Needs Assessment and Program Evaluation of a Peer Mentorship Program for Undergraduate Health Sciences Students

Chris W. Ruffell, Western University

Supervisor: Johnson, Andrew M., The University of Western Ontario
A thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Health and Rehabilitation Sciences
© Chris W. Ruffell 2023

Follow this and additional works at: https://ir.lib.uwo.ca/etd

Part of the Leadership Studies Commons

Recommended Citation

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact wlsadmin@uwo.ca.
Abstract

High post-secondary degree dropout rates cost individuals, institutions, and governments around the world hundreds of millions of dollars annually, and these rates appear to be increasing in many parts of the world. Peer mentorship programs have been proposed as a cost-effective method for increasing post-secondary success and ultimately reducing dropout rates, however, few studies to date have evaluated programs that were designed using student feedback. The purpose of the present study was to take an existing peer mentorship program, modify it using feedback collected from students, and quantitatively evaluate the results. Survey responses suggested that the program improved student transition to university, provided them with academic benefits, and increased their awareness of various resources. The program was successful with some caveats: (1) mentors and mentees met less frequently than desired; (2) self-reported overall benefit was lower than expected; (3) the optional learning sessions were not well-attended.

Keywords: peer mentorship, needs assessment, program evaluation
Summary for Lay Audience

High post-secondary degree dropout rates cost individuals, institutions, and governments around the world hundreds of millions of dollars annually, and these rates appear to be increasing in many parts of the world. Peer mentorship programs have been proposed as a less costly method for increasing post-secondary success and ultimately reducing dropout rates, however, few studies to date have evaluated programs that were designed using student feedback. The purpose of the present study was to take an existing peer mentorship program, modify it using feedback collected from students, and evaluate the results using statistics. Survey responses suggested that the program improved the students’ transition to university, provided them with academic benefits, and increased their awareness of various resources. The program was successful with some caveats: (1) mentors and mentees met less frequently than desired; (2) self-reported overall benefit was lower than expected; (3) the optional learning sessions were not well-attended.
Acknowledgements

The completion of this thesis would not have been possible without the guidance, encouragement, and ultimately mentorship that I received from my supervisor. Dr. Andrew Johnson, thank you for taking me on as one of your students, for helping me to develop a passion for research, and for bolstering my resilience through always reminding me to keep moving “onwards and upwards.” I know with certainty that both my undergraduate degree and master’s degree would have been less fruitful, but more importantly, less enjoyable without your support.

Thank you to my advisory committee, Dr. Jim Weese and Dr. Marnie Wedlake. Your extensive knowledge and insight regarding leadership, mental health, and everything in between enabled me to develop the present study, as well as the peer mentorship program, into what they have become. I will carry the lessons that I have learned from each of you with me as I continue my career in research.

Thank you to Alyssa Spaan and the many other members of the Health Studies Students’ Association who aided me with the peer mentorship program and contributed to the success of this project. Your selflessness and work ethic have provided hundreds of students with a greater sense of belonging and improved their chances of success at Western.

My sincerest thanks to my partner, Vinci Chan. Accomplishing this goal of mine would not have been possible without the support, happiness, and courage that you provide me with. Over the last seven years, you have been by my side through the highest highs and lowest lows, and for that I am eternally grateful.

Finally, thank you to my family and friends. Your encouragement and support have enabled me to accomplish so much more than I ever could have imagined. I am grateful for each of you, including those who did not have the chance to see the project though to completion.
# Table of Contents

Abstract ........................................................................................................................................... ii

Summary for Lay Audience ............................................................................................................... iii

Acknowledgements ......................................................................................................................... iv

Table of Contents ............................................................................................................................ v

List of Tables .................................................................................................................................. viii

List of Appendices ........................................................................................................................... x

Chapter 1: Background and Literature Review ............................................................................... 1

1.1: Post-Secondary Degree Completion/Dropout Rates (Canada, globally) ......................... 1

1.2: Factors Affecting Post-Secondary Degree Completion/Dropout Rates (Canada, Globally) ................................................................................................................................. 3

1.3: Consequences of Dropout Rates (on the individual and the country) .............................. 8

1.4: Peer Mentorship ..................................................................................................................... 11

1.5: Benefits of Peer Mentorship Programs for Mentees ......................................................... 13

1.6: Benefits of Peer Mentorship Programs for Mentors ......................................................... 15

1.7: Purpose Statement .................................................................................................................. 17

Chapter 2: Phase I (Needs Assessment) ....................................................................................... 18

2.1: Phase I Overview .................................................................................................................. 18

2.2: Needs Assessment Participant Recruitment ....................................................................... 18

2.3: Needs Assessment Surveys .................................................................................................. 19

2.4: Quantitative Analysis of Needs Assessment Surveys ....................................................... 20

2.4.1: Evaluation of Effectiveness of 2021/2022 Program ....................................................... 21

2.4.2: Mentee Evaluations of their Mentors .......................................................................... 22

2.4.3: Mentor Evaluations of the Mentor Position .................................................................. 23
2.4.4: Program Structure .................................................................................. 27

2.5: Needs Assessment Open-Ended Questions .................................................. 30

2.6: Needs Assessment Conclusion .................................................................... 36

Chapter 3: Methods, Results, and Discussion for Phase II (Program Evaluation) ............ 39

3.1: Phase II Overview ...................................................................................... 39

3.2: 2022/2023 Peer Mentorship Program Participant Recruitment ....................... 39

3.3: Mentor Training ......................................................................................... 40

3.4: Mentee and Mentor Pairing .......................................................................... 40

3.5: Mentee Sessions ......................................................................................... 41

3.6: Program Evaluation Surveys ........................................................................ 43

3.7: Quantitative Analysis of Program Evaluation Surveys ................................... 43

3.7.1: Description of the Mentees ...................................................................... 44

3.7.2: Program Evaluation – Mentee .................................................................. 47

3.7.3: Program Evaluation – Mentor .................................................................. 55

3.8: Program Evaluation Open-Ended Questions ............................................... 61

3.9: Program Evaluation Conclusion ................................................................... 64

Chapter 4: General Discussion ............................................................................ 66

4.1: Needs Assessment ...................................................................................... 66

4.2: Improvements for the 2022/2023 Program .................................................. 68

4.3: Program Evaluation .................................................................................... 69

4.4: Further Improvements ................................................................................ 71

4.5: Study Limitations ...................................................................................... 72

4.6: Conclusions ............................................................................................... 74
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>75</td>
</tr>
<tr>
<td>Appendices</td>
<td>81</td>
</tr>
<tr>
<td>CV</td>
<td>111</td>
</tr>
</tbody>
</table>
List of Tables

Table 1: Likert Style Program Effectiveness Survey Questions, Mentees ................................. 22
Table 2: Dichotomous Program Effectiveness Survey Questions, Mentees ................................. 23
Table 3: Descriptive Statistics for the Likert Style Program Evaluation

Questions, Mentees .................................................................................................................. 24
Table 4. Compromises Required by Mentors in Participating in the Peer

Mentorship Program .............................................................................................................. 25
Table 5. Frequency Table for the ‘Comfortable Answering Mentee’s Questions’,

‘Access to Resources’, and ‘Mentee Match’ Dichotomous Survey Questions,

Mentors ..................................................................................................................................... 26
Table 6. Descriptive Statistics for the Mentor Development Survey Questions ......................... 27
Table 7. Meeting Frequencies Reported by Mentees and Mentors ........................................... 28
Table 8. Judgments of Mentees and Mentors as to Appropriateness of Meeting Frequency .... 29
Table 9. Mentee and Mentor Opinions Regarding the Inclusion of

Optional Learning Sessions ...................................................................................................... 30
Table 10. Preferred Frequency of Optional Learning Sessions for Mentees and Mentors ...... 30
Table 11. Mentee Open-Ended Questions, Needs Assessment ................................................ 32
Table 12. Mentor Open-Ended Questions, Needs Assessment ................................................ 33
Table 13. Descriptive Statistics for Mentee Description Questions ........................................... 45
Table 14. Frequency Table of Mentee Expected Grade Ranges ................................................ 46
Table 15. Frequency Table for Mentee Main Reason for Joining, Anticipate

