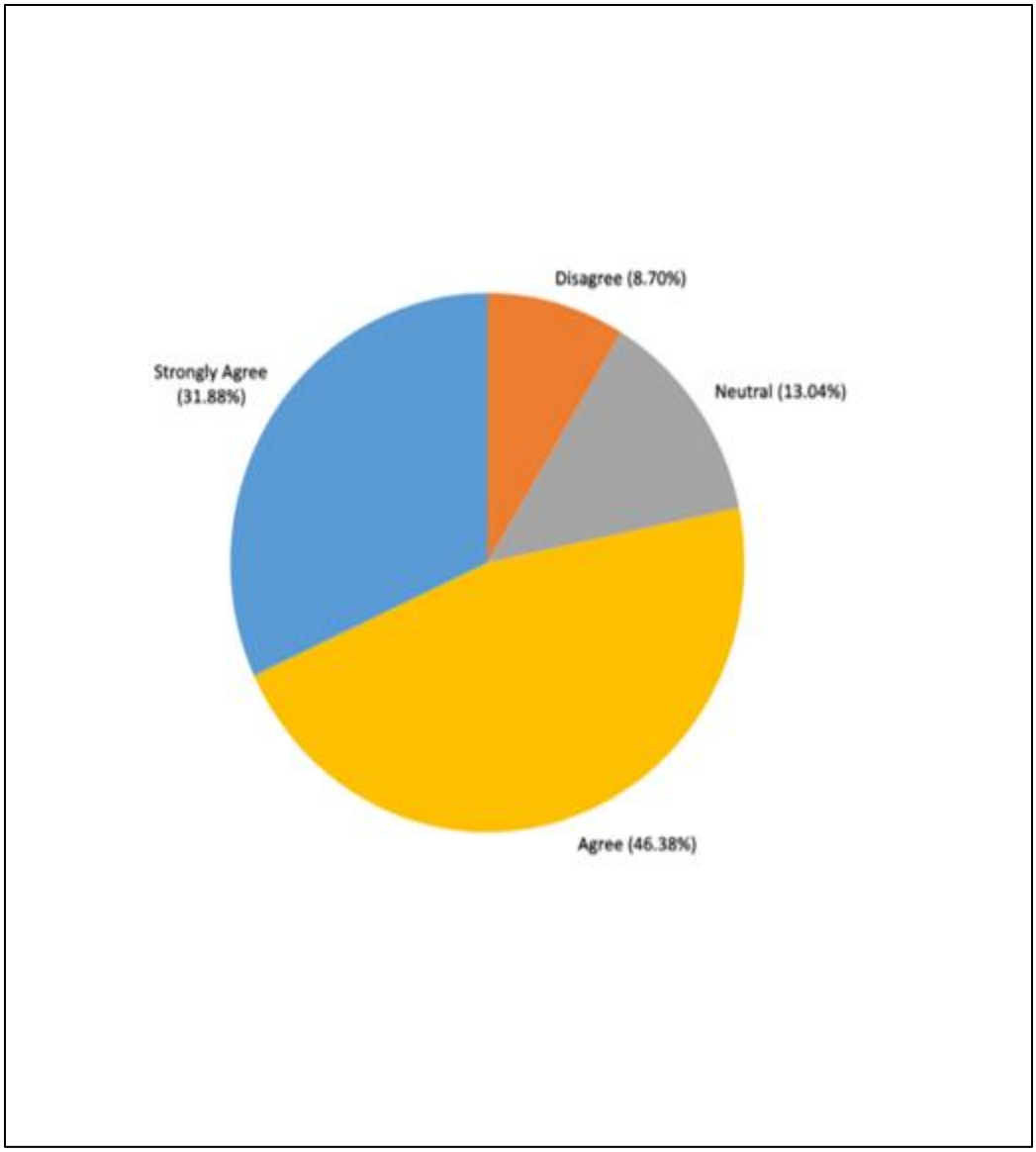


Figure 3 shows the frequency of responses to the survey question asking students whether they agree that there is a presence of stigma surrounding mental health at McMaster University. The results showed that the majority of McMaster undergraduate students either agreed or strongly agreed that there was a stigma around mental health, with small proportions showing some neutrality and disagreement. No respondents strongly disagreed with the statement provided.

Figure 3

Student Perceptions of the Presence of Stigma Surrounding Mental Health



The pie chart in Figure 4 displays all students’ surveyed perceptions of whether their peers reduced stigma surrounding mental health. This data showed that most students agreed or strongly agreed that peers reduced stigma surrounding mental health. Some individuals were neutral and fewer individuals disagreed. Important to note, no participant strongly disagreed with this statement.

Figure 4

Student Perceptions of Whether Their Peers Reduce Stigma Surrounding Mental Health

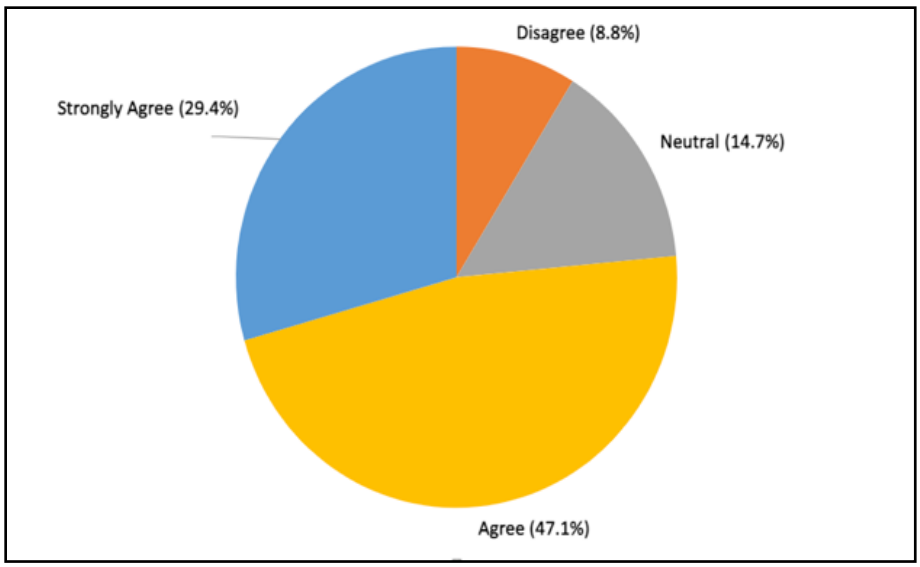
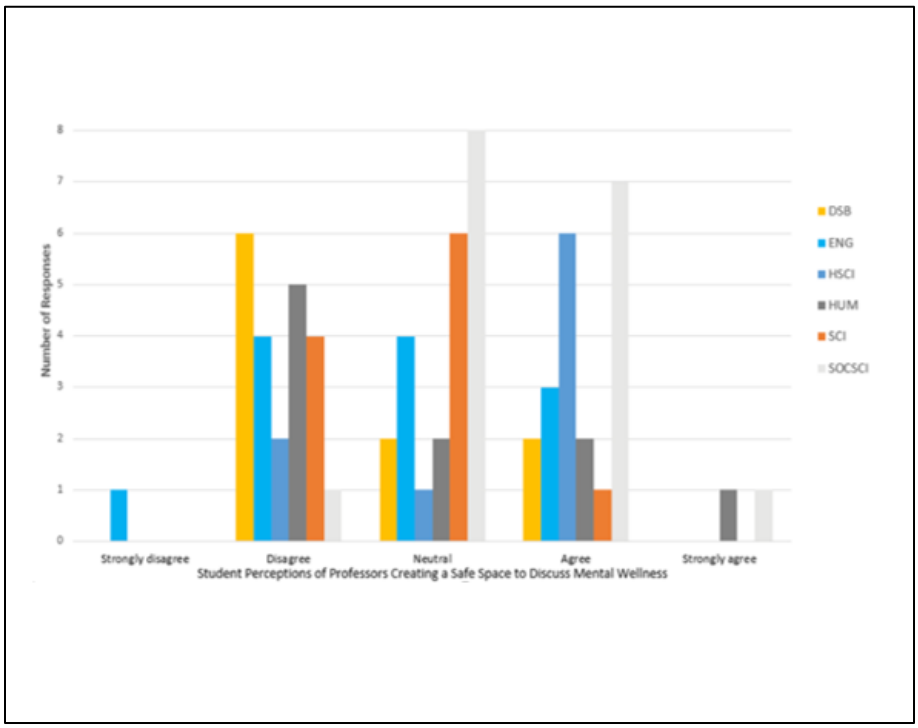


Figure 5 displays McMaster students' perceptions of their professors creating a safe space to discuss mental wellness. The graph is organized by faculty, with highest rates of agreement between Social Sciences and Health Sciences participants and highest rates of disagreement among Business and Engineering respondents.

Figure 5

Frequencies of Faculty-Specific Perceptions of Professors Creating a Safe Space to Discuss Mental Wellness



Figures 6a and 6b represent faculty-specific responses to whether the categorical classification system of the DSM-5 was effective based on respondents' knowledge of the DSM-5 (6a shows respondents with DSM-5 knowledge; 6b shows respondents

without DSM-5 knowledge). In Figure 6a, most agreement came from Health Sciences, Science and Social Sciences respondents, and disagreement came from Social Sciences and Business respondents. In Figure 6b, agreement was reported by Humanities, Engineering, and Business respondents and major disagreement was also reported by Humanities respondents. Note: no Health Sciences respondents did not have knowledge of the DSM-5.

Figure 6a

Faculty-Specific Perceptions of the Efficacy of the DSM-5 Classification System (Among Respondents with Knowledge of the DSM-5)

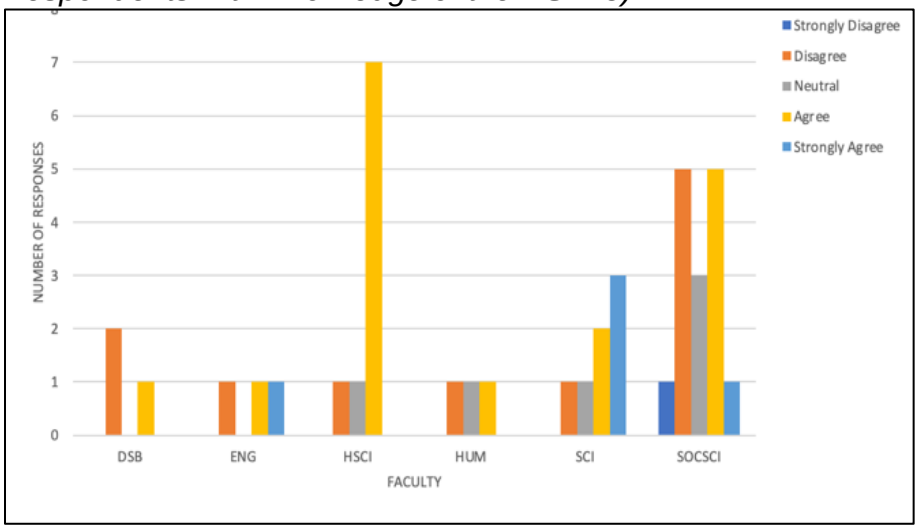


Figure 6b

Faculty-Specific Perceptions of the Efficacy of the DSM-5 Classification System (Among Respondents with No Knowledge of the DSM-5)

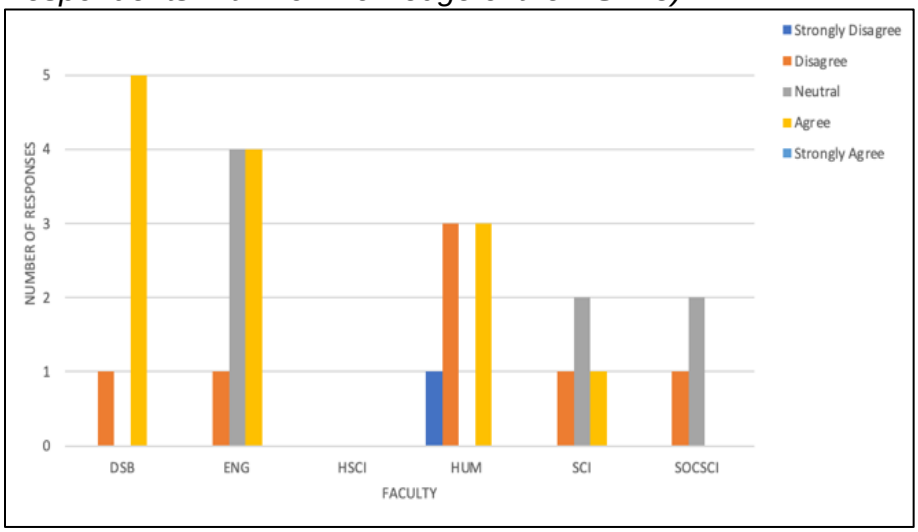


Figure 7 evaluates the relationship between stigma surrounding mental health and DSM-5 knowledge to assess validity of the variance. Since the p-value was greater than 0.05, we failed to reject the null hypothesis. Therefore, no statistical significance exists

in the comparison of respondents' perceptions of stigma against mental health and whether they know the DSM-5.

Figure 7

T-Test Stigma Against Mental Health

Independent Samples T-Test

		Statistic	df	p
Stigma against mental health	Student's t	1.77	67.0	0.082

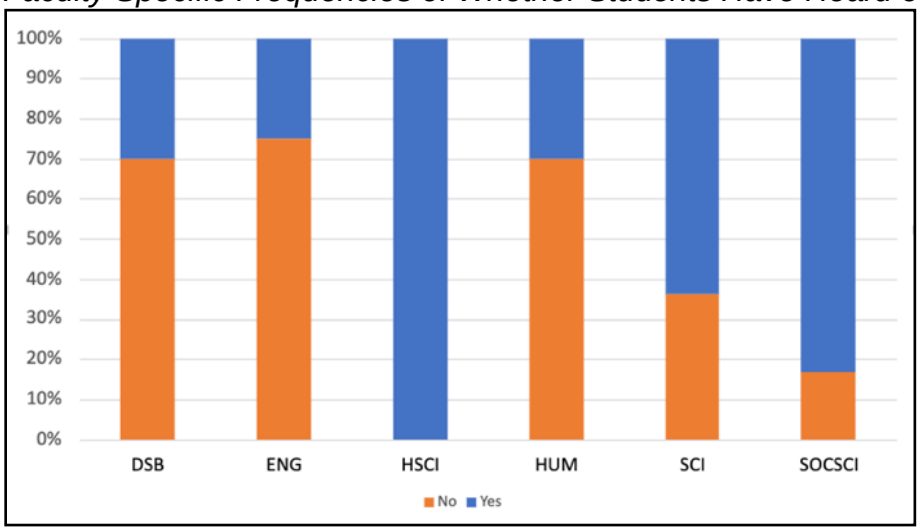
Group Descriptives

	Group	N	Mean	Median	SD	SE
Stigma against mental health	YES	40	4.17	4.00	0.813	0.129
	NO	29	3.79	4.00	0.978	0.182

The graph in Figure 8 presents knowledge of DSM-5 between the various faculties. The only faculty whose respondents all had knowledge of the DSM-5 is Health Sciences. All other faculties displayed an alarmingly high percentage in lack of knowledge except Science and Social Science, with Engineering, Business and Humanities being around 70-78% "No".

Figure 8

Faculty Specific Frequencies of Whether Students Have Heard of the DSM-5



The faculty-specific dataset in Figure 9 indicated whether professors discuss mental wellness in class on some level. More respondents in Social Sciences, Sciences, Humanities, and Health Sciences did have in-class discussions than those who did not, whereas more respondents in Business and Engineering did not have in-class discussions than those who did.

Figure 9

Frequency of Faculty Specific Perceptions of Whether Professors Discuss Mental Health in Class

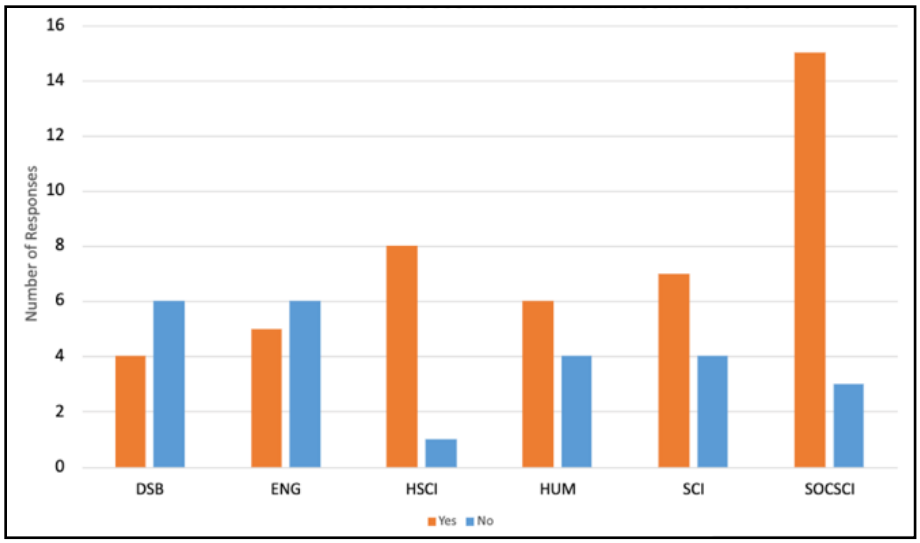


Figure 10 showed the relationship between the dependent variables, which were perceptions of the three questions about mental health literacy shown above, grouped by whether they had knowledge of the DSM-5. The first and third groups failed to reject the null hypothesis ($p > 0.05$) which indicated no statistical significance. The second group rejected null hypothesis ($p < 0.05$) and showed a significant statistical relationship between knowledge of the DSM-5 and attitudes towards the Student Wellness Centre.

Figure 10

T-Test Knows DSM-5

Independent Samples T-Test

		Statistic	df	p
Diagnosis required for experience to be taken seriously	Student's t	1.269	68.0	0.209
SWC provides effective mental wellness care	Student's t	-2.719	59.0	0.009
The classification system of the DSM-5 is effective	Student's t	0.847	67.0	0.400

Group Descriptives

	Group	N	Mean	Median	SD	SE
Diagnosis required for experience to be taken seriously	YES	40	3.13	3.00	1.399	0.221
	NO	30	2.70	2.00	1.368	0.250
SWC provides effective mental wellness care	YES	33	2.36	2.00	0.962	0.168
	NO	28	3.04	3.00	0.962	0.182
The classification system of the DSM-5 is effective	YES	40	3.35	4.00	1.099	0.174
	NO	29	3.14	3.00	0.915	0.170

Figure 11 shows a statistical significance ($p < 0.05$) between faculty and the student's perception of professors opening a safe space to talk about mental wellness. Perceptions of stigma against mental health, mental healthcare from the SWC, and

efficacy of the DSM-5 classification system as they related to faculty provided no statistical significance *(p > 0.05),* thus failing to reject the null hypothesis.

Figure 11

One-Way ANOVA- Faculty

One-Way ANOVA (Welch's)

	F	df1	df2	p
Stigma against mental health	0.627	5	27.2	0.681
SWC provides effective mental wellness care	0.632	5	23.9	0.677
Professors open a safe space to talk about mental wellness	2.648	5	26.9	0.045
The classification system of the DSM-5 is effective	1.376	5	27.1	0.264

Group Descriptives

	Faculty	N	Mean	SD	SE
Stigma against mental health	DSB	10	4.20	0.919	0.291
	ENG	12	3.50	1.168	0.337
	HSCI	9	4.00	0.866	0.289
	HUM	9	4.11	0.601	0.200
	SCI	11	4.18	0.751	0.226
	SOCSCI	18	4.11	0.900	0.212
SWC provides effective mental wellness care	DSB	9	2.67	0.866	0.289
	ENG	12	2.75	1.138	0.329
	HSCI	8	2.13	0.991	0.350
	HUM	10	3.00	1.247	0.394
	SCI	9	2.56	1.130	0.377
	SOCSCI	13	2.77	0.725	0.201
Professors open a safe space to talk about mental wellness	DSB	10	2.60	0.843	0.267
	ENG	12	2.75	0.965	0.279
	HSCI	9	3.44	0.882	0.294
	HUM	10	2.90	1.101	0.348
	SCI	11	2.73	0.647	0.195
	SOCSCI	17	3.47	0.717	0.174
The classification system of the DSM-5 is effective	DSB	9	3.33	1.000	0.333
	ENG	12	3.42	0.900	0.260
	HSCI	9	3.67	0.707	0.236
	HUM	10	2.80	1.135	0.359
	SCI	11	3.64	1.120	0.338
	SOCSCI	18	2.94	1.056	0.249

Figures 12a and 12b show the relationship between faculty-specific perceptions of whether peers reduced stigma, grouped by respondents' knowledge of the DSM-5 (12a showed respondents with knowledge of the DSM-5; 12b showed respondents with no knowledge of the DSM-5). Figure 12b showed major agreement in respondents in Business, Humanities, and Engineering; however, there was an equal amount of disagreement among Engineering respondents and some disagreement in Business respondents. Note: no Health Science respondents did not know the DSM-5. Figure 12a showed a majority of agreement across faculties, except for some neutrality and disagreement within Health Sciences and Science.

Figure 12a

Faculty-Specific Perceptions of Whether Peers Reduce Mental Health-Related Stigma (Among Participants with Knowledge of the DSM-5)

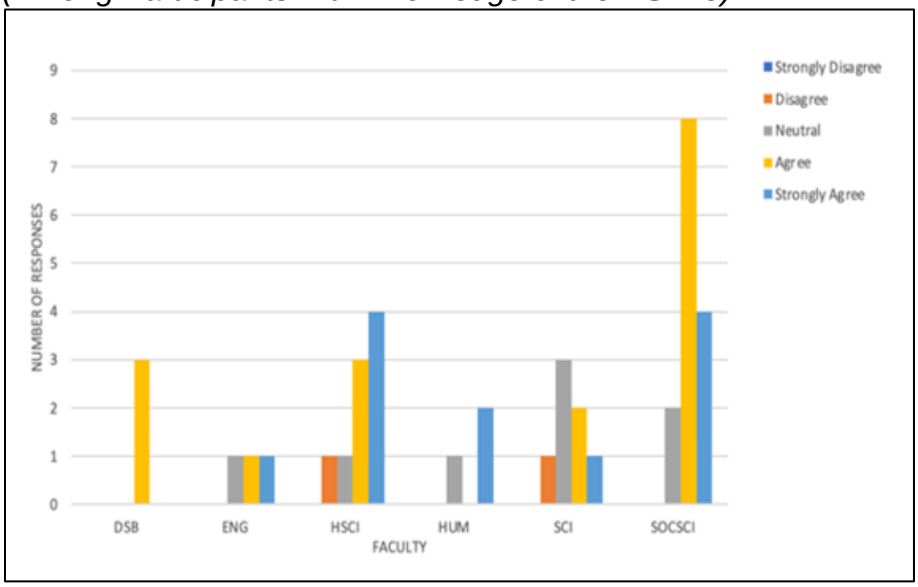
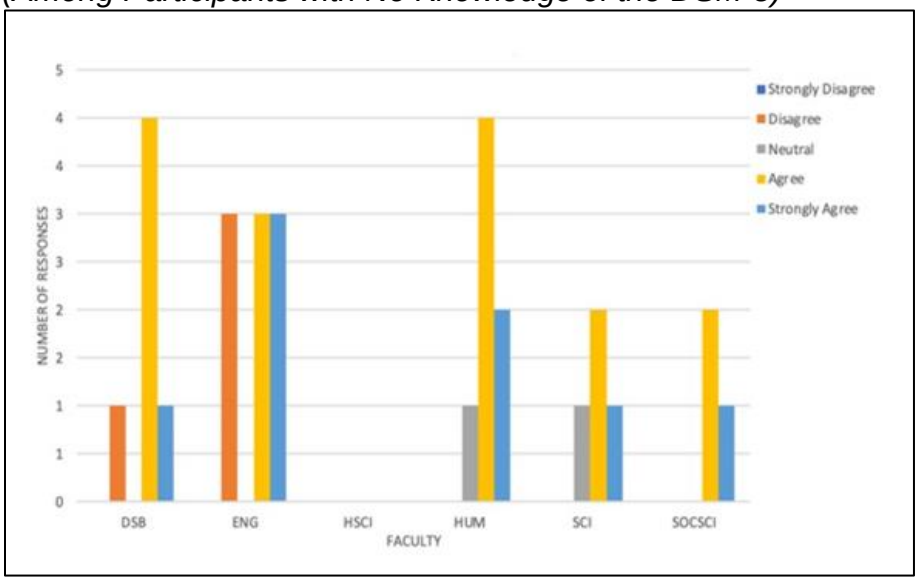


Figure 12b

Faculty-Specific Perceptions of Whether Peers Reduce Mental Health-Related Stigma (Among Participants with No Knowledge of the DSM-5)



The correlation matrix in Figure 13 measured the correlation between knowledge of the DSM-5 and perceptions of the effectiveness of the categorical classification system that the DSM-5 employs. Due to the p-value being above 0.05, there was no statistical significance of this correlation.

Figure 13

Correlation Between Knowledge of DSM-5 and Perceptions of te DSM-5 Classification System

Correlation Matrix

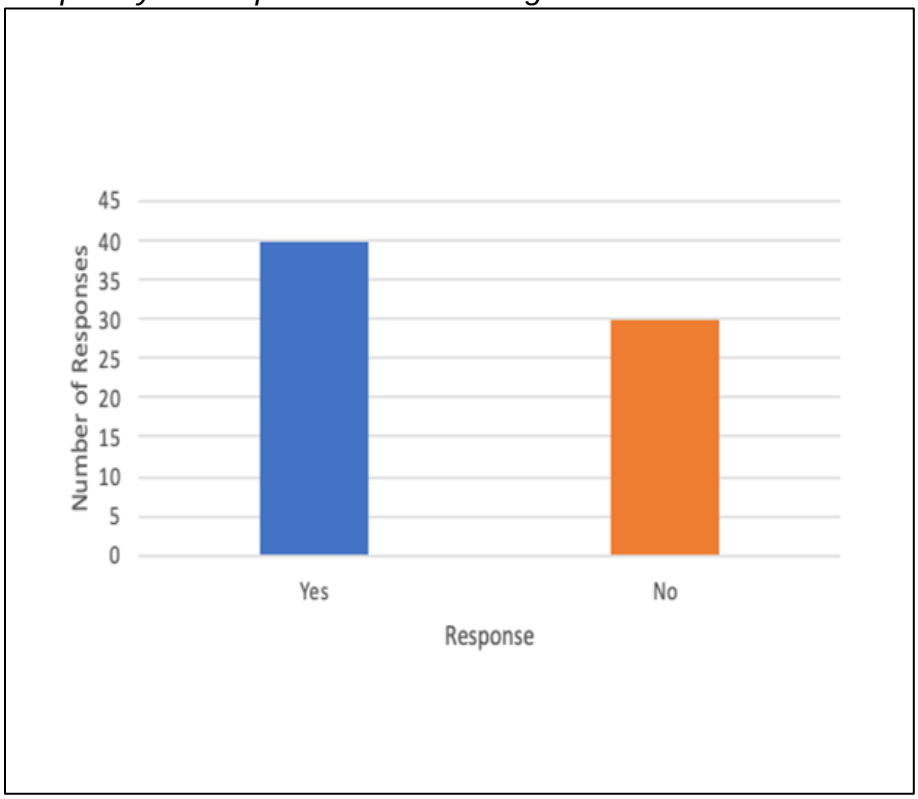
		The classification system of the DSM-5 is effective	Knows DSM
The classification system of the DSM-5 is effective	Pearson's r	–	
	p-value	–	
Knows DSM	Pearson's r	−0.103	–
	p-value	0.400	–

Note. * p < .05, ** p < .01, *** p < .001

Figure 14 shows knowledge of the DSM-5 across respondents irrespective of faculty. 40 respondents had some knowledge of the DSM-5, while 30 did not.

Figure 14

Frequency of Respondents' Knowledge of the DSM-5



The graph in Figure 15 shows responses to whether respondents believed that a diagnostic label is required to validate and take seriously a mental health experience. The perceptions were split relatively evenly, with 45.7% of respondents either agreeing or strongly agreeing, but a higher proportion (54.3%) of respondents were neutral, disagreed, or strongly disagreed.

Figure 15

Responses to Whether a Diagnosis is Required for a Mental Health Experience to be Taken Seriously

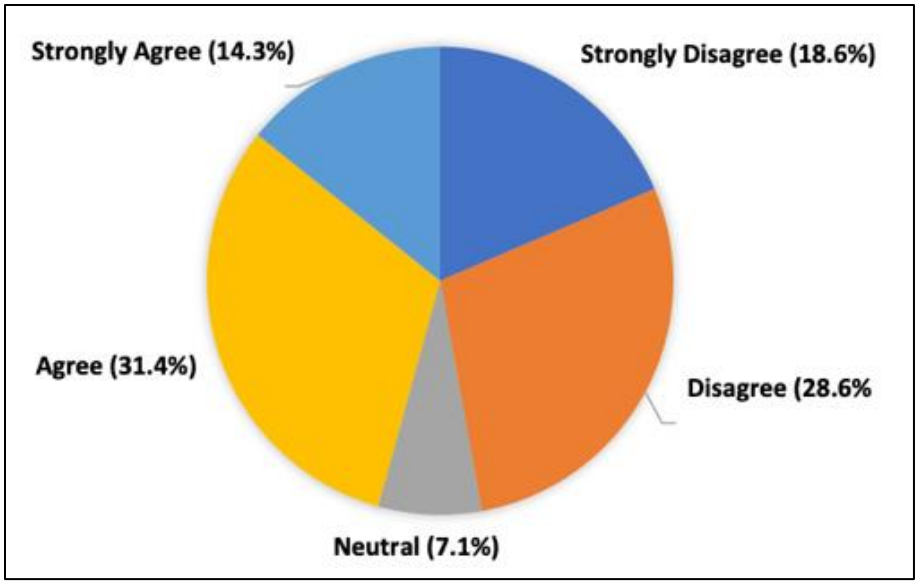
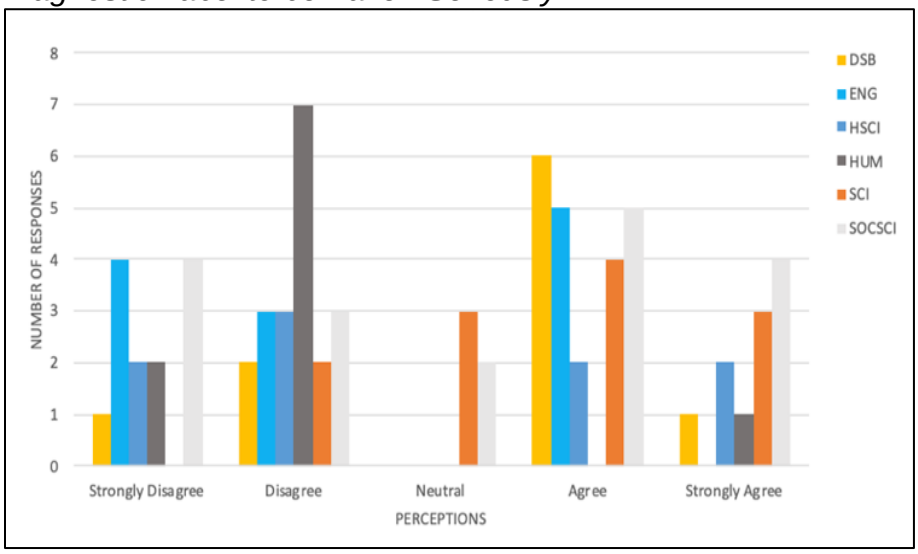


Figure 16 disseminates the perceptions from Figure 15 between faculty. The highest amounts of disagreement that a diagnostic label is required to validate and take seriously a mental health experience was found in Humanities, while the highest amounts of agreement were found in Engineering, Social Sciences, and Business. However, the same number of respondents in Social Sciences strongly agreed and strongly disagreed with the question.

Figure 16

Faculty-Specific Responses to Whether Mental Health Experiences Require a Diagnostic Label to be Taken Seriously



The graph in Figure 17 depicts the perceptions outlined in Figure 15 according to whether respondents had knowledge of the DSM-5. Responses did not have significant differences, except respondents with knowledge of the DSM-5 who had stronger

agreement and respondents with no knowledge of the DSM-5 who had stronger disagreement.

Figure 17

Perceptions of Whether a Diagnostic Label is Required for Mental Health Experiences to be Taken Seriously According to DSM-5 Knowledge

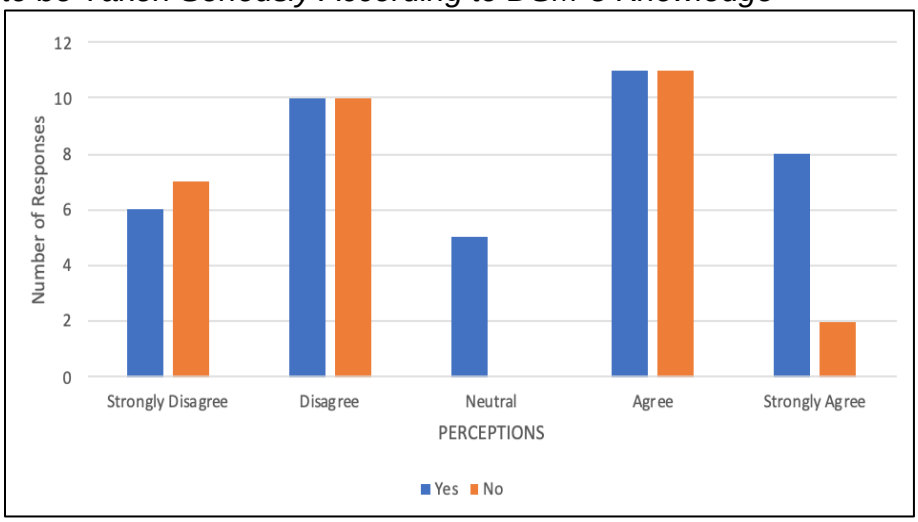
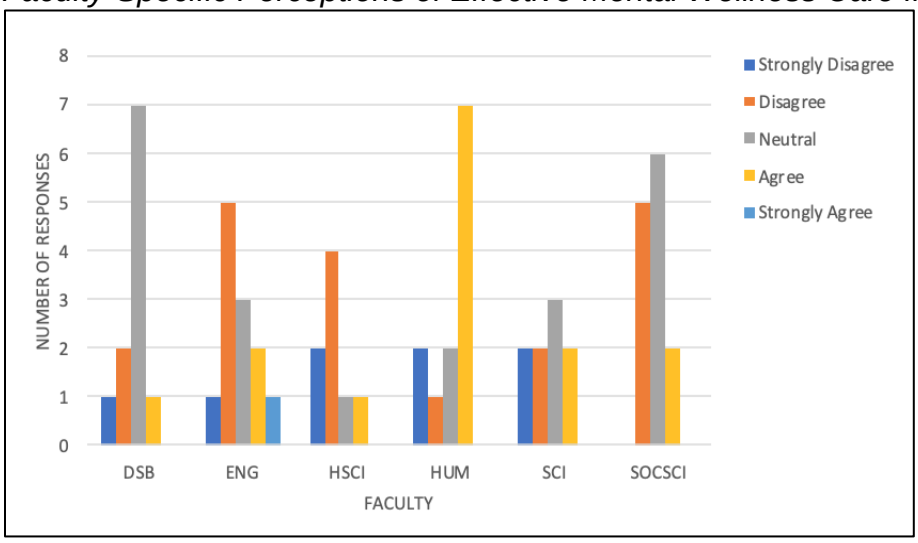


Figure 18 disseminates perceptions of care from the SWC between faculties. Higher neutrality was noted between Business and Social Science, and highest disagreement was seen in Health Sciences, Engineering, and Social Sciences. Humanities had the highest rates of agreement.

Figure 18

Faculty-Specific Perceptions of Effective Mental Wellness Care from the SWC



This graph in Figure 19 disseminates perceptions of stigma surrounding mental health between faculties. The highest rates of agreement were found in Social Sciences, Humanities, and Health Science, while the most variance in perceptions was found in Engineering.

Figure 19

Faculty-Specific Perceptions of Stigma Surrounding Mental Health

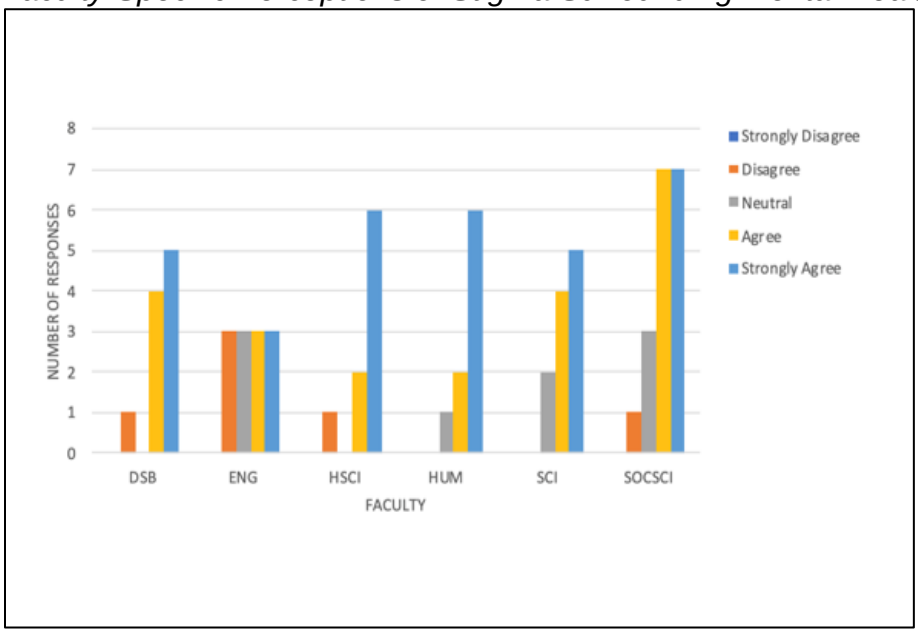


Figure 20 evaluated the correlation between knowledge of the DSM-5 and perceptions of effective mental wellness care from the SWC. DSM-5 knowledge was coded as YES (1) and NO (2). While the correlation co-efficient was low, the p-value was less than 0.05, indicating a significant correlation between the two variables.

Figure 20

Correlation Between DSM-5 Knowledge and Perceptions of Mental Healthcare from SWC

Correlation Matrix

		Knows DSM	SWC provides effective mental wellness care
Knows DSM	Pearson's r	—	
	p-value	—	
SWC provides effective mental wellness care	Pearson's r	0.334 **	—
	p-value	0.009	—

Note. * p < .05, ** p < .01, *** p < .001

This correlation matrix in Figure 21 evaluated the correlation between perceived stigma against mental health and faculty. The p-value was above 0.05 and the correlation co-efficient was low, indicating no significant correlation between the two variables.

Figure 21

Correlation Between Perceptions of Stigma Surrounding Mental Health and Faculty

Correlation Matrix

		Stigma against mental health	Faculty
Stigma against mental health	Pearson's r	—	
	p-value	—	
Faculty	Pearson's r	0.110	—
	p-value	0.370	—

Note. * p < .05, ** p < .01, *** p < .001

Figure 22 evaluated the statistical significance of the relationship between DSM-5 knowledge and perceptions of care from the SWC. The p-value was less than 0.05, which rejected the null hypothesis and supported a valid statistical significance for the relationship between the variables as well as the correlation (Figure 20).

Figure 22

T-Test Evaluating the Relationship Between DSM-5 Knowledge and Perceptions of Care from the SWC

Independent Samples T-Test

		Statistic	df	p
SWC provides effective mental wellness care	Student's t	−2.72	59.0	0.009

Group Descriptives

	Group	N	Mean	Median	SD	SE
SWC provides effective mental wellness care	Yes	33	2.36	2.00	0.962	0.168
	No	28	3.04	3.00	0.962	0.182

Discussion

Introduction

This section aims to discuss the findings of the data related to understanding the general perceptions of mental health literacy among undergraduate students at McMaster University in relation to existing literature and the previously mentioned research questions. Three themes that corresponded with significant findings and the current research questions are detailed according to both general and faculty-specific data.

The first theme will analyze responses that indicated the presence of stigma in the McMaster community and respondents' ability to recognize and respond to signs, symptoms, and experiences of mental distress. The major finding in this theme was that in general, respondents reported low levels of their ability to recognize and respond to signs of mental distress despite over half of participants reporting some knowledge of the Diagnostic Statistical Manual, Fifth Edition (DSM-5) and most participants citing stigma as a big problem. With respect to faculty-specific findings on this subject, the data was varied but partially corresponded with the reviewed literature.

The second theme discusses respondents' perceptions of how involved McMaster professors are in their mental wellness. Major themes to be discussed is the severe lack of professor acknowledgement of and involvement in mental wellness conversations, however the faculty-specific analysis has some skewed responses that partially align with the literature and will be discussed in detail within the section.

The final theme assesses significant findings on perceptions of and attitudes towards support services on campus, with specific emphasis on the relationship between levels of mental health literacy and perceptions of the Student Wellness Centre (SWC). These findings are supported by the reviewed literature, but each theme presents unique challenges and implications of broader significance that are addressed within the sections and within the conclusion of the discussion.

Themes of Recognizing and Responding to Mental Health Experiences

Respondents were asked questions that prompted them to provide perceptions of their ability to recognize, assess, and respond to mental health experiences. These questions included whether they were aware of the DSM-5 (Diagnostic Statistical Manual, Fifth Edition), whether they believed that mental health experiences should only be taken seriously when accompanied by a diagnostic label, and perceptions of stigma throughout the McMaster community. These responses will be evaluated and analyzed according to both generalized findings across respondents, and findings specific to faculty groupings.

To begin, 40 out of 70 respondents had some knowledge of the DSM-5, while the remaining 30 did not have knowledge of the DSM-5 whatsoever. Having knowledge of the DSM-5 indicated higher levels of mental health literacy because of the information about mental disorders, associated symptoms or signs, and treatment options provided within the manual. When looking at the results at a general level, it is worrying that close to half of the respondents did not have that knowledge because it insinuates that a basic understanding of different groupings of mental disorders is unknown to a large population of students.

This was supported by multiple studies outlined in the literature review, which stated that most university students had a mid-range score on mental health literacy testing and had not taken any type of clinical psychology course within their education (Miles et al., 2020; Lipson et al., 2016). More specifically, a study done by Furnham et al. (2011) found that only 75% of 400 university students could confirm that they had heard of 8 out of a possible 97 diagnostic labels, and over half of respondents said that they were able to confidently describe only 9 of the possible 97 disorders. Relating this back to the current research findings, notwithstanding the small sample size, it can be concluded that McMaster undergraduate students reflect the fact that broader scales of university students are unable to identify or recognize symptoms of specific mental disorders.

Findings on faculty-specific perceptions of DSM-5 knowledge supported much of the literature already done on the topic apart from the faculty of Humanities at McMaster University. Firstly, it was established in the literature that much of the knowledge and understanding of mental health within university student populations are disproportionately distributed towards science-related programs (Reavley et al., 2011). Our findings showed that the highest rates of DSM-5 knowledge were reported by respondents within the faculties of Health Sciences and Social Sciences. Interestingly, the only faculty in which all respondents reported knowledge of the DSM-5 was in Health

Sciences. This was surprising as there was a hypothesis made prior to data collection that Social Science respondents would have the highest rates of DSM-5 knowledge. However, this data must be understood in relation to the proportion of respondents belonging to each faculty – the number of respondents in Health Sciences was far fewer than respondents in Social Sciences, which could be why there was more variance in knowledge within this faculty.

It was less surprising then, that the lowest rates of DSM-5 knowledge were found in respondents belonging to the faculties of Business and Engineering as this was discussed in the literature (Reavley et al., 2011). The most shocking, and arguably most important finding related to this question was the fact that respondents belonging to the faculty of Humanities had the same rates of not knowing the DSM-5 as respondents in Business. This was not expected due to the nature of the Humanities faculty at large but could be reasonable considering that the highest likelihood of mental health problems was found in university students belonging to Business and Humanities (Lipson et al., 2016). Perhaps a narrow conclusion can be drawn that lower perceptions of mental health literacy, which in this section of the discussion refers to the knowledge surrounding the recognition of mental disorders, are associated with higher mental health problems, since students are not able to recognize the signs of mental distress before it is too late.

The research done by Furnham et al. (2011), along with our reported results, indicates that there is a sore lack of mental health literacy among university students – and, in the scope of this research, among McMaster undergraduate students. More specifically, these findings show that many McMaster students are unable to recognize symptoms of mental health experiences according to pre-existing diagnostic labels, which answers our research question in regard to the perceptions of mental health literacy among undergraduate McMaster students. This leads to the next general finding, which pertains to the respondents' perceptions of whether mental health experiences require diagnostic labels to be taken seriously.

Firstly, the majority of respondents that reported neutrality or disagreement when asked whether mental health experiences required diagnostic labels to be taken seriously had no knowledge of the DSM-5. Most of this disagreement came from respondents belonging to the faculties of Humanities and Engineering, which is in part supported by previous research. As noted, prior research found that Humanities students had a higher likelihood of having mental distress than other faculties (Lipson et al., 2016). When comparing this to the current research finding, this may indicate that the higher levels of mental health problems within this faculty means that the diagnostic label associated with these symptoms are less important than the symptoms themselves.

This contradicts the previous discourse which asserted that having less knowledge of the DSM-5 indicated lower mental health literacy. This contradiction is somewhat reasonable by proposing that while mental health literacy is characterized by the ability to recognize signs and symptoms of mental disorders, it could also be the ability to recognize signs and symptoms of mental health issues in general. As stated in the literature review, the rates of mental health problems in university students are constantly increasing, and with a sparse number of available psychiatrists on campus to make diagnoses, it is more likely that students would be taking the experiences of distress more seriously than the possibility of an associated diagnosis (Reavley et al., 2011 p. 45; Kadison, 2006).

Pivoting from perceptions of mental health literacy, the final part of this section of the discussion will analyze perceptions of stigma across respondents. To start, there were no significant differences found in perceptions of stigma surrounding mental health experiences between faculties. This was interesting, but not unfounded since literature only noted higher stigma within medical students and students in visual arts due to the amount of competition within each respective faculty (Lipson et al., 2016; Laidlaw et al., 2016). The current research excluded medical students from the sample population for ethical reasons and did not provide an option to specify programs, so there was no possibility to conduct specific research within the visual arts program.

While close to 80% of respondents agreed or strongly agreed that there was stigma present on campus, only 76.5% agreed or strongly agreed that peers reduced this stigma. Further, 14.7% of respondents were neutral in their perceptions and disagreement was reported infrequently by respondents belonging to the faculties of Science, Business, and Engineering. This feeds into the theoretical framework of symbolic interactionism because the perception of stigma not being reduced within these faculties are based on specific interactions that these respondents had with their peers. These faculty-specific interactions with peers would likely influence their overall perceptions of whether peers reduce stigma surrounding mental health. These findings are strongly indicative of the presence of stigma existing independently of faculty, thus becoming considered as a campus-wide problem.

In line with the tenets of symbolic interactionism, it can also be proposed that those who have not had interactions with the DSM-5 would assign different meanings to what qualifies as a negative mental health experience. This relates to the relationship between DSM-5 knowledge and perceptions of whether mental health experiences require a diagnostic label to be taken seriously. Conversely, students who did have interactions with the DSM-5 had fewer flexible perceptions as to which mental health experiences should be taken seriously, which can be inferred to mean that interactions with the DSM-5 colours perceptions of mental health experiences. This leaves the current research with more questions to be evaluated in further studies. Is the relationship between significance assigned to mental health experiences, with or without a label, and knowledge of the DSM-5 related to the categorical classification system of the DSM-5? Do the rigid criteria of what qualifies as a mental disorder in the DSM-5 influence the rigidity of perceptions of mental health experience validity? The findings showed no correlation between knowledge of the DSM-5 and perceptions of the efficacy of the categorical classification system, but these are questions to be considered and explored in further research.

Themes of Professor Involvement with Mental Wellness

The second theme that was established surrounded respondents' perceptions of involvement by their professors in mental wellness; this encompassed both the presence of mental wellness information, included on in-class or course syllabi, as well as course webpages on Avenue to Learn, and the type of environment that professors provided to address mental wellness and the importance of self-care. Respondents were asked to report their perceptions of these topics using binary yes or no answers, and Likert-scale answers ranging from strongly disagree to strongly agree. The responses showed a general lack of professor involvement in mental wellness topics, but findings also varied between faculties.

On a general scope, over 60% of respondents said that their professors discuss mental wellness in class, and over 70% of respondents said that there was some type of mental wellness information on the course syllabus or webpage on Avenue to Learn. However, a higher volume of responses by students reported neutrality, disagreement, or strong disagreement to the statement that professors open a safe space to address mental wellness or stress the importance of self-care. This finding is supported by a study done by Peake and Mullings (2016), which stated that faculty members are normally unaware and unempathetic towards addressing and accommodating students' mental health experiences since mental health policies in Canadian universities are overshadowed by the increasing pressure to provide adequate outflow of productive work. While there are new programs and policies being put in place to educate professors on accommodating for and responding to reduced productivity in students experiencing mental distress, the overwhelming lack of funding and research done on the topic renders professors and other faculty members useless or burnt out on the subject due to their own levels of stress (Peake & Mullings, 2016).

In further support of the current findings, many professors lack their own levels of mental health literacy, resulting in them being unable to recognize and address specific signs of mental distress in students (Brockelman & Scheyett, 2015). However, it was noted that many professors are willing to discuss accommodations and opportunities for clinical assistance with individual students experiencing mental distress (Brockelman & Scheyett, 2015). This reflects the current findings stating that professors do discuss mental wellness and include mental wellness support information in class and on course materials, but defies the finding that professors open a safe space to address mental wellness, so it is imperative that more research is done to assess whether professors themselves have the mental health literacy to recognize and help prevent mental distress in their students.

Focusing on these findings as they relate to respondents in specific faculties, results showed that respondents belonging to the faculties of Social Sciences, Science, Humanities, and Health Science agreed that professors address mental wellness in some capacity in a class setting. The contrast, however, was found in Business and Engineering respondents who disagreed on professors addressing mental wellness in class or even including related information on course syllabi or Avenue to Learn. This was supported by Lipson et al. (2011), who stated that mental health awareness was quite low within these faculties, possibly due to the stressful and competitive nature of these faculties overshadowing common signs of mental distress. However, findings on whether faculty-specific professors opened safe spaces to address mental wellness or stress the importance of self-care was much less reflective of any literature reviewed in previous sections.

When assessing perceptions of professors creating a safe space to address mental wellness, the only faculty with a majority positive perception was Health Sciences (66.7%). However, more worrying findings exposed Social Science respondents (52.9%), Humanities respondents (70%), and Engineering respondents (75%) to have a neutral or negative perception pertaining to this topic. Furthermore, a staggering 80% of respondents in Business and close to 91% of respondents in Science had neutral or negative perceptions. This is one of the most concerning findings within the current research because only respondents in one undergraduate faculty at McMaster agreed that their professors opened a safe space. Respondents in Social Science and Science were reported in literature to take more courses in clinical psychology, and nowhere in

the literature was it found that students within these faculties had less comfort in seeking guidance or accommodations from professors for mental distress (Reavley et al., 2011).

Furthermore, respondents within Social Sciences outnumbered respondents from other faculties, indicating vested interest in contributing to studies in mental health, and reported higher overall perceptions of mental health literacy at McMaster. This prompts the current research to wonder where the disconnect is between professors including mental wellness information on course syllabi or webpages but then not cultivating warm environments to address mental wellness. There is no research available to support or dispute these findings, which is even more perplexing and insinuates that there is an extreme need for more research to be done on these discrepancies. However, research by Lipson et al. (2011) partially supports the current findings about Business and Engineering faculties, but not the faculty of Humanities. More research must be done on the faculty of Humanities to assess whether the nature of the program courses and student environment contributes to mental health literacy and professor involvement in mental wellness.

Findings on perceptions of professors stressing the importance of self-care echo the discussion above, yet some results differ and are worthy of acknowledgement. All respondents in the faculty of Business had neutral or negative perceptions of this, accompanied by half of Social Science respondents, 80% of Science respondents, 70% of Humanities respondents, close to 78% of Health Science students, and close to 67% of Engineering respondents. What evoked interest with these findings was the stark contrast within the Health Science faculty of perceptions of professors opening a safe space to address mental wellness and perceptions of professors stressing the importance of self-care. This leaves the question of why Health Science respondents had such polarized opinions on similar topics, which has not been reported in previous literature thus far.

As with the previous section of the discussion, much of the findings from these survey questions can be contextualized within the two theoretical frameworks laid out in a previous section of this paper. Beginning with symbolic interactionism, the general findings reflect perceptions of students based on their individual interactions with these situations, indicating that the agreement or disagreement that is associated with the perceptions of all professors at McMaster are influenced by the interactions with respondents' own course selections as opposed to the entire body of faculty teaching available courses. The same goes for the faculty-specific findings, but on a narrower scale. While general findings can encompass a wealth of different course offerings at McMaster, the narrower faculty-specific perceptions pertain more to interactions that respondents have had with their respective faculty's courses and available electives.

Focusing on the previous explanations of mild social constructionism, respondents were able to understand that the 'course website' meant Avenue to Learn. This is a unique social structure which is not found at other universities, which means that students from universities outside of McMaster might have confusion when asked about a course webpage. As course webpages and websites are McMaster-specific, the societal context in which respondents were able to understand and respond accordingly to these questions reflect a broader understanding of how the university's social institutions are created and upheld through shared meanings between all students and faculty.

A large issue that has been posed for the current research findings being discussed was outlined in the literature review – there is a very big gap in the literature on these

topics which results in barriers to making definitive conclusions or connections. Of any and all implications that this research provides, among the most pressing is the need for more research to be done on this topic as there is a clear issue for students when it comes to perceptions of professor involvement in mental wellness on all counts. Drawing conclusions from the current research work to enhance understanding about perceptions of mental health literacy in accordance with our second research question concerned with how faculty may influence these perceptions. It has been demonstrated in these results that major differences in aspects of mental health literacy can be found between different faculties and within these faculties as well.

Themes of Attitudes Towards On-Campus Support Services

The last theme recognizes respondents' attitudes towards on-campus support services, which pertains to understanding perceptions of adequate and effective wellness support at McMaster. Respondents were asked to report their perceptions using a Likert-scale which ranged from strongly disagree to strongly agree. These responses zaided in showing the lack of quality and effective care for mental health, specifically at the Student Wellness Centre (SWC). Moreover, faculty-specific findings of mental health literacy, discussed above, demonstrate that respondents with higher mental health literacy have significantly different perceptions of effective care than those who do not, which will be discussed in subsequent paragraphs.

According to the overall report, 77% of respondents were neutral, disagreed, or strongly disagreed that the SWC provides effective care for mental wellness concerns. The results align with the claim by Reavley et al. (2011) who indicates that only 10% of university students feel comfortable seeking help from counsellors on campus. Thus, our research identifying whether treatment services on campuses are perceived to be effective help to highlight opinions of the effectiveness of treatment as not being entirely beneficial, which is an analysis supported by Gulliver et al. (2010). Contrary to Bulanda et al. (2014) and Armstrong et al. (2000), who noted much discussion on the differences in gender and ethnicity concerning attitudes towards help seeking behaviour, we did not focus on this distinction in our research. Our survey did not provide questions directly relating to this disparity; therefore, we cannot confidently support this claim. With that said, a direction of future research should incorporate these distinctions, since no definitive conclusion can be drawn until more research is available.

Shockingly, while the relationship between perceptions of effective care from the SWC and DSM-5 knowledge pertains to our research questions, the significance and intensity of the relationship emerges independently and points to an underlying problem with the specific levels of care provided at McMaster, or even with mental healthcare in universities on a broader scale. Further, this specific relationship must be researched in future studies, as it seems to be both an important and extremely thought-provoking finding. Analyzing the levels of mental wellness care from the SWC from respondents who have knowledge of the DSM-5 shows that 87.9% of respondents were neutral, disagreed, or strongly disagreed that the SWC provided effective support. Moreover, students who agreed (15.7%) that the classification system of the DSM-5 was effective disagreed that the SWC provides effective mental wellness support.

Conversely, students who disagreed that the classification system of the DSM-5 was effective agreed that the SWC provides effective mental wellness support. The classification model of the DSM-5 is categorical, meaning that individuals either meet the criteria for a diagnosis or do not based on a specific and rigid set of symptoms as a

reference point. With this being said, it prompts us to question the type of care that the SWC provides, and whether students who lean more towards a dimensional approach to treating mental health issues find the SWC care effective because the care provided from the SWC is for general mental health problems as opposed to specific types of care for specific mental disorders.

However, this is not a conclusion that we can draw from the current research because we were unable to get qualitative, experiential opinions from respondents for ethical reasons. As a result, the only way to study and analyze the relationship between perceptions of labelling and perceptions of care would be for more qualitative research to be done. We can aim to suggest improvements in mental health literacy and help seeking behaviours based on the current results which, on a broader scale, targets levels of mental wellness care provided by SWC. These improvements, however, can only be suggested once research is done to assess personal opinions and focus-group studies on the care provided. While the current research findings provide a foundation and starting point for asking these questions, they are not specific enough to make recommendations currently.

In relation to faculty and our findings, there was significant disagreement that the SWC provides effective mental wellness support, which was reported by respondents in Engineering, Health Science, and Social Science. In contrast, most agreement about SWC effective mental wellness support was found among Humanities respondents. Our research findings partially support Lipson et al. (2016) who noted business and engineering students to have the lowest likelihood of seeking treatment, as compared to students within social science, social work, and art & design who would be more likely to seek treatment. Our data suggests the SWC providing effective mental health support had the most disagreement with students from Engineering. In turn, a notable analysis not predicted was how Social Science and Health Science respondents were similar with Engineering respondents and had high rates of disagreement as well. We can conclude that while our research provides insight, most of the research on mental health literacy in relation to faculty is insufficient and requires further university-specific reach to be conducted.

As noted above, the theoretical framework of symbolic interactionism and mild social constructionism can be conceptualized in relation to these findings. Symbolic interactionism explains the respondent's perception and opinions by understanding that their interactions with the SWC, either personal or from peer disclosure, influence how they perceive the effectiveness of care. In addition, this same idea follows for students' attitude towards the DSM-5, which in turn reflects a relation to mental wellness care from the SWC. The current findings hold that interactions with the DSM-5 in some way does influence the meaning assigned to what effective care should look like, however how that meaning is assigned cannot be concluded at this time. It also prompts the question of whether respondents actually interacted with different classification systems to inform their opinion of the care, or whether the question influenced their opinions since the question did explain what the categorical model of classification was. We also must factor in the consideration that not all respondents have had interactions with the SWC for mental wellness care, which could influence how they answered the question. Meanings that are associated with symbols (SWC) are inherently personal, so open-ended questions to understand those personal meanings should be conducted.

In relation to mild social constructionism, respondents adhere to the understanding that the Student Wellness Centre (SWC) is a specific institution to McMaster University.

This facility is distinctive from outside universities, which means that only McMaster students would be able to answer the questions pertaining to the SWC, as those from differing areas would result in confusion to the effectiveness of this structure. All students at McMaster have a shared understanding to what the SWC is and provides due to the societal context in which they preside, meaning that this question could not be replicated in universities that are not McMaster as they are not included in the societal context of services and facilities upheld and broadcasted throughout the faculty and student population.

On a final note, which has been mentioned in multiple sections of this discussion, more research should be done specifically for McMaster University because of the apparent distaste for the present support services. We are also aware that there are many peer-run services that provide support for mental health, so further research should be done to assess the efficacy of these specific services since research by Bulanda et al. (2014) shows the increasing likelihood of students turning to peers and youth-run programs for mental health support. Through implications seen in this research, many barriers restrict us from making definitive conclusions and enhancing understanding among students in differing faculties and mental health literacy is imperative to further these results in a more conclusive direction.

Conclusion

To conclude, the problem that we sought to address through the current research was the lack of literature and knowledge surrounding mental health literacy among McMaster students, their perceptions of support on campus and through peers, and how stigma affects these perceptions, if applicable. To analyze this accordingly with our research questions, the discussion factored faculty-specific findings into the general findings for each theme. Three themes had unique findings and posed further questions and challenges that we hope will be studied and answered in subsequent research done on the topic. While we chose to broach this topic on the understanding that there was a gap in the research pertaining to it, the current research simultaneously starts the discussion and draws attention to how sparse the knowledge is on mental health literacy in undergraduate students. This research is required to enact positive change in a currently ignored facet of mental health literacy because as the discussion shows, the levels of mental health literacy in McMaster students is very low and is made worse by the inaction of faculty to intervene and address the increasing mental distress in university students. This discussion, and broader scope of research, was enacted in hopes of improving the problems with mental health literacy and help-seeking attitudes between faculties and in general terms.

Limitations

Quantitative Research

There were limitations present in our research and findings. Firstly, we collected our data through quantitative methods which created limitations as we were unable to elaborate or investigate specific reasons as to how or why respondents formed their perceptions. The lack of qualitative insight did not allow us to delve deeper into rationales for certain responses. This means we were unable to account for the reasons as to why these students feel the way they do. To validate our research, we chose to format our quantitative questioning to Likert-scale options to seek as many insights as we could into the perceptions of mental health for all participants.

Sample Size

Another limitation was the sample size. The total number of completed responses (n=70) was spread out throughout different faculties at McMaster University. Our findings cannot be generalized among the general population of the student body due to our sample representing such a small portion. Moreover, the number of respondents belonging to each faculty limited the data we collected and subjected it to greater variances in the data sample. Due to the number of respondents in each specific faculty being less than 20, generalizations were hard to draw upon. There could have been a significant difference in our results and subsequent conclusions had we had a larger sample size in total, and larger numbers of respondents for each faculty. Many assumptions for the normality (Shapiro-Wilk's) and homogeneity (Levene's) tests were violated because they are typically used for larger sample sizes, thus limiting the scope of inferences and conclusions that could be drawn from our data sample.

Sampling Method and Recruitment

Furthermore, our sampling and recruitment process also proposed challenges and limitations. Convenience sampling limited the recruitment process due to the lack of stratified sampling which skewed the true diversity in responses and the ability to replicate the data. Additionally, the lack of interaction and in-person interaction limited the recruitment process as it forced us to expend more time and energy on recruitment, which may have been easier with in-person and stratified sampling. More research using stratified and qualitative methods, and larger, more representative sample sizes needs to be conducted in order to deduce more in-depth reasoning behind the more personalized student wellness experiences of undergraduate students.

Participant Willingness

Limitations also existed in the results which could be from the respondents' willingness to participate in the study. The participants had the ability to withdraw from the survey at any time, therefore the results were skewed since we did not receive equal numbers of responses for each question. Our approach outweighed this limitation as we received 70 participants, which acted as a buffer for specific individuals who refused to complete all the questions provided. However, it did prompt us to wonder why 155 individuals felt unable or unwilling to complete the survey. We used many questions that required students to choose an answer from a scale, which allowed for a more focused understanding of their perceptions, with only a few simple 'Yes' or 'No' questions. We chose to use scales for most questions because even though not all participants completed the entire survey, there was specific data that was able to be analyzed after the results were collected.

Survey Questions

Finally, an important limitation to note is in the survey questions that were chosen and how they related to our research questions. Some data was skewed because of questions about the classification system of the DSM-5 being answered by respondents with no prior knowledge of the DSM-5. Our inattention when coding conditions for the survey should be held accountable for this potential gap in our research. In addition, we wanted to understand how stigma impacts perceptions of mental health literacy and

help-seeking behaviour, but did not create questions that were specific enough to understand this relationship to its full extent.

Significant Insights

Our research presents three significant insights. Firstly, McMaster students are aware of opportunities to seek guidance for mental wellness but are uncomfortable or unwilling doing so. As indicated in the results section (Figures 20 & 22), we found a statistically significant relationship between perceptions of effective mental wellness care from the SWC among students with knowledge of DSM-5. Students with more mental health knowledge claimed that the McMaster Student Wellness Centre provided inadequate care, which further indicates a need for better treatment and support services on campus.

The second insight is that our data is supported by previous studies that investigate university student mental health. Coincidingly with our research, previous studies also identified treatment services on university and college campuses to be scarcely sought out, with only 10% of students feeling comfortable seeking help from counsellors on campus, as well as faculty-specific data that also conclude discrepancies in faculty-specific perceptions of mental health literacy and support (Reavley et al., 2011; Lipson et al., 2016).

Lastly, suggestions can be made to improve faculty-specific mental health literacy and help seeking behaviors, as well as on a broader scale that includes mental wellness care provided by the Student Wellness Centre and associative resources. Our research indicates that perceptions of mental health literacy differed amongst faculty where participants in Business, Engineering and Humanities had little knowledge of the DSM, whereas participants in Sciences, Health Sciences and Social Sciences agreed to have more sufficient knowledge. Additionally, participants in the same programs also described their classroom experience and professors as providing limited exposure or discussion of mental health or mental health resources. This research further progresses previous research indicating more effective wellness support from these perceived faculties.

Moreover, this research can be used for further research to identify and elaborate on the inadequacies that exist within faculty-specific programming such as syllabus criteria, professor training, knowledge and general advocacy for wellness and mental health support. This would allow for all programs to receive more equitable and adequate classroom and professor support, increase help-seeking behaviors, and increase general mental health literacy, which would also work towards decreasing perceived mental health stigma. Our research indicates deficiencies that exist within the McMaster Student Wellness Centre and can be used to further investigate students' particular perceptions of the mental health services and resources being provided. This would aid in identifying ways to enforce more effective services which would encourage help seeking behavior on McMaster campus. Collectively, this will work to combat any perceived existing mental health stigma on campus. On a broader scale, it can also be used to further investigate mental health literacy, stigma, and perceptions on other University campuses to identify any common themes of mental health perceptions in this demographic.

Conclusion

Due to the agreement among academic studies, there must be more knowledge spread about mental health literacy and its related aspects. Our current research was conducted in the hopes of gaining more insight into specific attitudes and perceptions of mental health literacy in the McMaster Undergraduate population. This was done in an attempt to begin the process of proposing appropriate interventions to campus wellness services as well as faculty-specific solutions. Since the study was exclusively assessing the perceptions of McMaster students, it was imperative to address the underlying shared meanings within the McMaster community that contribute to the perceptions of mental health literacy and stigma at large. Thus, our secondary research aids to address and understand the concerns of perceptions of mental health literacy, barriers to help seeking behavior, and stigma associated with mental health struggles among university students.

The findings presented a deeper understanding of relationships between faculty and perceptions of support, mental health literacy as well as help seeking behavior with the McMaster Undergraduate population. Our results indicate discrepancies in Business, Engineering and Humanities as the faculties with lowest perceived support from professors and were the least literate in mental health in comparison to those in a Social Science faculty. To assess mental health literacy on campus, we also gathered relationships between DSM-5 knowledge and perceived levels of adequate support provided by the Student Wellness Centre.

Our results indicate that the greater DSM-5 knowledge students have, the less likely they are to think the Student Wellness Centre offers adequate support. This suggests that DSM-5 knowledge may not be indicative of help-seeking behaviour per say, but it is indicative of the perceived adequacy of support resources on McMaster campus. Furthermore, this can suggest that there is a perceived inadequacy within the Student Wellness Centre and its proposed services that deters students, with adequate knowledge to reach out for support, away from using its services. Although there was no correlation between the program of study and perceived stigma, most participants agreed upon general existing stigma surrounding mental health. Additionally, as the results indicated, most participants agreed that their peers helped to reduce stigma around mental health. This may indicate that participants feel a sense of comfort and support from peers when it comes to mental health, rather than feeling that peers further perpetuate the stigma.

Ultimately, the major takeaway from the current research is that it is of paramount importance that university faculty and services are provided with the education and funding to have effective understandings and abilities to address student mental health experiences.

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Self-Perceived Changes in Personality and Identity Due to the COVID-19 Pandemic

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Abstract

This present study seeks to understand how undergraduate students at McMaster University perceive changes to their personality and sense of identity as a result of the COVID-19 pandemic. Two main research questions are addressed in this paper: (1) how have the sociocultural influences of the pandemic changed undergraduate students' personality and identity, and (2) do these changes vary between different years of study? The study consisted of 58 participants, all undergraduate students studying at McMaster University. Participants completed a survey containing questions pertaining to their own perception of potential changes in personality, behaviour, and identity, as a result of being a university student during the COVID-19 pandemic. Results indicated significant changes in personality traits and identity, which can be attributed to the effects of the COVID-19 pandemic. There are many real-life applications and ways to implement the study's findings as our society navigates a new, post-COVID reality.

Introduction

The COVID-19 pandemic has significantly reshaped every sphere of life, from political and economic, to the social spheres. The changes that have occurred to the ways in which people socialize are of particular interest to the present study. For many undergraduate students, the COVID-19 pandemic began during transitional years of life best known for parties, travel, meeting new people, and the exploration of oneself. The focus of the present study is on the level of impact of the COVID-19 pandemic on the identities and personalities of McMaster undergraduate students. Notably, the pandemic has impacted students tremendously within the context of social settings and the way they view themselves. Researching this topic will allow for a better understanding of the McMaster community before and during the pandemic. These research findings will help us learn the ways in which identity and personality traits have been affected in undergraduate students, providing the ability to apply the findings to other individuals.

Personality can be defined for the purposes of this study using the big five personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism. These traits can be recognized by the acronym OCEAN and will be referred to this way

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throughout this paper. Additionally, identity will be defined as one's sense of being in a social context and how they perceive themselves.

Two research questions are addressed in this study: (1) how have the sociocultural influences of the pandemic changed undergraduate students' personality and identity, and (2) do these changes vary between different years of study? These questions are based on anecdotal observations made by the group, as we have collectively noticed that the pandemic has shifted the personalities and identities in ourselves and others. Undergraduate students are currently developing their identity and personality in university. This sudden and dramatic change in the environment has caused major shifts in identity and personality formation (Hvalshagen et al., 2021). We believed first- and second-year undergraduate students may not have had the chance for personality maturation, or the opportunity to learn how to present themselves in this social environment (Klimstra et al., 2013). On the other hand, third- and fourth-year undergraduate students have already had the opportunity to develop and solidify their personalities and identities, and therefore would be less affected by the shift to an online social environment (Klimstra et al., 2013).

We hypothesized that upper-year undergraduate students would have minimal changes in their personality. Upper-year undergraduate students could potentially be more introverted and lower in neuroticism due to their secured identity and personality as a result of further established relationships and identity. Furthermore, we hypothesized that lower-year undergraduate students would be more extraverted and higher in neuroticism because they have not formed their social identity and social relationships at university. The changes in these traits are amplified because of the lack of transition from high school to university caused by the COVID-19 pandemic. Overall, our research questions are driven by the anecdotal observations we have made based on the shifts in undergraduate students' personalities and identities due to the overwhelming influence of the COVID-19 pandemic.

This paper consists of 6 subsequent sections. The theoretical frameworks section reviews the three most dominant theories in this study, which are social identity theory, social cognitive theory, and OCEAN personality traits. The literature review section is an overview of the pre-existing research in the topic area, how it relates to the research questions, and what is still lacking in the field. The methodology section reviews the methods that were utilized, ethical issues, challenges, timelines, and plans for data analysis. The results section provides a brief overview of the statistical findings, followed by the discussion, which contains an in-depth analysis of those findings. The conclusion will address some of the potential limitations and insights of this study, before summarizing our findings.

Theoretical Frameworks

Our research draws upon three main social psychological concepts, including social identity theory, social cognitive theory, and the big five personality trait model. Social identity theory argues that individuals develop a sense of self-concept within groups through status and intergroup relationships (Tajfel, 1978; Abrams & Hogg, 2010). Social cognitive theory posits that when an individual witnesses a social action, they become socialized and internalize these characteristics, using them as a template for future behaviour (Bandura, 1977, 1986, 2005). The OCEAN traits exemplify the five

fundamental dimensions of openness, conscientiousness, extraversion, agreeableness, and neuroticism that can describe any individual's personality (McCrae & John, 1992).

Social Identity Theory

Social identity theory was introduced in the early 1970s by Henri Tajfel and colleagues. They sought to understand thought processes and behaviours within intergroup relationships and social identity (Tajfel, 1978; Abrams & Hogg, 2010). Social identity theory is a person's understanding of who they are within the context of their status in a group. Membership within a group contributes to an individual's self-esteem and identity within both themselves and society (Abrams & Hogg, 2010). According to social identity theory, an individual's identity is shaped based on their status within a group and their group membership (Abrams & Hogg, 2010). Individuals will behave in a manner that coincides with their group identity, in order to maintain membership (Abrams & Hogg, 2010). Social identity theory has made significant contributions to the research of social psychology by providing insight on group behaviours and processes (Abrams & Hogg, 2010).

Tajfel (1978) and his colleagues conducted multiple minimal-group studies throughout history that contributed to social identity theory. One study was designed to allow for participants to be assigned to a random and meaningless group; within these groups participants would have to give points to either their own or other groups (Abrams & Hogg, 2010). Even though the group was random with various social backgrounds, it was discovered that the participants would give more points to the in-group members than the out-group members (Abrams & Hogg, 2010). This experiment determined that even being assigned to a random group can cause individuals to favour the membership and feel more connected to members in the group rather than outsiders (Abrams & Hogg, 2010).

Social identity theory correlates with our research because the COVID-19 pandemic has decreased the number of social interactions and activities that previously bound groups of people together. As a result of the COVID-19 pandemic, undergraduate students may have a decreased sense of membership within the university student identity. Having a sense of social identity through group membership can help individuals relate to others, but also understand themselves better. This is crucial during the COVID-19 pandemic, as many students are lacking the understanding of their identity that is typically learned through university (Abrams & Hogg, 2010). Overall, social identity theory is important when evaluating the changes in identity among students during the COVID-19 pandemic. Communication and interaction with others have been limited, thus resulting in a reduction of identity development.

Social Cognitive Theory

Social cognitive theory was proposed by Albert Bandura (1977), which focuses on the socio-cognitive development of an individual through the perceptions of their environment and how they adapt to the environment around them. This theory highlights how being exposed to characteristics or traits in the environment can contribute to individual socialization (Bandura, 1977). Socialization happens through observation where individuals are watching the actions, behaviours, and social characteristics of those around them and begin to internalize these traits into their character (Bandura, 1977). As

a result of internalizing observed characteristics, people become socialized, understand the social norms of their environment, and learn how to appropriately act (Bandura, 1977).

A prominent and historical example of social cognitive theory is the bobo doll experiment performed by Dr. Albert Bandura (1961). This experiment consisted of multiple children being placed within an observational role and required to watch two sets of adults that were either passive or aggressive toward the doll (Bandura et al., 1961). They were then asked to interact with the doll; two reactions were subsequently observed (Bandura et al., 1961). The first set of children who watched the passive interaction with the doll interacted passively with the doll through hugging, talking, and other non-aggressive behaviours (Bandura et al., 1961). The second set of children who watched the aggressive interaction with the doll acted aggressively with the doll, mirroring the way the adults previously interacted with it (Bandura et al., 1961). Therefore, Bandura et al. (1961) proposed that one learns how to interact with the environment and the people around them by observing behaviours and internalizing them as a form of socialization.

This theory correlates with the research questions of our study as it examines how the changes in the socio-cognitive environment, due to the COVID-19 pandemic, have affected the characteristics and actions of undergraduate students at McMaster University. Undergraduate students need to perceive and observe the actions of their peers in order to fit into the role of a university student in a university environment. The disruptions that resulted from the COVID-19 pandemic shifted many environments to online formats, including schools, which may have prevented students from being properly socialized into their role as university students. This is because students are not able to observe the characteristics of their peers or socialize.

OCEAN Personality Traits

Personality traits can be organized into five basic dimensions: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (McCrae & John, 1992). Openness includes creativity, intellectual interests, and needs for variety and experience (McCrae & John, 1992). Conscientiousness is described as a dimension that constrains impulsive behaviour and can mean an individual is diligent and thorough (McCrae & John, 1992). Extraversion can be identified with these components: adventurousness, ambition, energy, and positive affectivity (McCrae & John, 1992). Agreeableness involves characteristics such as altruism, emotional support, and nurturance (McCrae & John, 1992). Neuroticism describes the tendency to experience distress, self-consciousness, tension, frustration, and guilt (McCrae & John, 1992). For research, the five-factor model can be utilized in questionnaires with scales to measure constructs of personality (McCrae & John, 1992). The model provides a framework for the examination of individuals' personality. Graziano and Ward (1992) proposed that the big five analysis of personality should be extended into the study of personality development. Although their research focused on young adolescents, the same conclusions can be drawn regarding other transitional periods of life, specifically within learning institutions.

This present study utilizes the OCEAN traits to examine the changes between undergraduate students' self-perception of their personality before and after the COVID-19 pandemic. According to Graziano and Ward (1992), academic competence is highly correlated with high ratings of conscientiousness, while social competence is highly

correlated with high ratings of extraversion. This is relevant because of the changes sustained in undergraduate students' personalities as a result of the COVID-19 pandemic. These changes may have an impact on their performance in school and their social abilities. The five traits allow for analysis as to whether the pandemic has caused any variation in the self-perception of students' personality.

Literature Review

The literature review will examine research studies looking at topics such as measures of personality, pandemic effects on identity and personality, psychological disturbance and mental health decline, and the relationship between personality traits and adaptation. In addition to these topics, we will also review the limitations of the literature and how this literature may affect the research findings.

Measures of Personality

Kekäläinen et al. (2021) surveyed a cohort of Finnish women aged 47-55 about their health behaviours before and after emergency conditions, in relation to personality. This study made use of a modified short form of the Eysenck Personality Inventory (EPI), which included 9 items for extraversion and 10 for neuroticism. Depressive symptoms were also measured by using the Centre for Epidemiological Studies Depression Scale, which included 20 items about depressed mood (Kekäläinen et al., 2021). In general, Kekäläinen et al. (2021) found that depressive symptoms were the strongest at the beginning of the pandemic, before people had adjusted to the changes. They also found that lower rates of extraversion and higher rates of neuroticism were connected with depressive symptoms.

Adding to the theme of personality, Anglim & Horwood (2021) researched the impact of COVID-19 on subjective and psychological well-being from a sample of undergraduate psychology students in Melbourne, Australia during the second wave of the pandemic and pre-COVID. To analyze well-being, the researchers used three measures, the big five personality traits, SWB (life satisfaction, positive affect, and negative affect) and PWB (positive relations, autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance) (Anglim & Horwood, 2021). Adolescents were experiencing lower levels of well-being during the pandemic, and furthermore, the effect of personality on well-being was slightly weaker during the pandemic. Anglim and Horwood (2021) found that personality had an impact on socio-economic factors, but socio-economic factors did not have a direct impact on personality.

These studies provide relevant data on personality and well-being pre-COVID and post-COVID, which allows for further insight on changes to personality given the social context of the pandemic. While our study does not directly examine mental health or well-being, the findings of these studies allow for a deeper understanding of these issues, and the factors that impact them.

Pandemic Effects on Identity and Personality

Godinic et al. (2020) make use of social identity theory to infer the effects that the COVID-19 pandemic may have had on personality. Groups provide people with social identity; group membership is especially important during times of stress. Identity can be referred to as self-definition as part of a wider community, and is therefore directly linked

with poverty, social exclusion, and marginalization. Uncertain times, such as a pandemic, have a significant impact on people's identities. Therefore, if one considers themselves a healthy, extraverted worker to a specific organization, anything that threatens this membership will also threaten identity (Godinic et al., 2020). The more rigidly an individual identifies with their social or work roles, the more identity disturbance they will experience. Identity disturbance can be defined by the DSM-5 as having an "unstable self-image or sense of self with a lack of clear aims and internal preferences." Cognitive dissonance may even occur if the way an individual perceives their self-image is contested by the uncertainty brought about by the pandemic (Godinic et al., 2020).

Increased isolation and distancing mandates have caused individuals to feel more alone than ever, especially for those who are extraverted (Anglim & Horwood, 2021). Anglim & Horwood (2021) describe extraverts as feeling energized by social interactions and enjoying being around people, and as a result, the lockdown has decreased their sense of identity. Not being able to have these interactions strips an extravert of their identity because they are not able to socialize, learn, or feel the same as pre-COVID. Folk et al. (2020) examined the effects of the pandemic on extraverts and concluded that there was a correlation between extraversion and decreased energy during the lockdowns. Throughout the pandemic, individuals have been restricted when it comes to the activities and recreations that once helped shape their identity with all the emergency health guidelines.

Kekäläinen et al. (2021) found that in Finnish women aged 47-55, higher scores of extraversion and lower scores of neuroticism were connected with lower levels of depression, and increases in leisure time and physical activity. Those who presented higher neuroticism scores reported eating less frequently, and higher extraversion scores were also associated with a change in eating behaviour (either healthier or unhealthier). Those with higher extraversion scores were more inclined to eat regularly, decrease alcohol consumption, and report healthy eating habit changes. Interestingly, extraversion was positively correlated with higher consumption of vegetables, and lower rates of emotional eating (Kekäläinen et al., 2021).

Furthermore, Hvalshagen et al. (2021) investigated the personality and identity conflicts experienced by undergraduate students attending a private post-secondary institution in the United States during the shift from in-person to online studies due to the COVID-19 pandemic. The study found that online learning deteriorated their student identity due to the absence of support for this role in their home environment and the numerous competing identities they faced at home (Hvalshagen et al., 2021). This prevented them from engaging in their normal identities at home, such as child, sibling, or wage earner (Hvalshagen et al., 2021). The study found that this identity conflict resulted in a lack of motivation to do schoolwork and fulfill any of their identities as well as they normally would, which leads to poor psychological well-being and cognitive dissonance within the student (Hvalshagen et al., 2021).