Reaching out for Most, and did Reach out for Most Survey Questions .............................. 48
Table 16. Mentee description of greatest benefit of the program .............................................. 49
Table 17. Intentions and follow-through in joining other support programs, for mentees
Table 18. Mentee ratings of social, mental, and physical benefits of peer mentorship, at baseline and follow-up
Table 19. Intention to participate compared with actual participation for the optional sessions
Table 20. Optional Learning Session Topics and Attendance Numbers
Table 21. Expected meeting frequency versus actual meeting frequency
Table 22. Mentee Transition to University
Table 23. Reported Frequencies for the Survey Questions How Often Did You Meet with Your Mentee and How Much Time Did You Dedicate to the Program per Week
Table 24. Frequency Table for the Survey Questions Concerning Challenges Answering Mentee’s Questions, Usefulness of Mentor Training, Access to Resources, and Mentee Match
Table 25. Frequency Table of the Most Common Topics that Mentees Reached out to Mentors for
Table 26. Descriptive Statistics for the 2022/2023 Mentor Development Survey Questions
Table 27. Descriptive Statistics for Mentor Opinions on Having a Program in Their First Year
Table 28. Responses to open-ended questions asked of mentors
List of Appendices

Appendix A: Ethics Certificate ......................................................... 82
Appendix B1: Needs Assessment, Mentor ........................................ 85
Appendix B2: Needs Assessment, Mentee ...................................... 87
Appendix B3: Program Evaluation (Baseline), Mentees .................... 89
Appendix B4: Program Evaluation (Followup), Mentors .................... 93
Appendix B5: Program Evaluation (Followup), Mentees .................... 96
Appendix C1: Mentor Training Slides ............................................. 99
Appendix C2: Mentee Session #1 .................................................. 104
Appendix C3: Mentee Session #2 .................................................. 107
Appendix C4: Mentee Session #3 .................................................. 110
Chapter 1: Background and Literature Review

1.1: Post-Secondary Degree Completion/Dropout Rates (Canada, globally)

According to Statistics Canada, over 2.1 million students enrolled in Canadian public universities and colleges for the 2017/2018 academic year (Statistics Canada, 2020). Reports indicate that during this same period, Canada was the most educated country in the world, with over 56% of adults aged 25-64 having received some post-secondary education (Hess, 2018). Canada has led this category since 2006, and 2021 census data shows that the proportion of post-secondary graduates in the working-age group (25 to 64 years of age) has now reached 57.5% (Friesen, 2022). An unfortunate by-product of having such a large population of enrolled students is that the number of students who do not reach graduation is also relatively high.

In 2018, Maclean’s ranked the top 49 universities in Canada by degree completion rates (Maclean’s, 2017). Of these 49 universities, only six had degree completion rates of 80% or higher. In fact, the average completion rate for all 49 universities listed was only 71.3%.

Concerningly, historical data shows that over the last two decades, post-secondary dropout rates in Canada have grown at a rapid pace to where they are now. A study followed the same national sample of Canadian youth used by Statistics Canada to calculate the dropout rate in 2003 for two additional years (to account for return to post-secondary education) and concluded that the best estimate of the post-secondary dropout rate in 2003 was 12% (Shaienks et al., 2008). Using the average degree completion rate from 2018 of 28.7% as a reference, the 2003 estimate amounts to less than half of the current post-secondary dropout rate and suggests an average annual increase in dropouts of approximately 1.1%. This already amounts to tens of thousands of additional students dropping out each year, however a recent survey suggests that the rate may grow even faster in the coming years.
The 2022 Canadian Student Wellbeing Study, conducted by Angus Reid, found that of the 1014 Canadian post-secondary students surveyed, 40% indicated that they are seriously considering dropping out of university (up 5% from 2021; Sachdeva, 2022). Interestingly, the 40% consisted mostly of students residing in Ontario, who were aged 18 or 19 (first or second year of university). Moreover, 47% of students aged 18 and 19 said they are seriously considering dropping out – the largest proportion of any age group. This is of particular concern, as in 2021 ‘only’ 29% of the students in this young cohort were seriously considering dropping out (an increase of 18% in one year). These survey results, taken together with the fact that 77% of university dropouts in Canada occur at the end of the second year of enrollment (an international pattern), suggest that Canada could see an all-time high in its post-secondary dropout rate in 2023 (Childs et al., 2016).

Viewing the issue from a global perspective, many countries are faring even worse than Canada with regard to post-secondary dropout rates. A 2022 report by the Education Data initiative estimates that upwards of 32.9% of undergraduate students in the USA do not complete their degree program (Hanson, 2022). Dropout rates in the USA have been found to be even higher on average for students enrolled in two-year programs at 39.5% (Bryant, 2022). In terms of degree completion rates, the USA sees a mere 41% of post-secondary students graduating after four years without delay (Bouchrika, 2023). The USA data also shows that men have an average dropout rate four percentage points higher than women. Additionally, race and ethnicity were found to be factors affecting the dropout rates, with American Indian/Alaska Native, Black, and Pacific Islander first-year students having greater dropout rates than their Hispanic, White, and Asian peers. Sadly, the data that is available for Latin America tells a similar story regarding degree completion rates. Roughly one in every three youths in the region will not enroll in post-
secondary education, and up to 45% of those that enter post-secondary education will not graduate (Kattan & Székely, 2017). Fortunately, despite the bleak outlook for the countries discussed, there are countries achieving better post-secondary graduation rates.

The Organization for Economic Co-Operation and Development (OECD) is an intergovernmental organization founded in 1961 to stimulate economic progress and world trade (OECD, 2023). The organization has 38 member countries around the world and collects graduation rate data for each country. From 2016 – 2020 (latest available data), the three countries with the highest post-secondary graduation rates (bachelor’s or equivalent level, women) were Lithuania (56.69%), Denmark (49.41%), and Greece (46.50%). The three countries with the lowest rates were Luxembourg (6.60%), Austria (22.04%), and Hungary (27.56%). During the same period, the OECD average was 37.29% for women and 24.40% for men. In 2016, Canada had a post-secondary graduation rate of 37.77% for women and 23.87% for men.

With an overview of the global landscape of post-secondary failure established, and the downward trend of Canadian institutions highlighted, it is worthwhile to address which factors are primarily responsible for the trends we are seeing and investigate how they have changed over the past couple of decades and beyond.

1.2: Factors Affecting Post-Secondary Degree Completion/Dropout Rates (Canada, Globally)

Unsurprisingly, one of the most common reasons for leaving post-secondary education is the inability to continue to afford tuition; a factor that has been exacerbated by tuition costs and costs of living rising at disproportionately high rates, relative to historical numbers (Guerra, 2022). For reference, the 2006/2007 academic year in Canada saw domestic students paying (on average) $4,400 for an undergraduate degree, while international students paid $13,378
For the 2022/2023 academic year, these numbers are $6,834 and $36,123, respectively. Using 2% annual inflation as a reference, it would be expected that the domestic tuition cost of $4,400 from 2006 would rise to approximately $6,040 in 2022. While the roughly $800 difference may be negligible for some, this can approach a month’s worth of rent for many students. Further, the total cost of tuition represents approximately 22% of the $31,200 income a student working full time at minimum wage (a difficult task for many to accomplish while studying full time) could expect to generate (before taxes and other deductions). The downstream impact of high tuition costs is demonstrated well by a 2019/2020 Western University survey, which found that the average student will graduate with approximately $24,000 in debt (Rodrigues, 2021). The authors also note that if students who expect to graduate with no education-related debt are excluded, this figure jumps to nearly $40,000.