Additionally, Sutin et al. (2020) examined the effects of the COVID-19 pandemic on the big five personality traits and psychological well-being, particularly during the critical period of the pandemic. Overall, they discovered that over a six-week period, neuroticism decreased, particularly surrounding sub-traits of anxiety and depression, yet conscientiousness did not change (Sutin et al., 2020). Hence, they suggest that traits in

neuroticism, especially anxiety, caused people to direct their focus more to the pandemic instead of themselves (Sutin et al., 2020).

Klimstra et al. (2013) researched personality traits and interpersonal identity of individuals in late adolescence and early adulthood. According to their research, individuals between the approximate ages of 16 and 22 are in life stages characterized by changes in personality and changes towards the establishment of identity (Klimstra et al., 2013). In young adulthood, neuroticism levels tend to decrease while there are simultaneous increases in levels of agreeableness and conscientiousness (Klimstra et al., 2013). In these periods of life, individuals are expected to invest in their social roles, and because of the push towards establishing these roles, young adults are driven towards personality maturation and identity formation (Klimstra et al., 2013).

These sources directly link identity and personality with the COVID-19 pandemic. These findings have helped us in the process of analyzing our own data and coming to conclusions about our findings. Personality and identity go hand in hand with each other, as exhibited by these studies.

Psychological Disturbance/Mental Health Decline

According to Godinic et al. (2020), isolation and social distancing can cause significant deterioration to well-being and psychological state. More specifically, uncertainty can have detrimental effects on mental health, such as distress and mental exhaustion. Well-being is impacted by both prior experiences and personality traits, so when faced with a stressful/traumatic experience, people may even experience mood and anxiety disorders. Economic and job uncertainty may have a particularly significant impact on mental health and psychological well-being, as many have experienced this throughout the COVID-19 pandemic. On top of providing monetary benefits, a job also provides non-monetary benefits, such as organization, status, sense of purpose, organizational participation, medical care, insurance, and feelings of accomplishment. This uncertainty surrounding income and job security can lead to depression and isolation (Godinic et al., 2020). The pandemic further impacted and affected those with pre-existing mental illness, with an emphasis on those with personality disorders. Those individuals may experience states of dissociation linked with constant self-criticism when met with stress and may have already been experiencing identity disturbances prior to the pandemic (Godinic et al., 2020).

Anglim & Horwood (2021) discovered that the worldwide COVID-19 outbreak has impacted the routine, mental wellness, and experiences of individuals by the various lockdowns and restrictions put in place. In Melbourne, Australia, after being in lockdown for 4 months, talk of a second wave and lockdown decreased young adults' sense of wellbeing further than pre-COVID rates. These decreases were seen in positive emotions, such as being excited, interested, and enthusiastic, and an increase in negative emotions, including anxiety and sadness (Anglim & Horwood, 2021).

According to Folk et al. (2020), being unable to connect in society due to the COVID-19 pandemic has caused many individuals to feel disconnected in society, resulting in decreased mental health. It was discovered that college students reported larger declines in life satisfaction, which also contributed to their feelings of psychological distress (Folk et al., 2020). Since introverts already have fewer social interactions, the effects of the pandemic decreased the mental health of extraverts more (Folk et al., 2020).

Kekäläinen et al. (2021) found an increase in depressive symptoms in Finnish women aged 47-55 from their pre-pandemic questionnaire to their post-emergency conditions questionnaire. Lower extraversion and higher neuroticism were associated with a higher level of depressive symptoms (Kekäläinen, et al. 2021). Similarly, Muro et al. (2021) investigated the changes in mental illnesses, such as anxiety and depression, among a sample of 155 Spanish women who completed a COVID-19 quarantine. The results of this study found that higher rates of neuroticism, higher baseline depression rates, lower likelihood of following a daily routine, and lower fitness levels during quarantines or lockdowns predicted higher levels of depression and depression caseness (Muro et al., 2021). High levels of anxiety and anxiety caseness resulted from high neuroticism, longer durations of stay-at-home orders, and greater initial symptoms of anxiety at baseline (Muro et al., 2021).

Furthermore, Zhang et al. (2021) researched the correlation between personality traits and their effects on mental health as a consequence of the COVID-19 pandemic. The authors studied the experiences of medical students at Wenzhou Medical University, examining their mental health in terms of generalized anxiety disorder, depression, and their sleep health status (Zhang et al., 2021). The big five personality traits, openness, conscientiousness, agreeableness, neuroticism, and extraversion were also examined in order to determine how they were affected by the pandemic (Zhang et al., 2021). They were concerned with the implications and consequences of what the pandemic could do to personality, physicality, and psychological well-being. The pandemic has produced a high-stress environment in terms of health and mortality due to the fear of being infected with COVID-19 (Zhang et al., 2021). To add, they were also interested in how personality traits can potentially make individuals more susceptible toward the stressful conditions of the pandemic, or if one's personality made them more resilient to the stress of the pandemic (Zhang et al., 2021). Overall, they discovered that there was a correlation between personality and the risks involved in developing a psychological disorder during the COVID-19 pandemic (Zhang et al., 2021). People who were high in neuroticism were more likely to present anxiety, depression, and disordered sleep as a result of the pandemic. However, people who were high in conscientiousness, extraversion and openness, were less likely to present symptoms of depression, anxiety and sleep disorders (Zhang et al., 2021).

Although our study does not address mental decline, these studies provide relevant perspectives on the correlation between mental health, personality, and identity. These findings can help us draw conclusions on our own results about the potential effects on undergraduate students' mental well-being.

Personality and Adaptation

Muro et al. (2021) explored the effect that personality, the adoption of new routines, and physical activity have on mood changes after five weeks of a COVID-19 lockdown among a sample of 155 Spanish women who had not contracted COVID-19. This study ascertained that characteristics of increased neuroticism traits and high baseline levels of anxiety or depression led individuals to struggle more with adapting to the abrupt disruption of their lifestyle, leading to them experiencing worse moods throughout and after lockdowns (Muro et al., 2021). However, the ability to establish new routines and regular participation in physical activities act as a protective factor and can boost

psychological well-being during lockdowns (Muro et al., 2021). The individual's personality allows them to be flexible enough to adapt their lifestyle to the unfamiliar conditions of a lockdown while still maintaining their identity. This results in less disruption to their life if they are able to establish and stick to a new routine (Muro et al., 2021). Additionally, the consistency of physical activity is known to boost mood and well-being, which can be especially helpful in such distressing times; having a routine allows for some consistency and structure in unpredictable times (Muro et al., 2021). Building upon this, Kekäläinen et al. (2021) found that, although there was an increase in depressive symptoms, the increase was most prominent during the beginning of emergency conditions. The participants then adapted to the circumstances causing a slight decrease in depressive symptoms (Kekäläinen et al., 2021).

Rettew et al.'s (2020) study examined how personality traits can be correlated with adaptation to the COVID-19 pandemic, particularly surrounding their health and well-being. They noticed how some people were able to maintain their well-being during the pandemic while others' well-being declined (Rettew et al., 2020). Based on a personality assessment and daily rating of mood, the authors discovered that while well-being decreased, so did their stress (Rettew et al., 2020). In addition, they found that within one's personality traits, they were able to adapt to the COVID-19 pandemic (Rettew et al. 2020). If neuroticism was lower, their well-being was greater, and if extraversion, agreeableness, and conscientiousness were higher, their well-being would be greatly maintained and adapted to the pandemic (Rettew et al., 2020). Overall, this paper provides insight on personality traits that can be a sign of whether they will adapt better to situations like the COVID-19 pandemic (Rettew et al., 2020).

While our study did not directly assess adaptation to the circumstances brought about by the COVID-19 pandemic, these resources provide us with the ability to infer about the role of personality on adaptation. This allows for further insight on how different populations reacted to the circumstances, and how they adapted to the significant changes brought about by the COVID-19 pandemic.

Literature Limitations

Godinic et al. (2020) determined specific ties between work identity and personality changes, leading to mental health decline in the face of economic uncertainty. A limitation to this study is that it is uncertain whether this would be a common experience across the globe. In a capitalistic society, work identity and job security would have a great deal of impact on personality and mental health because the society values those things highly. However, this may not be the case in cultures where having a strong work identity is not valued as highly, and where other types of identities may be emphasized. Therefore, more research should be done about the effects of identity, personality, mental health, and economic uncertainty across multiple cultures.

Kekäläinen et al. (2021) noted very interesting findings throughout their study, specifically because their analysis was longitudinal, however, there are still several limitations. To begin, the cohort used in this study were all from a very specific age group: 51 to 59 years of age. Furthermore, the cohort was only women who had higher education and a healthy lifestyle when compared to the rest of the population of Finland. This makes it highly unlikely that the results of the study would be representative of the public due to lack of gender, age, education, and lifestyle diversity. The authors also mention that

pandemic-related restrictions differed during the time of the study between countries, as well as within countries. Therefore, the results were very specific to central Finland at the time. This study is a great baseline for research to be conducted in the future about personality traits and changes in health behaviour due to the COVID-19 pandemic. Future researchers could benefit from using it as an example to conduct studies with a more diverse sample population.

One of the main limitations of the Rettew et al. (2020) study is that the population was of a small sample size of university students, particularly only from one university, so extrapolating the results is difficult for the general population. In addition to that, it is possible that the COVID-19 pandemic was not the main cause of one's faulty or improved adaptation, as there could have been a possible extraneous variable (Rettew et al., 2020). The final limitation is that these results of the study were conducted using self-report scales, which of course can have some subjective bias and a lack of objectivity to the results, leading to some validity and reliability errors (Rettew et al., 2020).

One of the main limitations of the Sutin et al. (2020) study is that there was some selection bias, especially surrounding the neuroticism trait, which in turn may have affected the results. In addition, the measure of the changes in one's personality traits were measured during the beginning or acute period of the pandemic, creating questions regarding the impact of the initial stages of the pandemic affected these changes or whether it was the later stages (Sutin et al., 2020). Another limitation presents itself through the definition of the difference between quarantine and isolation, and whether there was a difference in the effects to one's personality traits (Sutin et al., 2020). One of the final limitations is that there could have been an additional, unknown variable or situation that could have produced these results (Sutin et al., 2020).

The Zhang et al. (2021) study was cross-sectional with a sample size of only medical students at Wenzhou Medical University, which may cause some difficulties extrapolating the data to the general population. In addition to this limitation, the results and data were collected through self-report measures, leading to the possibility of objectivity not being fully present (Zhang et al., 2021).

Anglim & Horwood (2021) provided significant contributions to the understanding of well-being during the COVID-19 pandemic, however, there are still limitations with their research. One limitation is that this study was a between-subjects design (Anglim & Horwood, 2021). As a result, there is the possibility that extraneous variables may have influenced the study's results. Another limitation of this study was within the administration of tests as some of the surveys were optional, and therefore the results may be lacking validity (Anglim & Horwood, 2021).

As with most research studies, the Muro et al. (2021) study investigating the psychological impact of COVID-19 lockdowns on adult women has limitations to keep in mind. This study was conducted on 155 Spanish women, making it harder to generalize the findings to others due to the relatively small sample size and the specific characteristics of the participants that are not representative of the greater population (Muro et al., 2021). Additionally, the education, employment, and socioeconomic status of all the participants were relatively the same, again preventing the sample from being representative of an entire society and therefore imposing problems with generalizability (Muro et al., 2021). Additionally, the personality assessment used for this study is a condensed version of the big five personality inventory, which can limit the reliability of

personality assessments as it does not go into depth for each of the categories (Muro et al., 2021). This results in a vague understanding of the individual's personality rather than an in-depth analysis, which would be more accurate and reliable.

The Hvalshagen et al. (2021) article has similar limitations with generalizability of the study findings, as this study only focused on a very specific population. This specific group of participants is not representative of all undergraduate students' experiences with the transition to online learning due to the COVID-19 lockdowns. Additionally, it is important to note that the United States' approach to the pandemic and their lockdown rules are different than those of Canada's, and therefore there is an inconsistency in students' experiences because they will vary from country to country, making it difficult to generalize the findings to all undergraduate students (Hvalshagen et al., 2021).

Similar to the articles above, Folk et al. (2020) focuses only on college students and therefore has risks of generalizability. Another significant limitation includes the lack of a measure of well-being prior to the pandemic (Folk et al., 2020). The personality survey before the pandemic left out an extraversion measure, therefore changes within this measure were unable to be evaluated (Folk et al., 2020).

The study by Klimstra et al. (2013) focuses primarily on personality maturation and identity formation from establishing social roles in the context of intimate relationships, so the information may not apply in the context of the COVID-19 pandemic. Furthermore, the study relied solely on self-reports, and therefore holds the risk of bias (Klimstra et al., 2013). Another limitation of this study is that the majority of participants were women, so the findings may not be applicable to the greater population (Klimstra et al., 2013).

While there are limitations to all sources, the literature still gives relevant and reliable insight into personality, identity, adaptation, mental health, and the COVID-19 pandemic. All studies have limitations, as does ours, however these limitations are crucial in understanding next steps for future research and allowing us to know where our boundaries are.

Methodology

This research was approved by the McMaster Research Ethics Board (MREB#: 0327).

Participants

58 undergraduate students (n = 58) at McMaster University who are 18 years of age or older were asked to complete an anonymous online survey. All types of undergraduates were welcome to take the survey, regardless of being a domestic or international student.

Sampling method/design

The method that was used to collect research on our topic was a cross-sectional, quantitative methodological approach, utilizing an online anonymous survey hosted on the MREB approved platform, LimeSurvey. The sampling technique used was snowball sampling, a subtype of convenience sampling. At all stages, data collected and analyzed was anonymous and unidentifiable. Participants were able to withdraw from the survey at any point before the submission of their responses. They were informed of their right to withdraw from the project at the beginning of the survey. The survey consisted of 42 questions and responses, recorded on a Likert scale. Participants specified their level of agreement for each statement on a five-point scale.

Each OCEAN trait had three defining sub-traits, in which participants were asked to rank how much they related to the statement. Openness sub-traits include engagement in new activities, adventurousness, and creativity. Conscientiousness sub-traits include self-perception of being thoughtful and goal oriented, self-regulated, and being a good planner. Extraversion sub-traits include how much one enjoys socializing through events, social media, and social gatherings. Agreeableness sub-traits include how often one feels they exhibit or feel trust in others, selflessness, and kindness to others. Neuroticism sub-traits include a sense of worry, nervousness, and management of stress.

Recruitment

Each participant (undergraduate students, regardless of year) was recruited through physical flyers in person at McMaster University buildings. They were also recruited through digital means, including digital flyers through Facebook MSU student-run groups, MSU student-run clubs' social media pages, and program societies' social media pages (i.e., Facebook and Instagram). Every group member emailed their designated student-run groups as outlined in the ethics protocol. Physical flyers went through the McMaster Student Union, MSU printing services, and MSU Underground for approval and permission was granted to be posted on the McMaster campus. Additionally, MSU clubs were contacted for permission to post our digital recruitment poster on their social media feed.

Data analysis

Following the research proposal and ethics approval, data collection for this study began on November 15th, 2021, and ceased on February 18th, 2022. Analysis of data collected was done on Jamovi, a software approved by McMaster University. Codes were created for both questions and responses, which were later converted in Jamovi when calculating statistical data. The research group completed this data analysis together. All data was kept confidential, and data deletion occurred on April 30th, 2022.

Demographics

The participant demographics include the age, gender, current year of study, year of study when the COVID-19 pandemic hit, and participants' faculties. 12 participants (20.7%) were 18 years of age, 16 (27.6%) were 19 years of age, 8 (13.8%) were 20 years of age, 15 (25.9%) were 21 years of age, 2 (3.4%) were 22 years of age, 2 (3.4%) were 23 years of age, 1 (1.7%) was 24 years of age, 1 (1.7%) was 28 years of age, and a final 1 (1.7%) was 37 years of age. 8 (13.8%) participants identified as male, 48 (82.8%) identified as female, 1 (1.7%) identified as agender, and 1 (1.7%) identified as non-binary. The years of study include 14 (24.1%) first-years, 17 (29.3%) second-years, 5 (8.6%) third-years, 19 (32.8%) fourth-years, 2 (3.4%) fifth-years, and 1 (1.7%) participant did not specify. When the pandemic hit, 9 (15.5%) were first-years, 18 (31%) were second-years, 4 (6.9%) were third-years, 12 (20.7%) were in grade eleven, and 15 (25.9%) were in grade twelve. 11 (18.9%) participants were in the faculty of science, 3 (5.2%) were in the faculty of business, 4 (6.9%) were in the faculty of engineering, 4 (6.9%) were in the faculty of health sciences, 14 (24.1%) were in the faculty of humanities, 20 (34.5%) were in the faculty of social sciences, and 2 (3.4%) of participants did not specify.

Challenges & Risks

A challenge that occurred while collecting and analyzing data was that the study did not receive the desired number of responses. While the risk of graduate and medical students taking the survey was low, it occurred once during data collection, despite our intentions to study undergraduates and advertising only to this population.

Some survey questions posed the risk of potentially making participants uncomfortable or triggered as they were asked to reflect upon their experiences prior to and during the COVID-19 pandemic. However, the psychological risks to participants were no greater than those in everyday life. There were social risks to the survey, such as if a participant chose to take it in a public space, another person could have seen their responses, which could potentially be embarrassing or distressing for the participant. With that being said, the participants who engaged in this survey provided their implied consent by reading over the preamble and selecting a button indicating their consent to proceed with the survey.

The survey was edited to minimize the possibility of participants becoming uncomfortable or triggered. Furthermore, participants were informed that they could exit the survey at any point should they become uncomfortable or distressed. Participants were advised to complete the survey in a private setting, as to maintain their confidentiality and anonymity. The research posed no risks greater than those in everyday life.

Outline

The results section includes 13 figures presenting our statistical findings. Within the discussion section, the topics will be discussed in the following order: changes in personality, followed by changes in identity, variances in years of study, university, and personal experience. Finally, we will be discussing the validity of our hypotheses and research questions.

Results

This section summarizes and emphasizes significant findings, drawing upon a number of tables and graphs that depict the results from the survey questions. The main findings include higher neuroticism scores presently than prior to the COVID-19 pandemic, and lower openness, extraversion, and conscientiousness scores at the present time. Participants overwhelmingly indicated that their behaviour and personality has changed as a result of the COVID-19 pandemic, and that their university experience has been disrupted.

Figure 1 shows the paired sample t-test for participant's OCEAN personality traits before (measure A) and during (measure B) the pandemic. In this table, statistical significance is shown if measure B is greater than measure A, demonstrating that these traits have increased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For two neuroticism traits, "worry" and "nervousness," $p = < 0.001$, indicating that participants score higher in trait neuroticism now than they did before the pandemic, and that lower neuroticism is related to current pandemic conditions.

Figure 1

Measures of Personality – All Years (Measure A < Measure B)

Paired Samples T-Test

			statistic	df	p
A - New Activity	B - New Activities	Student's t	4.65	57.0	1.000
A - Adventure	B - Adventure	Student's t	6.14	57.0	1.000
A - Creativity	B - Creativity	Student's t	4.13	57.0	1.000
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	1.93	56.0	0.971
A - Self-Regulated	B - Self-Regulated	Student's t	1.55	57.0	0.937
A - Planner	B - Planner	Student's t	1.17	57.0	0.876
A - Socializing Events	B - Social Events	Student's t	5.96	57.0	1.000
A - Social Media	B - Social Media	Student's t	1.66	56.0	0.949
A - Social Gathering	B - Social Gatherings	Student's t	5.33	56.0	1.000
A - Trust	B - Trust	Student's t	6.17	57.0	1.000
A - Selflessness	B - Selflessness	Student's t	1.37	57.0	0.912
A - Kindness	B - Kindness	Student's t	2.38	57.0	0.990
A - Worry	B - Worry	Student's t	−8.60	57.0	<.001
A - Nervous	B - Nervous	Student's t	−7.30	57.0	<.001
A - Stress	B - Stress	Student's t	3.40	57.0	0.999

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} < 0$

Figure 2 shows the paired sample t-test for participants' OCEAN personality traits before (measure A) and during (measure B). In this table, statistical significance is calculated if measure A is greater than measure B, demonstrating that these traits have decreased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For all openness traits, two of three extraversion traits, and one neuroticism trait, p = < 0.001. Furthermore, for the conscientiousness trait, "thoughtful/goal oriented," p = 0.029, and for the agreeableness trait, "kindness," p = 0.01. This indicates that participants scored higher before the pandemic than they do now, and that these findings are significant. For the extraversion trait, "socializing through social media," p = 0.051, meaning that there was a drastic change, however it is not statistically significant.

Figure 2

Measures of Personality – All Years (Measure A > Measure B)

Paired Samples T-Test

			statistic	df	p
A - New Activity	B - New Activities	Student's t	4.65	57.0	<.001
A - Adventure	B - Adventure	Student's t	6.14	57.0	<.001
A - Creativity	B - Creativity	Student's t	4.13	57.0	<.001
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	1.93	56.0	0.029
A - Self-Regulated	B - Self-Regulated	Student's t	1.55	57.0	0.063
A - Planner	B - Planner	Student's t	1.17	57.0	0.124
A - Socializing Events	B - Social Events	Student's t	5.96	57.0	<.001
A - Social Media	B - Social Media	Student's t	1.66	56.0	0.051
A - Social Gathering	B - Social Gatherings	Student's t	5.33	56.0	<.001
A - Trust	B - Trust	Student's t	6.17	57.0	<.001
A - Selflessness	B - Selflessness	Student's t	1.37	57.0	0.088
A - Kindness	B - Kindness	Student's t	2.38	57.0	0.010
A - Worry	B - Worry	Student's t	−8.60	57.0	1.000
A - Nervous	B - Nervous	Student's t	−7.30	57.0	1.000
A - Stress	B - Stress	Student's t	3.40	57.0	<.001

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} > 0$

Figure 3 shows the paired sample t-test for lower year's OCEAN personality traits before (measure A) and during (measure B). In this table, statistical significance is calculated if measure B is greater than measure A, demonstrating that these traits have decreased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For two neuroticism traits, "worry" and "nervousness," p = < 0.001, indicating that participants score higher in trait neuroticism now than they did before the pandemic, and that lower neuroticism is related to current pandemic conditions.

Figure 3

Measures of Personality – Lower Years (Measure A < Measure B)

Paired Samples T-Test

			statistic	df	p
A - New Activity	B - New Activities	Student's t	2.456	30.0	0.990
A - Adventure	B - Adventure	Student's t	4.321	30.0	1.000
A - Creativity	B - Creativity	Student's t	3.455	30.0	0.999
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	3.024	29.0	0.997
A - Self-Regulated	B - Self-Regulated	Student's t	2.123	30.0	0.979
A - Planner	B - Planner	Student's t	2.244	30.0	0.984
A - Socializing Events	B - Social Events	Student's t	3.941	30.0	1.000
A - Social Media	B - Social Media	Student's t	0.536	29.0	0.702
A - Social Gathering	B - Social Gatherings	Student's t	3.713	29.0	1.000
A - Trust	B - Trust	Student's t	5.017	30.0	1.000
A - Selflessness	B - Selflessness	Student's t	2.188	30.0	0.982
A - Kindness	B - Kindness	Student's t	2.468	30.0	0.990
A - Worry	B - Worry	Student's t	−5.997	30.0	<.001
A - Nervous	B - Nervous	Student's t	−5.887	30.0	<.001
A - Stress	B - Stress	Student's t	3.049	30.0	0.998

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} < 0$

Figure 4 shows the paired sample t-test for lower year's OCEAN personality traits before (measure A) and during (measure B). In this table, statistical significance is calculated if measure A is greater than measure B, demonstrating that these traits have decreased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For two openness traits, two extraversion traits, and one agreeableness trait, p = < 0.001. Furthermore, for all the conscientiousness traits, one of the openness traits, and two of the agreeableness traits, p = < 0.05. This indicates that participants scored higher before the pandemic than they do now, and that these findings are significant.

Figure 4

Measures of Personality – Lower Years (Measure A > Measure B)

Paired Samples T-Test

			statistic	df	p
A - New Activity	B - New Activities	Student's t	2.456	30.0	0.010
A - Adventure	B - Adventure	Student's t	4.321	30.0	<.001
A - Creativity	B - Creativity	Student's t	3.455	30.0	<.001
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	3.024	29.0	0.003
A - Self-Regulated	B - Self-Regulated	Student's t	2.123	30.0	0.021
A - Planner	B - Planner	Student's t	2.244	30.0	0.016
A - Socializing Events	B - Social Events	Student's t	3.941	30.0	<.001
A - Social Media	B - Social Media	Student's t	0.536	29.0	0.298
A - Social Gathering	B - Social Gatherings	Student's t	3.713	29.0	<.001
A - Trust	B - Trust	Student's t	5.017	30.0	<.001
A - Selflessness	B - Selflessness	Student's t	2.188	30.0	0.018
A - Kindness	B - Kindness	Student's t	2.468	30.0	0.010
A - Worry	B - Worry	Student's t	−5.997	30.0	1.000
A - Nervous	B - Nervous	Student's t	−5.887	30.0	1.000
A - Stress	B - Stress	Student's t	3.049	30.0	0.002

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} > 0$

Figure 5 shows the paired sample t-test for upper year's OCEAN personality traits before (measure A) and during (measure B). In this table, statistical significance is calculated if measure B is greater than measure A, demonstrating that these traits have decreased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For two neuroticism traits, "worry" and "nervousness," $p = < 0.001$, indicating that participants score higher in trait neuroticism now than they did before the pandemic, indicating that neuroticism is related to current pandemic conditions.

Figure 5

Measures of Personality – Upper Years (Measure A < Measure B)

Paired Samples T-Test

			statistic	df	p
A - New Activity	B - New Activities	Student's t	5.181	26.0	1.000
A - Adventure	B - Adventure	Student's t	4.444	26.0	1.000
A - Creativity	B - Creativity	Student's t	2.371	26.0	0.987
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	−0.610	26.0	0.274
A - Self-Regulated	B - Self-Regulated	Student's t	0.000	26.0	0.500
A - Planner	B - Planner	Student's t	−0.901	26.0	0.188
A - Socializing Events	B - Social Events	Student's t	4.647	26.0	1.000
A - Social Media	B - Social Media	Student's t	2.101	26.0	0.977
A - Social Gathering	B - Social Gatherings	Student's t	3.792	26.0	1.000
A - Trust	B - Trust	Student's t	3.633	26.0	0.999
A - Selflessness	B - Selflessness	Student's t	−0.941	26.0	0.178
A - Kindness	B - Kindness	Student's t	0.570	26.0	0.713
A - Worry	B - Worry	Student's t	−6.310	26.0	<.001
A - Nervous	B - Nervous	Student's t	−4.400	26.0	<.001
A - Stress	B - Stress	Student's t	1.615	26.0	0.941

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} < 0$

Figure 6 shows the paired sample t-test for upper year's OCEAN personality traits before (measure A) and during (measure B). In this table, statistical significance is calculated if measure A is greater than measure B, demonstrating that these traits have decreased since the onset of the pandemic. On the right side of the table, the p-value indicates statistical significance. For two of three openness traits, two of three extraversion traits, and one agreeableness trait, p = < 0.001. Furthermore, for the conscientiousness trait, "creativity," p = 0.013, and for the extraversion trait, "socializing through social media," p = 0.023. This indicates that participants scored higher before the pandemic than they do now, and that these findings are significant. For the neuroticism trait, "stress," p = 0.059, meaning that there was a drastic change, however it is not statistically significant.

Figure 6

Measures of Personality – Upper Years (Measure A > Measure B)

Paired Samples T-Test

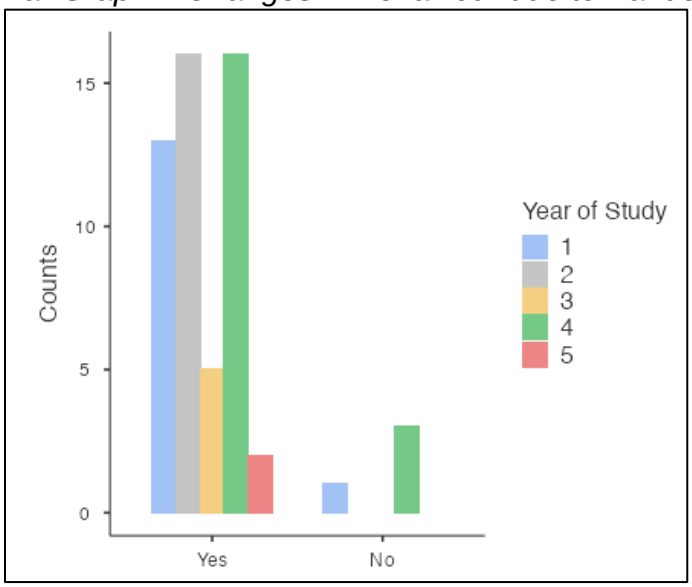
			statistic	df	p
A - New Activity	B - New Activities	Student's t	5.181	26.0	<.001
A - Adventure	B - Adventure	Student's t	4.444	26.0	<.001
A - Creativity	B - Creativity	Student's t	2.371	26.0	0.013
A - Thoughtful/Goal-Oriented	B - Thoughtful/Goal-Oriented	Student's t	−0.610	26.0	0.726
A - Self-Regulated	B - Self-Regulated	Student's t	0.000	26.0	0.500
A - Planner	B - Planner	Student's t	−0.901	26.0	0.812
A - Socializing Events	B - Social Events	Student's t	4.647	26.0	<.001
A - Social Media	B - Social Media	Student's t	2.101	26.0	0.023
A - Social Gathering	B - Social Gatherings	Student's t	3.792	26.0	<.001
A - Trust	B - Trust	Student's t	3.633	26.0	<.001
A - Selflessness	B - Selflessness	Student's t	−0.941	26.0	0.822
A - Kindness	B - Kindness	Student's t	0.570	26.0	0.287
A - Worry	B - Worry	Student's t	−6.310	26.0	1.000
A - Nervous	B - Nervous	Student's t	−4.400	26.0	1.000
A - Stress	B - Stress	Student's t	1.615	26.0	0.059

Note. H_a $\mu_{\text{Measure 1 - Measure 2}} > 0$

In Figure 7, participants were asked whether they believe their behaviour changed due to the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicated yes or no. This graph indicates that there is no difference in responses between upper and lower years. 93% of participants said yes, their behaviour has changed due to the COVID-19 pandemic, and 7% said no.

Figure 7

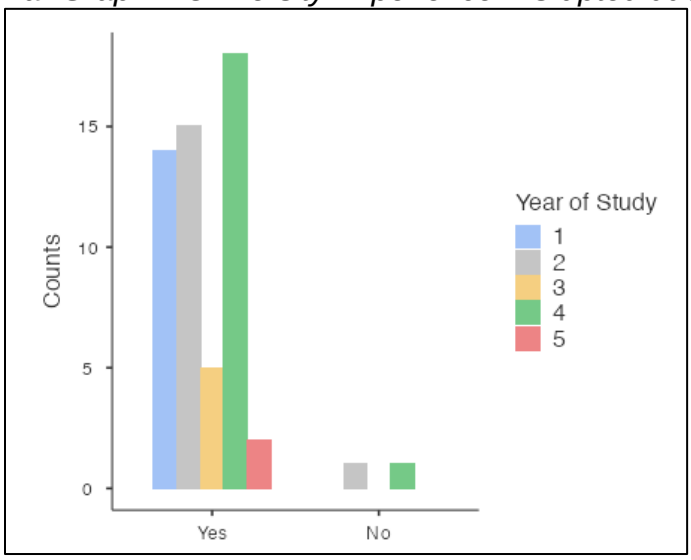
Bar Graph – Changes in Behaviour due to Pandemic



In Figure 8, participants were asked whether they believe their university experience was disrupted due to the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicated yes or no. 96.5% of participants said yes, their university experience was disturbed due to the COVID-19 pandemic, and 3.5% said no.

Figure 8

Bar Graph – University Experience Disrupted due to Pandemic

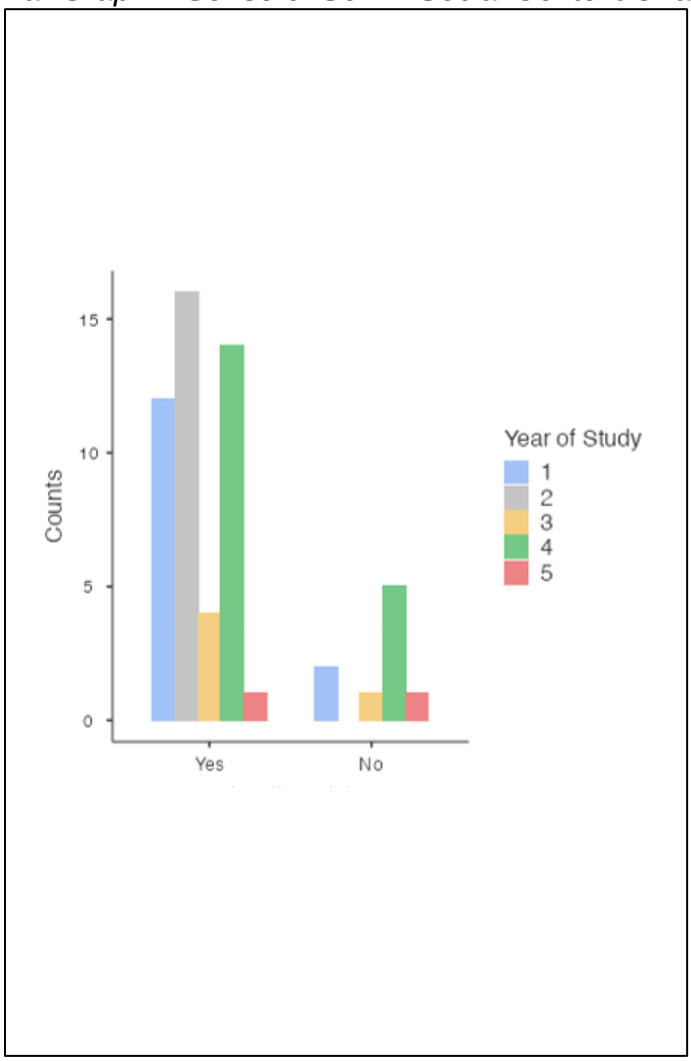


In Figure 9, participants were asked whether they believe their sense of self in a social context changed due to the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicated yes or no. This graph indicates that there is some variation in response between upper and lower years. 84.2% of participants

said yes, their sense of self in a social context has changed due to the COVID-19 pandemic, and 15.8% said no. First- and second-years scored the highest in feeling like their sense of self within a social context has changed. 100% of second-years, followed by 85.7% of first-years said yes. While upper years were slightly less, 80% of third-years, 73.7% of fourth-years, and 50% of fifth-years believed the COVID-19 pandemic has changed their sense of self in a social context.

Figure 9

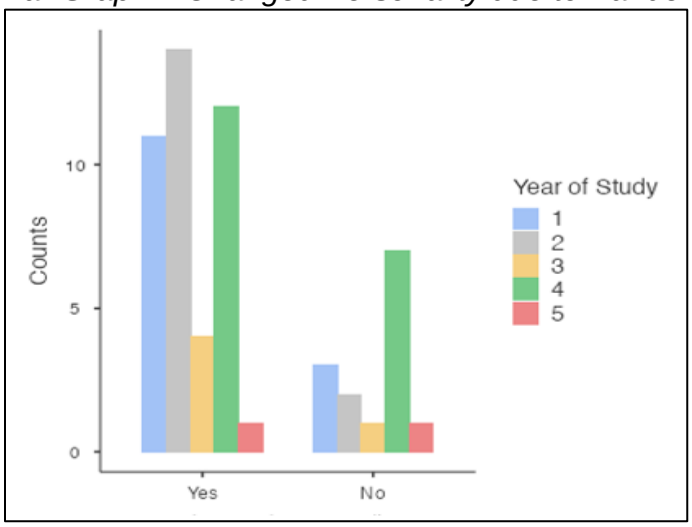
Bar Graph – Sense of Self in Social Context Changed Due to Pandemic



In Figure 10, participants were asked whether they believe their personality changed due to the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicated yes or no. This graph indicates that there is some variation in response between all years. 75.4% of participants said yes, their personality has changed due to the COVID-19 pandemic, and 24.6% said no. Of those who indicated no change, 36.8% of fourth-years indicated that their personality did not change as opposed to 21.4% of first-years. Furthermore, of those who indicated that their personality did change, there was a relatively even distribution in between lower- and upper-years.

Figure 10

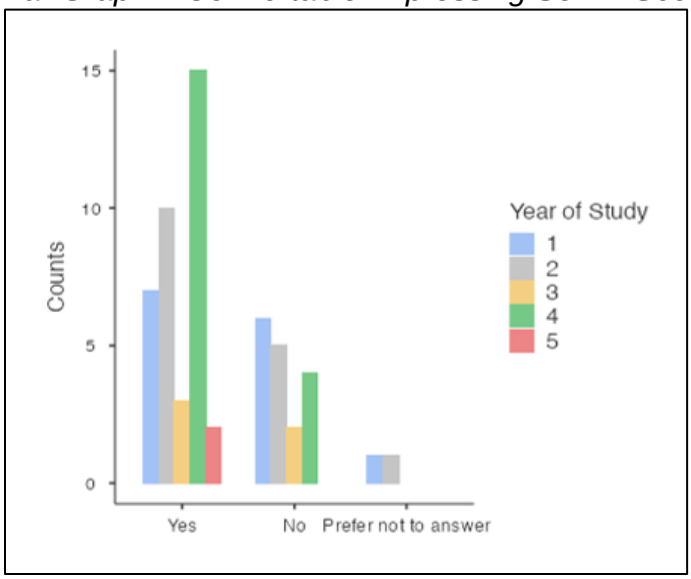
Bar Graph – Changed Personality due to Pandemic



In Figure 11, participants were asked whether they are comfortable expressing themselves in a social setting. This was defined to participants as wearing the clothes and makeup they want, speaking to and socializing with who they want. The bar graph displays the distribution of each participant's year and the counts of which indicated yes or no. This graph indicates that there is significant variation in response between all years, and a small number of individuals preferred not to answer this question. 66.7% of participants said their comfort of expressing themselves in a social context has changed due to the COVID-19 pandemic, 29.8% said no, and 3.5% preferred not to answer. 78.9% of fourth-years indicated that they are comfortable expressing themselves in a social context, whereas 50% of first-years indicated that they are comfortable expressing themselves in a social context.

Figure 11

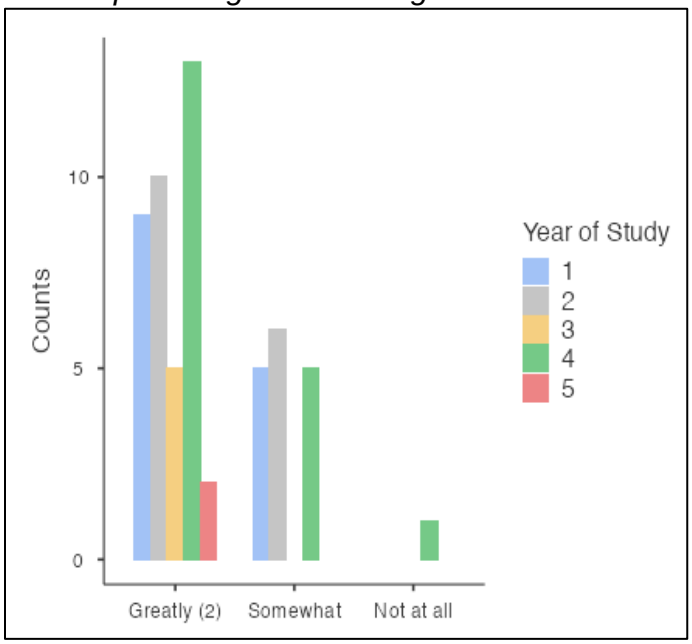
Bar Graph – Comfortable Expressing Self in Social Setting



In Figure 12, participants were asked about the degree to which they believe their routines and habits changed as a result of the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicate different degrees of change. 68.4% of participants indicated that their routines and habits were greatly impacted by the pandemic, 29.8% indicated that their routines and habits were somewhat impacted, and 1.8% indicated that their routines and habits were not impacted at all. This graph indicates that there is significant variation in response between upper- and lower-years. Of those who indicated their routines and habits changed greatly, the breakdown is as follows: 64.3% of first-years, 62.5% of second-years, 100% of third-years, 68.4% of fourth-years, and 100% of fifth-years. The breakdown for those who indicated that their routines and habits somewhat changed is as follows: 35.7% of first-years, 37.5% of second-years, and 26.3% of fourth-years. Only 5.3% of fourth-years indicated that there was no change in their routines and habits.