Although domestic students are certainly paying much more than they used to for the same level of education, the figures clearly show that financial challenges are compounded even further for international students studying in Canada, who paid (on average) 5.3 times more for an undergraduate degree compared with domestic students, for the 2022/2023 academic year (Statistics Canada, 2022). This large contrast between domestic and international tuition fees, at least in Ontario, stems from a 1976 decision by then Minister of Colleges and Universities, Harry Parrott, to decrease subsidies for international students (Chua, 2022). Subsequently, “… individual universities had to decide whether to pass the fees incurred by this move to international students – thus increasing international tuition by 2.5 times – or to shift their overall budgets” (Chua, 2022, para. 20). Ultimately, nine out of the 15 universities operating in Ontario made the decision to pass the fees to international students. The situation worsened in 1996,
when Ontario made the decision to deregulate international tuition fees, permitting post-secondary institutions to decide the costs for themselves. While loan and non-repayable grant programs such as the Ontario Student Assistance Program (OSAP) exist to aid students with their finances, international students are not currently eligible to take advantage of the program (Government of Ontario, 2023).

In addition to rising tuition costs, the exorbitant costs of living we are currently enduring, largely attributable to disproportionately high inflation rates over the past few years, are having a harsh impact on students’ ability to afford post-secondary education (Bank of Canada, 2023). The rise in costs can be quantified using the Consumer Price Index (CPI) – a measure used to track the overall change in consumer prices. In June of 2022, the CPI peaked at a 40-year high of 8.1%, indicating a sharp increase in the prices paid by consumers (Evans, 2022). For students, these increased costs of living manifest most prominently in the costs of rent and groceries. In 2022, rent for new tenants increased 18% year over year, and the average cost of rent reached $1,258 a month – “up 5.6 per cent from the previous year’s level, and roughly twice the annual average seen for the past 30 years” (Evans, 2023, para. 5). Moreover, the national vacancy rate for purpose-built rentals fell to 1.9% in 2022, suggesting that rent will remain high for the foreseeable future, unless supply meets demand or demand falls sharply.

Regarding the cost of groceries, data shows that the percent increase in food prices has been even greater than that of rent over the past couple of years. According to Statistics Canada, February marked the “… seventh consecutive month where the food inflation rate rose more than 10% year over year…”, resulting in grocery prices at their highest level in decades (Reilly-Larke, 2023, para. 1). Translating these findings into annual costs, Canada’s Food Price Report for 2023 states that “…a family of four will spend $16,288.41 on food this year… up $1,065.60 from
2022” (Montgomery, 2023, para. 3). Reliable and precise data is unavailable regarding the average increase in monthly spending on food for university students in Canada, however the amount has almost certainly increased in a similar manner to the previous example.

Unfortunately, food prices are projected to increase another five to seven percent throughout the remainder of 2023 (and likely into 2024 as well), combining with rent and other inflated costs of living to create significant financial hardship that may push thousands of students out of post-secondary education (Jones, 2023). Understandably, these rising costs have the highest impact on the least well-off students, as students who collect social assistance have been shown to be 3.82 times more likely to drop out of post-secondary education than their peers (Ma & Frempong, 2008). The findings by Statistics Canada that “Students in the highest parental income quartile… graduated at higher rates than students from the lowest parental income quartile…” and “… those in the highest parental income quartile graduated as fast or faster than students in the lowest parental income quartile…” cement the link between financial standing and post-secondary success (Van Bussel & Fecteau, 2022, p. 11).

While students who are facing insurmountable financial challenges constitute a large proportion of the post-secondary students who leave universities and colleges each year, there are additional factors impeding the success of many of these students, such as an inability to form strong social connections. For instance, it has been observed that Canadian post-secondary students who report not having strong social bonds are 1.19 times more likely to not finish post-secondary education than their more socially connected peers, and first-year students who reported not having someone on campus to talk to about personal issues were found to be 1.54 times more likely to drop out (Ma & Frempong, 2008). Additionally, an inability to make social connections can lead to some students developing a mentality that they are just a number or a
statistic to their institution or country and become unable to see their education as more than giving a large sum of their money to a business, indicating in most cases a lack of sense of belonging. “Students who reported such a lack of sense of belonging were 1.30 times more likely than students who did not to drop out of post-secondary education” (Ma & Frempong, 2008, p. 22). It has also been found that students who did not undertake volunteer positions on campus were 1.59 times more likely to drop out of post-secondary education, and students who did not reside on campus were 1.96 times more likely to drop out.

Another important factor influencing post-secondary success is academic performance in high school as well as during post-secondary enrollment. Considering academic performance in high school, it has been found that “… youths with low academic engagement in high school were 1.27 times more likely than youths with high academic achievement in high school to drop out of post-secondary education” (Ma & Frempong, 2008, p. 16). Furthermore, grade point average (GPA) is a strong predictor of post-secondary success, as “… youths with overall GPA at 60% or lower were 10.00 times more likely than youths with overall GPA at 90% or higher, 3.45 times more likely than youths with overall GPA at 80% or higher, and 1.64 times more likely than youths with overall GPA at 70% or higher to drop out of post-secondary education” (Ma & Frempong, 2008, p. 17). At the post-secondary level, first-year GPA was found to be highly predictive of success, as students with a “… first-year post-secondary education GPA at 60% or lower were 3.57 times more likely than students with first-year post-secondary education GPA at 90% or higher, 3.57 times more likely than students with first-year post-secondary education GPA at 80% or higher, and 2.89 times more likely than students with first-year post-secondary education GPA at 70% or higher to drop out of post-secondary education” (Ma & Frempong, 2008, p. 20). Additionally, one less hour of studying each week can increase the likelihood of
dropping out by 1.06 times, and missing assignment deadlines can increase the likelihood of dropping out by 1.58 times. Perhaps counterintuitively (in some cases), students who asked their instructors questions for clarification were 1.82 times more likely to drop out compared with students who did not. Speaking to both the importance of academic ability and personal finances, students who obtained no scholarship were 5.88 times more likely than students who obtained a scholarship to drop out of post-secondary education. It may also be reasonable to assume that students who receive a scholarship from their institution could feel a heightened sense of belonging to their alma mater.

Some additional meaningful factors affecting post-secondary success are interest in program, family structure, and geographical location. A national study conducted in Canada on the Post-Secondary Education Participation Survey (PEPS) found that among students who left post-secondary education early, approximately half of them cited lack of interest in their program (or post-secondary education in general) as the reason for dropping out (Barr-Telford et al., 2003). On the other hand, the same study notes that ‘only’ 29% cited financial considerations as their reason for leaving. Looking at family structure, students from single parent families are more likely to drop out (OR = 1.31 vs 0.71), and students who have parents with post-secondary degrees are less likely to drop out (OR = 0.66 vs 0.88). With regard to the type of geographical area a student resides in, it has been found that students hailing from rural communities were found to be significantly more likely to leave post-secondary education (OR = 1.18) than students living in urban areas (Shaienks et al., 2008).

1.3: Consequences of Dropout Rates (on the individual and the country)

As previously stated, in 2018 the average degree completion rate across the 49 most prominent universities in Canada was roughly 71%. The remaining 29% represents tens of
thousands of students annually who will experience the financial and psychosocial repercussions associated with dropping out. Direct costs associated with education, such as tuition, housing, stationary, and textbooks, are lost, amounting to thousands of dollars wasted by the student. Additionally, the student will have forgone earnings (opportunity cost) over the time required to pursue their education, as well as the increased earnings potential in the future that accrues as a result of having a higher level of education (Shaienks et al., 2008). Not only are these effects felt by individuals, but they impact on universities, and the country as a whole, in the form of lost tuition and specialized workers (Grant, 2014).