Figure 12

Bar Graph – Degree of Change in Routine and Habits

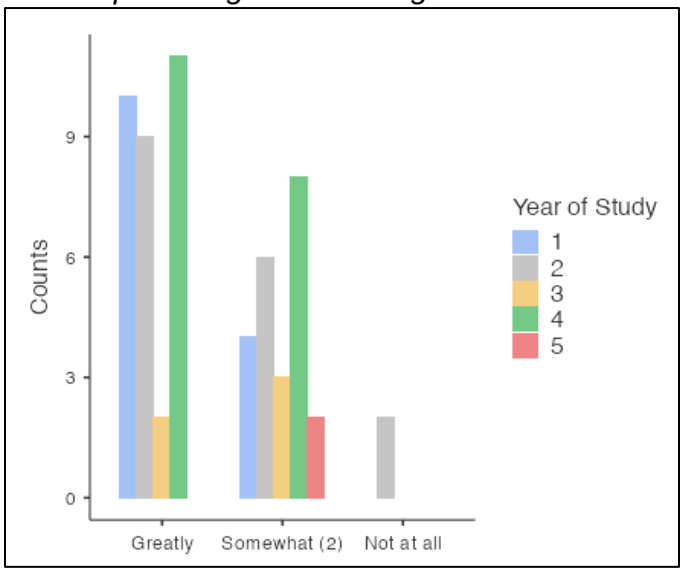


In Figure 13, participants were asked about the degree to which they believe their interests and past-times changed due to the pandemic. The bar graph displays the distribution of each participant's year and the counts of which indicate different degrees of change. 55.2% of participants indicated that their interests and past-times were greatly impacted by the pandemic, 39.7% indicated that their interests and past-times were somewhat impacted, and 5.2% indicated that their interests and past-times were not impacted at all. This graph indicates that there is significant variation in response between all years. The breakdown of variance for those who indicated their interests and past-times greatly changed is as follows: 71.4% of first-years, 52.9% of second-years, 40% of third-years, and 57.9% of fourth-years. For those who indicated their interests and past-times somewhat changed, the breakdown is as follows: 28.6% of first-years, 35.3% of

second-years, 60% of third-years, 42.1% of fourth-years, and 100% of fifth-years. Only 11.8% of second-years indicated that their interests and past-times did not change at all.

Figure 13

Bar Graph – Degree of Change in Interests and Past-times



Discussion

Research Questions and Hypotheses

This study sought to explore the sociocultural influences of the pandemic on the personality and identity of McMaster undergraduate students. We hypothesized that there would be a significant change in students' perception of their identities and personality as a direct result of the pandemic. Furthermore, we were curious if there would be any variation in the years of study. We hypothesized that first- and second-years would be higher in extraversion and neuroticism, and that third- and fourth-years would be lower in extraversion and neuroticism.

Changes in Identity

Our findings suggest that undergraduate students sustained a great amount of change to their identities and behaviour as a result of the COVID-19 pandemic. Students were asked whether they felt that their university experience was disrupted due to the pandemic, and as displayed in Figure 8, 96.5% of students indicated that their experience was disrupted. This points to the validity of our hypothesis that the pandemic was a major factor in the changes displayed in Figure 7, and Figures 9, 11, 12, and 13. In Figure 7, students were asked if they thought their behaviours had changed due to the pandemic. 93% of students indicated that their behaviours had changed, which reflect personality and identity. Kekäläinen et al. (2021) found that higher rates of extraversion and lower rates of neuroticism are associated with higher rates of leisure time and physical activity. While the present study did not ask participants about specific behaviours, the Kekäläinen et al. (2021) article shows that there is a significant link between behaviours and personality traits.

Furthermore, in Figure 12, 68.4% of students indicated that their routines and habits changed a great amount as a result of the pandemic, and in Figure 13, 55.2% of students indicated that their interests and past-times changed greatly as a result of the pandemic. These factors are heavily linked with identity as supported by previous research. Godinic et al. (2020) found that individuals will feel more identity disturbance in conjunction with more rigidity in self-identification of social or professional roles. Furthermore, Anglim & Horwood (2021) found that social isolation has negatively impacted extraverts, stripping them of their social identities. The findings of the current study's ratings of the personality traits conscientiousness and extraversion coincide with these two previous studies, as all show evident changes in identities.

In Figure 9, 84.2% of students believe that their sense of self in a social context changed due to the pandemic. 73.7% of fourth-years indicated that their sense of self in a social context did not change, compared with 85.7% of first-years, which is consistent with our hypotheses. Furthermore, in Figure 11, 78.9% of fourth-years indicated that they are comfortable expressing themselves in a social context, through wearing the clothes and makeup they want, and speaking with whom they want. 50% of first-years indicated that they are comfortable expressing themselves in a social context, which is also consistent with our hypothesis that first-years would have a less developed sense of identity.

Hvalshagen et al. (2021) found that the transition from in-person to online learning deteriorated their student identity. Those effects are evident in this study as it proves the longevity of the changes in their identity. Anglim and Horwood (2021) found that COVID-19 impacted routine, which consequently impacted individuals' mental health. Through this, we can infer that the undergraduate students in our study also had changes in their mental health as a result of the COVID-19 pandemic. Routines, interests and pastimes of participants in the current study were impacted due to the pandemic, similarly to these past studies.

Changes in Personality

In terms of personality, students were asked to self-report if they believe their personality has changed due to the pandemic. In Figure 10, 75.4% of students indicated that their personality had changed. Consistent with our findings, 36.8% of fourth-years indicated that their personality did not change, as opposed to 21.4% of first-years. This suggests that fourth-year students have a more established personality.

As seen in Figure 2, the p-value for all openness traits was < 0.001 when measure A is greater than measure B, meaning that people were higher in openness prior to the pandemic, concurring with the hypothesis. For lower and upper years, this trend persists, where two of three openness traits had a p-value of < 0.001 prior to the pandemic. Since openness decreased throughout the pandemic, it could indicate that individuals have suffered from a type of fatigue or an unwillingness to communicate with others. This may be predicated upon the fear of contracting COVID-19 or engaging in events that could risk their well-being in these times.

The conscientiousness sub-trait "thoughtful and goal-oriented" had a p-value of 0.029 when measure A is greater than measure B, as displayed in Figure 2. This indicates that this trait was higher prior to the pandemic. For lower years, all of the consciousness traits had a p-value of < 0.05, as displayed in Figure 4. This indicates that they scored higher

in conscientiousness prior to the pandemic. As displayed in Figure 6, the conscientiousness trait “creativity” had a p-value of 0.013, indicating that upper years were more creative prior to the pandemic. This decrease in creativity could be due to the lack of change in the environment given the isolation, individuals could not develop new ideas due to the lack of an interactive environment.

In Figure 2, two out three extraversion traits had a p-value of < 0.001. This trend continues for lower- and upper-years (see Figures 4 and 6), indicating that they were more extraverted before the pandemic. This finding partially confirms our hypotheses, as we thought that upper years would be lower in extraversion post-pandemic. However, we also hypothesized that lower years would be higher in extraversion post-pandemic as a result of having missed out on the opportunity to socialize with others, discover themselves, and establish an identity during their first year in university. Therefore, this invalidates our hypothesis.

In Figure 2, the agreeableness trait “kindness” had a p-value of 0.010. In Figure 4, the agreeableness trait “trust” had a p-value of < 0.01, and the remaining agreeableness traits were < 0.05, indicating that lower years were more agreeable prior to the pandemic. In Figure 6, the agreeableness trait “trust” had a p-value of < 0.01, indicating that upper years were more trusting prior to the pandemic. It is possible that these changes are due to the uncertain nature of the pandemic, regarding laws and rules, as well as fears of contracting COVID-19.

In Figure 1, when measure B is greater than measure A, the neuroticism traits “worry” and “nervousness” have a p-value of < 0.01, indicating that participants are higher in neuroticism now than before the pandemic. Stress has a p-value of < 0.01, as displayed in Figure 1, indicating that undergraduate students are less stressed now than they were before the pandemic. The same trend continues in lower years (see Figures 3 and 4) and upper years. However, in Figure 6, stress has a p-value of 0.059, meaning that there was a change for upper years, but it was not statistically significant. This finding contradicts our hypothesis because we believed that all students would be higher in all neuroticism traits post-pandemic. However, there could be multiple factors influencing lower stress levels in undergraduate students since the onset of the pandemic.

Sutin et al. (2020) found that neuroticism decreased over a 6-week period, however conscientiousness did not change. Our results contradict these findings, in which both conscientiousness and neuroticism did increase. Interestingly, only two out of three sub-traits of neuroticism increased, with the sub-trait of stress decreasing over the course of the pandemic. Klimstra et al. (2013) found that in young adults, levels of neuroticism decrease while levels of agreeableness and conscientiousness increase due to the expectation of young adults to invest in their social roles. This may indicate that undergraduate students in our study may have difficulty socializing moving forward out of the pandemic, as participants reported sub-traits of neuroticism increasing and sub-traits of agreeableness staying the same.

Changes in personality can have significant impacts on mental health. Although the current study did not directly focus on mental health, past literature can be used to presume the relationship between our results and mental health. Kekäläinen et al. (2021) found that lower rates of extraversion and higher rates of neuroticism were associated with increased depressive symptoms. Furthermore, Muro et al. (2021) discovered that high levels of neuroticism were linked with high rates of anxiety. Undergraduate students

in our study indicated lower extraversion and higher neuroticism as a result of the pandemic. It could be deduced that undergraduates in the current study may also be dealing with higher rates of depression and anxiety. High levels of conscientiousness, extraversion, and openness were protective against the stress of the pandemic, whereas high levels of neuroticism were more likely to lead to increased stress (Zhang et al., 2021).

Furthermore, a study by Rettew et al. (2020) found that participants' well-being would be higher, and they were more able to adapt to the stress of the pandemic if neuroticism was lower and extraversion, agreeableness, and conscientiousness were higher. The majority of undergraduate students reported lower levels of conscientiousness, extraversion, and openness as well as higher levels of neuroticism. It would be easy to assume that undergraduate students would be more stressed, however, upon examination of data, we found that stress levels decreased over the course of the pandemic (see Figure 1). The investigation of well-being is beyond the scope of this study, however, we can deduce that undergraduate students may have lower levels of well-being moving out of the COVID-19 pandemic due to OCEAN trait reports.

Variances in Years of Study and Experience

Regarding the differences in year of study and experience, we have discovered a lack of significant difference between the years of study, particularly among those in first and fourth year. Initially, we believed that first-year students would be more likely to be extraverted and high in neuroticism due to the lack of social identity within a university setting and their desire to establish one. Furthermore, we believed that fourth-year students would be more likely to be lower in neuroticism and extraversion, as they have established their social identity given their exposure to a normal first year university experience. However, this was not the case, as fourth-years displayed similar levels to first-years in extraversion and neuroticism (see Figures 3 to 6). This may have occurred due to a failure to consider how the pandemic may not have been so impactful in certain periods of life. First-year students are initially transitioning to university, thus resulting in high levels of neuroticism and extraversion; this can also be applied to fourth-year students, as they are transitioning out of university. Undergraduate students are attempting to re-establish their social identities throughout the life transitions of being a university student. This means that while the COVID-19 pandemic may have been an influential factor on personality and identity changes, it is possible that other life factors were equally or more influential.

Conclusion

Limitations

As with all research, there are several limitations involved with this study. To begin, the sample size was a small number of 58 participants, and therefore internal validity may be weak. Since the sample population is specific to McMaster undergraduate students, it will remain unknown without further research if the findings could be replicated. However, we believe that these findings could be generalized to undergraduate students at other universities and other individuals at different life stages who do not attend university. Furthermore, authenticity is questioned especially when reviewing anonymous online surveys. There is potential for people to answer dishonestly, or to answer in a way they believe we want to see, which can skew the findings. When conducting quantitative

research, such as our survey, there could be important details that are potentially missed. This is especially true considering that the survey consists primarily of closed-ended questions, offering participants no chance to elaborate or offer their own unique input. Although the COVID-19 pandemic has been tumultuous, the uncertainty still exists whether these changes could have happened regardless, as it is normal for social identity and personality to evolve over time. This applies particularly during major transitional periods of life. In addition, it should be noted that correlation does not equal causation, given that there are other extraneous factors that could have caused these traits in identity and personality to change. For example, the present study did not investigate the relationship these changes have in correlation with mental illness, due to the institution's ethical guidelines. Furthermore, the difference in stress levels (see Figures 1 to 6) before and after the pandemic could have been due to certain issues not addressed, such as socioeconomic issues, transportation, or accessibility of academics. Therefore, we cannot conclude if the responses of the participants in this study have been influenced by these factors.

Significant Insights

This research project can provide significant insight into how university students' personalities were affected by the COVID-19 pandemic. Knowing how a worldwide pandemic impacted individuals' ongoing perceptions of themselves can help us, as social scientists, understand what cognitive processes and behavioural attributes are most affected by these external circumstances. Being able to understand the correlation between the COVID-19 pandemic and changes to personality or identity can help provide insight as to why there is a surge in issues on mental health and well-being at a global scale. Additionally, investigating the findings of our study has the potential to provide a deeper understanding for the participants, who have recently been experiencing changes to their lifestyles, behaviours, thoughts, and personality. This allows participants to gain a comprehensive understanding of their identity transformation and the cognitive dissonance they may be experiencing.

This study can provide many practical applications, such as interventions, policies, and new social supports and services. Therefore, should another extraordinary circumstance occur, society will have better insight on how to cope and enact the proper support for individuals. For example, accessibility in higher education could be improved with hybridized education. Telemedicine has been helpful throughout the pandemic in alleviating some of the barriers in access to services. It should be further improved upon and promoted so that more individuals may access and utilize it. University students experience significant pressure while balancing school and work, without the added stress of contracting COVID-19. A general policy should be implemented in workplace environments and educational institutions to provide additional opportunities for leaves of absence specific to COVID-19.

These findings also provide a foundation for future researchers to expand upon the topic. It may be crucial to determine if the changes in personality and identity that have resulted due to the COVID-19 pandemic would be maintained or return to baseline levels. It would be beneficial to set further research in motion, as society has now begun its return to normal and COVID-19 restrictions are being phased out.

Summary and Concluding Thoughts

The COVID-19 pandemic has caused sudden and drastic changes to the way people are able to live their lives. These changes have been predominantly disruptive to social aspects of life, which are crucial to the self-discovery that occurs in the first few years of university as a result of the newfound freedom and independence. This research explored the impact that the COVID-19 pandemic continues to have on the personality and identity of undergraduate students at McMaster University. The research findings suggest that it is crucial to understand the implications of disrupted transitional periods of life because of the impact on personality and identity development. Without a strong sense of personality and identity, cognitive dissonance, mental turmoil, and disruption to life may occur. It is the duty of researchers and social scientists to identify ways for individuals to mitigate these effects and maintain a stable self-concept. Therefore, our findings contribute to the growing body of literature on both avenues of research: the study of personality and identity development and the impacts of the COVID-19 pandemic.

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Social Media as a Stage: A Behind the Scenes Analysis of Performative Activism, "Cancel Culture," and Effective Allyship

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Abstract

Activism on social media has become increasingly significant, with individuals sharing content online to advocate for various social issues and marginalized groups. Social media has become a prominent tool for global outreach and has also led to the emergence of social processes such as performative activism and "cancel culture" (Saint-Louis, 2021). These social processes warrant further examination in order to gauge their effectiveness, and to gain insight into online and offline activism. This study explores the motivations that individuals hold for engaging in activism online, and how external and internal factors might influence their decisions. Both quantitative and qualitative methodological approaches were employed in an anonymous online survey to gain insight into individual narratives regarding these social phenomena. Within the research, participants positioned online activism as the least effective in enacting meaningful change, yet they reported consistently engaging in this form of activism. Further, most participants believed that others advocated for social movements in order to gain approval from others, but stated other reasons when asked about their own motivations to post online. While the research found that the fear of "cancel culture" led to increases in online activism, the majority of participants suggested education as an alternative to this process. This research demonstrates the importance of reflecting on personal motives when engaging online and considering the meaning of effective allyship in order to enact progressive and long-lasting change.

Introduction

Activism on social media has become increasingly prominent, with individuals sharing content online to advocate for various social issues and marginalized groups. This form of activism can lead to the blurring of lines between effective allyship and posting with other motives in mind. Some individuals might feel pressured to engage in activism on social media, in order to avoid social alienation. Consequently, this may motivate them to engage in performative activism. Individuals participate in performative activism by advocating solely for the purpose of maintaining a social image, rather than providing meaningful and progressive support for a social cause (Lucie, 2021). Performative

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activism is often driven by the fear of social reprimands, primarily in the form of “cancel culture” (Petray, 2015). This phenomenon has become increasingly prevalent in society as a new way to publicly shame those who deviate from social norms. “Cancel culture” involves calling someone out, often on social media, for socially unfavourable behaviours (Petray, 2015). Through “cancel culture,” individuals are held accountable for their actions, either past or present (Saint-Louis, 2021). However, it is unclear whether this method of accountability is actually effective and serves the best interests of all the parties involved. Although social media has become a significant tool for global outreach, it has also brought about new social processes, such as performative activism and “cancel culture,” which warrant further examination in order to gauge their effectiveness.

Overview of Final Paper

Within this paper, we introduce our topic of study, our purpose for conducting this research, and our guiding research questions. We then discuss the existing literature in relation to the topics within our study and acknowledge gaps in the field that directed our own research. Next, we identify the theoretical frameworks we have chosen to apply to the various social phenomena, including Goffman’s Dramaturgy, Social Desirability Bias and Social Identity Theory. Following the theories, we outline the steps we took throughout the research process, ethical considerations and the necessary actions to combat them, along with any challenges we faced. We also discuss our methodology, in which we describe the steps in the research process, including participant recruitment, data collection, and data analysis. We then expand on the ethical considerations regarding the methodology and explain how we maintained proper ethical conduct throughout the research process. Next, we present the results of our research using the appropriate charts, graphs, tables, and figures. Additionally, in the discussion section, we analyze and interpret the results we distinguished, and connect them to existing literature and our theoretical frameworks. Furthermore, we address the limitations of our study and any significant insights our research provided. Finally, we summarize the content of our research paper and provide some concluding thoughts.

Purpose of the Research

Within our research, we investigated the increasing prevalence of social media activism and the related phenomena surrounding performative activism and “cancel culture.” We explored the motivations that individuals hold to engage in these practices, as well as how external and internal factors might influence their decisions online. Throughout the research process, we gained a better understanding of the effectiveness of performative activism in enacting change and the use of “cancel culture” to encourage accountability (Bouvier, 2020). Examining the effectiveness of these phenomena provided us with significant insights about the most meaningful ways to advocate for ourselves and others. As well, this research allowed us to be more educated about the experiences of marginalized communities in order to be more informed and active allies. We hope that this research will provoke readers to critically reflect on how they engage in activism, both online and offline. In addition, we hope this will encourage individuals to consider the motivations that guide their engagement in activism and whether they believe their actions are truly effective. Ultimately, we are hopeful that this research can

incite introspection within ourselves and others to consider the impact of our actions in creating productive change.

Research Questions

Our research study was guided by two overarching questions. Our first question states, "how effective is performative activism (i.e., advocating for a social cause solely to maintain a positive social image) as a method of advocacy and what motivation do individuals hold for engaging in this type of advocacy online?" The purpose of this question was to understand what influences individuals to engage in performative activism and whether it helps or hinders social movements online. This question is relevant as performative activism has grown in prevalence and existing research does not adequately address its effectiveness. Thus, we wanted to gain insight into whether it serves the purpose of enacting real social change. The second question poses, "how does the fear of social alienation, or fear of being "cancelled" (i.e., when individuals who deviate from social norms are called out by others, often on social media), alter individuals' attitudes and behaviours in relation to online activism?" With this question, we explored the role that "cancel culture" plays in driving individuals to advocate for social issues online. As well, this question allowed for an examination of how individuals might conform to social norms, in order to avoid being rejected. We constructed this question as "cancel culture" has emerged as a new form of social ostracization and we wanted to investigate how effective it is in holding individuals accountable for their actions.

Literature Review

Social Media Activism

With its increasing prevalence, social media plays a pivotal role in facilitating the spread of information and organizational action within social movements (Murthy, 2018). Scholars have conceptualized social media activism as, "a fundamentally communicative process that involves individuals' communicative actions to collectively solve problems" (Chon & Park, 2019, p. 75). Social media provides a space for individuals to relay their opinions and stories, as well as organize collective action (Chon & Park, 2019). It has rippling effects which can impact various components of social movements, from the mobilization of resources to actual interventions (Murthy, 2018). Beyond acting as a form of communication, social media platforms such as Twitter have been described as dominant organizing mechanisms which frame the foundation of a social movement's structure (Murthy, 2018). Ultimately, social media acts as a tool to assist in the swift development of social movements that occasionally translate from online to offline (Murthy, 2018).

The phenomenon of online activism is accompanied by contrasting perspectives which either considers it to be effective or ineffective (Murthy, 2018). Particularly when it was a new and unfamiliar concept, online activism was disregarded and labeled as "slacktivism" (Greijdanus et al., 2020). This term depicted online activism as effort-free, unproductive, and a concept that inhibited more effective and effortful offline protests (Greijdanus et al., 2020). A trade-off hypothesis was considered which argued that online activism was substituting offline activism in a negative correlation (Greijdanus et al., 2020). A number of studies were conducted that tested this hypothesis, keeping several factors in mind (Greijdanus et al., 2020). For example, it was found that activism taking place online does

not inhibit offline activism if those partaking in it believe their actions are effective (Greijdanus et al., 2020). Factors such as age were also addressed as studies found that older individuals did not perceive online engagement as sufficient (Greijdanus et al., 2020). Overall, while a minimal number of isolated studies suggested that offline activism is sometimes replaced by online activism, it is relatively rare, as the relationship between the two seems to be more complicated than that (Greijdanus et al., 2020).

The evidence suggests a positive correlation between online and offline activism occurring through a number of intrapersonal and interpersonal effects (Greijdanus et al., 2020). Engagement in activism online can prompt people to also partake in offline activism, as small-scale actions online may facilitate their participation in more costly action offline (Greijdanus et al., 2020). Furthermore, activism on social media may lead to the emergence of social identity within individuals, formed based on similar interests, morality, solidarity, shared beliefs about the given issue, self-efficacy, and injustice (Greijdanus et al., 2020). The development of this social identity may serve as a precursor to encourage these individuals to participate in offline protests (Greijdanus et al., 2020). A reverse effect may also occur in which offline activism prompts online action (Greijdanus et al., 2020). In addition, interpersonal effects are present as a result of individuals coordinating, recruiting, and developing social identities, along with sharing information online prior to, during, and following the initiation of a movement (Greijdanus et al., 2020). In such effects, social media acts as a crucial tool for assembling new participants for offline protests (Greijdanus et al., 2020). Intrapersonal and interpersonal effects relating to online and offline activism illustrate the strong positive correlation that exists between the two (Greijdanus et al., 2020).

Performative Activism

Performative activism refers to the fundamental shift of engagement when bringing about social change (Lucie, 2021). Petray (2015) explains that “online activism could be done well, but often is not” (p. 25). More often, those who engage in online activism treat it as a trend and fail to enact real and positive changes in regard to social causes (Lucie, 2021). Looking at the indistinct line between performative activism and genuine allyship, Petray (2015) exemplifies how individuals engage in activism for the wrong reasons. For one, simple actions such as “clicking the like button,” or merely using hashtags, demonstrates minimal effort, labelling such individuals as “slacktivists” (Petray, 2015, p. 27). These ineffective actions divert attention to the individual self rather than a larger movement, preventing their voices from being heard. In a study examining the effectiveness of online activism, Dookhoo (2019) found that most individuals who participate in online activism were not optimistic that their actions would bring about real social change. If engagement on social media is perceived as ineffective or silent, the public is quick to denigrate the morals of that individual, regardless of whether they have sustained interest in the issue (Velasquez & LaRose, 2015). Therefore, with this fear of ostracism, the motivation of those who engage in performative activism is merely to gain social capital and satisfy the audience, even if that means amplifying silence rather than uplifting oppressed voices (Strother, 2021). Bobel (2007) suggests that the motivation behind online activism can be difficult to determine without delving deep into one’s individual identity. Thus, if it is vividly seen that people are petitioning, protesting,

donating, or doing more than the bare minimum, many would consider them to be genuine activists (Sullivan & Esmail, 2007).

On Tuesday June 2nd, 2020, what was intended to be a day of reflection for the Black community quickly became yet another example of performative activism; this day was referred to as 'Black Out Tuesday' (Strother, 2021). On this day, many individuals changed their profile pictures and posted black squares on their social media in hopes to 'black out' digital platforms. The goal was to pause and acknowledge the systemic racism taking place within society, in regard to the unjust treatment of the Black community (Strother, 2021). Unfortunately, many individuals used this silent protest as a way to gain social capital and bolster their public image. This raised concerns as skeptics began to question individuals' true intentions behind posting these empty black squares, whilst remaining silent on social inequalities that exist in one's day-to-day life (Strother, 2021). During this time, there was a group consensus that those who did not wish to participate by posting a black square would be ostracized and rejected by their peers, as well as society at large. This pressured individuals to engage in performative activism in order to maintain their public image and avoid social condemnation. The awareness of social capital ultimately creates cynicism about whether individuals are actively trying to pursue change or if they are doing it out of fear or to gain social standing (Lucie, 2021).

"Cancel Culture"

The increased connectivity individuals experience due to advancements in technology has created a culture of cancellation (Velasco, 2020). "Cancel culture" occurs when individuals who transgress societal norms are called out or ostracized, often on social media (Saint-Louis, 2021). Within "cancel culture," individuals withdraw their support of someone who they consider to be acting in an unacceptable or problematic manner, such as being accused of bullying, racism, sexism, or homophobia (Mueller, 2021). The collective action of "cancel culture" can be directed towards public figures, corporations, or any individual who deviates from prescribed norms (Mueller, 2021). "Cancel culture" can have long-lasting consequences for the individual being called out, such as being fired from their job, publicly shamed, or having their personal information shared (Saint-Louis, 2021). Public shaming and forced apologies are not a new phenomenon, as this has occurred for centuries in various forms. However, digital technology has created an environment in which an individual's behaviour is constantly documented and accessible at any time (Mueller, 2021). This constant surveillance of online activity has contributed to the growing prevalence of "cancel culture," and as Velasco (2020) states, "anyone, therefore, can be subjected to the culture of cancellation" (p. 6).

Although "cancel culture" has rapidly increased in prominence within the digital world, there has been some debate about the morality and effectiveness of "cancellation" as an active practice. The strategy of "cancel culture" can be a tool that helps marginalized communities achieve social change, especially those who might be unable to obtain a public apology or any legal amends otherwise (Norris, 2021). In addition to this, the process of "cancellation" can highlight abuses of power and hold public figures accountable for their words and actions (Norris, 2021). "Cancel culture" also creates a space for open debate and examination of the shared values within a community (Mueller, 2021). However, some believe that "cancel culture" is divisive and polarizing, and that it can be considered a form of extortion or intimidation (Mueller, 2021). Within this practice,

language is weaponized to call attention to those who are acting in a way that defies societal expectations, creating an environment in which “everyone is empowered to sanction bad behaviour” (Mueller, 2021, p. 10). For example, when the controversial view of transgender women was brought forward by J.K. Rowling, the author of the Harry Potter series, people felt entitled to come forward on social media and condemn her opinion (Saint-Louis, 2021). These actions prompted Daniel Radcliffe, who plays the main character in the film adaptation of her novels, to publicly disassociate himself from her view (Saint-Louis, 2021).

As a result, “cancel culture” also intensifies self-censorship, as individuals fear being “cancelled” if they express an idea that contradicts the dominant socially acceptable norms (Velasco, 2020). “Cancel culture” can also be damaging through the practices that it leads to, such as doxing. Doxing takes place when an individual’s private information is shared on the internet to bring harm to them as part of their “cancellation” (Saint-Louis, 2021). These practices not only deeply impact the life of the individual being “cancelled,” but also the lives of those close to them.

Allyship

With the rise of social media activism, allyship is a term which has garnered significant attention (Bourke, 2020). The concept of allyship “reflects a state of being connected to the expression of an ally identity” (Bourke, 2020, p. 179). Possessing the identity of an ally often involves belonging to the dominant group and working to end oppression by supporting and advocating for marginalized groups (Bourke, 2020). Furthermore, to be an ally means to make a conscious commitment to impede and diminish cycles of injustice (Bourke, 2020). Effective allyship occurs when individuals recognize the power and privilege they possess, and intentionally transfer these benefits to marginalized communities (Clark, 2019). Jenkins (2009) situates the concept of allyship into three separate categories. Firstly, an ally aims to provide a sense of support and solidarity towards oppressed populations (Jenkins, 2009). The second aspect of an ally’s role is to use their voice to be an advocate for change and speak out against issues such as injustice (Jenkins, 2009). Lastly, allies are agents who take an action-oriented approach to create changes in systems that may have major power imbalances (Jenkins, 2009).

Implications and Limitations of Existing Literature

Although there is extensive literature discussing social media activism, performative activism, “cancel culture,” and allyship, there are still gaps that can be further examined. As well, more research is needed to describe the intersection of these social phenomena, and how they influence one another. Firstly, social media has played a pivotal role in altering the landscape of activism, and its influence exists on a large scale. However, existing research does not adequately grasp the important role social media plays in shaping and mobilizing social movement organizations (Murthy, 2018). In addition to this, more research is needed to decipher the intrinsic and extrinsic motivations individuals may hold for engaging in online activism, in order to fully understand its effectiveness. Moreover, many researchers often fail to understand the psychological reasoning that leads individuals to engage in performative activism. Dookhoo (2019) argues that the driving force behind this inclination to maintain social appearance is a direct cause of humans' emotional, social, habitual, and cognitive needs.

There is insignificant research regarding the motivations and intentions of activists, and how they contribute to online and offline action (Strother, 2021). As well, not enough research has been conducted on the social repercussions of disengagement in online activism, and what these reprimands, such as "cancel culture," might look like. "Cancellation" often focuses on demonizing the individual, rather than discussing their actions (Bouvier, 2020). Thus, more research is needed in this field to find alternative ways to approach individuals who deviate from societal norms, rather than publicly shaming or intimidating them on social media. In addition, there should be more research carried out to understand people's thoughts on "cancel culture," and how the idea of being "cancelled" makes them feel. This is lacking in current research as most take on an objective stance through the observation of past celebrity or citizen "cancellations," or through the collection and analysis of pre-existing social media posts. In addition, more research is needed in the realm of allyship, specifically digital allyship, as it is a relatively recent concept.

The existing literature forms the foundation of our own research as we examine the ways in which social media activism, performative activism, "cancel culture," and allyship interact with one another. The limitations identified in the existing literature will guide our own research as we explore how an individual's motivation to engage in performative activism on social media might be fueled by the potential consequences, such as "cancel culture," and the effectiveness of this kind of advocacy.

Theories

Dramaturgy

Dramaturgical theory was coined by sociologist Erving Goffman (1959) in his book, *The Presentation of Self in Everyday Life*. Goffman was interested in studying human interactions at a micro-level and found that individuals interact with one another in a form that is similar to a grand play (Goffman, 1959, as cited in Kivisto & Pittman, 2007). Goffman makes these connections within his theory in order to explain how people either consciously or subconsciously portray themselves using theatre as a trope (Goffman, 1959, as cited in Kivisto & Pittman, 2007). Goffman describes individuals as "actors," and the world is represented as a stage that they perform on (Goffman, 1959). The individuals whom we interact with are considered to be our "audience" (Goffman, 1959). Audience characteristics and the size of the audience plays a large role in how we behave, which is referred to as "region behaviour" (Goffman, 1959). Goffman suggests that region behaviour is a mechanism used to manipulate our audience's perception of reality, which ties into another key part of this theory called impression management (Goffman, 1959, as cited in Kivisto & Pittman, 2007). Impression management is the effort to influence the perceptions that our "audience" has of us, even if it is to provide an insincere or false reality (Goffman, 1959). Goffman wanted to understand how and why people engage in this insincerity, as well as what happens when we are unsuccessful with it (Goffman, 1959, as cited in Kivisto & Pittman, 2007). In order to manage the impressions of others, "actors" may use certain dialogue or "costumes," which refer to the clothes or accessories we wear and select based on our audience at the time (Goffman, 1959).

Within Goffman's dramaturgy, actors construct an identity that they choose to project in social settings, and they might adopt different personas depending on the expectations of the audience (Goffman, 1959). Goffman describes the "front stage," as the impression

that an individual has formed of themselves, with their performance incorporating socially accepted values (Goffman, 1959). The “front stage” is public and includes an audience, thus individuals put on ‘a show’ that aligns with the expected image people might have of them (Goffman, 1959). As long as they remain within the “front stage,” individual actors attempt to ‘keep up appearances’ in order to manage their impression (Goffman, 1959). On the other hand, the “back stage” is a private domain in which individuals can “step out of character” (Goffman, 1959, as cited in Robinson & Schulz, 2016, p. 57). Within the “back stage,” individuals do not need to maintain a certain impression, and can be more honest, avoiding any threats to their identity (Goffman, 1959). Goffman suggests that “front stage” and “back stage” performances are separate from one another, however, virtual stages that now exist due to the increasing prominence of social media platforms have blurred the line between these two stages (Goffman, 1959, as cited in Kilvington, 2020).

Within the virtual “front stage,” individuals attempt to display an idealized version of themselves, while the virtual “back stage” offers individuals a more relaxed performance that can take place through private messaging platforms (Kilvington, 2020). However, the boundaries between these virtual stages are blurred as virtual “front stages” often feel very personalized and private, even though they are visible to the public (Kilvington, 2020). Thus, individuals might feel more comfortable sharing their true opinions, even if they are harmful to others, in the virtual “front stage” that would normally be shared within their “back stage” during an in-person social interaction. The ambiguous boundaries between these virtual stages are evident through online hate speech that has become more prominent, as individuals are less fearful of its consequences within the virtual stage (Kilvington, 2020). For example, there have been many instances where public figures have been exposed for harmful actions within their virtual “back stage” that eventually seeped into their virtual “front stage” (Kilvington, 2020).

We used Goffman’s dramaturgy to analyze why individuals decide to post or share certain content on social media, and how the content they share differs between their virtual “front stage” and virtual “back stage.” We also used dramaturgy to examine the motivation behind an individual’s decision to advocate for particular issues or movements on social media platforms, and how their actions in these spaces contribute to their overall impression. Goffman’s dramaturgy was also useful as we investigated the impacts of “cancel culture” on an individual’s performance and identity, and how the fear of being “cancelled” may fuel their actions within the virtual stage.

Social Desirability Bias

Allen L. Edwards introduced the notion of social desirability, looking at individuals who strive to avoid repercussions by rejecting socially undesirable behaviours, and admitting to the desirable ones (Edwards & Diers, 1962, as cited in Chung et al., 2003). Social Desirability Bias (SDB) focuses on respondents’ propensity to respond to questions in a form that others perceive as favourable (Chung & Monroe, 2003). A major theory of SDB by Delroy L. Paluhus provides two dimensions for response bias that explain participant motives: impression-management and self-deception (Chung et al., 2003). Those who attempt impression management strategies tend to sway people’s perceptions of their social identity, impacting how others regard them, as well as potential consequences (Chung et al., 2003). Meanwhile, self-deception looks at the unconscious tendencies that individuals hold to view themselves as favourable, by maintaining a positive self-concept

(Chung et al., 2003). This dimension differs from person-to-person through psychological elements that construct how one discerns the world. Thus, social desirability can be conceived through the motivation to maintain social approval, or through a personality construct (Phillips & Clancy, 1972).

However, Graeff (2005) states that the results of SDB vary based on the nature of data collection, such as the degree to which an individual seeks to present themselves in a positive light, as well as whether the respondent's answers will be publicized or anonymous (Graeff, 2005). Anonymous surveys allow individuals to feel that their opinions are being valued equally, without fear of their identity being exposed to others. Thus, if there is a fear of social approval, individuals are more likely to provide favoured answers with the anticipation of receiving positive appraisal from others, rather than expressing their genuine beliefs. Furthermore, if respondents are able to predict the types of responses that would gratify the researchers, it may also have an impact on the SDB outcome (Graeff, 2005).

Moreover, individuals tend to hold contradictory beliefs about themselves and those around them, making them more likely to disprove of their own undesirable behaviours, rather than others (Chung et al., 2003). When Social Desirability Bias occurs, participants anticipate their responses to look good in the eyes of others by providing socially accepted answers (Chung et al., 2003). For example, after an influencer is "cancelled" or "called-out," the public's criticism vastly affects their reputation and their public image. In such a circumstance, influencers often feel obligated to combat the allegations with an apology video acknowledging their mistakes. With an increasingly prominent internet culture, public figures tend to present themselves as desirable to others through a form of apology, in order to avoid being ostracized.

Using Social Desirability Bias to form our research and analyze the topics being studied benefitted us when we examined the intentions and motivations behind those who engage in performative activism, and whether they fear expressing beliefs that could have a negative impact on certain groups. In addition, through participant experiences and opinions, we came to understand whether there was a fear of being "cancelled" within those who engage in performative activism, merely because they feel obligated to present themselves in a desirable light. Fisher (1993) states that if respondents feel discomfort with reporting their genuine views and experiences, they are more probable to act contrary to the expectations of others in order to achieve a social purpose. Ultimately, this could motivate individuals to engage in performative activism online for a desirable and positive outcome from others. Lastly, we used this theory to investigate if conscious false beliefs coexist with opposing unconscious genuine beliefs, where individuals may act upon objectives that are contrary to their actual interests.

Social Identity Theory

Originally proposed by European psychologists Henri Tajfel and John Turner, Social Identity Theory refers to the intersection between one's self and perceived group affiliation (Tajfel et al., 1979, as cited in Trepte, 2006). It is the self-categorization of individuals aligning themselves with social groups, in search of belongingness; this is the product of a person's self-esteem being derived from their perceived membership within a group (Trepte & Loy, 2017). Social Identity Theory emphasizes how social groups guide individual and collective behaviours, thus enticing positive perceptions of one's self in

relation to their disposed group (Trepte & Loy, 2017). In order to maintain a positive self-concept, social groups tend to hold ethnocentric values. This is done whilst engaging in a downwards comparison and undermining those affiliated with other groups to boost their own morale, consequently leading to the formation of 'in-groups' and 'out-groups' (Trepte & Loy, 2017). Out-group members are typically those who do not share the same attitudes and beliefs as the in-group, nor do they conform to social norms, and they are not afraid to voice their own opinions (Trepte & Loy, 2017). Those who choose to deviate from prescribed social norms are commonly devalued as members within society, rejected by peers, and receive major backlash from the community (Greijdanus et al., 2020). By subjecting those with divergent values to scrutiny and negative biases, the in-group is able to maintain a positive social identification with its members. Thus, this leads to the devotion of more individuals and increased access to resources, consequently furthering the divide between the two groups (Trepte & Loy, 2017).

With the emergence of media in today's society, it has become easier for the in-group to broaden their hold on society as there is a high demand for social acceptance, as well as a desire to be part of something greater than oneself. Further, through a close analysis of an individual's perceived group status, Social Identity Theory is able to predict behaviours and aptitude for social mobility between groups (Trepte, 2006). Essentially, if an individual engages in something even remotely outside of the in-group's ideals, they will be rejected and pushed to the out-group.

Moreover, there has been a recent societal shift in which certain attitudes and behaviours are now deemed unacceptable, despite previously being considered the norm, such as homophobia. Further, those whose beliefs do not align with the in-group's values are considered deviant beings and are subjected to social scrutiny, in addition to being alienated by their community (Trepte & Loy, 2017). In turn, this lessens or completely diminishes one's social capital, thus making them part of the out-group. In addition, on social media, there has been an emergence of online activism to shed light on pressing social issues. Individuals are constantly pressured by others to engage in online activism, in order to maintain their social capital. Thus, those individuals who do not wish to participate in advocacy demonstrations are subjected to social condemnation. In order to avoid social reprimands, individuals may engage in performative acts, as well as alter their attitudes and beliefs, in order to be socially accepted.

The first core tenet of Social Identity Theory, which sets its foundation, is the process of social categorization. In order to make sense of the world, individuals create categories and schemas in their mind that assist them in processing information (Trepte, 2006). Likewise, individuals categorize other people into groups and shape social interaction based on those perceived groups (Trepte, 2006). Similarly, individuals engage in self-categorization, in which they establish their own social group memberships (Trepte & Loy, 2017). These memberships may become integrated into one's own social identity if their values align, and as a result, they internalize them as a part of their self-concept (Trepte & Loy, 2017). In addition to the process of social categorization, the "accentuation principle" plays a role in emphasizing group memberships, as individuals tend to accentuate the similarities of their in-group, along with the differences of the out-group (Trepte & Loy, 2017).

Social categorization relates to our research topic surrounding performative activism and "cancel culture" as it outlines the way in which individuals distinguish themselves and

their in-group, as well as outliers who they consider to be part of the out-group. In terms of our research, individuals categorize others on the basis of shared beliefs. They create a dichotomy between people who have the same beliefs as them, which they consider to be right, and those who have alternate views, which they perceive as wrong. By distinguishing their perception of right and wrong, they choose to solely associate with those they perceive to be part of their in-group.

Another key component of Social Identity Theory is social identification. This principle refers to the process through which individuals identify with a group, invest their emotions into it, and alter their behaviour in accordance with their membership (Trepte, 2006). The concept of social identification can be applied to this research as individuals choose to identify with certain groups on the basis of shared beliefs and separate themselves from others whom they place in the out-group. Individuals go as far to disassociate themselves entirely from anyone or anything that has opposing beliefs to their own. For example, in order to emphasize their identity with their in-group, individuals often boycott certain companies and brands that do not comply with their morals. By doing so, they amplify their position on the side of the dichotomy, while emphasizing their disengagement with the other side.

Furthermore, the process of group membership influencing behaviour relates to our topic as social identification with one's in-group can motivate individuals to continue engaging in online and offline activism (Greijdanus et al., 2020). Activism on social media tends to create an online community, which can lead to the emergence of a new social identity within participants (Greijdanus et al., 2020). Social identification within these online communities has been found to facilitate participation in continued online activism, along with a drive to engage in offline action as well (Greijdanus et al., 2020). The concept of social identification is highly relevant in terms of our research topic as it highlights the way that individuals define themselves and others, as well as influencing their drive to engage in activism.

The final key tenant of Social Identity Theory is the cross-comparison between social groups in order to gain self-esteem, reinforce membership, and further the divide between groups (Trepte, 2006). In relation to performative activism, one underlying force behind engaging in online advocacy is to gain social capital and, in turn, increase self-esteem (Strother, 2021). This is exemplified through individuals who passively post about social issues on their social media platforms with little to no background knowledge on the issue at hand. Through performative activism, people are able to unite and stand together for a cause, thus strengthening ties between members within the in-group. Finally, the in-group furthers the divide between 'us' and 'them' by collectively and publicly ostracizing individuals, as a means to push their values onto society, and alienate those who fail to accept their ideals (Trepte & Loy, 2017).

Summary of Theories

Within the context of this research, the theories discussed have worked simultaneously to offer us a deeper understanding of social media activism and the related phenomena of performative activism, "cancel culture," and allyship. Dramaturgy theory, Social Desirability Bias and Social Identity Theory have allowed us to examine the internal processes of our participants, such as their intentions and motivation to engage in activism.

Dramaturgy theory was helpful in analyzing participants' responses about their primary motivations for engaging in online activism, and how their presentation differed between their virtual "front stage" and "back stage." It also allowed us to investigate any indicators of performative activism and how participants may have engaged in it to appear desirable to a certain audience. The second theoretical framework, Social Desirability Bias, helped us grasp an understanding of the motivation individuals hold for engaging in performative activism when participants were asked if they have ever felt obligated to post about social issues online. In addition, this framework allowed us to explore how individuals often act in a certain way to attain a social purpose. The third theory, Social Identity Theory, prompted us to recognize how individuals may engage in performative activism and alter their attitudes, solely to avoid backlash or being called out by others in the community (Greijdanus et al., 2020). Overall, each theoretical framework was able to provide us with meaningful findings and insights on public perceptions regarding online and offline activism.

Methodology

Research Methodology

In our study, both quantitative (i.e., online anonymous survey) and qualitative (i.e., open-ended questions as part of our online, anonymous survey) methodological approaches were used to answer our research questions. Our first research question stated, "how effective is performative activism as a method of advocacy and what motivation do individuals hold for engaging in this type of advocacy online," while our second research question asked, "how does the fear of social alienation, or the fear of being "cancelled," alter individuals' attitudes and behaviours in relation to online activism?" The survey was conducted through an anonymous online questionnaire created on LimeSurvey, the McMaster Research Ethics Board (MREB) approved platform. The research was approved by the McMaster Research Ethics Board (MREB#: 0327). The recruitment of our participants was completed through a third-party, the McMaster Student Union (MSU) and its affiliated clubs, committees, and societies, who distributed information regarding our survey to potential participants on our behalf. Convenience sampling was used, as the population being advertised to during the recruitment process was undergraduate students at McMaster University, who were 18 years of age and older in any program or level of study.

We believe that this method of research was the most effective for our study because of the flexibility it allowed us to have in developing survey questions and the design process. It also had minimal risks in regard to COVID-19 as no in-person contact was necessary for the completion of this study. Participants were able to take the survey from any location of their choice, which was beneficial as on-campus presence was not mandatory at the time.

Our research methodology allowed us sufficient freedom in the development of our survey questions. Additionally, we were able to incorporate a variety of question types into our survey. Excluding the demographic questions, 7 out of our 17 questions used the Likert Scale, two were dichotomous (e.g., yes or no questions), four were multiple-choice questions, and the remaining four were open-ended short answer questions. The diversity of question types provided us with several avenues for the way that we asked or phrased questions, as well as how we analyzed, compared, and generalized our results once the

study was complete. Finally, using an online survey as a means of data collection not only helped us to reach a large sample population, but also helped us to eliminate the potential for the Hawthorne effect. This occurs when the researcher is present during the experimental portion of the study, which may influence how the participants behave or respond (McCambridge et al., 2014).

Research Process

In order to conduct our research, we first came up with our topic of interest and narrowed it down to the concepts and areas we were most keen to investigate further. We then created research questions to guide us throughout the research process. We examined the existing literature surrounding our topic, in order to find any gaps in the research that could inform our own study. In addition to this, we investigated different theories that we could apply to our topic to help us gain a better understanding of the various concepts we were studying. These theories were especially valuable when analyzing the patterns and trends that were present in our survey results. Once we constructed a foundation upon which to build our own research study, we created both open-ended and closed-ended questions to be used in our survey. These questions helped us gain insight into student opinions about performative activism, “cancel culture,” and effective advocacy. While generating these questions, we also considered the ethical implications and potential risks that participants might face, in order to find ways to curb any negative effects they may experience.

Once we received ethics approval, we created our 10-minute anonymous online survey using the McMaster Ethics Research Board approved platform, LimeSurvey. Next, we began the recruitment process by reaching out to several student-run groups and organizations to ask them to advertise the survey for us on their social media platforms using our approved email recruitment scripts. We ensured that any group member with a conflict of interest was not contacting the student-run club or group they were part of. The following is a complete list of all the student-run groups and clubs we recruited from:

Public Health Association	Assyrian Chaldean Syriac Student Union (ACSSU)	Social Psychology Society	McMaster Social Sciences Society	McMaster Engineering Society
McMaster Indian Association	McMaster Humanities Society	MacKin Society	Black Students Association	Girl Up McMaster
Hispanic and Portuguese Club	Muslim Students Association	Middle Eastern Students Association	Jack.org McMaster	McMaster Gujarati Students Association

Humanity First McMaster	Queer and Trans Colour Club	McMaster Pass on Positivity	Financial Marauder	World Vision McMaster
McMaster Hindu Students Association	McMaster Anthropology Society	Communications and Multi-Media Society	McMaster Sociology Society	McMaster Linguistics Society
Health, Aging and Society Student Association (HASSA)	COPE: A Student Mental Health Initiative	McMaster Philosopher's Society	McMaster Social Work Student Collective	Psychology Neuroscience and Behaviour Society

Once the survey was advertised through these student-run groups, participants who were McMaster University undergraduate students 18 years of age and older in any program or year of study encountered the link and accessed it. They were able to view the letter of information and give us implied consent by clicking "Yes, I agree to participate in the study." The participants went through the survey and completed the questions they felt comfortable answering before submitting it. We collected the data in the form of computer responses from LimeSurvey and the participants were free to complete the survey in whichever location they chose within the designated time frame. We kept the survey open from our start date of November 12th, 2021 until the end of the data collection period on February 18th, 2022 and we were able to collect a total of 51 full responses. Following this, we closed the survey and began the process of data analysis. We analyzed both our quantitative and qualitative data to look for significant results, including common trends or patterns. In addition to this, we drew connections among our quantitative and qualitative data to generate a clear picture of our survey results. Once the data analysis stage concluded, we condensed our significant findings in order to discuss them during our poster presentation in March 2022 and our final paper. Once we successfully submitted our final paper, we ensured that all participant data was deleted.

Ethical Issues and Actions for Proper Conduct

With any research project, numerous ethical concerns must be taken into consideration. To start, it is important to ensure the confidentiality and anonymity of our participants and their information. As researchers, we employed a number of methods to guarantee the safekeeping of this information, such as storing documents on password-protected devices and sharing information solely through our McMaster emails, encrypted files and a secure network. Further, all participant information remained anonymous to our research team, and we did not recruit participants ourselves, but rather through student-run groups. Finally, once we concluded our research, we deleted all saved data by April 30th, 2022.

First, to uphold ethical practices within our research, we ensured that participants were properly informed of their rights in the letter of information before taking the survey. It was vital that they understood these rights in order to minimize any potential risks. Participants had the right to refuse to partake in the study at any given point in time. This included the right to withdraw from the study, without explanation, once participation began.

Participation in this study was completely voluntary in order to protect the autonomy of participants. We also ensured that respondents were aware of the lack of consequences for withdrawing or refusing to participate in the study, to avoid potential social risks. However, once participants submitted their survey answers, they were not able to have their responses removed from the study. Due to the anonymous nature of this survey, it would be impossible to tell which answers the participant had submitted in order for them to be removed, therefore, we could not allow participants to withdraw post-submission.

Additionally, research participants had the right to not answer every question on the survey. This minimized potential psychological risks and avoided hostility bias. Participants were not required to answer all the survey questions, as this might have unintentionally subjected them to reflect on unpleasant experiences and memories, especially given that our research focuses on controversial and sensitive social topics. Finally, by commencing the survey, participants indicated that they have read the letter of information, which provided them with details of the study, thus giving us implied consent.

Moreover, participants may have experienced social and psychological risks when taking part in our research. Our aim was to minimize the implications of these risks to the greatest extent. Potential social risks included a lack of privacy to those completing our survey. When taking part in a survey, having the ability to express one's own thoughts without the fear of publicity is vital in receiving genuine responses. Participants were unrestricted as to where they could take our online survey. Therefore, instead of taking the survey in a public setting, participants were able to take it in a more private or secure environment. Anonymity is substantial in ensuring respondents' privacy, thus, all of the responses were made strictly anonymous throughout data collection, data storage, and dissemination of our research findings. In addition, we provided the contact information for student support services if participants needed support because of any uncomfortable feelings that arose during or after our survey.

Furthermore, when individuals were given the opportunity to share their experiences and opinions regarding our topic, they may have felt uncomfortable to engage in critical self-reflection when answering some of our questions, ultimately creating possible psychological risks. When questions addressed sensitive topics, respondents might have felt hesitant with their involvement, thus discouraging them from completing our survey. In order to manage these risks, participants were informed that they will be sharing their experiences without being identified, as well as not being required to answer questions if they were uncomfortable in doing so. Participants were also provided with support services, as mentioned above, as a way to manage any potential psychological risks. Additionally, all questions asked were minimal risk, posing no greater risk than everyday life. The anonymous nature of the survey also reduced the potential psychological, and social risks associated with the study as participants were not identifiable. Finally, participants were able to withdraw from the survey anytime until submitting the survey.

Lastly, it was crucial to manage potential conflicts of interest in our research in order to avoid harmful misperceptions. In such circumstances, if the researchers have multiple roles in common with the participants, these conflicts of interests may lead to undue influences that could affect the decision-making processes of the respondents. As researchers, we were all McMaster University students who sampled a population of undergraduate students at the same institution. In addition, one of the members of our

research team was a teaching assistant for a first-year undergraduate course. As well, two of our group members were involved in multiple clubs and societies within the school. Therefore, there were perceived conflict, since we were students and volunteers of the community we sampled from. To avoid these conflicts of interest, while recruiting from student-run clubs, non-members were the ones to reach out, rather than those who were a part of the club. In addition, we surveyed students in an online environment, therefore, they were able to take it in any space they felt comfortable.

Finally, this research aimed to remain impartial and unbiased, especially through the administration of our survey questionnaire. This was done by carefully devising our survey questions in a way that did not sway the participants into providing answers desired by the research team. By remaining conscious of these potential risks and through proper engagement in ethical conduct, we aimed to refrain from causing potential harm to participants that could have led to ethical impropriety.

Challenges: Data Collection and Analysis

We encountered several challenges within the process of data collection. Firstly, we ran into issues with participant recruitment, as our only method of advertising the survey was through third-party, student-run groups. This was problematic as an insufficient number of groups agreed to promote it for us, which reduced the number of students we were able to reach. This may have also been influenced by the specific social media platforms that the student-run groups used to post our survey, as younger generations gravitate towards certain platforms over others. In addition, there was no way for us to ensure that our sample was representative of our target population which is comprised of individuals with various life experiences influenced by factors such as race, socioeconomic status, sex, etcetera.

Another challenge we encountered is that the responses we received from participants may have been skewed due to the effects of response bias. It is possible that only individuals who were knowledgeable on, and interested in, the topic responded to the survey. This could have led to issues within data analysis, as the results may not have been fully generalizable to our target population. Furthermore, respondents may have answered in a manner that portrays them as socially desirable rather than in an honest way. They may have also provided calculated responses to align with the answers that they thought we hoped to receive. Potential response bias might have led to issues in the data analysis process, as it could have impacted any patterns and conclusions we distinguished.

The last challenge we faced within the data analysis process was our lack of experience in conducting and analyzing our own research. As this was a fairly new experience for us, our skills regarding data analysis were limited. Furthermore, we had minimal experience using the software necessary for this step of the research process, which proved to be a challenge. This was a learning experience for us, and required us to develop and strengthen various skills, as we inevitably encountered a number of challenges throughout the process.

Plans for Data Analysis

We used the software Jamovi to analyze our quantitative data that we collected from the survey. We started by organizing the data from our 13 quantitative questions and five

socio-demographic questions into frequency tables and examined the descriptive statistics so that we could assess the common patterns and trends amongst the data. Once we organized the data, we made note of any significant trends that were present. We then converted our relevant data into percentages to allow for effective comprehension and analysis. We investigated the variables that influenced the data patterns we discovered, in order to draw specific conclusions in relation to our research questions. We used Microsoft Excel to create various charts and figures to represent our data and allow for a better understanding of our results.

We analyzed our qualitative data by reading through the responses for each of our four qualitative questions and making detailed notes on each one. This allowed us to discern any common themes or key words between them that could be coded to easily distinguish their similarities. These similarities were used to identify major themes present within the data that related to our research topic. We also made note of participant responses that were significant to our overall findings and contributed personal insight to our topics of interest. In addition to this, we drew connections between the qualitative and quantitative data to further examine the common trends and patterns within the results.

Timeline for Data Collection & Analysis

Task	Start Date	End Date
Participant Recruitment	November 12th, 2021	February 18th, 2022
Data Collection	November 12th, 2021	February 18th, 2022
Data Analysis	February 19th, 2022	March 1st, 2022
Poster Creation	February 1st, 2022	March 8th, 2022
Final Thesis Paper	January 17th, 2022	April 1st, 2022
Deletion of Data	-	April 30th, 2022

Results

Sociodemographics

The sample size within our research study included 51 McMaster undergraduate students (n=51). The demographic questions participants were asked in our survey included their year of study, faculty, ethnicity, gender, and age.

Year of Study

Our first demographic question asked participants what year of undergraduate studies they were in. Responses included first year, second year, third year, fourth year and other. As shown in Figure 1, the majority of participants were in their fourth year, representing a total of 49.0%. We had 25.5% of individuals who stated that they were in their third year, 17.6% who were in their second year, 5.9% in their first year, and one individual (2.0%) who selected 'other.'

Figure 1

Frequencies of Year of Study

Levels	Counts	% of Total
1st year	3	5.9%
2nd year	9	17.6%
3rd year	13	25.5%
4th year	25	49.0%
Other	1	2.0%

(The jamovi project, 2022)

Faculty

Our next demographic question asked which faculty participants were part of at McMaster University. As demonstrated in Figure 2, the majority of participants in our study were in the Faculty of Science (38.0%), followed by the Faculty of Social Sciences (32.0%), Faculty of Engineering (14.0%), Faculty of Health Sciences (8.0%), DeGroote School of Business (6.0%) and the least selected response being the Faculty of Humanities (2.0%).

Figure 2

Frequencies of Faculty

Levels	Counts	% of Total
DeGroote School of Business	3	6.0%
Faculty of Engineering	7	14.0%
Faculty of Health Sciences	4	8.0%
Faculty of Humanities	1	2.0%
Faculty of Science	19	38.0%
Faculty of Social Sciences	16	32.0%

(The jamovi project, 2022)

Ethnicity

With the space provided, we asked participants, if comfortable, to write the ethnicity they self-identify with. Our participants identified with the following ethnicities as indicated in Figure 3: White / European / Caucasian (37.3%), South Asian (21.6%), Middle Eastern (15.7%), No Answer (13.7%), East Asian / South East Asian (5.9%), Black / African /

Caribbean (3.9%) and Hispanic / Latin American (2.0%). There were 7 participants who chose not to answer, leading to a total of 44 respondents to this question.

Figure 3

Frequencies of Ethnicity

Levels	Counts	% of Total
White, European, Caucasian	19	37.3%
Black, African, Caribbean	2	3.9%
Middle Eastern	8	15.7%
South Asian	11	21.6%
Hispanic, Latin American	1	2.0%
East Asian, South East Asian	3	5.9%
No Answer	7	13.7%

(The jamovi project, 2022)

Gender

Participants were also asked which gender they self-identified with, if they were comfortable sharing. Based on the results, 30 participants identified as female (66.7%), 13 participants identified as male (28.9%) and 2 participants identified as non-binary (4.4%). There were 6 participants who chose not to answer, leading to a total of 45 respondents to this question. From these results, we can conclude that more than half of our survey participants identified as female.

Figure 4

Frequencies of Gender

Levels	Counts	% of Total
Female	30	66.7%
Male	13	28.9%
Non-binary	2	4.4%

(The jamovi project, 2022)

Age

Our last demographic question asked participants to indicate their current age in the space provided, if comfortable doing so. There were 4 participants who chose not to answer, leading to a total of 47 respondents to this question. As seen in Figure 5, responses ranged from ages 18 to 28. 2.1% of participants were 18 years old, followed by 14.9% who were 19, 21.3% who were 20, 48.9% who were 21, 6.4% who were 22, 4.3% who were 23, and lastly 2.1% who were 28 years old.

Figure 5

Frequencies of Age

Levels	Counts	% of Total
18	1	2.1%
19	7	14.9%
20	10	21.3%
21	23	48.9%
22	3	6.4%
23	2	4.3%
28	1	2.1%

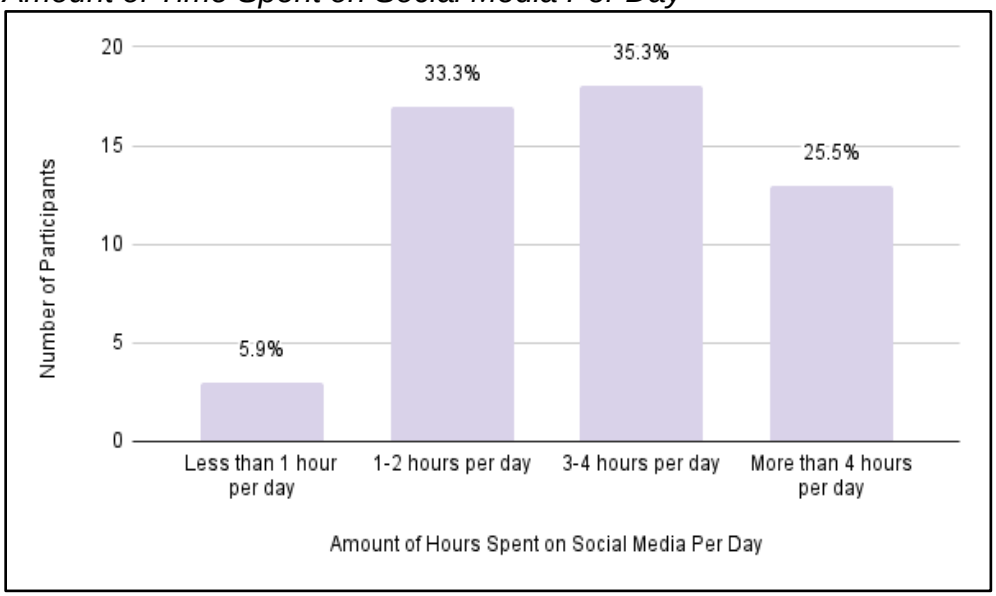
(The jamovi project, 2022)

Social Media Use

The first survey question asked participants how many hours they spend per day on social media platforms such as Instagram, Twitter, Snapchat, TikTok, and Facebook. As seen in Figure 6, 5.9% of respondents reported less than 1 hour spent per day using social media; 33.3% stated that 1-2 hours of their day are spent on social media; and 35.3% indicated that they spend 3-4 hours using social media daily, which was also the most commonly chosen response. Finally, 25.5% of participants reported spending over 4 hours every day on social media platforms. As seen in Figure 6, the majority of participants spend either 3 hours or more on social media per day.

Figure 6

Amount of Time Spent on Social Media Per Day



The second question in our survey asked participants which social media platform they use most often, with options including Instagram, Twitter, Facebook, Snapchat, TikTok, or other. The most common response was Instagram with a total of 47.1% of respondents saying they use it the most. Following Instagram, 31.4% of participants reported TikTok as their most used social media platform. After TikTok was Snapchat, selected by 9.8% of respondents. Next, 5.9% reported using Twitter the most often. Finally, 3.9% selected the use of "other" social platforms, and 1.9% stated they use Facebook the most often. The results demonstrated that participants used Instagram the most, while Facebook was the least used social media platform.

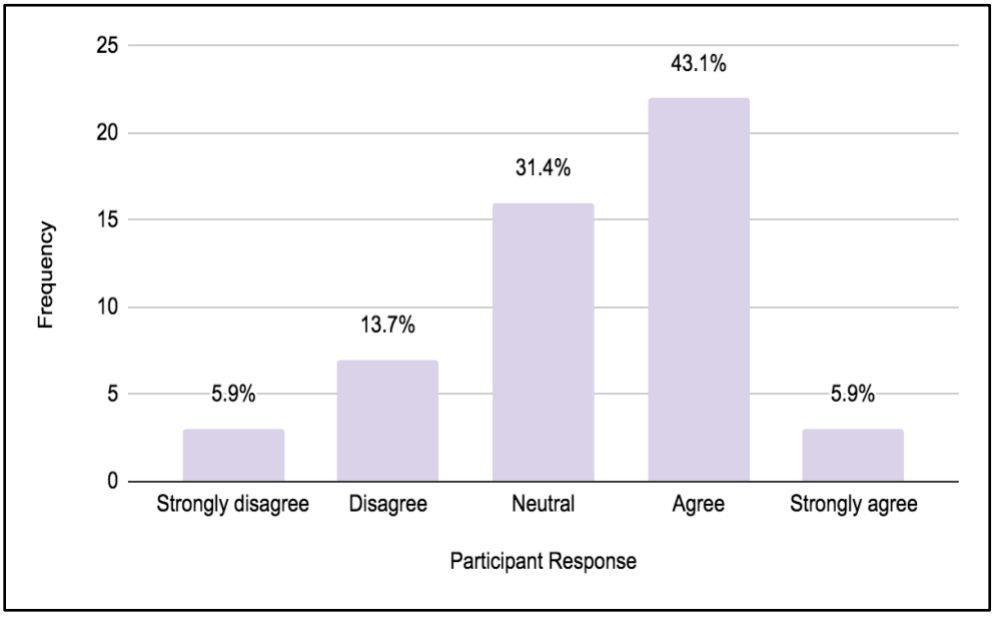
The third question in the survey asked participants how they would describe their use of social media from options including passive, active, or both. 27.5% of respondents described their use of social media as passive, which includes scrolling without engaging with or posting content. 1.9% of respondents described their social media use as active, which includes scrolling and regularly engaging with and posting content. The most commonly chosen description of social media use was both passive and active, as 70.6% of participants selected this answer.

Perceived Effectiveness of Different Forms of Activism

Participants were presented with the statement "I believe that posting or sharing information about a social movement or issue on social media is an effective form of activism," and were asked how strongly their values aligned with the given statement. As shown in Figure 7 below, 5.9% of respondents strongly disagreed with this statement, while 13.7% disagreed and 31.4% of participants had neutral feelings towards it. 43.1% of the individuals who took the survey agreed with the statement and 5.9% of respondents strongly agreed with it. The majority of participants either agreed with this statement or had neutral feelings towards it.

Figure 7

"Posting or Sharing Information about Social Movements on Social Media is an Effective Form of Activism"

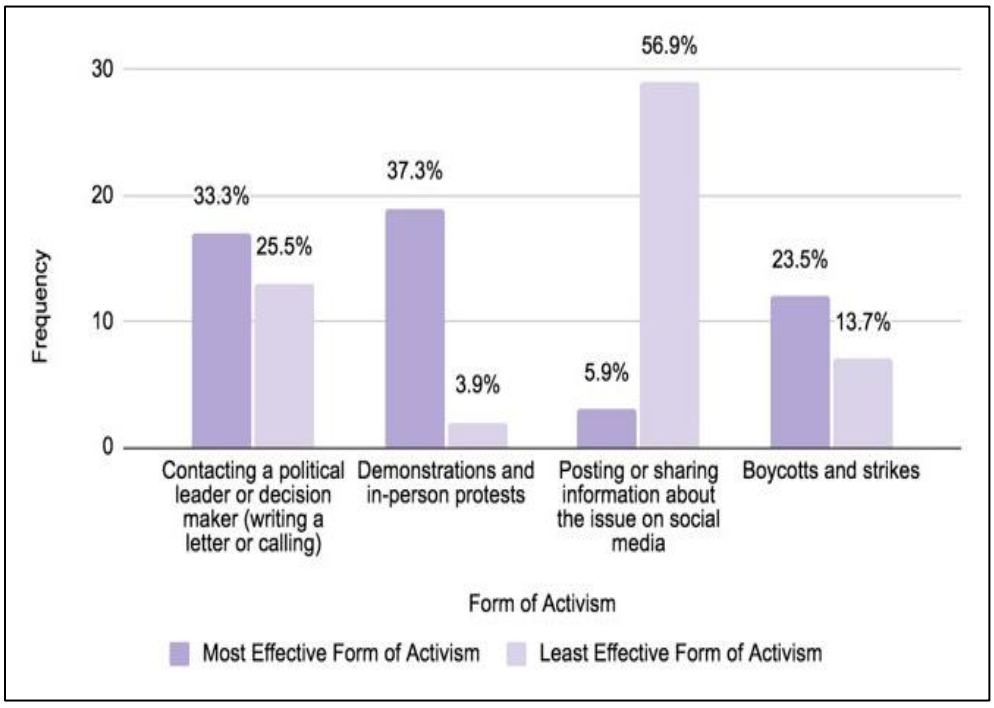


Participants were then asked to contemplate which method of activism they felt was the most effective in enacting meaningful change from a list of four options: demonstrations and in-person protests, contacting a political leader or decision maker, posting or sharing information about the issue on social media and boycotts and strikes. As indicated in Figure 8, 37.3% of individuals felt that demonstrations and in-person protests were the most effective, while 33.3% of respondents believed that contacting a political leader or decision maker is more productive. In addition to this, 23.5% of participants thought that boycotts and strikes are most beneficial and 5.9% indicated that posting or sharing information about issues on social media is the most effective form of advocacy. The data displayed that individuals participating in this survey believed that demonstrations and in-person protests are the most effective in enacting change.

Subsequently, from the same list, respondents had to rank which form of activism they would consider to be the least effective in enacting meaningful change. Figure 8 exhibits that 3.9% of participants positioned demonstrations and in-person protests as least effective, while 13.7% selected the option of boycotts and strikes. 25.5% indicated that boycotts or strikes are ineffective, while 56.9% of participants believed that posting or sharing information on social media is the least effective. Overall, respondents indicated that posting or sharing information on social media is the least effective method to enact change.

Figure 8

Effectiveness of Different Forms of Activism



Following these questions, respondents were asked a qualitative question about desensitization (less likely to feel shock or distress due to repetitive exposure to global issues) that could result from the extensive amounts of information about social problems available on social media. Majority of the participants indicated that there is a possibility

of desensitization due to an "over-saturation of global issues on social media." A recurring theme among the responses was that bad news is not as shock-inducing anymore. Many respondents explained feeling overwhelmed due to the repetitive exposure to various issues on social media. The inevitability of viewing the same stories in several spaces online can lead individuals to become habituated to the severity of the given social issues. One of our respondents commented:

> "…When an issue receives attention on social media, it is often shared by a multitude of people simultaneously, and the sheer quantity of information can be overwhelming and desensitizing. In addition, consistent exposure to different social issues can create a perception of inevitability, especially if there appears to be no progress on these issues."

Respondents also described the repeated exposure to tragic events on social media as becoming "normalized" and "commonplace." Several participants mentioned that regularly viewing this content on social media reduces any passion to take action and engage in the process of change. This lack of motivation to engage in activism is believed to be a result of the desensitization that people experience on social media. Several respondents noted that the more often individuals post about a particular issue on social media, the less real and applicable it feels to each person, thus not sparking an emotional and empathetic response. Respondents also indicated that many individuals might post about these issues simply because they see others doing it. This has led to what survey participants have called a "trend-like pattern of activism posts." One participant explained their belief regarding this pattern, stating:

> "…I think this is why people tend to post on social media because it's the easiest form of activism. I think at times it's not just that the person doesn't care, but it's because they see other's posting which makes them also want to post to prove they are aware of the issue and to avoid being called out."

Participants also mentioned that when a message about an issue is shared many times on social media, it becomes less meaningful. As well, one respondent stated that viewing several posts about the same issue "decreases our perception of the severity and true impact these issues have on people." Another survey participant summed up the majority of the responses we received by declaring that "if you are told about 100 bad things going on in the world at once, it is hard to care about just 1 issue enough to make a change." Thus, respondents believed that desensitization is very prominent within social media, due to the repeated exposure to posts about various social issues that individuals continue to share, resulting in a reduced willingness to engage in activism.

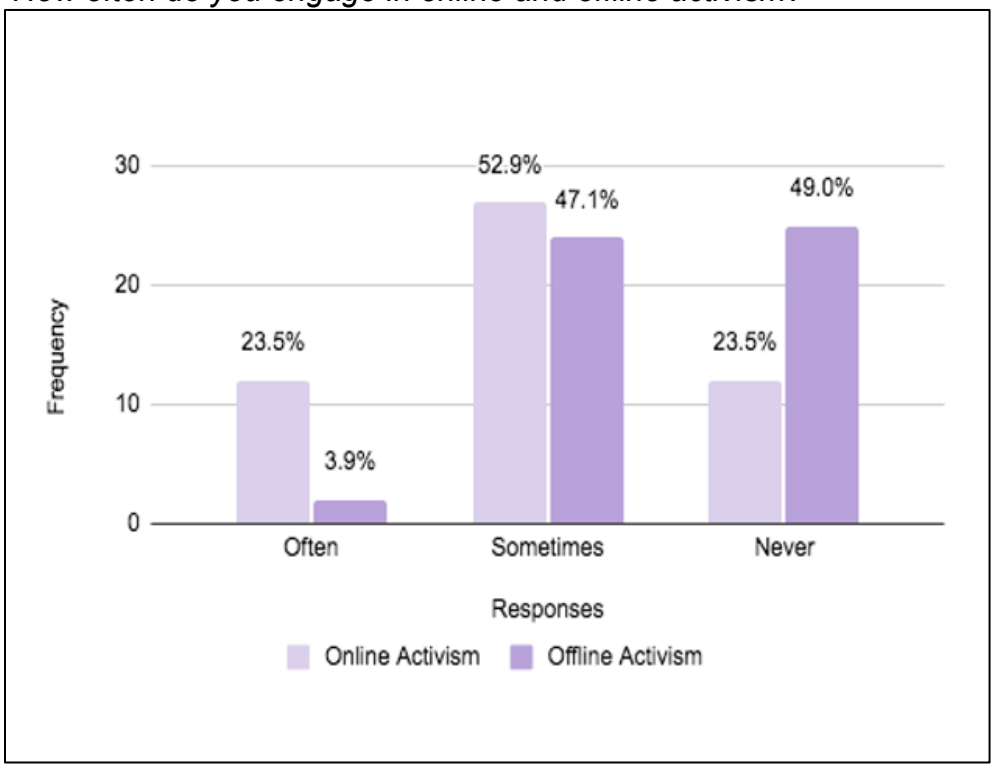
Participant Engagement in Online and Offline Activism

A double bar graph is used in Figure 9 to illustrate the results of two quantitative questions regarding participant engagement in online and offline activism. The first question asked how often participants engage in online activism, for example, posting or sharing information about an issue, signing petitions, etc. The second question asked respondents how often they engage in offline activism, which includes attending in-person

protests, boycotts, contacting political leaders, etc. Combining the two questions into a double bar graph allowed us to compare responses for both categories. Using a Likert scale, participants were provided with the following options: never, sometimes, often, and always. Within both questions, we did not have any participants select the option always, and thus it is not displayed on the x-axis of the graph. For engagement in online activism, 52.9% of participants selected sometimes, followed by 23.5% who selected often and 23.5% who selected never. For engagement in offline activism, 49.0% of participants reported that they never engage in it, followed by 47.1% who reported sometimes engaging in it, and lastly, 3.9% who stated that they often engage in it. Thus, the majority of participants indicated that they never engage in offline activism, and the majority of participants for the question about online activism stated that they do sometimes engage in it.

Figure 9

"How often do you engage in online and offline activism?"

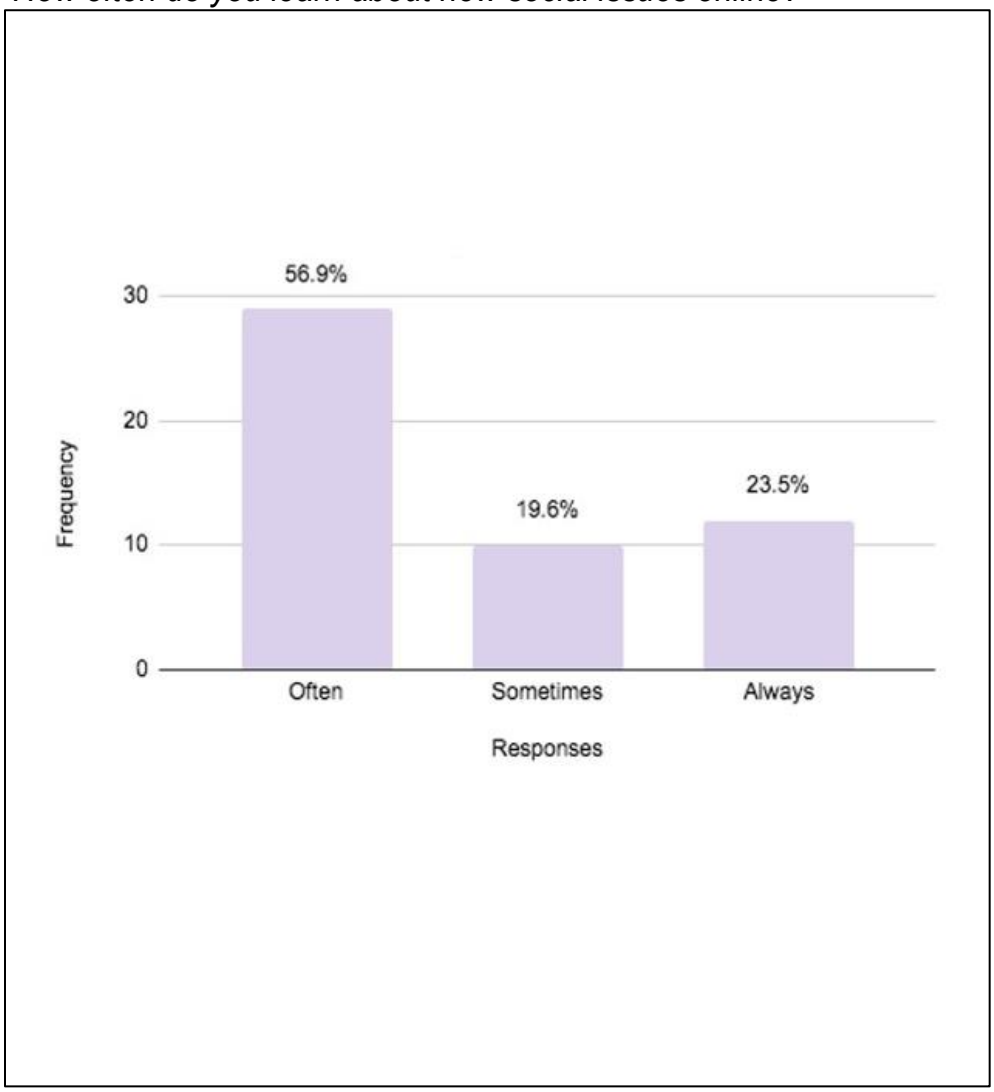


Learning about Social Issues

We asked participants how often they learn about new social issues or movements through the posts they see on social media. Using a Likert scale, participants were given the following options to choose from: never, sometimes, often, and always. We did not have any participants indicating that they never learn about social issues online. For that reason, 'never' is not displayed on the x-axis of our graph. Based on the results shown in Figure 10, 56.9% of participants often learn about social issues on social media, followed by 23.5% who always learn about them online, and 19.6% who sometimes do. These results demonstrate that to varying degrees, participants learn about social issues and movements through social media platforms.

Figure 10

"How often do you learn about new social issues online?"



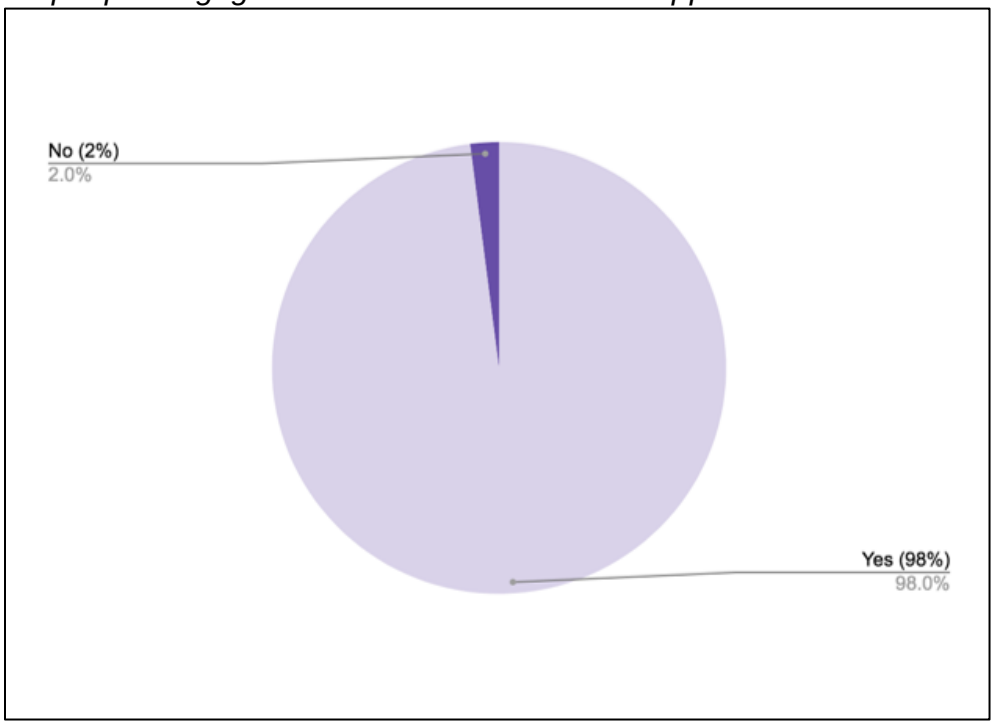
Performative Activism

Participants were presented with the following question: "Have you ever felt obligated to post or share content on social media to advocate for social issues?" Participants had the option to select either yes or no in response to this question. Participants were split in their answers with 51% of our respondents indicating that they have felt obligated to post about social issues, while the remaining 49% of individuals involved in the study shared that they have not felt obligated to do so.

Participants were then asked if they think other individuals post or share content on social media about social issues in order to gain approval from others. Again, they had the option of selecting either yes or no in response to this question. As seen in Figure 11, 98% of participants answered yes with the remaining 2% voting in opposition. It is clearly demonstrated through the data that the overwhelming majority of participants believe gaining approval from others is a factor in posting about social issues online.

Figure 11

Do people Engage in Online Activism to Gain Approval from Others?