A 2017 report by Statistics Canada, analysing the most recent census data at the time, found that the median annual earnings of women and men aged 25 to 64 were $43,254 and $55,774 respectively for those with a high school diploma, and $68,342 and $82,082 respectively for individuals with a bachelor’s degree (Zhao et al., 2017). This equated to a 58% earnings advantage for women with a bachelor’s degree (compared with women with only a high school education) and 47.2% for men (compared with men with only a high school education). In the long-term, a man with a bachelor’s degree will earn an average of $728,000 more than a man with only a high school diploma and a woman with a bachelor’s degree will earn $442,000 more than a woman with only a high school diploma (Frenette, 2014). It is also worth noting that a greater proportion of companies requiring a bachelor’s degree (versus a high school education) have better pension plans, benefits, and fewer layoffs. A report by the Statista Research Department published in 2022 found that in Canada in 2021, the average unemployment rate for all levels of education stood at 7.5%, however for those with university degrees it was 5.1% and for those with only a high school education it was 9.8% (Statista Research Department, 2022). Taken together, these figures help to explain why individuals with post-secondary degrees are
less likely to experience homelessness than individuals with only a high school level of education (or less).

Although the individual bears most of the brunt of the repercussions that stem from leaving post-secondary education prior to degree completion, the decision to leave prematurely is also detrimental to the post-secondary institution itself and the country of residence. Using Western University as an example, Maclean’s reported that in 2022 Western had a degree completion rate of 87.1% (it is worth noting however that this figure may be slightly inflated as Macleans counts undergraduate students who take up to seven years to complete their degree) (Maclear’s, 2022). Enrollment numbers available on Western’s website indicate that for the 2021-2022 academic year, 7,968 first-year students began their undergraduate degree at Western (Western University Office of Institutional Planning & Budgeting, 2022). Therefore, at an average (domestic) tuition cost of $6,834, Western alone is losing millions of dollars to students leaving their degrees before completion. Given that there are more than 49 universities across Canada - the majority of which have worse degree completion rates than Western - the combined loss could be in the hundreds of millions of dollars, leaving post-secondary institutions with less capital to put towards research, improving education quality, student support services, and the overall student experience.

The gravity of this financial loss, combined with the total number of individuals who leave higher education across all post-secondary institutions throughout Canada, causes a great deal of harm to Canada’s economy as well. Evidence suggests that over $40 billion in direct spending flows through Canada’s post-secondary institutions each year, generating up to $77 billion in indirect economic activity after multiplier effects (i.e., the additional (or indirect) economic impact resulting from the direct economic impact; Grant, 2014; Riley, 2021). As a
result, an average degree completion rate of just 71.3% (across Canada’s 49 best universities) may be causing Canada to miss out on over a billion dollars in economic productivity annually. Considering the fact that despite these figures, Canada is still the most educated country in the world, the economic impact of students leaving post-secondary institutions before degree completion is likely to be in even more pronounced in most (if not all) other countries around the world. This could suggest that, on a global scale, the issues at hand may amount to forgone economic productivity in the hundreds of billions, or even trillions.

1.4: Peer Mentorship

Completely eliminating post-secondary dropout and ensuring that all students reach degree completion would involve tackling the underlying multi-dimensional, systemic issues characteristic of modern societies, and require an unfathomable amount of capital and human resources, which would not be feasible for governments to provide. Consequently, there is no panacea for these problems. However, there exists a cost-effective learning strategy with the potential to mitigate the academic and social transitional challenges (often cited as the primary reasons for dropping out) affecting first-year post-secondary students, post-secondary institutions, and the Canadian economy: peer mentorship (Collier, 2017).

Mentorship is a method of learning that is thought to have originated thousands of years ago, with most scholars attributing its inception to its appearance in Homer’s Odyssey (Ferreres, 2018). Traditionally, a mentorship relationship is characterized as a primarily one-way helping relationship, with the mentor having significantly more seniority than the mentee, so much so that the mentor may stand to gain little from the relationship (University of Washington, 2023). This is in contrast with a peer mentorship relationship, where although the mentor still has more experience than the mentee, the two are often closer in age and are therefore more likely to have
similar worldviews and experiences, leading to the potential for the mentor to gain from the relationship as well (mutual assistance). Ultimately, peer mentors are more likely than hierarchical mentors to share a common perspective (Collier, 2017).

In modern times, peer mentorship has most commonly been employed in the business world (Ferreres, 2018). In the context of the workplace, this type of learning involves pairing a novice employee (the mentee) with a more seasoned employee (the mentor) with the aim of reducing transition lag and increasing the performance of the mentee. Although the primary focus of this learning strategy is typically to support the mentee, evidence has shown that peer mentorship relationships can provide benefits to the mentor as well, such as improved communication skills and ability to teach others (Wong et al., 2016). In an academic setting, the most common design for a peer mentorship program is one where incoming first-year (undergraduate) students are paired with upper-year (typically third- and fourth-year) students. This dynamic provides incoming students with the social support, technical know-how, and insider tips that enable a student to not only adapt to the differences between high school and post-secondary academics but to thrive in higher education.

As many readers are likely to be familiar with the concept of leadership, it is worth briefly discussing how leadership differs from mentorship, given the perceived similarities between the two terms. In 1961, W.C.H. Prentice defined leadership as “…the accomplishment of a goal through the direction of human assistants” (Prentice, 2004, para. 1). Prentice would go on to explain that “The [person] who successfully marshals his human collaborators to achieve particular ends is a leader”, regardless of whether the individual possesses or displays power; has a low or high level of popularity; or is even particularly loved or admired by their followers (Prentice, 2004. para. 3). According to Prentice, the “unique achievement” of a leader stems from
their “...understanding of [their] fellow workers and the relationship of their individual goals to the group goal that [they] must carry out” (Prentice, 2004. para. 4). In more recent times, the literature describing the essential characteristics of a strong leader has shifted toward defining the prosocial traits which enable a leader to rally their supporting cast toward a common goal. For instance, through reviewing over 100 years of leadership research and integrating the findings with personal experience, Weese (2018) developed the “5Cs” of exceptional leadership practices (credibility, compelling vision, charismatic communicator, contagious enthusiasm, and culture builder). One can see within this model that leadership places emphasis on accomplishing a larger, shared goal, whereas mentorship is primarily concerned with enabling a novice member of an organization to reach a certain level of competence and understanding within a contracted length of time.

1.5: Benefits of Peer Mentorship Programs for Mentees

The literature suggests that peer mentorship programs can confer academic, psychosocial, and (ultimately) professional benefits for the students who have enrolled in them (Collier, 2017; Colvin & Ashman, 2010; Jacobs et al., 2015; Lorenzetti et al., 2019; Wong et al., 2016). An integrative review of 11 peer mentorship programs for undergraduate nursing students found that peer mentorship appears to be a beneficial approach for managing inadequate academic preparation, lack of social and academic resources, and anxiety (Wong et al., 2016). The outcomes of the review were separated into six categories: academic, social, professional, mental health, other specific personal skills, and challenges of the program. Regarding academics, scores improved in four of the 11 programs, however this difference was statistically significant in only one of the included programs. Additionally, mentees reported liking when the programs offered alternative ways of learning and opportunities for reflection, and another reported benefit
was improvement of critical thinking skills. In terms of social benefit, students reported a sense of support, decreased sense of alienation, as well as the ability to discuss fears and other aspects of university life. Further, in two of the programs, mentees reported having a larger circle of friends after participating in the program.

Concerning professional benefits, students’ social skills improved, and some of the students reported an improved attitude towards their profession (nursing). Moreover, the mentees indicated that being involved with a peer mentorship program increased their satisfaction level with choosing nursing as a career. Looking at the mental health outcomes of the 11 programs, mentees reported increased self-confidence and improved self-esteem. The programs were unable to improve self-efficacy, however they did reduce the anxiety and stress levels of the students. This finding is corroborated by a 2019 integrative review of eight peer mentoring programs for nursing students, which found that peer mentoring decreases stress and short-term anxiety levels of undergraduate nursing students (Kachaturoff et al., 2019). Lastly, other specific personal skills built on by the programs included: improved collaboration, problem solving, organization, communication, time management, sense of responsibility, and a sense of growth and contribution.

Given the array of benefits measured or reported by the 11 programs included in this integrative review, the authors concluded that peer mentorship programs may increase student retention and success rates in post-secondary education. An example of such an outcome is the 2015 study by Jacobs et al., which followed and evaluated a peer mentorship program being offered for nursing students at a community college in the USA. The study found that the program was able to boost semester completion from 36% to 76%. In short, the most meaningful
benefits to the mentees were advice on study habits, emotional support, and increased familiarity with campus resources (such as tutoring and careers centre; Jacobs et al., 2015).