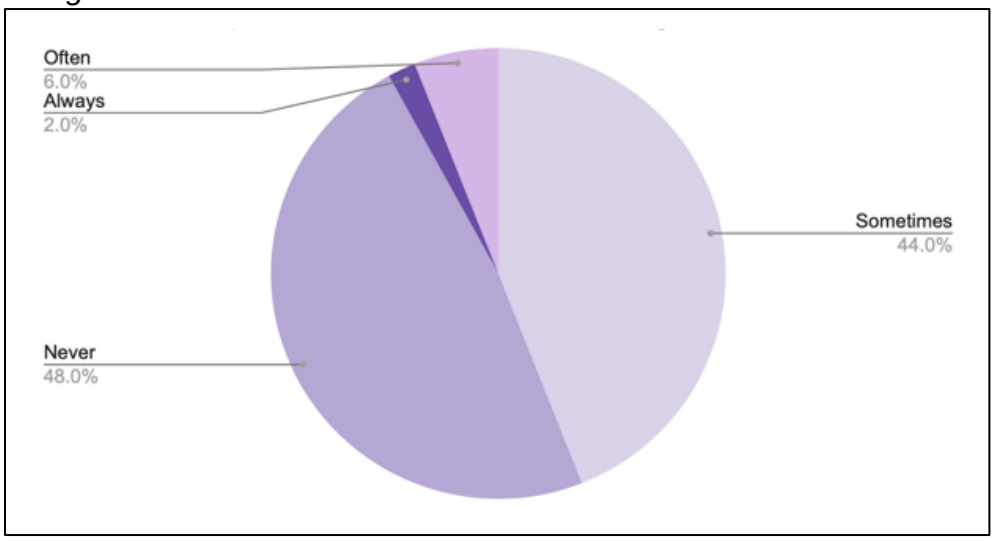
Following these questions, participants were then asked to provide a qualitative response to the following statement: “If you ever posted or shared content on social media to advocate for social issues, what was your primary motivation? Please explain in a few words in the space below.” The majority of our participants (77.5%) indicated that they have shared content on social media to advocate for social issues in the past. Out of that 77.5%, two main motivations for posting arose. The first was to raise or spread awareness for a social issue, and the second was based on passion for a particular social issue. Very few participants reported being motivated by social approval, however, some did acknowledge this as a reason for posting. One respondent commented that they posted “so others don’t think I’m ignoring the issue or opposed to it.” 22.5% of our participants shared that they never posted about social issues and provided us with some insight. One participant shared: “I don't since I don't believe posting about an issue…is going to help anybody.” This indicated that some participants believe posting on social media about social issues does not make a difference when it comes to aiding in a problem.

“Cancel Culture”

Through the use of a four-point Likert scale, ranging from never to always, participants were asked to denote how often they refrain from sharing their true opinions on social media in fear of being “called out.” As demonstrated in Figure 12, it was found that 44.0% of respondents sometimes refrained, 6.0% often refrained, and 2.0% of respondents always refrained from speaking their minds. With that being said, 48.0% of participants indicated that they have never refrained from sharing their unfiltered opinions on social platforms. Overall, the majority of participants have, to some extent, withheld sharing their true opinions online in order to avoid social altercations and reprimands.

Figure 12

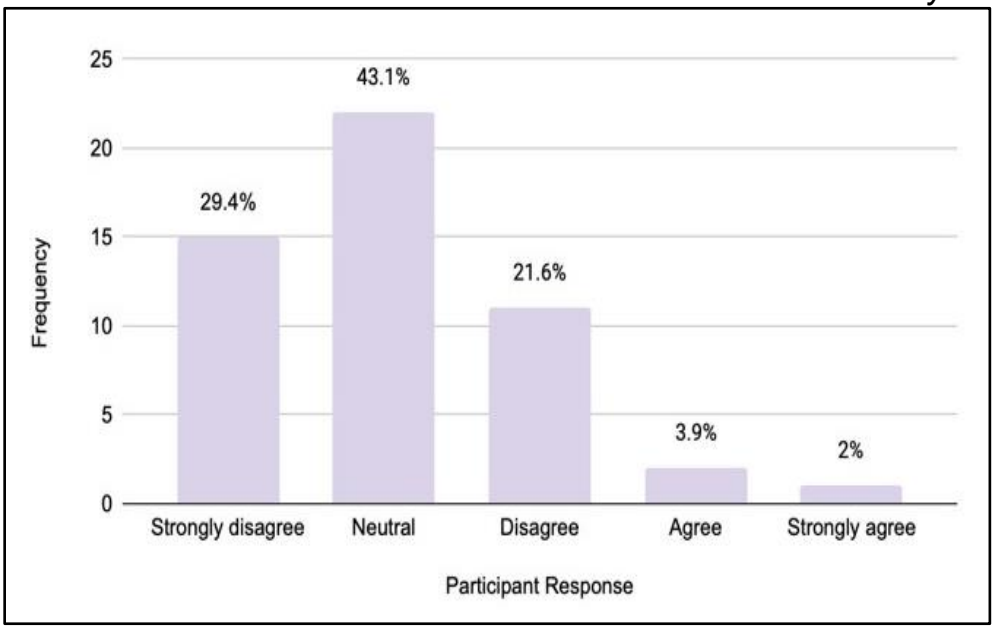
Frequency in Which Individuals Refrain from Sharing True Opinions Online in Fear of Being "Called Out."



Moreover, participants were asked to consider the following statement: "I believe that "cancel culture" (when individuals who deviate from social norms are called out by others, often on social media) is effective and beneficial for society." Using a five-point Likert scale, participants were asked to report how strongly they agree or disagree with the given statement. As shown in Figure 13, It was found that 29.4% of participants strongly disagreed, 21.6% disagreed, 43.1% were neutral, 3.9% agreed, and 2.0% of participants strongly agreed with the statement. In sum, the majority of participants felt that "cancel culture" is ineffective and not beneficial for the progression of society.

Figure 13

"I believe that "cancel culture" is effective and beneficial for society."



To gain greater insight into why participants either agreed or disagreed with the belief that “cancel culture” is effective and beneficial for society, we integrated an open-ended question in which participants had the opportunity to provide a rationale for their given answer. For the most part, participants felt that “cancel culture” is effective to a certain degree in holding individuals accountable for their actions, as well as to publicly condemn immoral behaviour. With that being said, nearly all participants agreed that “cancel culture” has gone too far as it prevents people from speaking their minds, thus leaving no room for progressive thought and conversations to occur. One participant shared:

> “There's the argument that "cancel culture" is seen as unproductive when everyone is called out in the same capacity, but it's important to still acknowledge and condemn inappropriate behaviour. It's just sometimes certain behaviours are given the same ire from social media when it's not warranted (i.e., "cancelling" someone who made insensitive tweets from 10 years versus current acts of violence/blackface/crimes).”

A recurring theme that emerged finds that excessive cancelling takes away from meaningful causes, does not give people a chance for redemption, and unlawfully ruins lives. Participants are especially concerned that “cancel culture” does not allow individuals to take accountability for their actions and learn from their mistakes, thus hindering long-term character growth and development. Participants emphasized the importance of this, given that young individuals are still developing their identities and constantly outgrow different stages of their lives. Some even believe that this is a form of online “bullying” and “defamation” as this phenomenon allows the public to degrade individuals without consequence as they hide behind a screen. Participants explained:

> “Cancel culture does not allow for reconciliation, forgiveness, or second chances so that people can heal and grow as human beings. Particularly with younger individuals (like on social media) cancel culture can be unfair as they are still developing their identities,” and “... social media is a relatively unregulated platform, cancel culture, to a lesser extent, can resemble mob mindset, in the sense that anonymous people act as the judicial system and there is often little room for discussion on certain issues that may benefit from it. I also think that cancel culture can suppress certain negative viewpoints but it doesn't change them, and is therefore a short-term solution.”

Finally, participants also believe that the fear of being cancelled leads to performative actions: “the hostility that comes from cancel culture may cause individuals to lie about their true intentions to ensure their reputation remains stable.” Out of the fear of being cancelled, it is believed that many individuals engage in performative activism in order to maintain their social capital.

The next question in our survey was qualitative and asked participants how they believe society should react to and approach those who express beliefs that could negatively impact certain groups. Out of 51 participants, 43 responded to the question while the remainder chose not to provide an answer. Some key words that were

mentioned within responses included “education,” “conversation,” “discussion,” “debate,” and “change.”

Majority of answers expressed a general opposition to cancelling related reactions as a response to those who hold potentially harmful beliefs. The overarching consensus was that cancelling someone will not change their beliefs, and the process is generally too extreme. Respondents brought up issues with the online nature of “cancel culture,” as it allows individuals to potentially retaliate in a hostile manner since they have the comfort of being behind a screen. Furthermore, some respondents expressed disapproval of the process in virtue of the freedom of speech which everyone possesses. These respondents asserted that everyone has the right to have and express their own beliefs, as long as they do not harm others. As an alternate response, one participant suggested strengthening potential victims instead of trying to change the beliefs of such individuals. Another respondent suggested that community values that discourage discrimination should be emphasized as a reaction. Ultimately, even respondents who argued that everyone should be able to freely express their beliefs regardless of what they are, agreed that individuals should face reprimands if their beliefs harm others or if they resist change.

Within the responses to this question, an emphasis was placed on the importance of open conversation and discussion. When reacting to individuals who express potentially harmful beliefs, many respondents believed that it is important to treat them with respect by giving them the chance to explain their perspective. These respondents mentioned that the only way to change an individual’s mind is to respect their existing beliefs even if they do not personally agree with them, which one participant claimed is “easier said than done.” Respondents explained that civil discussions or debates with counter arguments would be productive in giving the individual a chance to change. One participant expresses:

> “I think a neutral but fact based approach should be taken, this is so it can be more of a conversation and opportunity for the individuals to be able to recognize and see the things that they are not seeing or simply ignoring. Additionally, I think an educational approach should be taken because some of their views could be based on their upbringing or misinformation they have internalized. In conclusion, making it feel like a conversation and not an attack to allow a chance for the individuals to grow.”

This quote ties into the next prominent theme within the responses; education as the best reaction to individuals who express potentially detrimental opinions. One respondent stated, “society should first aim to not yell but educate.” Respondents mentioned that those who express such beliefs are often uneducated and have been exposed to misinformation or have internalized problematic perceptions presented to them since childhood. Thus, participants emphasized that individuals should be given the chance to become more cognizant of a perspective that they may have been previously ignorant to. Respondents stated that this could be done by presenting individuals with educational facts and explaining how their beliefs may negatively impact others. Participants indicated that education is more of a long-term and effective solution in comparison to simply cancelling someone. Participants stated:

> “See what their reasoning is and correct them for their poor actions but not cancel them

as a whole. Canceling them won't change their beliefs but educating them or correcting them might" and "EDUCATION. To put it bluntly, most individuals with offensive/incorrect views are just uneducated (and stupid…). If we educate them, they might be more likely to understand the other side."

A minimal number of respondents expressed support for cancelling someone as a reaction to their expression of potentially harmful beliefs. One respondent mentioned that it "makes an example out of the individual," which they suggested may discourage others from having and expressing similar opinions. Furthermore, some respondents explained that the ideal reaction to such individuals depends on the situation at hand, and in some cases cancelling might be a reasonable response.

Discussion

Social Media Activism

When responding to questions about online activism and how it compares to offline activism, most participants indicated that posting about a social issue or movement on social media is the least effective form of advocacy. Participants mostly selected offline forms of activism, such as in-person protests and demonstrations, as the most effective in enacting meaningful change. However, when respondents were asked how often they engage in online forms of activism like posting or sharing information on social media, the majority indicated that they regularly engage in this behaviour. Thus, a contradiction exists in which individuals continue to participate in online activism, even though they do not believe their actions will be truly effective in enacting change. This discrepancy is suggestive of performative activism, in which individuals treat advocacy like a trend, posting simply to gain social approval or recognition, rather than actively trying to be an ally for marginalized communities (Lucie, 2021). This contradiction points to a need for further exploration of why individuals are motivated to engage in activism online, especially when they are wary of its potential to lead to meaningful change.

Drawing on Goffman's (1959) Dramaturgy, individuals might be motivated to post online to advocate for particular movements as a way to manage their impression. Within their virtual "front stage," an individual might display an idealized version of themselves, one that is passionate about various issues and advocates for others, by posting or sharing information on social media. However, in their "back stage" (Goffman, 1959), individuals can be more honest about their actions and acknowledge that their activism on social media might not be effective. This process of posting on social media to maintain a performance for others is also indicative of performative activism, as individuals may be engaging in activism to gain social capital and appeal to a certain audience (Strother, 2021). This is supported by additional findings from this study, which reveal that most of the respondents believe offline forms of activism are more effective, yet half of the respondents indicated that they never engage in this type of advocacy. However, it is challenging to uncover a strong explanation for why individuals might refrain from engaging in offline activism even though they believe it is effective. There are several factors that could influence their decisions, including the increased health and safety restrictions during the COVID-19 pandemic when this study took place.

The inconsistency between attitudes towards online and offline activism is evident within participant responses to the following statement: "I believe that posting or sharing

information about a social movement or issue on social media is an effective form of activism." Many respondents indicated that this type of activism is effective, yet most of them later ranked it as the least effective when given a list of various methods of advocacy. Thus, there is a lack of consensus among the survey respondents that clarifies which forms of activism people believe are the most effective. These inconsistencies in the results demonstrate that individuals may have been engaging in performative behaviour and were attempting to manage their overall impression, which could lead to discrepancies between their attitudes and actions. More research is needed to investigate these contradictions between engaging in online or offline activism and their perceived effectiveness in enacting meaningful change.

Social Approval

It is evident that many individuals (51%) have felt obligated to post about social issues online. This is an indicator of performative activism, as participants may have taken part in surface-level activism by posting out of obligation, due to the desire to maintain their social image. When individuals revealed that they have posted out of said obligation, they implied that they may not have done so to genuinely support the cause. However, when participants were asked what their own primary motivation was to share content online for social issues, performative reasons were rarely mentioned. These responses were contradictory because although the majority of individuals felt obligated to post, it was not reported as a primary motivation. It is worth noting that there was a significant finding between an individual's perceived obligation to post and their faculty of study ($p = 0.036$). A large portion of our respondents belonged to the faculties of social sciences or sciences, thus these students might feel relatively more obligated to post as their programs often place an emphasis on social issues, ethics, and being an advocate for others.

The findings in Figure 11 display that 98% of participants believe that others sometimes post about social issues online to gain approval from others. This suggests that the majority believe the motive of gaining approval does play a role in the engagement of online activism. Thus, it is possible that those who do post for approval may appear to be invested in advocacy for social injustices but do very little when it comes to truly enacting change with genuine intentions. This also relates to the qualitative question asking participants about their motivation behind online activism. While the strong consensus was that others engage in online activism to gain social approval, hardly any respondents admitted to having similar reasoning themselves. However, relating to perceived obligation to post, one participant did share that their primary motivation was "so others don't think I'm ignoring the issue or opposed to it." This answered a portion of this study's research question where the motivation individuals hold for engaging in performative activism was investigated. This respondent's motivation was to appear invested in the social issue and to present themselves positively in the eyes of others. However, having solely one qualitative response admitting to posting for performative reasons does not enable a deeper understanding nor provide sufficient insight behind this particular motivation. It is important to note that out of 51 respondents (n=51), 37 participants responded to the qualitative question looking at the primary motivation for engaging in activism, and three of those respondents admitted that they do not engage in it at all. This raises the question of whether Social Desirability Bias played a factor in the low number of responses admitting to performative behaviours.

Although participants were aware that their responses were anonymous, it is still possible that they chose to provide answers they believed were socially acceptable, rather than those that reflected their genuine beliefs. The overarching responses for primary motivations included spreading awareness and being passionate about social issues. It is important to acknowledge that some of these responses may have been grounded in Social Desirability Bias as while participants claim to be posting to raise awareness, it is possible that it is merely due to perceived obligation reported previously. On the other hand, it is possible that respondents could have been truly passionate about the social cause. The commonality of providing socially acceptable answers is supported through the findings of Demai (1984) who concludes that individuals tend to provide answers in a desirable manner so they may be perceived that way, and thus enhance their self-esteem. In addition, this finding suggests that those who respond desirably do not always agree with it, but do so anyway (Demai, 1984).

Another respondent admitted that they sometimes feel pressured to post about social issues on social media, stating: “I work very hard to avoid posting things just because others are, even though I feel the pressure to do so when I don’t believe they are effective.” This implies that although the participant does not view posting or sharing content online as effective, they still feel pressured to do so. This can be linked to the Social Identity Theory where the underlying force of engaging in advocacy online is to gain social capital and to be part of the in-group (Strother, 2021). Through performative activism, individuals are able to stand together for a social issue and become part of the in-group, as they do not claim to be posting just to gain social approval (Strother, 2021). However, individuals often believe that those who admit to posting to gain approval from others are considered part of the out-group, except this does not apply to themselves. We theorize that many individuals fear ostracization and do not truly reflect on why they post the content they choose to share. Further research is needed to recognize the personal objectives individuals hold for engaging in advocacy for social movements, as there are still blurred lines between the actions and intentions people have for this form of activism.

The stark contrast between participants’ perceptions about intentions others have for engaging in online activism compared to their own reasons could be explained by the possibility that individuals are not aware of the full scope of their motivation when advocating online. This points to the prospect that genuine intentions behind engaging in online activism may be partly subconscious and can only be acknowledged upon introspection. As the need for social approval is so deeply ingrained in humans (DeWall & Bushman, 2011), perhaps individuals do not even acknowledge it as a motive, and thus engage in performative activism without realizing it. Future research should explore this hypothesis as a potential reason behind individuals being unable to see performative actions within themselves but see them clearly in others. We hope that this study, as well as similar ones, continue to raise questions about the underlying factors which influence both online and offline activism.

“Cancel Culture”

Through the research findings, it has become evident that the habitual behaviours of individuals on social media are commonly influenced by fear of social rejection, often in the form of “cancel culture.” To start, we asked participants to outline how frequently they

refrain from sharing their true opinions on social media in fear of being “called out.” Results indicated that the majority of participants have, to different degrees, concealed their true beliefs or remained silent on certain topics to avoid social reprimands. Further, it was made clear that individuals sometimes decrease social engagement due to fear of “cancel culture,” however, we wanted to further explore how this fear may also be a motive behind increasing online social engagement. For instance, if one does not demonstrate allyship on social media by reposting information on social causes, they may face backlash and alienation. Subsequently, as previously mentioned, individuals claim to engage in activism for all the right reasons, yet they believe that others engage in activism simply to boost their social capital.

It is important to consider the social structures in place that cause individuals to behave performatively. Social media often takes on an aggressive approach when confronting individuals with harmful beliefs that defy social norms and expectations. “Cancel culture” negatively impacts people as it often entails defamation, ostracization, loss of employment or academic status, and public condemnation (Petray, 2015). Given this phenomenon, participants were asked how they believe society should react to and approach those who express beliefs that could negatively impact certain groups. Overarching themes that emerged included educating individuals and having open conversations or debates, in order to allow for character growth and development. Avoidance of confrontation often plays a role in how individuals behave both subliminally and consciously. Whilst performative activism may not entirely be attributed to “cancel culture,” it does play a significant role in influencing one’s decisions.

Moreover, “cancel culture” may also hinder individuals from having open conversations and learning from one another. Participants have expressed that it is often frightening to approach certain conversations. Ultimately, unease of saying the wrong thing triumphs and hinders individuals from mentioning anything at all, causing them to steer clear of meaningful conversations. This avoidance then cultivates an environment that may lead one to partake in performative actions. “Cancel culture” suppresses ideas and further prevents learning opportunities and discussions that can empower individuals to become more informed and effective allies. As outlined when discussing alternative approaches to individuals who transgress social norms, findings indicated that education is often the best approach to further inform the masses. Through reframing this approach, there is a shift from punishing individuals for wrongdoings, to positively changing behaviours and life outcomes.

Performative Activism

As previously mentioned, there were some contradictions made by participants throughout the survey that were suggestive of performative action. However, there is room to consider whether or not performative activism is effective to some extent. The majority of our participants answered "often" or "always" in response to a question which asked how often they learn about social issues through posts on social media. However, they also stated that they believe individuals post or share content online to gain approval from others. This suggests that although the perceived motives for spreading information about social issues are performative, social media activism is still increasing the spread of information about these issues, which is also corroborated in the literature (Murthy, 2018). There is an evident positive correlation between engagement in online activism

and how often individuals learn about social issues online (r = 0.35, *p* = 0.012), indicating that social media does contribute to the spread of information. However, it is worth noting that there is no guarantee that this increase in social awareness will spark engagement in activism or enact active change.

Further consideration should be given to the idea of whether or not performative activism is an effective form of advocacy, as regardless of the intentions behind it, it successfully spreads awareness. However, definitions of what is regarded as 'effective' are also worth considering. Firstly, effectiveness can be measured by the translation from online to offline activism. If considering this definition, the results from our survey indicate that it is not effective as half of our participants stated that they do not take part in offline activism. On the other hand, perhaps effectiveness relates to allyship and whether or not performative activism is a legitimate step in the quest to becoming a productive ally. Our results would suggest that if effectiveness of performative activism was defined by worthy allyship, it would not be considered effective in this case either. Again, this is because the majority of our participants stated that people post on social media to gain approval from others. This perceived motive is not an indication of effective allyship as being an ally involves recognizing the power and privilege that one holds and purposefully working to shift the benefits that come with that position to marginalized populations (Clark, 2019). However, if the effectiveness of performative activism is defined by successfully spreading awareness and information on social issues, then this may be one of the few cases where performative activism is justified as effective. More research is needed to understand how performative activism and its ability to spread information can be used in a more positive way, as this is a popular form of activism according to our participants.

Desensitization

Injustices can unfortunately be found in every corner of the world, and activism plays a key role in raising awareness about these issues. This study holds real-life significance as it closely examines the emerging phenomena of online activism and the role it plays in either helping or hindering social movements. Since online activism has emerged more recently, it is vital that society approaches it with a strong sense of sensitivity and respect towards those who are affected by the social issues being shared. This sensitivity can become blurred by the issue of desensitization, which is a reduction in shock or distress among individuals upon repetitive exposure to information about social issues online (Choudhury et al., 2014). Individuals tend to become desensitized when faced with an overabundance of negative narratives; a process through which it is easy for one to lose empathy, compassion, and regard for others (Choudhury et al., 2014). This phenomenon is commonly addressed in research in regards to media violence, as studies have found that repetitive exposure to violent content leads to desensitization surrounding the concept among viewers (Berger et al., 2011). Many of our participants stated that desensitization is a possibility within online activism, and that the extensive exposure to social issues can lead to the purpose behind them seeming less meaningful, and rather being treated as a trend. The treatment of social issues as trends is problematic and needs to be addressed within research as individuals often capitalize on the issues which are the unfortunate reality of many people's lives, for the selfish motive of gaining social capital. Performative activism contributes to this potential desensitization and belittles the injustices of the world to something as trivial as posts on social media. Furthermore, it

harbours a sense of detachment between those that post about social issues and those who actually live in the reality of them. Rather than garnering empathy for those experiencing such issues, posting with selfish motives places the emphasis on individuals' personal goal of social approval. While activism is highly valuable, and the intentions of individuals engaging in it may be positive, it is important to examine the way in which online activism is managed. This is crucial as it ensures the integrity of social movements is respected and upheld, without undermining their severity and purpose.

Conclusion

Summary

Within this study, we investigated the various motivations that drive individuals to engage in activism both online and offline. Furthermore, we examined how individuals who deviate from arising social norms may be subjected to "cancel culture," thus encouraging performative activism. Most respondents believed that online activism was the least effective in enacting meaningful change, yet the majority of participants reported engaging in it more frequently than offline activism. With that being said, there was no singular consensus regarding the effectiveness of social media activism, as some respondents contradicted themselves in subsequent questions that addressed similar topics. While the overwhelming majority of participants believed that others engage in online activism to gain social approval, they did not mention the same reason when asked about their own motivations for doing so. Rather, they cited reasons including feeling passionate about a cause or wanting to spread awareness as contributing factors to their engagement in online activism, potentially demonstrating Social Desirability Bias. Likewise, it was found that the fear of "cancel culture" plays a role in increasing online activism, as individuals want to avoid social ostracization and being subjected to the out-group if they do not advocate for a given social issue. Although this is indicative of performative activism, this method of spreading information can be effective, as participants reported that they often learn about social issues online. However, it also poses the risk of desensitization, as respondents agreed that repetitive exposure to social issues can lead to a decrease in empathy and meaningful action. Within the results, participants emphasized the importance of education when approaching those who might hold harmful beliefs, and in the quest for effective allyship. Overall, the correlations and discrepancies we uncovered within this study illustrate a necessity for further research regarding activism on social media.

Limitations

We encountered several limitations within the research process, particularly during participant recruitment. We heavily relied on student-run groups and organizations to advertise the survey on our behalf, which reduced the number of students we were able to reach. Additionally, the social media platforms that our survey was advertised on likely influenced the responses we received. For example, a lot of young undergraduate students rely on platforms such as Instagram, Snapchat and Discord, rather than Facebook, to communicate with others. This may have contributed to the low number of respondents in their first year of university (5.9%). In addition, many first-year students might not have been as involved in various student-run clubs since they were just starting

their university experience, thus they potentially had less exposure to survey advertisements from MSU affiliated clubs.

Moreover, within our research we may have encountered response bias in several forms. Firstly, when completing the survey, individuals may have engaged in social response bias by responding in a way that made them look favourable or answered according to what they believed the research team wanted to hear. However, the anonymous nature of the survey may have played a role in decreasing the effects of response bias and might have encouraged individuals to be more honest. Satisficing bias might have also been present within our research, as participants may have chosen not to answer every question or simply put in minimal effort into the ones they did answer. This could have caused the results to be unrepresentative of the opinions our target population actually holds. In addition to this, it is likely that individuals who took this survey are mainly those who are interested in this topic and have strong opinions about it. This might have skewed the results and decreased their generalizability, as we did not hear from a variety of perspectives. Next, order effects, a bias that results from the order of questions within a survey, might have also influenced the responses we received. Specifically, assimilation effects, which occur when one question encourages a similar answer in the following question, may have been present within our survey as the questions built on one another. Furthermore, the way in which certain questions were phrased may have influenced how the respondents answered. For example, when asking participants about their motivations for engaging in online activism, the survey specifically asked for their “primary” motivation. This may have impacted the results and led participants to focus on one motivation, rather than the various factors that might influence their decisions online, including performative intentions.

The demographics of our survey respondents have also limited the generalizability of our results to a larger population. We mainly received responses from individuals self-identifying as female, with a much smaller sample of participants identifying as male or non-binary. Investigating the extent to which gender influences how individuals engage or participate in performative activism and “cancel culture” could have altered the results. In addition, our sample size was disproportionately Caucasian and does not adequately account for other ethnic groups, such as African Americans (3.9%) and Latin Americans (2.0%). This is significant because the ethnic groups that were less represented in the study are those who are often marginalized within society. It would have been beneficial to observe how individuals from these ethnic communities interact with and experience online activism and “cancel culture.” This disproportionate representation might have skewed our results and contributed to low generalizability within this study.

Significant Insights

Social media activism has become an increasingly prominent part of society that holds immense power in influencing people’s thoughts and actions. Studying this topic and its related phenomena is highly significant as it has recently emerged on a large scale and there is minimal existing research within this field. Our research delved into the ways that people engage online in order to advocate for various social movements. This research is important as it reflects on the intentions individuals hold when advocating online, and how they might contribute to potentially problematic processes such as performative activism and “cancel culture.” It is critical to address these processes as they can have a

significant impact on individuals' lived experiences. While engaging in online activism, it is vital to ensure that the individuals or groups being advocated for are kept at the forefront of activism and their integrity is prioritized over personal gain. In addition, our research created an opportunity to discover alternative methods to approach those who express beliefs that transgress societal norms, rather than relying solely on "cancel culture." This is important because "cancel culture" is highly divisive and can lead to negative outcomes for those who are subjected to it, instead of encouraging progressive change within society. Lastly, this research was significant as it provided insight into how genuine and effective allyship can be enacted, and why it is important to implement it within our everyday lives.

Concluding Thoughts

Throughout this research, we were interested in exploring the increased awareness of social issues within online platforms that have altered socially acceptable attitudes and behaviours. Our research provided insights on the motivations people hold for engaging in performative activism and how interactions with others might guide their behaviour on social media. Our research shed light on the growing phenomenon of online activism and its effectiveness as a form of advocacy. Furthermore, it highlighted the ability of online activism to translate into offline domains. In addition, our research created an opportunity to discover alternative methods to approach those who have beliefs that transgress societal norms, rather than relying solely on "cancel culture." The research also provided insight into what genuine and effective allyship looks like, and how we can implement it in our everyday lives. Social media activism has become increasingly intertwined with everyday life for individuals and it is integral to the spread of information, thus it is important for this area of study to continue to be explored. We hope that this study encourages its participants and readers to critically reflect on their motivations for engaging in activism, how they are fulfilling their roles as allies, and whether they believe their actions are truly effective. Social media has become an important stage for activism, in which some individuals may merely be putting on a performance, while others play their authentic selves. What role do you want to play within the world's stage?

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You Can Count on Me: The Relationships Between Housing, Social Integration, and Adjustment Among First-Year McMaster Students

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Abstract

The first year of university is an exciting experience, but it can also be quite stressful as students face many changes. Though research on first-year students in general is abundant, little is known about the relationship between where they live and how socially integrated and adjusted to university they feel. No research has considered this relationship in the context of the COVID-19 pandemic. Our mixed-methods study aimed to fill these gaps. Participants (n=45), primarily 18-year-old females residing on campus, completed quantitative scales and open-ended questions in an anonymous online survey. Quantitative results revealed a non-significant positive relationship between students' social integration and adjustment, and a significant positive relationship between students' perceived social support and adjustment. Students living off campus with other students reported greater social integration than those living on campus or at home, but not significantly. Contrasting our quantitative results, qualitative results showed that students believed their housing had a significant impact on their sense of social integration and adjustment. Additionally, students reported feeling supported by their friends in three primary ways: emotional support, instrumental support, and by providing social interaction. We hope that these findings can be used to enhance the first-year experience by improving social programs and adding supports.

Introduction

The transition into university is a challenging one as students face a great deal of changes: new academic expectations, new responsibilities, new friends, and for some, new living environments (Pittman & Richmond, 2008). An important aspect of adjusting to this transition is forging meaningful friendships and social connections, which has been hindered by the public health restrictions in place due to the ongoing COVID-19 pandemic (e.g., social distancing, capacity limits, virtual gatherings, et cetera.; Li & Wang, 2020). To better understand how students are developing social connections and adjusting to university, our study aimed to elucidate the relationships between housing arrangements, social integration, and adjustment.

Statement of the Problem and Purpose of the Research

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Students entering their first year of university are highly susceptible to all sorts of mental health problems; countless studies identify elevated rates of depression, anxiety, and stress among undergraduate students (e.g., Donovan et al., 2021; Moeller et al., 2020; O'Keeffe, 2013; Pittman & Richmond, 2008). Research indicates that these problems may be caused in part by difficulty adjusting to university (Pedrelli et al., 2015; Thurber & Walton, 2012; Wyatt et al., 2017). A sense of belonging and good social support can ease the transition to university and help students adjust, while a lack of these things can result in even more stress (Maunder, 2018). For this reason, it is important to study the factors that influence the transition to university in order for institutions to develop effective solutions for their students.

Research Questions and Inspiration

Our primary research question was, 'What are the relationships between housing accommodation, sense of social integration, and adjustment to university?'. Housing accommodation refers to whether students live on campus in residence, off-campus in a student house, or at home with family; none of our participants indicated living alone so this type of housing accommodation was not included in our study. To understand students' overall sense of social integration in their new university community, we combined their sense of belonging and perceived social support (PSS). Sense of belonging refers to the "extent to which students feel valued, accepted, and included" in a social environment (Goodenow, 1993a, as cited in Maunder et al., 2018, p. 757; Hagerty et al., 1992, p. 173, as cited in Choenarom et al., 2005). PSS refers to the extent to which one feels supported and understood by others (Xiang et al., 2020). Finally, adjustment refers to how well students are coping with the transition to university and was used as an indicator of general well-being. We used both quantitative and qualitative data to investigate these relationships.

Our secondary research question was, 'In what ways are students supported by their university friends?'. We used students' responses to one of our open-ended survey questions to answer this research question.

These research questions were derived from our own experiences as first-year students. While some of us experienced an easy transition to university, others found it much more difficult. Our housing situations also varied, with some of us living in residence, some off-campus with friends, and some at home with family. These experiences inspired us to conduct our research on how housing accommodations are related to developing a sense of social integration, and to adjusting to the university environment.

Overview of Sections

This paper first explains our two guiding theories: the Need to Belong Theory (Baumeister & Leary, 1995) and the Main-Effect Model (Cohen & Wills, 1985). Following our theories, we review literature on student housing, belonging, PSS, and adjustment to university. Next, we describe our methodology and research process. Then, we present our quantitative and qualitative results, followed by a discussion of those findings. Our discussion includes the limitations present in our research, as well as the significant insights and implications of our findings. We conclude with a brief summary and some proposed directions for future research.

Theories

Introduction

To investigate the relationship between where a student lives, how socially integrated they feel, and how well they are adjusting to university, we used the Need to Belong Theory (NBT; Baumeister & Leary, 1995) and the Main-Effect Model (Cohen & Wills, 1985). The NBT was our main framework, as it focuses entirely on the importance of forming and maintaining social relationships (Baumeister & Leary, 1995)—something that all first-year students are tasked with as they transition to this new phase of their lives. The Main-Effect Model is similar to the NBT in that it also considers the importance of social relationships, however, it further details the specific ways in which social support influences well-being. Together, these theories formed a solid guiding framework with which to conduct our research.

We intended to use these theories to interpret our results, particularly using the pathways of the Main-Effect Model to interpret students' responses to our open-ended question about social support, however this proved somewhat ineffectual. A detailed explanation of this is presented in the discussion. Nonetheless, these theories were invaluable in designing our survey, particularly in crafting our measure of social integration.

Need to Belong Theory (NBT)

Brief History of the Theory

The idea that people are motivated to form social bonds is not new; throughout history, many theorists have asserted the importance of social contact, including Freud (1930), Maslow (1968), and Bowlby (1969; as cited in Baumeister & Leary, 1995). Although different theorists understand the need for social interaction in different ways, they all emphasize the importance of forming and maintaining relationships (Baumeister & Leary, 1995). However, as Baumeister and Leary (1995) point out, most theorists fail to systematically and empirically evaluate their hypotheses. In response, Baumeister and Leary (1995) put forth a review of empirical evidence relevant to the belonging hypothesis—the idea that the need to belong is a fundamental human motivation—and propose the Need to Belong Theory (NBT).

Main Tenets of the Theory

According to the NBT, the motivation to form and maintain a minimum number of stable and positive interpersonal relationships is innate to all human beings (Baumeister & Leary, 1995; Moeller et al., 2020). This 'need to belong' has two aspects: firstly, people desire frequent and pleasant interactions with others; secondly, people need these interactions to occur within a stable, enduring context of care and concern (Baumeister & Leary, 1995). Essentially, the need to belong is satisfied by a combination of frequent interaction and consistent caring (Baumeister & Leary, 1995). Without the presence of both components, the need to belong can only be partially satisfied: interactions with a constantly changing series of partners will be less satisfactory than repeated interactions with the same people; strong relationships in the absence of frequent interactions will be unsatisfactory (Baumeister & Leary, 1995).

With regard to the number of social relationships, the need to belong is subject to satiation and diminishing returns: people seek a limited number of social bonds, beyond which additional bonds provide less benefit (Baumeister & Leary, 1995). Evidence consistently suggests that people prefer fewer close relationships to a larger number of weaker relationships, reflecting a belief of quality over quantity (Baumeister & Leary, 1995).

In line with the notion that belonging is a fundamental human need, NBT suggests people form social bonds quickly and easily, and are generally very reluctant to break them (Baumeister & Leary, 1995). Real, potential, or imagined changes in belonging status will produce emotional responses (Baumeister & Leary, 1995). The formation of social bonds is associated with positive emotions; close relationships are strongly correlated with happiness and well-being (Baumeister & Leary, 1995). Contrastingly, threats to and dissolutions of social bonds are associated with negative emotions; people feel extremely anxious at the thought of losing or lacking important relationships (Baumeister & Leary, 1995).

Main-Effect Model

Studies have indicated for decades that, regardless of the quality, those involved in many social relationships have better health than those involved in only a few (Cohen & Wills, 1985). Results reveal that those with fewer social supports die earlier and have poorer mental health (e.g., Aneshensel & Frerichs, 1982; Berkman & Syme, 1979; Blazer, 1982), leading Cohen and Wills (1985) to argue that one's level of social support directly impacts their well-being. In their analysis of these findings, Cohen and Wills (1985) present the Main-Effect Model of social support as a way to explain why those with more social connections often fare better than those without, regardless of any stressors they might experience. According to the Main-Effect Model, people typically have better well-being when they are involved in large social networks with others that they believe are available to support them (Cohen & Wills, 1985). In fact, it is emphasized that perceived availability of support is more predictive of well-being than actual support, indicating that if people feel that support is available to them, their mental well-being will be enhanced whether they seek support or not (Cohen & Wills, 1985; Cohen et al., 2000).

The Main-Effect Model has three major pathways in which social support can indirectly benefit well-being: social influence, positive psychological states, and neuroendocrine responses (see Figure 1 in Kawachi & Berkman, 2001). The social influence pathway suggests that members of a social group guide one another towards healthy behaviours (Cohen et al., 2000; Kawachi & Berkman, 2001). This might be in the form of modeling, and possibly peer pressuring friends, towards health-positive behaviours such as exercise or attending therapy, or in the form of providing information about relevant health-related resources (Cohen et al., 2000; Kawachi & Berkman, 2001). Social support and integration also elicit positive psychological states such as a sense of purpose and of belonging, which motivate people to engage in higher levels of self-care and help sustain an overall better sense of well-being (Cohen et al., 2000; Kawachi & Berkman, 2001). Furthermore, the neuroendocrine response to stress typically increases when people are socially isolated, however a feeling of being socially supported helps regulate and minimize this response (Cohen et al., 2000; Kawachi & Berkman, 2001). Elevated neuroendocrine responses can lead to psychological disorders such as anxiety or

depression (Cohen & Wills, 1985), meaning that perceptions of social support can minimize the negative effects of stress. The Main-Effect Model posits that when individuals belong to large social networks in which they feel supported, these three pathways indirectly boost mental health, and thus overall well-being (Kawachi & Berkman, 2001).

Theories Summary

Our two guiding theories, the NBT and the Main-Effect Model, combined to form a solid guiding framework that helped us design our research. Using both theories together provided us with more insight than either theory alone, resulting in a more comprehensive perspective of our variables. The NBT proposes that the need to belong is a fundamental motivation that, when satisfied, results in positive emotions and well-being (Baumeister & Leary, 1995). Likewise, the Main-Effect Model argues that those with more social connections have better overall health (Cohen & Wills, 1985). The positive psychological states pathway of the Main-Effect Model—which states that social support elicits a sense of belonging—is directly related to the NBT, while the other pathways provide more details about how social support benefits well-being (Cohen & Wills, 1985). We expected that this overlap between the Main-Effect Model and the NBT, and the further elaboration of the Main-Effect Model, would give us a comprehensive theoretical framework with which we could investigate students' sense of social integration and how it relates to their housing accommodations and adjustment to university; as is described later in our discussion, this was not the case.

Literature Review

Introduction

Our study considered the relationships between housing and social integration, housing and adjustment, and social integration and adjustment. As such, our literature review explored these topics, as well as the importance of adjustment to overall well-being.

Housing

First-year university students have several options when deciding where to live. Students can often choose to live in residence, where they live either by themselves or with roommates in various different room styles. At McMaster, students can choose to live alone in a single, with a roommate in a shared room, or with several roommates in an apartment-style suite; they can also choose between access to a common washroom, single user washrooms, or an ensuite. As an alternative to residence, students can live off-campus in a house or apartment with other students or alone. Some students do not select any of these options, and instead choose to remain at home with their family and commute to campus when necessary. As the following literature review demonstrates, there are advantages and disadvantages to each option with regard to social integration and adjustment to university.

Housing and Social Integration

Throughout their transition to university, students that move away from home experience a multitude of emotions, most notably feelings of missing friends and family,

that may lead to feelings of isolation (Buote et al., 2007; Dumford et al., 2019). Students who remain at home may still experience feelings of isolation if their existing friends move away for university, and face further challenges in developing new friendships with other students if they do not live close to campus. As explained in the upcoming section on social integration, forging new social relationships at university is essential in protecting students against these negative feelings (Dumford et al., 2019; Wilcox et al., 2005). Housing accommodation plays an important role in forming those beneficial friendships that result in a sense of belonging and high PSS (Joseph, 2021; Wilcox et al., 2005).

Research suggests that living in residence leads to a greater sense of social integration than living in a student house or at home (Dumford et al., 2019; Joseph, 2021; Wilcox et al., 2005). Although there are appeals to living off-campus with friends or family—such as affordability, having a private room, kitchen, and bathroom, and a “homier” feeling (Wode, 2018)—students in such housing accommodations often struggle to socialize as frequently as desired and form close friendships (Wilcox et al., 2005).