Beyond the high school to post-secondary education transition, peer mentorship programs also appear to be beneficial for students transitioning from undergraduate to graduate studies, as similar mentee outcomes were found by a 2019 systematic review investigating the outcomes of peer mentoring programs for first year graduate students in academia (Lorenzetti et al., 2019). After applying the inclusion criteria, 45 studies were included in the review, from which four domains of outcomes were identified: academic, social, psychological, and career. The academic domain of outcomes included increased awareness of academic and program norms; development of procedural and disciplinary knowledge; research and methodological skills; and writing and academic publishing competencies. Mentorship benefits identified in the social domain included expanded professional networks; enhanced communication and other interpersonal skills; and an increased sense of community or shared purpose that they perceived positively impacted degree persistence. The psychological outcomes were self-confidence and motivation; reduced stress; alleviation of feelings of isolation; and an increased sense of security. Lastly, the career outcomes included increased professional accountability; improved time management; development of leadership skills; increased ability to work within a team; and being better prepared to transition to professional life.

1.6: Benefits of Peer Mentorship Programs for Mentors

Although peer mentorship programs typically focus on the experience and betterment of the mentees, the literature shows that these programs can also confer benefits for the mentors. These benefits arise not only through supporting the assigned mentee(s) on a day-to-day basis, but also from the various training components that are often compulsory components of these
programs, such as lessons on communication skills, going over roles and responsibilities, highlighting support services available to students, discussion on methods for coping with stress, and practicing teaching strategies (Wong et al., 2016). The integrative review by Wong et al. (2016) found that mentors received similar benefits from participating in the program, across the same outcome categories (academic, social, professional, mental health, and other specific personal skills). The academic benefits for mentors were opportunities for reflection and enhanced critical thinking skills. Regarding social benefits, mentors also reported a sense of support, a decreased sense of alienation, ability to discuss fears or other aspects of university life, and in three of the included studies mentors reported an expanded circle of friends. The professional benefits included an increased interest in subsequent mentorship programs and an interest in advanced practice nursing roles. Considering mental health, mentors also reported an increased sense of self-confidence. The other specific personal skills which mentors reported gains to were a sense of improvement in leadership skills and facilitating small groups; a sense of contribution and being able to give back to the school; and improved collaboration, problem solving, organization, communication, and time management skills.

In addition to these findings, a study that followed a single peer mentorship program at the Utah Valley University also concluded that peer mentorship programs can have benefits for mentors at the post-secondary level (Colvin & Ashman, 2010). In this study, the general benefits reported by mentors included being able to support students, reapplying concepts in their own lives, and developing connections themselves. Some mentors also reported new friendships and an improved ability to retain content as benefits.
1.7: Purpose Statement

The purpose of the present study was to i) explore the literature surrounding peer mentorship programs and post-secondary completion rates; ii) determine the needs of Health Sciences students for a peer mentorship program through the administration of surveys; iii) evaluate the degree to which the 2021/2022 iteration of the program was meeting the needs of these students; and iv) improve the program for the 2022/2023 academic year using feedback provided by the 2021/2022 cohort of students and re-evaluate the program. Considering the negative impact that low degree completion rates are having on individuals, post-secondary institutions, and the world’s economies, we believe that the findings outlined above suggest a need at the post-secondary level for a relatively easy to implement and cost-effective solution that can target some of the major factors contributing to drop out, such as peer mentorship programs.

Presentation of this project is divided into two logical phases: Phase I (Chapter 2) involves conducting a needs assessment, to evaluate the areas in which the program can improve, and Phase II (Chapter 3) involves carrying out a program evaluation of the 2022/23 implementation of these program changes. In Chapter 4, we present an overall summary and conclusions drawn from the thesis as a whole.
Chapter 2: Phase I (Needs Assessment)

2.1: Phase I Overview
The decision to include a needs assessment within this study was influenced, in part, by the integrative review of 11 peer mentorship programs that was conducted by Wong, et al. (2016), which found that none of the programs studied used a collaborative approach with student bodies in the development and implementation of their programs. The overall study was approved by the Non-Medical Research Ethics Board (NMREB) at Western University (Project ID# 119363, Appendix A) on February 15, 2022, and this approval included both the needs assessment and the subsequent program evaluation (for the 2022/23 program implementation).

2.2: Needs Assessment Participant Recruitment
First-, third-, and fourth-year Health Sciences students at Western University were eligible to participate in the needs assessment phase of the Health Sciences Peer Mentorship Project if: (a) they had enrolled as a mentee or mentor during the 2021/2022 iteration of the program; (b) were able to read and understand English; and (c) had access to the internet. Students were ineligible to participate in the needs assessment if they did not meet the eligibility criteria. Mentees and mentors were recruited over a one-month period (March 2022) through mass emails (specific to their role) sent to the email addresses provided by the students when they initially signed up for the program in September of 2021. The emails contained a link to either the mentee or mentor version of the Qualtrics survey (Appendix B), which then presented students interested in participating in the study with the letter of information and consent. After reading the letter of information and consent, volunteers provided implied consent by checking a box within the survey. This triggered the release of the survey questions relevant to their role in the study (i.e., mentor or mentee).
2.3: Needs Assessment Surveys

Two Qualtrics surveys were created for the needs assessment phase of the study – one for mentees and the other for mentors. The survey designed for the mentees contained Likert style, yes/no, rating scale, and open-ended questions. The survey questions centred around topics such as the impact of the program on students’ transition to university, primary use of the program (e.g., academics, social support, etc.), their opinion of their mentor, and suggestions for improving the program. Some examples include: “To what extent did the peer mentorship program improve your transition to university?”; “Do you consider the frequency of the meetings with your mentor to have been appropriate?”; “Overall, what rating would you give to your assigned mentor?”; and “With what topics or challenges did you find yourself most commonly reaching out to your mentor for?”. The survey required approximately 10 minutes of students’ time to complete, and students who agreed to complete the survey were given the option to enter a draw for the chance to win a $100 gift certificate to Amazon.ca.

The survey designed for the mentors also contained Likert style, yes/no, and open-ended questions. The survey questions for the mentors focused on topics such as their ability to help their mentee, benefits of being a mentor, and suggestions for improving the program. Examples of the mentor survey questions include: “On average, how often did you talk to/meet with your mentee?”; “Did you feel comfortable answering your mentee’s academic questions?”; “Do you feel that your experience as a mentor aided in your personal/professional development?”; and “What challenges did you face when trying to engage with your mentee?”. The survey required approximately 10 minutes of students’ time to complete, and students who agreed to complete the survey were given the option to enter a draw for the chance to win a $100 gift certificate to Amazon.ca.
2.4: Quantitative Analysis of Needs Assessment Surveys

The objective of this needs assessment was to provide insight into the aspects of the 2021/22 program that were perceived by mentees and mentors to be working, and the aspects that required improvement. This information would be used to update the program in the 2022/2023 implementation. Mentees were surveyed to review the extent to which they felt the peer mentorship program provided a positive impact on their academic or social adjustment to university. To capture the extent to which there was a perceived reciprocal benefit for mentees and mentors, mentors were asked about the extent to which they learned and grew over the course of their interactions with their mentee(s).

Needs assessment data for both mentees and mentors were first analyzed descriptively to generate an overview of the data. This involved calculating medians for the numerical (Likert-style) variables, and frequency tables for the categorical and binary variables. We considered summarizing our Likert-style items as continuous measures, but decided to treat these individual item values as ordinal measurements owing to the fact that we are not generating scales through aggregation and cannot, therefore, be assured of the psychometric properties of our construct measurement (e.g., validity and reliability). The calculation of medians, however, provides us with a useful evaluation of the central tendency on each item, without the requirement of making assumptions concerning the distance between points. With regards to the frequency tables, we opted to express the counts in terms of valid percent (i.e., as a percent of non-missing responses), to facilitate comparisons between items (the amount of missing data was inconsistent across the items in the survey). This enabled us to better illustrate the popularity of each choice, and still present the number of NAs.
Within the needs assessment phase of this study, we received 33 responses from mentees, and 63 responses from mentors.