By conducting in-depth interviews with undergraduate students, Wilcox and colleagues (2005) found that students living off-campus felt that not living on campus hindered their ability to make friends, leaving them feeling marginalized and isolated. Holdsworth (2006) found similar results: off-campus students felt they had fewer opportunities to meet people, make friends, and fit in compared to their on-campus counterparts. While students can and do make friends in their classes, it is much easier to develop meaningful friendships with those one lives with and sees frequently (Nahemow & Lawton, 1975; Wilcox et al., 2005). Not only do residence halls force students to interact with one another in common spaces such as hallways, elevators, and washrooms, but they also provide additional opportunities for social engagement—for example, cafeterias, leadership opportunities, and study spots—which foster a greater sense of social integration (Li et al., 2005). Those living in residence rooms with roommates may be particularly fortunate; in Dumford and colleagues’ (2019) survey of thousands of American undergraduate students, those living with at least one roommate reported higher levels of belonging than those living in single rooms.

Correspondingly, Wilcox and colleagues (2005) found that students living in residence who were struggling to adapt to university life found comfort in peers they lived with, and that it was these new friends who aided them in their transition into their new school community. As the year progresses, students come to depend more on the friends they live with rather than their friends and family from home; their new friends take on the role of a “surrogate family” as they become the new primary source of support and belonging (Wilcox et al., 2005). However, this also comes with the issue that many families often face: the need for space. Christie and colleagues (2002) point out that living in residence can sometimes lead to feelings of claustrophobia and a lack of privacy as the year progresses. Moreover, despite all the extra opportunities to socialize, students living in residence may still fail to develop meaningful social relationships. Those who frequently return home, usually to visit friends or significant others, have less time to bond with the students around them, and thus become more socially isolated (Mackie, 1998, as cited in Wilcox et al., 2005). Evidently, students’ housing accommodations greatly influence their opportunities to make friends, and thus their sense of belonging and PSS.

Housing and Adjustment

Much of the literature on the relationship between type of housing accommodation and adjustment to university considers social integration to be a mediating variable. As will be discussed in the upcoming section on social integration and adjustment, forming good friendships is essential in successfully adjusting to university (Wilcox et al., 2005). Many researchers argue that housing accommodations greatly influence students' social integration, which then leads to higher rates of adjustment and retention (Dumford et al., 2019; Fosnacht et al., 2019; Lamont Strayhorn, 2008). As previously discussed, living in residence provides significantly more opportunities to make friends than living off-campus in a student or family home (Joseph, 2021; López Turley & Wodtke, 2010; Wilcox et al., 2005), suggesting that living in residence leads to better adjustment to university.

Other research on the topic of housing and adjustment has considered the drawbacks of moving away from home on the transition to university, including experiences of "homesickness" (Thurber & Walton, 2012; Tochkov et al., 2010). Homesickness, defined as the "distress or impairment caused by an actual or anticipated separation from home", is considered a result of an inability to adjust to the university environment (Thurber & Walton, 2012, p. 415). For any student, the transition to university is challenging. However, this challenge can be exacerbated by cultural differences and potentially decreased contact with family (Thurber & Walton, 2012). In a study that examined the incidence and determinants of homesickness among first-year students at an American university, a sample of international students from India was compared to a group of domestic students (Tochkov et al., 2010). In their results, the researchers found that homesickness was significantly more prevalent among international students (Tochkov et al., 2010). Moreover, homesickness was positively correlated with anxiety and depression (Tochkov et al., 2010). Fisher and Hood (1987) found similar results: first-year students who reported more homesickness showed significantly higher rates of depression. For international students, homesickness has a heightened adverse effect on their psychological health and academic performance (Tochkov et al., 2010). Fortunately, universities typically have programs in place to help ease international students' transition.

Other literature on the relationship between housing and adjustment focuses primarily on academic achievement as a measure of adjustment (Simpson & Burnett, 2019; Taylor & Mitra, 2021). Such studies typically find that although students who live in residence are more academically engaged than their off-campus peers (Astin, 1984), they do not perform as well, likely due to the increased involvement in potentially distracting social activities (López Turley & Wodtke, 2010; Pascarella, 1984). In support of this finding, one study showed that commuter students perform better academically than students living on campus, perhaps due to additional factors related to living at home, such as being under stricter rules and having no choice but to study more (Simpson & Burnett, 2019). However, López Turley and Wodtke (2010) argue that most studies fail to consider that the effect of housing on academic performance may differ for different groups of students and different types of institutions. Accordingly, their study found that for the majority of first years, housing accommodations did not significantly impact academic performance (López Turley & Wodtke, 2010).

Unfortunately, it seems that minimal research has been done on the direct impact that housing accommodations may have on adjustment to university. Research mainly

suggests that social integration acts as a mediator, such that housing provides opportunities for social integration, which is associated with better adjustment.

Social Integration

As previously mentioned, our variable of social integration consists of a sense of belonging and PSS. Although these are distinct concepts, they capture similar aspects of social integration, as this review will demonstrate. For this reason, we have combined them to form one variable. The summary of this section provides greater detail on this process.

Belonging

A sense of belonging is defined as the extent to which people feel valued, accepted, and included in a social system or environment (Goodenow, 1993a, as cited in Maunder et al., 2018; Hagerty et al., 1992, p. 173, as cited in Choenarom et al., 2005). Generally, as argued by Baumeister and Leary (1995), being accepted and included leads to feelings of happiness, contentment, and calmness; being rejected, excluded, or ignored leads to feelings of anxiety, depression, grief, jealousy, and loneliness. Social exclusion—a lack of belonging—is thought to be the most common and important cause of anxiety (Baumeister & Tice, 1990, cited in Baumeister & Leary, 1995). A lack of belonging is also linked to higher levels of mental and physical illness, and greater vulnerability to behavioural problems such as crime and suicide (Baumeister & Leary, 1995).

Belonging and Adjustment

Many studies have found a strong positive correlation between sense of belonging and adjustment to university: a greater sense of belonging is associated with a greater ability to adjust (Maunder, 2018; Moeller et al., 2020; O'Keeffe, 2013; Pittman & Richmond, 2008). In a survey of undergraduate students in England, Maunder (2018) found that students' adjustment to university was most strongly predicted by how attached they felt to their university friends. Attachment to the university itself was also measured, but it contributed to adjustment considerably less than peer attachment. Their results indicate that strong social relationships are critical to a successful transition to university, aligning with previous findings (Lamothe et al., 1995; Wilcox et al., 2005). Consistent with the NBT's assertion that people require strong relationships in addition to frequent interaction (Baumeister & Leary, 1995), studies have also found the quality of social bonds to be important; forging high quality friendships is associated with better adjustment to university (Maunder, 2018; Wilcox et al., 2005). One limitation in much of this literature is the inability to draw causal conclusions due to the use of correlational research designs. Studies that utilize qualitative approaches can overcome this limitation and gain deeper insight to the direction of the relationship between belonging and adjustment, and thus prove that a sense of belonging directly influences students' ability to adjust to university (Maunder, 2018; Wilcox et al., 2005).

While a sense of belonging facilitates a successful transition to university, a lack of belonging is associated with a poorer transition (Maunder, 2018). Students who struggle to make friends are more likely to experience depression, loneliness, and social anxiety (Moeller et al., 2020, O'Keeffe, 2013; Pittman & Richmond, 2008), struggle academically (Kantanis, 2000), and consider dropping out of school (Heisserer & Parette, 2002;

Maunder, 2018). A sense of belonging is therefore crucial to a successful transition to university and to overall well-being.

PSS

PSS is the degree to which one feels that their need to be supported is fulfilled (Stack-Cutler et al., 2015). It is important to note that the perception of being supported is far more important to well-being than the actual degree of support (Henderson, 1981; Henderson et al., 1980, as cited in Cohen & Wills, 1985); that is, whether people actually require support, simply believing that it is available is enough to benefit well-being (Cohen & Wills, 1985; Xiang et al., 2020). Higher PSS is correlated with higher levels of happiness, self-esteem, and self-efficacy, as well as lower levels of stress, depression, and anxiety (Xiang et al., 2020; Bukhari & Afzal, 2017). Consistent with the Main-Effect Model, these findings exist regardless of the amount of stress that students experience (Xiang et al., 2020).

PSS and Adjustment

Stack-Cutler and colleagues (2015) found that, among university students, life satisfaction is positively correlated with PSS, and that support by significant others, such as friends, were more important than the feelings of belonging to an institution as a whole. This demonstrates the necessity for first-year university students to develop close bonds with those around them. In support of this conclusion, Awang and colleagues (2014) found that developing meaningful friendships is essential to a successful transition to university. It has also been found that highly supported first-year college students have better social and emotional adjustment (Friedlander et al., 2007, as cited in Awang et al., 2014), which aids students in their overall transition to university (Demaray et al., 2005, as cited in Awang et al., 2014).

The first few weeks of university are critical for first-year students as they navigate this new experience. A student's level of PSS is a key factor in their decision to drop out of school (Wilcox et al., 2005). Thomas (2002) found that students who were undecided about dropping out credit their decision to stay to the social support they received from their peers, while Mackie (1998) reported that many students who drop out early in their first year do so due to a lack of social integration and support. It might be argued that the Stress-Buffering Model—the idea that social support primarily benefits those under significant amounts of stress (Cohen & Wills, 1985)—would best explain this phenomenon, however further research has demonstrated that the Main-Effect Model (Cohen & Wills, 1985) provides a better explanation. As students remain in school and develop more relationships, they begin to feel more supported, which increases confidence (Awang et al., 2014). Essentially, high levels of PSS may help students develop more social relationships, which further boost PSS, creating a positive feedback loop (Xiang et al., 2020). Following these first few critical weeks, students' levels of PSS increase and stabilize (Wilcox et al., 2015), aligning much better with the Main-Effect Model.

Blending Belonging and PSS

Although a sense of belonging differs from a sense of social support, the literature finds that these two concepts are highly connected (Wilcox et al., 2005). Outcomes for

belonging and PSS are typically very similar: both are required for a successful transition to university, and a lack of either results in poor well-being (e.g., Awang et al., 2014; Maunder, 2018; Wilcox, 2005). As such, we combined the two concepts to create one variable of social integration, while still measuring each concept individually.

Adjustment

Serving as an indicator of well-being, adjustment is defined as how well students are coping with the transition to post-secondary (Maunder, 2018). As argued by Pittman and Richmond (2008), the transition to university is made easier for those who have certain protective factors, such as strong social relationships and a sense of belonging. Greater attachment within the university, environment, and among peers is linked to better social adjustment (Tao et al., 2000), lower levels of depressive symptoms, higher academic motivation, and lower attrition rates (Pittman & Richmond, 2008). Generally, successful adjustment is associated with greater well-being (Tao et al., 2000; Thurber & Walton, 2012).

Pittman and Richmond (2007, p. 272; 2008, p. 345) assert that similar findings exist in younger populations. Studies sampling middle school and high school students found a link between a sense of belonging and positive student outcomes, including greater academic motivation and success (Anderman, 2002; Anderman, 2003; Goodenow, 1993b; Goodenow & Grady, 1993; Roeser et al., 1996), lower rates of attrition (Finn, 1989; Wehlage et al., 1989), and better interpersonal functioning (Anderman, 1999; Resnick et al., 1997; Shochet et al., 2006).

In any setting, it is important that an individual feels that they belong and that they are supported by those around them (Pittman & Richmond, 2008). Adjusting smoothly into university is dependent on these variables, and a deficiency in either of these factors increases students' vulnerability to lower well-being, which can manifest as poor mental or physical health. Accordingly, research has found that the inability to transition into post-secondary is associated with poorer mental and physical health (Tao et al., 2000; Thurber & Walton, 2012). In a study highlighting prevention and treatment strategies for university students, Thurber and Walton (2012) found that students who have difficulty transitioning to university report high levels of depression, anxiety, and withdrawn behaviour. Morton and colleagues (2014) published similar findings; while their correlational study could not determine a causal direction, first-year students in their study with higher levels of depression and life stress reported more difficulty adjusting to university.

Although there is a significant body of research on the topic of adjusting to university, relatively few studies utilize large and diverse samples (Pittman & Richmond, 2008), and few recognize the varying definitions of social support, adjustment, and well-being (Tochkov et al., 2010). Moreover, correlation studies cannot establish the temporal order of adjustment and well-being to determine whether poor adjustment to university causes a decrease in well-being, or whether low well-being is responsible for difficulty adjusting to university.

Summary of the Literature

In our search of the literature, we found a considerable amount of research on the relationships between our topics of interest: housing with social integration, social integration with adjustment, and adjustment with general well-being. Much of the research

on the relationship between housing and adjustment pointed to other factors that mediate the relationship—such as social integration—rather than finding any direct effect. Research has also indicated a strong relationship between adjustment and student well-being. Generally, the literature supports the idea that type of housing is related to levels of social integration, which in turn affect adjustment to university and overall well-being.

Methodology

Introduction to the Research

Our research was a mixed-methods study of first-year McMaster University students. Specifically, our research questions were (1) 'What are the relationships between housing accommodation, sense of social integration, and adjustment to university?' and (2) 'In what ways are students supported by their university friends?'. To answer these questions, we conducted an anonymous online survey hosted on the MREB-approved platform LimeSurvey. We focused primarily on our variables of interest: type of housing accommodation, level of social integration, and level of adjustment to university.

Research Timeline

A complete timeline of our research process is presented in Table 1.

Table 1

Complete timeline of research process

Task	Date
Research proposal and ethics protocol submitted	October 19, 2021
Revision meeting with Dr. Clancy	October 29, 2021
Proposal revisions completed and ethics approval granted	November 8, 2021
Survey launched and recruitment began	November 10, 2021
Research project overview submitted	November 19, 2021
Data collection ended	February 18, 2022
Data analysis began	February 19, 2022
Data analysis ended	February 28, 2022
Poster draft submitted for review	March 7, 2022

Poster presentation	March 18, 2022
Final thesis paper submitted	April 1, 2022
All data deleted	Once Dr. Clancy has submitted grades for the course, no later than April 30, 2022

Materials

We activated our survey on November 10, 2021 and accepted responses until February 18, 2022. The survey consisted of 19 closed-ended questions and three open-ended questions.

Measure of Housing

Housing accommodation was measured by asking participants to select whether they lived on campus in residence, off campus with other students, off campus with family, off campus alone, or an option not listed. Additional housing-related data was collected on residence room and bathroom type (if applicable), household size, distance from campus, and frequency of visiting campus.

Measure of Social Integration

Social integration was measured by combining items that assessed a sense of belonging (e.g., “I feel connected to my friends”) and items that assess PSS (e.g., “I am satisfied with the number of people that I feel I can turn to for help”) to create a seven-item scale with good internal consistency (α = .83). The belongingness subscale consisted of four items and had acceptable internal consistency (α = .77). The PSS subscale consisted of three items and had questionable internal consistency (α = .65) which improved when the third item (“My friends care about my well-being”) was dropped (α = .7). We formulated each item to correspond with particular tenets of the NBT and the Main-Effect Model in an effort to capture the important aspects of social integration. Each item on the scale was rated on a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree).

Measure of Adjustment

Adjustment to university was measured using a four-item scale with acceptable internal consistency (α = .71). During the data analysis process, we realized that two of the four items were not applicable to students living at home (“I visit and/or call home frequently; I rarely feel homesick”), so we excluded these two items from the overall measure of adjustment for students who indicated they lived at home. The internal consistency of this subscale was acceptable (α = .72). We used the four-item measure for students living on campus or with other students off-campus, and the two-item measure for students living at home for their final measure of adjustment. Each item was rated on a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree).

Demographics

At the end of the survey, we collected demographic information, specifically age, self-identified gender, and international status.

Recruitment

To recruit first-year student participants, Jessica Aranyush and Jewel Pheasant-Dumont contacted McMaster student-run groups, clubs, and pages. Using our recruitment scripts, we asked the groups to post a poster promoting our survey on their social media profiles. We emailed or messaged the following groups: Society of Off-Campus Students, McMaster Social Psychology Society, McMaster Anthropology Society, PNB Society, McMaster Sociology Society, McMaster HASSA, McMaster Pass on Positivity, McMaster Golden Z, McMaster Humanities Society, Social Work Students Collective, Gujarati Student Association, McMaster Dance Recreational Team, McMaster COPE, McMaster ISA, McMaster Social Sciences Society, McMaster Students Union, macGEET, DeGroote Commerce Society, McMaster Life Sciences Society, McMaster Human Behaviour Society, McMaster Engineering Society, Medicine Health and Society, Kinesiology Society, Linguistics Society, DeGroote Impact, McMaster Extra Life, McMaster Relay for Life, McMaster Veggie Club, McMaster Indigenous Health Movement, Mac ProcrastiKnitters, Mac Soup Kitchen, McMaster Board Game Society, Bollywood Club, McMaster Geeks, McMaster Math and Stats Society, McMaster Arts for Children, McMaster Penpals for Seniors, Mac Italian Club, McMaster Chinese Students Association, Mac German Cultural Club, McMaster Indian Association, McMaster Association of West Indian Students, McMaster Polish Society, McMaster SriLankan Association, McMaster Vietnamese Students Association, McMaster French Club, Iraqi Students Association, McMaster Japanese Club, The Egyptian Student Association at McMaster University, McMaster Foodies, Spotted at Mac, McMaster University Class of 2025 Current Students, McMaster University Class of 2025 Official Group, McMaster Social Sciences Accepted Class of 2025, and the McMaster ArtSci Class of 2025. Maiya Bertola and Kate Cooper also affixed 150 MSU-approved posters around campus.

Sample

We received 442 responses to our survey, 394 of which were deleted for not having completed the majority of the closed-ended questions. Two additional responses were removed for having indicated in their open-ended responses that they were not in first year, and one was removed for being 17 years old. Our final sample consisted of 45 McMaster students over the age of 18. Demographic information is described in the results section.

Ethical Concerns and Solutions

Our study may have posed a psychological risk to participants to the extent that the questions may have been triggering or uncomfortable for some. To manage this risk, the following precautions were taken: the survey was anonymized, allowing participants to share their experiences without being identified; the survey was voluntary, giving participants the ability to skip questions or quit the survey at any point before completion; the survey listed support resources on the first and final pages from which participants can seek support if they feel uncomfortable or upset. Our study may have posed a social

risk to participants to the extent that completing it in public may have exposed their responses to others in the immediate environment. This risk was managed by informing participants in the preamble that they could complete the survey at a time and place of their choosing, minimizing the chance of a breach of their privacy. Beyond these potential issues, our study posed minimal risk—none greater than everyday life. The research was approved by the McMaster Research Ethics Board (MREB#: 0327).

To avoid any conflicts of interest, we recruited participants primarily through student-run groups, clubs, and pages; we did not contact students directly. Jessica Aranyush and Jewel Pheasant-Dumont were responsible for contacting most of the groups previously stated; Vanessa Richards contacted the McMaster Social Psychology Society as Jessica Aranyush and Jewel Pheasant-Dumont are on the executive team. Kate Cooper was noted to have several conflicts of interest as a Teaching Assistant and Community Advisor to first-year students, thus she was not involved with recruitment beyond affixing posters around campus. Once the data was collected, it was kept private, secure, and protected from others outside of the research group on password-protected computers connected only to secure networks.

Data Analysis

To discover what relationships existed between our variables of interest—housing accommodation, social integration, and adjustment to university—we analyzed our quantitative data using Jamovi software. We began by setting up our data file, reverse scoring the required items and creating mean scores for social integration and adjustment. Then, to learn more about our sample, we calculated descriptive statistics. Next, we conducted one-way ANOVAs to see whether different types of housing accommodations were associated with different levels of social integration and adjustment, and used a correlation matrix to see the association between social integration and adjustment. After analyzing our main relationships, we conducted additional analyses, including reliability analyses to determine the internal consistency of our scales, independent samples t-tests to compare mean differences between groups with only two categories, generalized linear model mediation analysis to test the mediating effect of social integration on the relationship between housing and adjustment, and independent chi-square tests to see whether categorical frequencies were as expected. In this paper, we report only the findings pertaining to our research questions and additional findings we deemed interesting.

To supplement and contextualize our quantitative data, as well as to answer our secondary research question (In what ways are students supported by their university friends?), we analyzed responses to our three open-ended survey questions using descriptive coding. We took a mostly inductive approach to coding the responses, allowing the themes to emerge from the data, however our codes and themes were influenced by the findings of our literature review and our two guiding theories, the NTB (Baumeister & Leary, 1995) and Main-Effect Model (Cohen & Wills, 1985).

Summary of Methodology

To summarize, we developed a quantitative survey with qualitative components to answer our two research questions. We recruited a final sample of 45 first-year students through McMaster student-run groups and posters displayed across campus. We ensured

that we took the necessary precautions to minimize any potential risks to our participants, and to avoid conflicts of interest in our recruitment process. Finally, we used Jamovi to analyse our quantitative data and descriptive coding to analyse our qualitative data.

Results

Quantitative Results

Demographics

Usable data was collected from 45 participants (n=45). Participants were all assumed to be in their first year of university given the inclusion of this criterion in the survey title and preamble (M_{age} = 18.3, SD_{age} = 0.63). Most participants self-identified as women (86.7% female, 11.1% male, 2.2% non-binary). Only five participants identified themselves as international students (11.1% international, 88.9% non-international). Approximately half of the sample lived on campus in residence (53.3% in residence, 22.2% off campus with students, 24.4% off campus with family). Approximately half of those living in residence lived in traditional double rooms (54.2% double, 41.7% single, 4.2% apartment-style). Exactly half of those living in residence had access to a common washroom (50% common washroom, 29.2% single user washroom, 20.8% ensuite washroom). This reflects the proportion of room types in McMaster residences: double rooms with access to a common washroom are the most common room type (Housing & Conference Services, n.d.). Across all participants, social integration was relatively high on the scale out of five ($M_{social\ integration}$ = 3.64, $SD_{social\ integration}$ = 0.73) while adjustment was close to average ($M_{adjustment}$ = 2.6, $SD_{adjustment}$ = 0.97).

Statistical Analysis

We conducted several different statistical analyses to answer our research questions and discover additional relationships between our variables. The following tables and figures illustrate our most relevant and interesting findings.

Table 2 and Figure 1 show the levels of social integration and adjustment by different housing types, analyzed by conducting a one-way ANOVA. Social integration was highest for those living off campus with other students, followed by those in residence, and lowest for those at home. Adjustment to university was best for those living in residence, followed by those off campus with other students, and worst for those at home. However, the differences between groups were not significant.

Table 2

Means and standard deviations of social integration and adjustment by housing type

	Social Integration		Adjustment	
Housing Type	Mean	SD	Mean	SD
In residence	3.60	.809	2.79	.966
Off campus with other students	3.84	.695	2.55	.900
Off campus with family	3.51	.572	2.20	1.03

p-value	.547	.271

Figure 1

Mean scores for social integration and adjustment by housing type

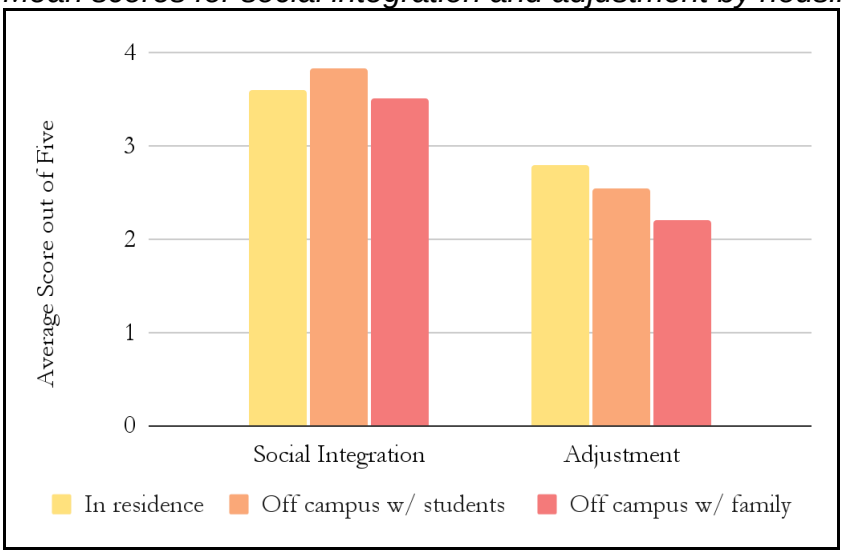
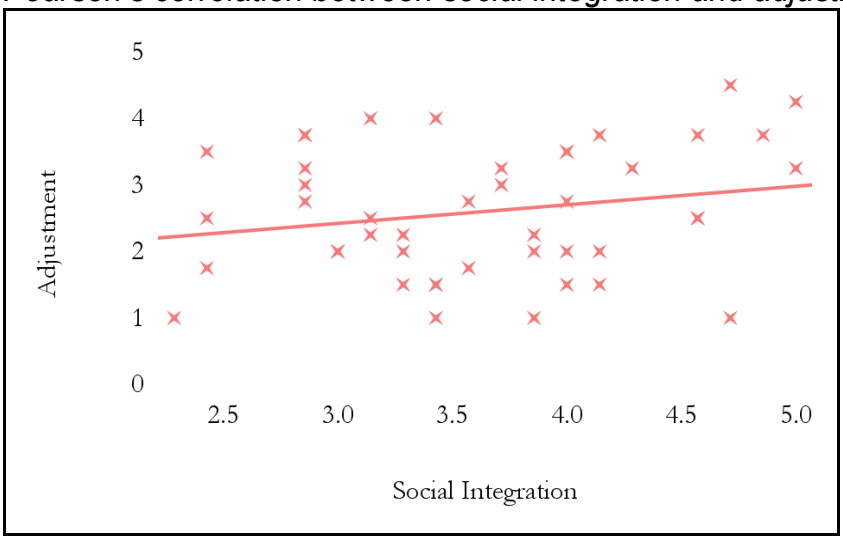


Figure 2 shows the correlation between social integration and adjustment. Social integration and adjustment are positively correlated, but not significantly (r = .21, p = .167).

Figure 2

Pearson's correlation between social integration and adjustment



We also tested the indirect effects of housing accommodation on adjustment through social interaction using a generalized linear model of mediation. The indirect effects were not significant, meaning that social integration did not mediate the associations between

housing and adjustment. The direct effects were also not significant, meaning that housing did not have a direct effect on adjustment.

Table 3 shows the correlations between all social integration items and adjustment. Items 1, 4, 5, and 6 were measures of belonging; items 2, 3, and 7 were measures of PSS. Only items 2 and 3 were significantly correlated with adjustment. A subscale consisting of these two items was significantly positively associated with adjustment (r = .462, p = .001). Correspondingly, participants who strongly disagreed, disagreed, or felt neutrally toward these two items reported significantly worse adjustment than those who agreed or strongly agreed. Results of these independent samples t-tests are reported in Table 4 and visually illustrated in Figure 3.

Table 3

Pearson's correlation between social integration items and adjustment

Social Integration Scale Item	Adjustment
1. I have a strong, accepting social bond with my peers	.206
2. I am comfortable asking those who live in close proximity to me for help	.395**
3. I am satisfied with the number of people that I feel I can turn to for help	.422**
4. I am satisfied with the number of really close friends that I have	.065
5. I enjoy spending time with my friends	.087
6. I feel connected to my friends	.023
7. My friends care about my well-being	-.183

Note. *p < .05, **p < .01, ***p <.001

Table 4

Comparison of low and high agreement to 2) "I am comfortable asking those who live in close proximity to me for help" and 3) "I am satisfied with the number of people that I feel I can turn to for help"

	Level of agreement		Adjustment	t-value	p-value
Item 2	Low agreement (strongly disagree, disagree, neutral)	Mean SD	2.09 .760	2.99	.005
	High agreement (agree, strongly agree)	Mean SD	2.91 .968		

Item 3	Low agreement (strongly disagree, disagree, neutral)	Mean SD	2.24 .854	2.59	.013
	High agreement (agree, strongly agree)	Mean SD	2.95 .971		

Figure 3

Adjustment by level of agreement to social integration items 2 and 3

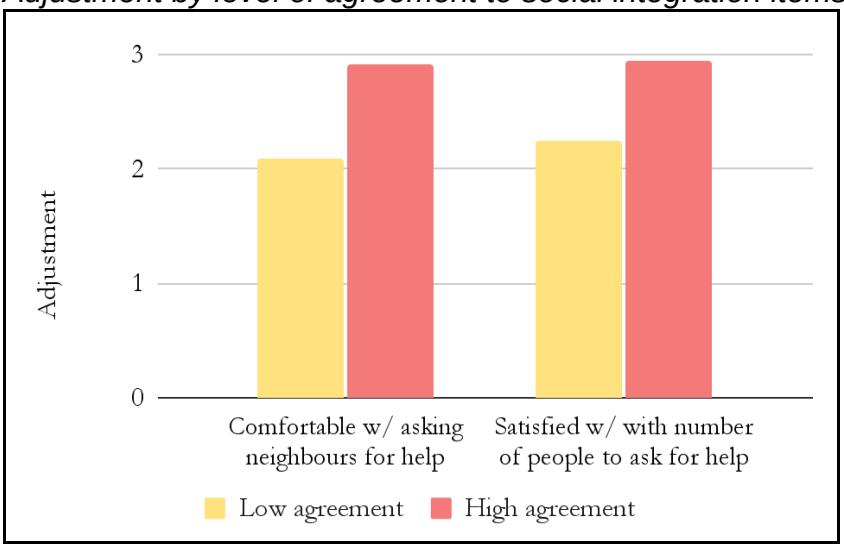


Table 5 and Figure 4 show the results of a one-way ANOVA testing the relationships between frequency of visiting campus and social integration and adjustment. More frequent campus visits were associated with higher levels of social integration, though not significantly. The relationship between campus visit frequency and adjustment was significant; visiting campus very frequently or very rarely was associated with better adjustment than visiting weekly.

Table 5

Means and standard deviations for social integration and adjustment by campus visit frequency

	Social Interaction		Adjustment	
Campus Visit Frequency	Mean	SD	Mean	SD
Every day or almost every day	3.68	.816	2.84	.886
Weekly	3.57	.695	1.89	.824
Never or almost never	3.29	.572	2.75	1.768

p-value	.722	.016

Figure 4

Social integration and adjustment and by campus visit frequency

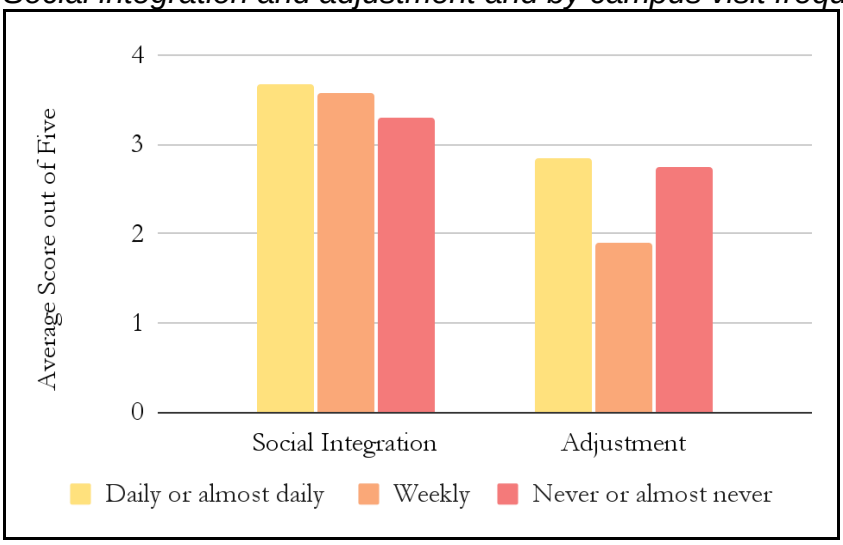


Table 6 shows the results of an independent samples t-test comparing international students and non-international students' social integration and adjustment. The two groups did not differ significantly on social integration, however international students were significantly better adjusted than non-international students.

Table 6

Comparison of international and non-international students' social integration and adjustment

	Social Integration		Adjustment	
International Status	Mean	SD	Mean	SD
International	3.83	.650	3.50	.433
Non-international	3.61	.744	2.49	.966
p-value	.534		.027	

Independent samples t-test were conducted to test the associations between residence room type (single or double) and gender (male or female) with social integration and adjustment. Students in double rooms reported higher levels of social integration and adjustment than those in single rooms, but not significantly. Female students reported higher social integration than male students, while male students reported better adjustment than female students, but the differences were not significant. Moreover, a

linear regression showed that the interaction between gender and social integration was not significant, meaning that gender did not moderate the relationship between social integration and adjustment. A one-way ANOVA was conducted to test the associations of residence bathroom type (common, single-user, or ensuite) with social integration and adjustment. Students in residence with access to a common bathroom were more socially integrated than other students in residence, while students with an ensuite were better adjusted than other students in residence, but these differences were not significant. A chi-square test was run to assess the relationship between housing type and distance from McMaster campus; as expected, this relationship was significant, X^2 (4, N = 45) = 18.6, p = <.001. Interestingly, several students who reported living in residence also reported living farther than 8 kilometres from campus or outside of Hamilton entirely.

Qualitative Results

To supplement our quantitative data, we analyzed the responses to three open-ended questions: 1) In what ways do you think that your living arrangements affected your ability to make friends and receive social support? 2) In what ways do you think that your living arrangements affected your ability to adjust to university life? 3) In what ways do your friends support you?. Our analysis of the qualitative questions used an inductive coding approach, wherein we generated codes only after reading through the responses. We allowed overarching themes and subthemes to emerge from the responses after completing the coding.

Question 1

The first open-ended question asked students how they thought their living arrangements affected their social integration. Responses centered mainly around feelings of social integration and isolation. Prominent themes and subthemes are reported in Table 7.

Table 7

Prominent themes and subthemes in responses to open-ended question 1

Themes	Subthemes
Social integration	• *No subthemes*
Social isolation	• Housing negatively affecting social integration • COVID-19

Social Integration

A significant theme that emerged from students' responses was the idea that living in residence was conducive to social interaction and integration. Living in residence allowed students to interact with more people and increase their chances of forming connections with others, and made it easier to spend time with already-established friends. One student captured this common theme perfectly with their response: "Being in residence increases chances of meeting new people and also being able to hang out with them more (which enables the formation of a stronger connection)." This idea was prevalent

not only among students living in residence, but also among those who had chosen to live off campus with other students or their family. One participant who chose to live at home stated, “if I was comfortable with living in residence I’m sure it would have made it easier to meet people.” A few students living off campus with other students also responded that living with their peers had increased their sense of social integration, however they acknowledged that they mainly became closer with their housemates and did not form as many new social connections as they would have living in residence. Overall, the theme of social integration emerged mainly from the responses of students living in residence, who explained that this living arrangement provided them with more social interaction and integration.

Social Isolation

In contrast to the theme of social integration, many students mentioned feeling socially isolated and disconnected from their first-year peers. Within this overarching theme, the largest subtheme that emerged was *housing as a direct cause of social isolation*. Students whose responses fell within this subtheme explicitly stated that their living arrangements were the reason why they felt socially isolated. Students in all three housing types indicated, to a varying extent, that their housing type contributed to their feelings of social isolation.

Feeling that housing type was directly responsible for their social isolation was most prevalent among students living at home. One such student noted, “I think because I'm living off campus with my family, I haven't had many opportunities to make friends because I don't see other McMaster students unless I'm visiting campus.” Another stated that living at home made them feel “extremely socially isolated.” Interestingly, students living off campus with other students also indicated feeling that living on campus would have helped them feel more socially integrated. Multiple students in this housing type echoed one student, who explained that “not being able to be on campus as a first year has made it incredibly hard to meet people and make friends.” Of the students in residence who reported that their housing type made them feel socially isolated, all resided in single rooms.

Within the subtheme of housing as a cause of social isolation, some students explicitly identified isolation caused by their living arrangements as having negatively impacting their mental health. One student in a single room in residence revealed that feeling isolated “really took a toll on my emotional and mental wellbeing,” and added that living in a single had “affected my ability to make friends tremendously.”

The *COVID-19 pandemic* was also a recurring subtheme in students’ responses to our first open-ended question. Some students made reference to online classes and wearing masks, however these were often only brief mentions. Only one student described that COVID-19 regulations inhibited their ability to meet people in their building, saying that “online school has not helped with making friends since I am mainly in my room most of the time.” However, it is safe to assume that COVID-19 and associated conditions did not facilitate social interaction and integration and can be more accurately categorized as a factor causing social isolation.

Question 2

The second open-ended question asked students how they believed their living arrangements affected their ability to adjust to university life. Table 8 displays the themes and subthemes that emerged from students' responses to this question.

Table 8
Prominent themes and subthemes in responses to open-ended question 2

Themes	Subthemes
Connectedness	• Positive experiences • Negative experiences
Continuity	• Positive experiences • Negative experiences
Proximity	• Positive experiences • Negative experiences
Living Space	• Positive experiences • Negative experiences
Independence	• Positive experiences • Negative experiences

Connectedness

Similar to the main themes that emerged in the responses to the first open-ended question, many students mentioned that their living arrangements provided either a sense of connectedness, or a lack of connectedness, which impacted their adjustment to university. When describing *positive experiences* of connectedness, students mentioned that living on campus has eased their adjustment to university because it allowed them to connect with other first-years, particularly over shared experiences. For instance, a participant who lived in residence noted: "Having other students around me who were experiencing the same situation as me helped as we were able to discuss similar feelings of uneasiness surrounding university life." These positive experiences of connectedness were most commonly cited by those who lived on campus with roommates.

Negative experiences appeared in students' responses as they felt a lack of connectedness as a result of their living arrangements, which negatively affected their adjustment to university. This theme was particularly prominent in the responses of off-campus students. Off-campus students reported feeling less connected to their peers as they were unable to interact with other students as much as students living on campus. Moreover, participants who lived off campus noted feeling like outsiders to university life, and that living at home made them less of a typical university student. These negative experiences of limited connectedness to both the university and their peers were cited as reasons for having difficulty adjusting to university.

Continuity

Continuity was a critical factor that students expressed, whether it was as a positive or negative influence on adjusting to university. *Positive experiences* of continuity were cited

by students living off-campus with their family, as their support system and living environment remained consistent. For example, one student stated that staying at home for first year made it easier to adjust, as it was "one less change in my life amidst the craziness [of] adjusting to university life and expectations," and they were able to continue receiving support from their parents and dog. However, this theme only emerged in a few participants' responses; relative to the frequency of other themes, it was not a popular perspective.

More prominently, students noted *negative experiences* of continuity in their living arrangements and the negative impact it had on their adjustment to university. Those who lived in residence noted that the sudden change of environment was difficult to adjust to, particularly because they did not have the same support system as they did at home. Here, it was discontinuity in living arrangements that was experienced negatively. Conversely, one student found continuity in their living arrangements was a negative experience that made it difficult to adjust to university: "I did not get into the groove of living in the traditional residence buildings. Staying off campus has basically been like still living at home."

Proximity

Students cited the proximity of their housing accommodation to the university as either a positive or negative contributor to their adjustment to university. Students living on or close to campus described *positive experiences* of proximity as they had easier access to the benefits associated with campus. One student summed this theme up perfectly, writing that living in residence helped with adjustment since "everything I needed was right there." Some students specified that the reason they enjoyed living in close proximity to campus and having easy access to campus amenities was because it saved them time. With this extra time, they were able to focus more on schoolwork or hangout with friends. These other activities helped them "feel more at ease and comfortable," which eased their adjustment to university. Overall, proximity to campus and its associated convenience made the transition to university less challenging.

Participants also cited *negative experiences* that occurred as a result of their lack of proximity to campus. One student who lived off-campus with family noted that living farther from school was a difficult transition, as they were more accustomed to living in close proximity to their high school. Another common response was that living off-campus made adjustment more difficult as much of their time was spent commuting. Not living near campus made it harder for students to adapt and adjust to university life.

Living Space

Participants indicated in their responses that their living environment fostered both positive and negative experiences when it came to adjusting to first year. Within the *positive experiences* subtheme, a common response from on-campus students was that being surrounded by an academic environment allowed and encouraged them to stay dedicated to their studies. Some participants also noted that being on campus in a single room helped them to adjust since they had their own space to become accustomed to the university environment.

For other students, their living space was a *negative experience* that impacted their adjustment to university. Students in residence cited issues with their room and

roommates as factors that made it difficult to adjust. In some cases, students expressed that the room itself was unsatisfactory and made it harder for them to make the adjustment, for example having a washroom that “isn’t ideal.” In other cases, participants expressed being uncomfortable in their living space due to their roommates: “They force me to interact with another person frequently, but that’s not always what I want [or] am comfortable with.” Some participants who lived in residence also commented that they disliked their roommate, leading them to go home more frequently instead of remaining in residence.

Students living off campus with family also had negative experiences with their living space in relation to their adjustment to first year. These students found that it was difficult to study effectively and maintain focus with other family members around the house, resulting in a more difficult adjustment to university.

Independence

Students stated in their responses that their living arrangements came with a unique sense of independence, which was either a positive or negative experience when trying to adjust to university. *Positive experiences* of independence were evident in several students’ responses as they explicitly mentioned feeling positively about having gained a new sense of independence after moving out of their family home. This was especially common among students living off campus with other students. One such student wrote, “I think living away from home has definitely allowed me to become more independent and comfortable with trying things I’m typically not very familiar with, such as new extracurriculars.” Another student explained that being on their own had made them feel more independent, and that “it has been very enjoyable.” The opportunity for students to live away from home gave them new independence that they had not experienced prior to attending university.