**2.4.1: Evaluation of Effectiveness of 2021/2022 Program**

Table 1 presents the descriptive statistics for the questions that evaluated the effectiveness of the 2021/2022 program.

Table 1. Likert Style Program Effectiveness Survey Questions, Mentees

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>n</th>
<th>Median</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent did the program improve your transition to university?</td>
<td>31</td>
<td>1</td>
<td>14</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>To what extent did the program benefit you academically?</td>
<td>31</td>
<td>1</td>
<td>14</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: 0 = “Not at all”; 1 = “Slightly”; 2 = “Moderately”; 3 = “Quite a bit”; 4 = “Extremely”

The amount of improvement experienced by the mentees with regards to transitioning to university ranged from 0 (“not at all”) to 4 (“extremely”) and had a median of 1 (“slightly”). This suggests that, on average, the program helped the first-year students to transition to university a slight amount. Similarly, the amount of academic benefit experienced by the mentees ranged had a median of 1 (“slightly”) and also ranged from 0 (“not at all”) to 4 (“extremely”). Again, this suggests that the academic benefit experienced by mentees was small.
Table 2 shows the response frequencies for the dichotomous questions that evaluated program effectiveness.

Table 2. Dichotomous Program Effectiveness Survey Questions, Mentees

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any negative experiences as a mentee?</td>
<td>3 (12.00%)</td>
<td>22 (88.00%)</td>
<td>8</td>
</tr>
<tr>
<td>Will you apply to be a mentor in your third/fourth year?</td>
<td>23 (95.83%)</td>
<td>1 (4.17%)</td>
<td>9</td>
</tr>
</tbody>
</table>

Only 3 mentees (12%) from the 2021/2022 cohort reported having any negative experiences, while 22 mentees (88%) reported having none. The contrast was even greater for the question “Will you apply to be a mentor in your third/fourth year?”, as just 1 mentee (4%) said that they would not consider applying to be a mentor, while 23 mentees (96%) indicated that they would. We can infer from this that the interactions between the mentees and mentors were largely positive, and, as a result, many of the mentees are interested in assuming the role in their third and/or fourth year.

2.4.2: Mentee Evaluations of their Mentors

Table 3 lists the descriptive statistics for the survey questions that investigated the mentee evaluations of their mentors.

Table 3. Descriptive Statistics for the Likert Style Program Evaluation Questions, Mentees

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>To what extent did your assigned mentor suit your needs?</td>
<td>31</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>How knowledgeable was your mentor?</td>
<td>31</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Did you ever feel hesitant to reach out to your mentor?</td>
<td>28</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>
The extent to which mentors suited the needs of their mentees ranged from 1 to 5 (median = 3), on a scale from 1 to 5. In general, this suggests that students considered their mentor to be a good fit. Concerning the knowledge level of the mentors, mentees’ ratings ranged from 0 (“Not knowledgeable at all”) to 4 (“Very knowledgeable”) with a median score of 3. This suggests that mentees considered the mentors to be knowledgeable. Further, mentees did not demonstrate any hesitancy in reaching out to their mentor, with the median response to the question of whether or not they felt hesitant to reach out to their mentor being 0 (“Never”).

2.4.3: Mentor Evaluations of the Mentor Position

Although the primary focus of the peer mentorship program was to aid the university transition of mentees, ensuring that the experience of the mentors is positive is also integral to the success of these programs. Therefore, we went about amassing mentor evaluations of the mentor position, in several general domains: (1) their ability to engage with the peer mentorship program without compromising other essential occupations as a student (i.e., academics, extracurriculars and volunteering, and social activities); (2) their access to resources that would support their mentees; and (3) their perception of the personal and professional development that they derived from their participation in the program.

2.4.3.1 Compromises Required by Participation in the Peer Mentorship Program

The compromises that mentors were required to make in order to participate in the peer mentorship program were assessed with a series of dichotomous questions, the responses to which are summarized in Table 4.
Table 4. Compromises Required by Mentors in Participating in the Peer Mentorship Program

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Able to be a mentor without compromising your academics?</td>
<td>45 (88.20%)</td>
<td>6 (11.80%)</td>
<td>12</td>
</tr>
<tr>
<td>Able to be a mentor without compromising your extracurriculars/volunteering?</td>
<td>39 (75.00%)</td>
<td>13 (25.00%)</td>
<td>11</td>
</tr>
<tr>
<td>Able to be a mentor without compromising your social life?</td>
<td>42 (80.77%)</td>
<td>10 (19.23%)</td>
<td>11</td>
</tr>
<tr>
<td>Were there any drawbacks to being a mentor?</td>
<td>8 (16.67%)</td>
<td>40 (83.33%)</td>
<td>15</td>
</tr>
</tbody>
</table>

With regards to academics, the majority of mentors (n = 45, 88%) indicated that they were able to serve as a mentor in our program without sacrificing time for their academics. Six (12%) of the mentors who responded to the survey indicated that they needed to give up some of their time for their academics to participate as a mentor. Similarly, most mentors (n = 39, 75%) indicated that they were able to be a mentor without compromising their time for extracurriculars/volunteering. It is worth noting, however, that more than twice as many mentors (n = 13, 25%) compromised their time for extracurriculars or volunteering, as compared to compromising their time for academics. Social life fell in between the previous two, with 42 mentors (81%) indicating that they could fulfill their obligations to their mentee without compromising their social life, and 10 (19%) indicating that they could not. Ultimately, 8 respondents (17%) indicated that there were drawbacks to being a mentor in the program, while 40 (83%) indicated that there were not. Taken together, we can infer from these results that the 2021/2022 iteration of the program did not represent an unreasonable demand on mentors’ time, and serving as a mentor came with few drawbacks, however a number of students did experience drawbacks and/or had to sacrifice time for important activities to serve as mentor in our program.
2.4.3.2 Access to Necessary Resources

Successful participation in the Peer Mentorship program requires mentors to feel that they have the necessary resources available to them in fulfilling their responsibilities. In addition to directly asking mentors if they had the resources they needed in order to support their mentee, we asked two additional questions that spoke to the resources that were provided to them (i.e., their level of comfort in answering questions, and their perception of their preparedness to address mentee questions). These three dichotomous questions are summarized in Table 5.

Table 5. Frequency Table for the ‘Comfortable Answering Mentee’s Questions’, ‘Access to Resources’, and ‘Mentee Match’ Dichotomous Survey Questions, Mentors

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you feel comfortable answering your mentee’s academic questions?</td>
<td>46 (97.87%)</td>
<td>1 (2.13%)</td>
<td>16</td>
</tr>
<tr>
<td>Did you have access to the resources necessary to support your mentee?</td>
<td>41 (87.23%)</td>
<td>6 (12.77%)</td>
<td>16</td>
</tr>
<tr>
<td>Do you feel that you were matched with a mentee whose needs matched your knowledge and skills?</td>
<td>37 (84.09%)</td>
<td>7 (15.91%)</td>
<td>19</td>
</tr>
</tbody>
</table>

Looking at the results presented in Table 5, we can see that the vast majority of mentors who responded to the survey indicated that they felt comfortable answering their mentee’s academic questions (n = 46, 98%) with 1 (2%) mentor feeling otherwise. When asked if they had access to the necessary resources to support their mentees, again most mentors (n = 41, 87%) felt that they did. Six mentors (13%) felt that they did not. With regards to how well the mentors felt that their assigned mentee matched their skillset, the majority (n = 37, 84%) felt that their mentee matched their skills well. Although there was a large amount of missing data within this question, the missing responses would not be enough to overturn the majority even if they were all “No”.
Taken together, the responses to these three questions suggest that most mentors felt comfortable answering their mentee’s academics questions, had access to the necessary resources, and felt that their mentee was a good match for them.

2.4.3.3 Perceptions of Personal and Professional Development

A final dimension that we assessed in identifying needed changes to the peer mentorship program was the extent to which it provided the mentors with an opportunity for personal and professional development. To assess this, we asked mentors the question directly, and then asked them to specify the domains in which they perceived themselves to have grown. When asked if their experience as a mentor aided in their personal and/or professional development, 40 out of 45 mentors (89%) agreed that it had.

To identify the areas of specific personal and professional development, we asked mentors to rate their growth within each of Western’s degree outcomes, on a scale of 0 (“Strongly disagree”) to 4 (“Strongly agree”). The frequencies for each of these outcomes is presented in Table 6.

Table 6. Descriptive Statistics for the Mentor Development Survey Questions

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>Median</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptable problem solver?</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>22</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Community builder</td>
<td>38</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>12</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Global learner</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Future-focused planner</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>15</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Critical thinker</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>19</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Innovative leader</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>16</td>
<td>17</td>
<td>25</td>
</tr>
</tbody>
</table>

Note: 0 = “Strongly disagree”; 1 = “Somewhat disagree”; 2 = “Neither agree nor disagree”; 3 = “Somewhat agree”; 4 = “Strongly agree”
As shown in Table 6, mentors felt that their participation in the program led to positive development (i.e., greater than the midpoint of the scale) in all six of these outcomes. Of note, however, was the fact that the program led to the greatest improvements in the “Community Builder” outcome, which demonstrated a median score of 4 (“Strongly agree”). Overall, these results suggest that mentors perceived an improvement in all of the degree outcomes, as a result of their participation in the program.

2.4.4: Program Structure

To investigate the extent to which the 2021/2022 program structure worked for both the mentees and mentors, we asked each group about: (1) meeting frequency; (2) satisfaction with meeting frequency; (3) whether we should add optional learning sessions to the program; and (4) the frequency with which we should offer optional learning sessions.

2.4.4.1 Meeting Frequency

Table 7 presents the frequencies reported by mentees and mentors concerning average meeting frequency, and Table 8 presents the extent to which this meeting frequency was perceived to be appropriate.

Table 7. Meeting Frequencies Reported by Mentees and Mentors

<table>
<thead>
<tr>
<th>Group</th>
<th>Biweekly</th>
<th>Weekly</th>
<th>3+ Times/Week</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentees</td>
<td>17 (73.91%)</td>
<td>4 (17.39%)</td>
<td>2 (8.70%)</td>
<td>10</td>
</tr>
<tr>
<td>Mentors</td>
<td>46 (90.20%)</td>
<td>3 (5.88%)</td>
<td>2 (3.92%)</td>
<td>12</td>
</tr>
</tbody>
</table>
Seventeen mentees (74%) reported having biweekly meetings with their mentors, while four mentees (17%) had weekly interactions. Further, two mentees (9%) engaged in meetings three or more times per week. The frequencies follow a similar pattern among mentors. The majority of mentors, 46 (90%), participated in biweekly meetings with their mentees, while three (6%) engaged in weekly sessions, and two (4%) reported meeting three or more times per week.

Ultimately, this suggests that most of the mentee/mentor pairings met biweekly.

Fourteen mentees (45%) suggested that the meeting frequency was appropriate within their dyad. On the contrary, 41 mentors (76%) considered their meeting frequency to be appropriate. This is interesting, as it suggests that mentees and mentors show significant disagreement on what constitutes an appropriate meeting frequency, $\chi^2(1) = 6.87, p = .009$. The mentors are largely happy with biweekly meetings – perhaps because it allows them to support their mentees with fewer compromises to their own schedule.

### 2.4.4.2 Optional Learning Sessions

One of the innovations that we planned for the 2023/24 implementation of the Peer Mentorship program was the inclusion of optional learning sessions. To address the attitudes (in general terms) of experienced mentees and mentors to this addition, we asked both groups about their receptiveness to this idea as a dichotomous question, and also asked about the most desirable learning session frequency. Table 9 presents the proportions of each group that
considered optional learning sessions to be a good idea, and Table 10 presents the preferred frequency of these sessions.

Table 9. Mentee and Mentor Opinions Regarding the Inclusion of Optional Learning Sessions

<table>
<thead>
<tr>
<th>Group</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentees</td>
<td>20  (80.00%)</td>
<td>5  (20.00%)</td>
<td>8</td>
</tr>
<tr>
<td>Mentors</td>
<td>38  (88.37%)</td>
<td>5  (11.63%)</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 10. Preferred Frequency of Optional Learning Sessions for Mentees and Mentors

<table>
<thead>
<tr>
<th>Group</th>
<th>Monthly</th>
<th>Every 3 Weeks</th>
<th>Biweekly</th>
<th>Weekly</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentees</td>
<td>11  (57.89%)</td>
<td>4  (21.05%)</td>
<td>2  (10.53%)</td>
<td>2  (10.53%)</td>
<td>14</td>
</tr>
<tr>
<td>Mentors</td>
<td>26  (70.27%)</td>
<td>6  (16.22%)</td>
<td>3  (8.11%)</td>
<td>2  (5.40%)</td>
<td>26</td>
</tr>
</tbody>
</table>

Twenty mentees (80%) expressed support for adding optional learning sessions, as compared to 38 mentors (88%) who agreed that these learning sessions should be incorporated into the program. No significant disagreement was indicated between the groups as to the potential utility of these optional sessions, $\chi^2(1) = 0.34, p = .56$. These two questions had a fair amount of missing data, particularly the version posed to the mentors. Despite this, it still seems clear that both mentees and mentors favoured adding the optional learning sessions.

Table 10 suggests that of the mentees, 11 (58%) felt that they should be held monthly, four (21%) once every three weeks, two (10.5%) biweekly, and two (10.5%) weekly. A similar pattern can be seen among mentors, with 26 (70%) preferring monthly sessions, six (16%) once every three weeks, three (8%) biweekly, and two (5%) weekly. No significant difference in this pattern of responses was observed between groups, $\chi^2(3) = 1.0, p = .80$. Clearly, monthly is the desired frequency for both mentees and mentors.
2.5: Needs Assessment Open-Ended Questions

The data we collected within the open-ended questions did not lend itself to a formal qualitative analysis, as we did not seek out rich descriptive data from the participants within this survey. Rather, the open-ended questions that we posed of participants were intended to provide us with information about response options that were not provided to participants within the survey.

To this end, we reviewed the responses submitted for each question (among mentees and mentors) and grouped similar responses into categories. This allowed us to count the frequency of these additional responses, within each question. Responses to the open-ended questions asked of mentees are summarized in Table 11, and responses to the open-ended questions asked of mentors are summarized in Table 12.

2.5.1 Mentee Responses to Open-Ended Questions, Needs Assessment

The first open-ended question on the mentee survey was “How often would you have liked to have met with your mentor?”, which was a follow-up for mentees who indicated that they felt the meeting frequency with their mentor was inappropriate. Of the 13 responses received, 3 said twice a month, 2 said weekly, 1 said twice per week, and 7 indicated that their mentors were inconsistently available and would have preferred a more consistent meeting frequency, such as biweekly.
Table 11. Mentee Open-Ended Questions, Needs Assessment

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>How often would you have liked to have met with your mentor?</th>
<th>With what topics or challenges did you find yourself most commonly reaching out to your mentor?</th>
<th>What caused you to feel hesitant to reach out to your mentor?</th>
<th>In what areas could your mentor have improved?</th>
<th>What challenges did you face during your first year at Western that were not addressed by the peer mentorship program?</th>
<th>Please describe these negative experiences.</th>
<th>What suggestions do you have to improve the program for future offerings?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often would you have liked to have met with your mentor?</td>
<td>13</td>
<td>Twice a month (n = 3)</td>
<td>Weekly (n = 2)</td>
<td>Twice per week (n = 1)</td>
<td>More consistency (n = 7)</td>
<td></td>
<td></td>
<td>Better matching (n = 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Socializing with peers (n = 2)</td>
<td>Unresponsive mentor (n = 2)</td>
<td>Better matching (n = 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Help with subjects mentor had not taken (n = 8)</td>
<td>Mentor not a good match (n = 1)</td>
<td>More social opportunities (n = 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Getting involved in community (n = 1)</td>
<td></td>
<td>More activities (n = 3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Match students earlier (n = 1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>More in-person session s (n = 1)</td>
</tr>
</tbody>
</table>
Table 12. Mentor Open-Ended Questions, Needs Assessment