A positive experience of independence was also noted by one participant living at home. For them, continuing to live at home and not gaining a new sense of independence was beneficial: “Living at home has kept me responsible and given me ample amounts of time to get done what needs to get done.”

In contrast, some off-campus participants described gaining independence as a *negative experience* that made it harder to adjust to university. These students found that living with their peers resulted in more responsibilities around the house, including cleaning the house and shopping for groceries, since they could no longer rely on their parents’ assistance with household chores. They cited the increased responsibilities as making adjustment to university more difficult.

Question 3

The third open-ended question asked students to describe specific ways that their friends supported them. This question was included specifically to help us answer our secondary research question: ‘In what ways are students supported by their university friends?’. Table 9 presents the prominent themes and subthemes that emerged from students’ responses to this question.

Table 9

Prominent themes and subthemes in responses to open-ended question 3

Themes	Subthemes
Emotional Support	• General emotional support • Listening • Showing empathy
Instrumental support	• Food • Academic support
Social Interaction	• *No subthemes*

Emotional Support

Many participants expressed that emotional support from their friends was vital to their support needs. Emotional support can be defined as verbal and nonverbal processes that communicate support and care to another individual (Federici & Skaalvik, 2014). A subtheme present in participants' responses was *general emotional support*. A large majority of respondents indicated that their university friends made them feel welcomed and accepted, and were there to provide support when they needed it. For instance, a student expressed that their peers supported them by "checking in on my mental health, reaching out, [and] offering to talk if I'm not in a good place." General emotional support was also characterized by the students' perception that they can turn to their friends for advice and encouragement.

Students' responses revealed that *listening* was a critical component of emotional support. Receiving emotional support from peers allowed students to feel more connected and willing to explain how they are feeling. For example, a respondent mentioned that their friends "providing a listening ear [...] when I feel overwhelmed" made them feel supported. Students also noted that reciprocal listening was present in their friendships.

Respondents indicated in their responses that *empathy* from their friends showed their support. Empathy was characterized as support through shared first-year experiences. One participant noted: "I feel that my friends support me in having the same mutual feeling when it comes to not knowing anything about university" Similarly, another said that their friends "connect me to resources when they have gone through a similar experience and [tell me] how I can combat the barrier I have at hand." It is evident that having shared experiences with friends creates the opportunity for these friends to provide support through resources that they know to be helpful.

Instrumental Support

Students also described how their friends provided them with what could be classified as *instrumental support*, defined as tangible assistance wherein one receives help in a material form (Federici & Skaalvik, 2014). Nearly all responses that mentioned instrumental support could be further classified into subthemes of *academic support* and *food*.

Students indicated in their responses that support through *food* was a large factor in how their friends supported them. The use of food was important for students because they felt that it comforted them in their times of need, and their friends' support through the bringing and sharing of food alleviated some of their stress. For example, one student

stated that receiving food from their friends when they were sick helped immensely as they were unable to buy it themselves. Other students mentioned feeling supported by the small gesture of being brought food by their friends. Similarly, students were supported by their friends when they shared meals together as it was more desirable to eat with a friend rather than alone.

Academic help was another frequent response from students when describing the type of instrumental support they acquire from friends. Academic support was represented as working together on assignments, providing help with difficult homework questions, and giving advice on coursework. The ability for their peers to assist them in coursework alleviated stress, which in turn led to a stronger sense of support in their friendships. As such, tangible academic support was an important part of feeling socially supported.

Social Interaction

A common theme that appeared from participants' responses was that their friends supported them through social interaction. The students' social interaction with their peers included a large emphasis on their physical presence and the support it provided. For instance, students who lived in residence noted that social interaction occurred most often from walks together or going to get food together. These responses indicated that those who lived on campus were able to interact with their peers in person, which offered them strong, frequent support through their physical presence. Similarly, support from their peers was cited in general by students as being able to meet with their friends and hangout with them. The students' ability to spend time with their friends in person provided meaningful social interaction in person. Social interaction was noted by some students as important support for when they felt lonely or upset, as it provided a distraction. Overall, the general theme of social interaction was characterized by their peers' support by having a physical presence when needed.

Discussion

This study examined the relationships between housing accommodation, social integration, and adjustment to university through quantitative measures and qualitative responses detailing subjective experiences. The following section will connect the quantitative and qualitative findings to each other, our guiding theories, and the literature we reviewed to highlight and expand on important conclusions.

Housing and Social Integration

Quantitative results revealed that social integration was highest for students living off campus with other students and lowest for students living off campus with family, however these differences were not significant. This lack of significance contradicted the literature we reviewed, which overwhelmingly stated that social integration was typically highest among students living in residence and lowest among students living at home, as a result of the additional opportunities for social interaction in residence (Dumford et al., 2019; Joseph, 2021; Wilcox et al., 2005). Qualitative findings, specifically responses to the first open-ended question (In what ways do you think that your living arrangements affected your ability to make friends and receive social support?), aligned with the literature. Here, a prominent theme was the idea that living in residence facilitated social interaction and therefore increased social integration; this idea was strongly supported as it was expressed not only by students who had experienced it through living in residence, but

also by students who had chosen not to live in residence and believed doing so would have improved their social integration. Likewise, off-campus students expressed feelings of social isolation that they believed were a direct result of their off-campus accommodation. Regarding the relationship between housing and social integration, our qualitative—but not quantitative—findings confirmed existing literature.

Housing and Adjustment

Analysis of our quantitative results revealed that students living in residence had the highest levels of adjustment, followed by students living off campus with other students, and then students living off campus with their family, but that these differences were not significant. This pattern—but not the lack of significance—was predicted by the literature, which suggests that students in residence have better adjustment as a result of greater social integration (Dumford et al., 2019; Fosnacht et al., 2019; Lamont Strayhorn, 2008). This relationship will be discussed in depth in a subsequent section.

Responses from our second open-ended question (In what ways do you think that your living arrangements affected your ability to adjust to university life?) provided greater insight into how students were perceiving the impact of their housing accommodation on their adjustment to university, including the discussion of factors beyond social integration.

Surprisingly, nearly equal numbers of residence students reported that their living arrangement contributed positively to their adjustments as contributed negatively. This lack of consensus corresponds with existing literature; some studies have found that students living in residence experience better adjustment (e.g., Joseph, 2021; López Turley & Wodtke, 2010; Wilcox et al., 2005), while others have found that residence students' adjustment suffers more than their off-campus counterparts (e.g., Thurber & Walton, 2012; Tochkov et al., 2010). Further research into the specific aspects of housing accommodations that contribute to the improvement or worsening of adjustment, such as proximity to campus and features of living space, is required to fully understand the relationship between housing and adjustment.

In contrast to mixed opinions from participants living in residence, off-campus students were more consistent in their responses. A large majority of students living off campus with family indicated feeling that their living arrangement had negative impacts on their adjustment to university. Most of these students felt that living away from campus kept them disconnected from their peers and the university community, which made it difficult to adjust. Previous literature has demonstrated that off-campus students who become more involved in school-based extracurriculars experience higher levels of social integration (Moore, 2020), so further research should be done to understand if this benefit can extend to off-campus students' adjustment.

In contrast to students living off campus with family, most off-campus students living with other students indicated that their living arrangement had positive effects on their adjustment to university. It appears that newfound feelings of independence and living in close proximity to campus are extremely important to adjustment, as these were the main differences noted between students living off campus with students and students living off campus with family. Furthermore, these factors seemed to be protective against the experiences of homesickness that our literature consistently associated with students

living away from home (Fisher & Hood, 1987; Thurber & Walton, 2012; Tochkov et al., 2010).

International students are a specific demographic that has been found to experience homesickness (Tochkov et al., 2010). Surprisingly, international students in our study reported significantly higher levels of adjustment than non-international students. It is possible that McMaster's programs and networks for international students are effective in mitigating the harmful effects of homesickness, thus aiding these students in their adjustment. Another possible explanation is that being unable to frequently visit home forces international students to become more socially integrated with other students, which elicits higher levels of adjustment. Further research into this topic is needed to better understand international students' levels of social integration and adjustment, and to discover the effectiveness of programs aimed at improving their adjustment to university.

Social Integration and Adjustment

Quantitative analysis revealed a positive association between social integration and adjustment, however the relationship was not significant. This lack of significance was unexpected as literature has long suggested that there is a robust association between these two variables (Lamothe et al., 1995; Maunder, 2018; Moeller et al., 2020; O'Keeffe, 2013; Pittman & Richmond, 2008; Wilcox et al., 2005). In fact, many scholars believe that social integration is essential to successfully transitioning to university life (Awang et al., 2014).

Housing, Social Integration, and Adjustment

Few studies considered the direct effect of housing on adjustment. Instead, it was suggested that social integration acted as a mediating variable, such that housing accommodation affected social integration, which in turn affected adjustment, rather than housing having a direct effect on adjustment (Dumford et al., 2019; Fosnatch et al., 2019; Lamont Strayhorn, 2008). Our quantitative findings did not support a significant indirect—mediating—effect of social integration, nor did they support a significant direct effect. However, qualitative data from students' responses provides strong support for social integration as a mediator between housing and adjustment. In response to the first open-ended question (In what ways do you think that your living arrangements affected your ability to make friends and receive social support?), students expressed beliefs that their housing had directly impacted their levels of social integration or isolation. In response to the second open-ended question (In what ways do you think that your living arrangements affected your ability to adjust to university life?), students identified social connectedness resulting from their housing accommodation as a positive influence on their adjustment to university, and social disconnectedness resulting from their housing accommodation as a negative influence on their adjustment to university. Taken together, these qualitative findings provide strong evidence for the mediating effect of social integration on the relationship between housing and adjustment. A larger sample size may have been required to detect the effect in quantitative analysis.

PSS and Adjustment

Our two-item subscale measuring PSS was significantly positively associated with adjustment. The two items in the subscale were 1) “I am comfortable asking those who live in close proximity to me for help” and 2) “I am satisfied with the number of people that I feel I can turn to for help.” The correlation between PSS and adjustment was expected as previous literature has noted that first-year students who feel supported often have higher levels of emotional and social adjustment (Friedlander et al., 2007, as cited in Awang et al., 2014), which translate to optimal adjustment to university (Demaray et al., 2005, as cited in Awang et al., 2014). Contrary to expectations, the same relationship with adjustment was not found with belongingness—our second measure of social integration—or social integration as a whole. We speculate that the COVID-19 pandemic and its related restrictions interfered with this relationship; this will be discussed in a subsequent section.

Campus Visit Frequency and Adjustment

Analysis of our quantitative results identified a significant positive correlation between how often a student visits McMaster campus and their level of adjustment. Students who visited campus daily or close to daily reported the highest levels of adjustment, followed closely by students who rarely or never visited campus. Interestingly, students who visited McMaster campus weekly had the lowest levels of adjustment. There is not any existing literature on this topic that we could compare our results to; prior to the COVID-19 pandemic, it was exceedingly rare for students to attend university without physically visiting campus.

In the absence of existing literature, we speculate that students who never visited campus felt more adjusted than students who visited weekly because they made alternative efforts to adjust to university in place of frequently attending campus. Li and colleagues (2013) suggest that there are ‘attaching behaviours’ that can facilitate students’ affiliation to their university community; these attaching behaviours include owning branded school merchandise, becoming involved in extracurriculars, and staying informed with news about the university (Li et al., 2013, as cited in Maunder, 2018)—all of which could be done virtually, from home while the university was closed due to the pandemic. Students who visited campus weekly might have been less likely to make these extra efforts to aid adjustment and may have inadvertently worsened their level of adjustment. As institutions cease public health protections and students are once again required to physically attend campus, we do not believe that further research to investigate this finding is necessary.

Residence Type, Social Integration, and Adjustment

Regarding room type, quantitative analysis revealed that students living in double residence rooms had higher levels of social integration and adjustment than students living in single residence rooms, but not significantly. This finding—but not the lack of significance—is consistent with Dumford and colleagues’ (2019) finding that having a roommate was associated with a greater sense of belonging, which positively contributes to adjustment. Correspondingly, the four residence students who reported feeling that their housing accommodation was responsible for their feelings of social isolation in the first open-ended question were all single room residents.

Regarding washroom type, quantitative analysis revealed that students with access to a common washroom reported the highest levels of social integration, while students with access to ensuite washrooms reported the highest levels of adjustment in comparison to students with access to other types of washrooms. Washroom type was not considered in the literature we consulted, however these results make logical sense. Sharing a washroom with all the residents on one's floor is likely related to higher social integration because it provides more opportunities for residents to come in contact with each other, but is likely more difficult to adjust to, given the dramatic difference between sharing a washroom with a few family members and sharing with 30+ neighbours. Moreover, having access to an ensuite washroom is likely correlated with better adjustment because it is a smaller change to get used to, but likely related to lower levels of social integration due to having fewer reasons to leave one's room and potentially interact with others.

Types of Social Support

To address our secondary research question (In what ways are students supported by their university friends?), our third open-ended question (In what ways do your friends support you?) focused specifically on social support. The responses to this question suggest that students feel supported by their university friends in three major ways: emotional support, instrumental support, and social interaction.

As previously reviewed, the Main-Effect Model argues that one's level of social support directly impacts well-being (Cohen & Wills, 1985). Initially, we intended to utilize this theory to inform the themes for our third open-ended question, however, once we began qualitative data analysis, we realized that the responses we received from students were not best explained by the three major pathways of social support to well-being detailed by the Main-Effect Model. While some of the findings were indirectly related to the three pathways, it was not fitting to code the responses as such. Instead, we decided to take an inductive approach and classify responses based on common themes that emerged from the data itself.

Students' responses indicated that, as suggested by Buote and colleagues (2007), friends fulfill several key functions in helping students adjust to their new environment. From the provision of emotional and academic support, and bringing food, to merely the physical presence of another student, our data illustrates that friends contribute significantly to other students' well-being in more ways than one. Considering the novelty of the university environment and the significant changes that accompany the transition to university, it is no surprise that students rely heavily on one another for support. Illustrated through the responses to our third open-ended question, and further backed by corresponding literature, real-life connections are crucial.

The themes from this open-ended question correspond with other research. Coinciding with our theme of social interaction, Joseph (2021), López Turley & Wodtke (2010), and Wilcox and colleagues (2005) all found that physically living in residence provided significantly more opportunities to make friends and connect with others, leading to better adjustment to university. The importance of social interaction was emphasized further by Friedlander and colleagues (2007), who found that post-secondary students that were highly supported had better social and emotional adjustment. Our qualitative findings echoed this, as students emphasized the importance of the social connection received from physically being with their peers in residence.

Instrumental support was another theme highlighted within our qualitative data, specifically referring to the significance of sharing meals and providing academic support. Corresponding with existing research by Buote and colleagues (2007), students felt that support in these domains alleviated stress and encouraged healthy behaviours. Through these connections, students were encouraged toward health-positive behaviours, aligning with the Main-Effect Model's social influence pathway (Cohen & Wills, 1985; Cohen et al., 2000; Kawachi & Berkman, 2001).

Student responses also indicated that emotional support from their peers was vital to their well-being, specifically noting the importance of listening and empathy within these interactions. Depicted through our results, perceivable support was noted to be a highly valued form of social support by students. Our findings correspond with other research, exemplified most clearly through the work of Sun and colleagues (2020), whose study highlighted the benefits of perceived available peer support in addressing issues such as depressive symptoms, in the context of the COVID-19 pandemic.

Ultimately, students' responses to our third open-ended question gave us a deeper understanding of the support which students receive from their peers. This allowed us to grasp a greater and more raw expression of what students value in their relationships and the contributing factors to students' well-being and perceived social support.

Relation to Theories

Our study was guided by two theories: the Need to Belong Theory (NBT; Baumeister & Leary, 1995) and the Main-Effect Model (Cohen & Wills, 1985). We used these theories to create our social integration scale, formulating items to correspond with specific ideas put forth by the theories. For example, we created the item "I am satisfied with the number of really close friends that I have" based on the assumption of the NBT that people prefer a few high quality close relationships to a larger number of weak relationships (Baumeister & Leary, 1995), and the item "I am satisfied with the number of people that I feel I can turn to for help" based on the proposition of the Main-Effect Model that the perceived availability of support is more predictive of well-being than actual support (Cohen & Wills, 1985; Cohen et al., 2000). Taken together, these theories led us to expect that individuals with a strong sense of belonging and high level of perceived social support would experience greater well-being.

We intended to use these theories alongside our review of the literature to interpret our quantitative and qualitative results, however our quantitative findings lacked significance, which made applying the theories to these results more difficult. According to the NBT and the Main-Effect Model, students who reported higher levels of social integration should have also reported better adjustment to university, however we did not find that to be the case, as the association between the two variables was not significant. Students who lived in residence—an environment with more opportunity for social interaction (Dumford et al., 2019; Joseph, 2021; Wilcox et al., 2005)—should have reported higher levels of social integration and adjustment, but did not. Overall, the lack of significance in the majority of our quantitative findings meant that the NBT and the Main-Effect Model did not clearly align with these results.

In contrast, the results of our qualitative analysis were much more aligned with the expectations of the NBT and the Main-Effect Model. In responses to our first open-ended question, common themes of social integration and social isolation referenced the

importance of having social connections and support proposed by the NBT and the Main-Effect Model. Likewise, in the responses to our second open-ended question, social connection emerged as a prominent factor in students' perception of their ability to adjust to university. As previously discussed, responses to our third open-ended question were not best coded into categories based on the three pathways of social support to well-being, however they were still somewhat connected.

The Main-Effect Model has three major pathways in which social support can indirectly benefit well-being: social influence, positive psychological states, and neuroendocrine responses (see Figure 1 in Kawachi & Berkman, 2001). First, the social influence pathway suggests that members of a social group guide one another towards healthy behaviours through encouragement of health-positive behaviours or provision of information about relevant health resources (Cohen et al., 2000; Kawachi & Berkman, 2001). Some responses describing emotional and instrumental support may be linked to this pathway. For example, it can be inferred that students who receive support in the form of encouragement to talk about their feelings and information about support resources were being guided towards healthy coping behaviours. Similarly, students who receive instrumental support in the form of food may also be being guided towards healthy behaviour if their friends are attempting to improve their eating habits. Second, the positive psychological states pathway refers to the idea that social support and integration elicit positive psychological states—such as a sense of purpose and of belonging—which motivate people to engage in higher levels of self-care and help sustain an overall better sense of well-being (Cohen & Wills, 1985; Cohen et al., 2000; Kawachi & Berkman, 2001). Responses that expressed that their friends made them feel positively may be related to this pathway, however none explicitly mentioned a positive psychological state motivating them to improve their well-being. Third, the neuroendocrine response to stress typically increases when people are socially isolated, however a feeling of being socially supported helps regulate and minimize this response (Cohen & Wills, 1985; Cohen et al., 2000; Kawachi & Berkman, 2001). While responses did not mention neuroendocrine responses to stress being alleviated by social interaction, they did cite social interaction as a form of support that made them feel better. Through these indirect connections, the pathways of the Main-Effect Model were helpful in interpreting qualitative results.

Impact of the COVID-19 Pandemic

Given that we were conducting our research in the context of a global pandemic, we expected that students' experiences would differ slightly from the existing literature; however, data analysis revealed the COVID-19 pandemic impacted our results much more than we had initially anticipated. As a consequence of the pandemic, everyone has had to modify the ways in which they interact with their family and friends in order to avoid feeling lonely and isolated. This change was likely even more difficult for students transitioning into their first year of university, as they faced the additional challenges of forming new social relationships and simultaneously trying to adjust to a new stage of life, all while following COVID-19 health restrictions that reduced social interaction.

As was previously discussed, our quantitative data revealed a significant positive correlation between adjustment and our two-item PSS subscale, but not between adjustment and belongingness or adjustment and social integration. In times of such constant change and uncertainty, it is logical that students seem to value feeling socially

supported more than feeling like they belong with their peers; living in a context of ongoing crisis makes having someone to turn to a *need* rather than a *want* in the event that something negative does occur. This significant relationship confirms existing literature that considers PSS in the context of the COVID-19 pandemic. Labrague and colleagues (2021) found that adequate social support is protective against loneliness and stress in post-secondary students, and boosts their psychological well-being, which other research in our literature review indicated is critical in successful adjustment to university (Morton et al., 2020; Tao et al., 2000; Thurber & Walton, 2012).

Limitations

There were several significant limitations of our study, including a small, non-representative sample, the confounding influence of the COVID-19 pandemic, the cross-sectional survey design, the questions used in the survey, and our own biases as researchers.

The Sample

Despite repeated efforts to contact as many McMaster student-run groups and recruit as many first-year students as possible, we were only able to produce a final sample of 45 students. If any significant relationships did exist between our variables of interest, this sample size was not large or diverse enough to detect it. Moreover, students were recruited through non-random sampling methods. As a result, this sample was not representative of the first-year population at McMaster, as evidenced by the demographic results section. In particular, women were overrepresented. Because of this, our findings cannot be generalized.

The Context of the Pandemic

Another significant limitation to our research was that it was conducted over a three-month period wherein COVID-19-related health policies, regulations, and guidelines were continually changing. Table 10 provides a brief summary of the course of COVID-19 trends and regulations throughout our data collection period.

Table 10

Timeline of COVID-19 restrictions and policies relevant to first-year McMaster students

Month	Events
November 2021	• Omicron variant first detected in Ontario (Public Health Ontario, 2022a) • Plans for a fully in-person Winter 2022 semester in place (McMaster University, n.d.) • McMaster libraries and various lecture halls open for students to study (McMaster University, n.d.)
December 2021	• New COVID-19 cases in Ontario surpass 19 000 (Public Health Ontario, 2022b)

	• Social gathering and capacity limits are reduced (Office of the Premier, 2021); all meetings are to be done virtually (McMaster University, n.d.) • McMaster announces a one week delay to in-person instruction for the Winter 2022 term (McMaster University, n.d.)
January 2022	• COVID-19 cases steadily decrease, but remain at over 2500 new daily cases (Public Health Ontario, 2022b) • McMaster further delays in-person instruction for Winter 2022 term (McMaster University, n.d.) • January 31, 2022: in-person classes begin for first-year students (McMaster University, n.d.)
February 2022	• Capacity limits are removed from indoor public settings where proof of vaccination is required (McMaster University, n.d.; Office of the Premier, 2022)

The many changes outlined above all influenced the university experience in some capacity. Most significantly for first-year students, the surge in COVID-19 cases as a result of the Omicron variant forced McMaster to delay the beginning of in-person instruction twice—some first-years had to wait five months into their university careers to step foot on McMaster soil for the first time. The uncertainty of the situation and the additional change of transitioning from virtual to in-person learning mid-semester likely impacted students' adjustment to university. Moreover, the general experience of continually changing guidelines and restrictions also likely acted as a stressor for students, impacting their overall well-being.

Another point of consideration is that these changing circumstances likely affected where students were living. As a Community Advisor in residence, Kate Cooper had anecdotal evidence that students who officially lived in residence were actually spending significant amounts of time at home. Anticipating that this may affect our results, we included a question about how far from campus students lived a majority of the time to help address it. An independent chi-square test comparing living distance to housing type frequencies confirmed Cooper's observation: six of the 24 students who reported living in residence also reported living farther than eight kilometers from campus a majority of the time. This complexity may explain why our quantitative results failed to show any significant associations between housing accommodation, social integration, and adjustment. However, it is also possible that these results reflect human error rather than the effects of complicated housing situations: participants may have misunderstood the question as asking where they domiciled, rather than where they spent the majority of their time. Unfortunately, the anonymous nature of our study made it impossible to verify with our participants.

Although we anticipated that the COVID-19 pandemic would have some impact on students' first year experience, we designed this survey in October 2021 before the Omicron variant was first detected, and therefore elected not to include questions specifically asking students about the impact of COVID-19 on their housing accommodations, social integration, and adjustment. Unfortunately, COVID-19 did end

up being a significant factor throughout our data collection period—particularly in the Winter 2022 semester—and our survey was limited by not including questions specifically about this impact. As such, we can only speculate on its effects.

The Survey Design

Our research consisted of a cross-sectional survey, meaning that any conclusions drawn from quantitative data were only correlational and could not be interpreted as evidence of causation. To reduce the impact of this limitation on our findings, we included open-ended questions about our main variables of interest. The inclusion of students' subjective experiences, particularly their beliefs about the *impacts* of housing and social integration on their adjustment to university, allowed us to make conclusions about causation in the context of students' perceptions. However, this open-ended survey question design was a limitation in itself. Compared to the data that could have been obtained by conducting one-on-one interviews, open-ended survey questions produced shorter, more disorganized, and less relevant responses.

The Materials

For this study, we were required to create our own survey questions rather than use validated scales. While this was an excellent learning experience, and we value the lessons learned from it, it was a significant limitation to our findings. We did not test the validity of our scales, so it cannot be known whether our survey questions were truly good measures of our variables of interest, particularly social integration and adjustment. Of our four items measuring adjustment, only two were relevant to all participants. This may have reduced the validity of the measure by not adequately capturing all underlying facets of the concept. The scope of our study also restricted us from including other measures related to social integration and adjustment, such as academic performance, involvement in extracurriculars, and overall mental well-being.

Our Positionality

As former first-year students ourselves, our lived experiences likely influenced our research. As discussed in the introduction, our first-year experiences led us to investigate the topic of housing, social integration, and adjustment among first-year students. Our experiences also likely impacted our interpretations of our data, as well as the quantitative results we decided to present. It is possible that we interpreted students' responses to our open-ended questions in ways consistent with our own experiences, and that our speculations about the possible explanations for certain quantitative findings derive from our preconceived notions about first year. As such, our analyses should not be taken as objective.

Significant Insights

Despite the limitations of our research and the lack of significance in our primary quantitative findings, our research still presents many important insights and implications for the future. Our research unexpectedly provided insight into the effects that the COVID-19 pandemic has had on first-year university students. Contrary to previous findings (e.g., Fosnacht et al., 2019; Lamont Strayhorn, 2008; Dumford et al., 2019), our sample of McMaster first-year students reported low adjustment to university despite high ratings of social integration. During the ongoing COVID-19 pandemic, our findings can help inform

post-secondary institutions' decisions regarding how to offer courses in the future (fully in-person, fully online, or hybrid). Multiple students cited online courses and COVID-19 restrictions as factors that contributed to their inability to adjust to university, which indicates that in-person courses might be particularly important for first-year students. Further research is recommended to assess this.

Additionally, the information yielded by our study can contribute to the implementation of better social programs for first-year students. The need for effective social programs is particularly relevant in these times, as the ongoing COVID-19 pandemic and its ever-changing guidelines and restrictions on social interaction have evidently affected university students. With greater knowledge of the ways in which students feel supported by their peers, as provided by responses to our third open-ended question, institutions can implement new and modify existing programs and strategies to offer support in ways that students value. In order to feel supported by their university friends, first-year students must first meet and develop friendships with their peers. While many programs, including McMaster's Welcome Week, do aim to facilitate social interaction and the development of social relationships, our findings indicate that more must be done to ensure that students feel socially integrated within the school community.

Emotional support was mentioned by over half of our participants in their open-ended responses, suggesting that post-secondary institutions should consider expanding counselling services to include a peer support option in addition to professional counselling. In 2012, a team of recent graduates from McMaster University assembled a proposal for peer support resources to be integrated into McMaster's efforts to support their students' well-being (Brar et al., 2012). Their review discussed countless benefits of peer support including creating an empathetic environment that can increase students' level of comfort when seeking support (Hoffman et al., 2004, as cited in Brar et al., 2012; Mead & MacNeil, 2006, as cited in Brar et al., 2012). McMaster does offer peer support through various clubs including the Student Health Education Centre (SHEC) and Togetherall, but does not promote these services to the same degree as the professional support services in the McMaster Student Wellness Centre (SWC). Given the evidence from our research suggesting students' value of peer support, and from previous research indicating its benefits, along with the limited availability of support services through the SWC, peer support services should be better advertised to McMaster students. We also call for peer support services to be made available to students in all post-secondary institutions.

First-year students in our study also indicated that they value instrumental support and being supported through social interaction. Previous research has also found that students tend to perform better on academic assessments after studying with other students than when they study alone (Nofsinger & Petry, 1999). At an institutional level, universities can implement frequent program-run study nights, particularly when required courses have upcoming tests or assignments due. Providing students with opportunities to study with their peers can help them feel supported, and can contribute to improving their grades—another factor commonly associated with better adjustment to university (Anderman, 2002; Anderman, 2003; Goodenow, 1993b; Goodenow & Grady, 1993; Roeser et al., 1996). Hosting these events with food available might also increase students' perceptions of being supported, as food was frequently cited in our study as a way that students are supported by their friends. Program study nights would 'kill two

birds with one stone' as they would provide students with a productive opportunity for social interaction at a time of presumably increased levels of stress. The prominent themes of instrumental support and social interaction in our third open-ended question also confirm the effectiveness and necessity of peer mentoring programs within post-secondary institutions, and we encourage all institutions to expand and promote programs of this nature.

While our study did not yield the results that we expected, many significant insights and future implications can be drawn from our findings. Our study has revealed, through the consequences of the COVID-19 pandemic, that first-year students thrive when provided with opportunities to meet and interact with their peers in normal settings such as the classroom. We encourage post-secondary institutions to attend to the needs of first-year students and provide them with in-person learning opportunities wherever possible, as well as consider the ways in which their students want to be supported when implementing policies and selecting resources to make available to students.

Conclusion

As the first year of university is known for its tumultuous and chaotic nature, we felt that it was important to explore the factors that influence the transition to university. Merely in our own research team, our experiences as first-year students have differed significantly, inspiring us to explore the relationship between housing arrangements, social integration, and adjustment further. Articles compiled for our research supported the notion that the type of housing is related to levels of social integration, which in turn influences adjustment to university and overall well-being. After collecting our background research, we expected to see themes and trends within our research that were similar to those in previously analyzed literature. While current literature failed to contain a lot of information surrounding our specific areas of focus, it helped us to begin our analytical journey to answer our two research questions, 'What are the relationships between housing accommodation, sense of social integration, and adjustment to university?' and 'In what ways are students supported by their university friends?'

Our research consisted of a cross-sectional survey that utilized both quantitative and qualitative methods. While the majority of our findings lacked significance, our quantitative results highlighted that despite reporting high levels of social integration, first-year students at McMaster were not well adjusted to university. Furthermore, students' responses to our third open-ended question provided us and future researchers with valuable insight regarding the ways in which students are supported, which is extremely beneficial in the process of creating and implementing programs at a university-based level.

While conducting our research, our group encountered multiple limitations. One of our most notable limitations involved our sample size, as we were only able to recruit a final sample of 45 students. Another significant limitation to our research was the impact of COVID-19, specifically referring to the ever-changing health policies, regulations, and guidelines. Our survey design was influenced by COVID-19 as well, as we were limited to open-ended survey questions which produced lower quality results than one-on-one interviews. Our research was further impacted by its cross-sectional design and lack of validated scales.

Despite limitations and lack of significant quantitative findings, our research has helped to highlight valuable insights that can be used towards creating a supportive, safe, and caring environment for first-year university students. Our findings underscore the importance of physical, in-person learning and emphasize the necessity of effective social programs, peer support opportunities, and relevant clubs and societies which emphasize student integration and well-being.

Future Directions

Transitioning to university is an extremely difficult time as students are met with multiple changes in a variety of separate life domains. Our research team wanted to highlight this, while also working to inform the McMaster student body and relevant institutions of possible solutions for their students to make this transition easier. By providing insight regarding how students are developing social connections and adjusting to university, we hope that institutions are better able to understand the student experience and use this information towards effective solutions for their students. Further research should investigate the impact of COVID-19 on social integration and adjustment to university, with special consideration for incoming classes of first-year students lacking in social skills as a result of experiencing COVID-19 during high school. We hope that this work may inform additional research in this topic area, conducted with larger sample sizes and within academic institutions across the globe.

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Communication and the Maintenance of Relationships During The COVID-19 Pandemic

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Abstract

Communication is foundational to relationship maintenance. Humans have long relied on the body as a source of communicative interaction, and now must adhere to new ways of being due to the COVID-19 pandemic. This research focuses on the impacts on communication put in place by new pandemic-related restrictions, in addition to adaptive measures utilized by participants within peer and romantic relationships. 75 McMaster students completed an online, anonymous survey outlining communicative processes before and after the pandemic, newfound methods of communication, and any associated influences on the individual. The research finds that the COVID-19 pandemic has negatively impacted styles of communication, and despite finding new ways to remain connected, participants still experienced significant levels of social disconnectedness. This research may be used to further the understanding of how negative circumstances, such as the COVID-19 pandemic, may impact relationship quality and inform any future intervention strategies that could mitigate these effects.

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Ethnicity and its Effects on Mental Health during the COVID-19 Pandemic

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Abstract

Various studies have analyzed the effects of majority-minority ethnic status and mental health, demonstrating that ethnic minorities experience greater stress in general, but especially during the ongoing COVID-19 Pandemic, given that they face disproportionate rates of infection. This has not been replicated at McMaster University, thus, this study aimed to examine if perceived stress during the COVID-19 Pandemic is differentially associated with mental well-being in dominant versus non-dominant ethnic groups. Data was collected from 217 undergraduate students at McMaster University ranging from 18 to 28 in age through an online survey. This survey entailed self-reporting on mental wellbeing and perceived stress using The Short Warwick-Edinburgh Mental Well-being Scale and the Perceived Stress Scale and answering an open-ended question related to stressors during the Pandemic, followed by answering various demographic questions. Contrary to previous findings on ethnicity and health, the effects of ethnicity on mental wellbeing and the interaction of ethnicity and perceived stress on mental wellbeing were not significant. However, the effects of stress on mental wellbeing were significant, showing a strong negative correlation and indicating that mental wellbeing was heavily impacted by stress. These findings may reflect the low mean-age of participants as well as the small sample size, and further longitudinal research is encouraged. Further, these findings are beneficial for implementing stressor specific resources at McMaster University to support students, including additional and novel supports for challenges relating to online learning such as feelings of social isolation, a lack of institutional support, and increased workload, among others.

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Forced Marriage: How the Faults of Our Social Hierarchy Contribute to a Worldwide Human Rights Violation

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Abstract

Forced marriage is where either one or both people involved do not consent to the marriage. Child marriage is also a type of forced marriage since a child cannot consent. This worldwide practice is a human rights violation which disproportionately affects young girls and women and is extremely harmful. This is a paper presentation that explores and shares findings of how forced and child marriage is portrayed in Canadian news media. This paper also reviews the various social determinants that reinforces this practice. Using the LexisNexus database, we searched news articles with the keywords “forced marriage”, “Canada”, “media”, “portrayal”. Our sample consists of 30 Canadian news articles ranging from January 2000 to January 2020. Three themes emerged from our findings: 1) Canada as a ‘saving grace’, 2) Religion as a scapegoat for forced marriage, 3) How Canada’s laws reinforce forced marriage. Our findings reveal that Canadian media portrays Canada as a human rights advocate, condemning countries that openly practice forced marriage and actively donating to the victims in other countries. However, our findings also reveal that Canada not only practices child marriage, but also completely fails to acknowledge and address this issue. Therefore, our findings suggest that Canada uses the media to portray forced marriage as a damning issue in other countries, while actively ignoring the same issue in Canada. This is significant because this portrayal in the media allows forced and child marriage to continue in Canada, putting more young girls and women at risk. We hope to bring awareness to this issue so that it can finally be addressed.

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How Comfortable are McMaster Undergraduate Students with Sharing their Identities on Instagram?

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Abstract

Social media has become a communication surrogate, replacing everyday interactions with online exchanges. This societal shift has transformed applications, such as Instagram, into totems of modern communication and identity creation. At the in-person level, identity negotiation is constrained by our physicalities and internalized perceptions of others, but when we enter into an online space, every aspect of our identity can be edited and fine-tuned; the only constraints are your imagination. In these new sites of online communication, identity can be negotiated and renegotiated in a multitude of different ways depending on what personal information the user chooses to conceal or reveal. Using the theoretical framework of Symbolic Interactionism with a focus on Dramaturgical theory, our research aims to uncover how undergraduate McMaster students manage their identity performances when disclosing their personal information, beliefs, and online activism; by understanding how students are utilizing their main Instagram accounts, we can discern how students feel about Instagram as a performative space. In order to acquire our data, we are using a qualitative methodological approach, specifically a minimal-risk online survey to be distributed among undergraduate McMaster students; the results of our survey are still pending, as are our findings. After acquiring our results, we hope to gain a better understanding of university students' relationship with social media and what constitutes beneficial/detrimental personal information. Essentially, we hope to uncover which identities are being further concealed/ revealed on Instagram, as the discrepancy between the two may hold some normative implications for our society. In this presentation, we will be further outlining our research process, and explain the significant insights we hope to acquire through our survey.

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Social Media as a Stage: A Behind the Scenes Analysis of Performative Activism, "Cancel Culture," and Effective Allyship

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Abstract

Activism on social media has become increasingly prominent, with individuals sharing content online to advocate for various social issues and marginalized groups. While social media has become a significant tool for global outreach, it has also brought about new social processes, such as performative activism and "cancel culture," which warrant further examination in order to gauge their effectiveness. Within this paper presentation, we will investigate the increased prevalence of social media activism and the related phenomena surrounding these social processes. Performative activism occurs when those engaging in it treat activism as a trend, rather than collectively contributing to social movements (Lucie, 2021). "Cancel culture" occurs when individuals who transgress societal norms are called out or ostracized, often on social media (Saint-Louis, 2021). We want to explore the motivations that individuals hold to engage in these practices, and how external and internal factors might influence their decisions online. We are currently in the process of recruiting participants and collecting our data. To do this, we are using both quantitative and qualitative methodological approaches in order to answer our research questions. We hope that the qualitative questions will garner individual narratives about the phenomena we are studying, while the quantitative questions will provide us with more objective findings about the sample population. Our questions will surround topics including population demographics, social media use, performative activism and "cancel culture." We will conduct this research through an anonymous online questionnaire, which has been created on LimeSurvey, the McMaster Research Ethics Board (MREB) sanctioned platform. The recruitment of our participants will be done through a third-party, the McMaster Student Union (MSU) and its affiliated clubs, committees, and societies, who will distribute the survey on our behalf. Once we have finished data collection and can continue with the research process, we will summarize our findings and distinguish any significant patterns or trends. We hope that this study will encourage its participants and readers to critically reflect on their motivations for engaging in activism, how they participate in activism, and whether they believe it is truly effective. We also hope our research provides us with meaningful findings that will inform us on the best ways to enact change, as well as engage in effective advocacy and allyship.

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The Influence of Patriarchal Norms and Social Inequalities on Gender Discrepancies in BPD Diagnoses

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Abstract

While literature surrounding Borderline Personality Disorder (BPD) has attributed the substantial gender disparity prevalent in patient-populations as reflective of a difference in biology, this paper presentation examines the role that social structural inequalities may play instead. The overrepresentation of women in the patient population is discussed through three principal themes in this presentation; the first explores the gender disparity that exists within risk factors for BPD, emphasizing that women are at a higher risk of experiencing the principal risk factors associated with the development of BPD. A second perspective highlights the role of adaptational responses to maltreatment and neglect, and how these responses have been pathologized in the mental healthcare field. Finally, the third examines a number of diagnostic biases that have roots in gender biases within the mental healthcare system itself. While a number of theories exist to try and explain why the diagnosis of BPD is dominated by women, these three highlight the inequalities women face which may either contribute to their high diagnosis rates, or function as a reflection of the diagnostic criteria itself. Approaching the diagnostic category of BPD critically and with a focus on social inequalities, as opposed to solely a biomedical method of analysis, may illuminate the unique experiences women face that may contribute to their diagnosis. This presentation will also examine the utility of the diagnostic category itself and bring into question the many ways biases impact the diagnostic process and how they can lead to pervasive gender disparities, such as the disparities that are reflected in BPD diagnoses.

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The Medicalization of the Queer Experience

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Abstract

While the acceptance of various 2SLGBTQQIA+ identities within Western societies has improved from years past, members of this community still suffer from the harmful effects of medical terminology and philosophy. Reflecting on 2SLGBTQQIA+ history is imperative to understanding the current issues for the community, and how their rights can be further expanded. Terms such as homosexuality and bisexuality are tied to a long history of healthcare practitioners treating same-sex attraction as a "disease" that requires medical and psychotherapeutic intervention in order to "cure" individuals. Medicalization has a deeply rooted history with colonial and religious institutions. In this presentation, I will outline findings from a systemic review of medical, psychological, psychiatric, and social work literature that focuses on how queer sexuality has been interpreted by and alongside the mental health system since the 19th century, and how these interpretations are affected by the public (and vice versa). I seek to clarify the historical normalization of heterosexuality within this literature, and the queer identity being understood through the lens of the medical model of help (which is demonstrated through the evolution of accepted labels used for and within the 2SLGBTQQIA+ community). I will also outline actionable objectives for non-queer healthcare professionals—such as physicians, psychiatrists, and social workers—to take when providing general allyship and queer-affirming care to clients using the biopsychosocial model of helping.

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