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>Lack of time (n = 7)</th>
<th>Unable to reach mentee (n = 21)</th>
<th>Mismatched schedules (n = 5)</th>
<th>COVID-19 Restrictions (n = 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What barriers prevented meeting with mentee more often?</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What drawbacks did you experience?</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What caused you to feel uncomfortable when answering academic questions?</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What resources would have helped you support your mentee?</td>
<td>4</td>
<td>Course-specific (n = 3)</td>
<td>Academic supports (n = 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What challenges did you face when trying to engage with your mentee?</td>
<td>36</td>
<td>Mentee did not have questions (n = 8)</td>
<td>Mentee did not always respond (n = 14)</td>
<td>Mentee hesitant to open up (n = 4)</td>
<td>Lack of experience (n = 5)</td>
</tr>
<tr>
<td>What suggestions do you have to improve the program for future offerings?</td>
<td>19</td>
<td>Check-ins with mentors (n = 3)</td>
<td>Structured events/socials (n = 12)</td>
<td>Create pairs earlier (n = 3)</td>
<td>Create pairs using more criteria (n = 1)</td>
</tr>
</tbody>
</table>
The second open-ended question was “With what topics or challenges did you find yourself most commonly reaching out to your mentor?” We received 21 responses to this question, 20 of which indicated that the individual mostly reached out to their mentor for academic support. Specifically, within academics, students reached out for: steps for next year, study techniques, reviews of professors, what courses to take, how to get involved, and course content questions. Aside from academics, 1 student said that they reached out for “social aspects”.

The third open-ended question was “What caused you to feel hesitant to reach out to your mentor?” and was a follow-up question for mentees who indicated they felt hesitant (to any degree) to reach out to their mentor. We received 8 responses to this question, which could be divided into two categories: i) I did not want to bother them (n = 3); ii) I did not feel like they could help me (n = 5).

The fourth open-ended question was “In what areas could your mentor have improved?”. We received 15 responses to this question, which could be grouped into three categories: i) communicate better/reach out more (n = 8); ii) improve familiarity with first-year courses (n = 2); and iii) no suggestions (mentor was good) (n = 5).

We also asked the mentees “What challenges did you face during your first year at Western that were not addressed by the peer mentorship program?” The mentees provided 15 responses to this question, which included: i) socializing with peers (n = 2); ii) getting help with subjects their mentor had not taken (n = 8); iii) getting involved in the community (n = 1); and iv) nothing (n = 4).

The sixth open-ended question we asked mentees was “Please describe these negative experiences”, which was a follow-up to “Did you have any negative experiences within the peer
mentorship program that you would like to share?” if “Yes” was selected. We received 3 responses to this question, which can be divided into two groups: i) my mentor barely ever responded to me (n = 2); ii) my mentor did not match my needs (n = 1).

Lastly, the mentees were asked directly “What suggestions do you have to improve the program for future offerings?”. We received 11 answers to this question, which included: better mentee-mentor matching (n = 3), more opportunities to connect with peers (n = 3), more structured activities between mentor and mentee (n = 3), create pairs earlier in the academic year (n = 1), and more in-person sessions (n = 1).

2.5.2 Mentor Responses to Open-Ended Questions, Needs Assessment

The first open-ended question that we asked the mentors was “What barriers prevented you from meeting with your mentee more often?”, which was a follow-up to “Do you think that you should have met with your mentee more often?”. We received 38 responses to this question, which included: i) lack of time (n = 7); ii) unable to get in touch with mentee (n = 21); iii) mismatched schedules (n = 5); and iv) difficulties with COVID-19 restrictions (n = 5).

The second open-ended question that we asked the mentors was “What drawbacks did you experience?”, which was a follow-up to “Were there any drawbacks to being a mentor in the program?” if “Yes” was selected. We received 6 responses to this question, which can be summarized as i) mentee being too demanding (n = 1); and ii) feeling annoyed due to being unable to contact mentee (n = 5).

We also asked the mentors “What caused you to feel uncomfortable when answering your mentee’s academic questions?”, which was a follow-up to “Did you feel comfortable answering your mentee’s academic questions?” if “No” was selected. We did not receive any responses to
this question (only 1 mentor indicated that they felt uncomfortable answering their mentee’s academic questions).

Next, we asked the mentors “What resources would have helped you to better support your mentee?”; this was a follow-up to “Do you feel that you had sufficient access to the resources needed to support your mentee?” if “No” was selected. Just 4 mentors replied to this question, and their answers included: i) course-specific resources (first-year Health Sciences courses in particular) (n = 3); and ii) academic supports to refer mentees too (such as tutoring services) (n = 1).

In answer to the question “What challenges did you face when trying to engage with your mentee?” we received responses from 36 mentors, with responses including: i) mentee did not have questions (n = 8); ii) mentee did not always respond (n = 14); iii) mentee was hesitant to open up (n = 4); iv) lack of experience with a problem mentee was facing (e.g., failing a course) (n = 5); and v) being unable to meet in-person (due to COVID-19 restrictions) (n = 5).

Lastly, the mentors were asked “What suggestions do you have to improve the program for future offerings?”. We received 19 responses to this question; the mentors’ suggestions included: mentor check-in meetings, structured events/socials, match mentees with mentors earlier in the academic year, and match mentees with mentors using more criteria.

2.5.3 Open-Ended Questions Discussion, Needs Assessment

The needs assessment open-ended questions provided us with a variety of insights, however, there were three main themes that emerged from the responses to these questions that we felt required addressing: i) both the mentees and mentors reported difficulties getting in contact with each other/maintaining contact; and ii) improve academic support for both the mentees and mentors; and iii) include more social events. To address these suggestions for the
2022/2023 program, we included a “getting started” section in the mentor training, which emphasized the need to establish a plan for communicating with your mentee. Additionally, we occasionally sent out mass emails to the mentees and mentors encouraging them to contact us if they have any issues. When a participant contacted us with regards to being unable to reach their mentee/mentor, we would email the unresponsive individual directly and get the pairs back on track. With regards to academics, we provided the mentors with many academic resources during the training and the first optional learning session for the mentees was entirely based around academics. Finally, to address the lack of social events, we made the decision to make the last optional learning session a social event at The Wave restaurant at Western.

It is worth reiterating that the 2021/2022 offering of our program took place during the ‘height’ of the COVID-19 pandemic. Therefore, this cohort may have faced unique challenges, such as a disproportionately high level of difficulty with communicating with each other as they adjusted to a new ‘virtual reality’ and may have also had a greater desire for activities, given the large increase in time spent at home (and subsequently reduced opportunity to socialize, at least in a normal fashion).

2.6: Needs Assessment Conclusion

Overall, based on feedback from the mentees and mentors who enrolled in the 2021/2022 offering of our program, the Health Sciences Peer Mentorship Program could be more successful with regard to its primary goals of helping students transition to university and more quickly adapt to post-secondary academics, as it only provided minor benefits in both of these areas. Some of the reasons for this, based on the above statistics and written responses, were that the mentors could have been more knowledgeable (at least concerning academics), some of the mentees wished that they could have met with their mentor more often, and connecting (i.e., the
mechanics of contacting each other) was difficult within some pairs. The open-ended data suggested that overall community-building would be improved through the introduction of a social event of some sort. To remedy these issues, and ultimately try to improve the program’s ability to achieve what it was created for, we made the following changes for the 2022/2023 iteration of the program:

1. A separate pairing survey was sent to the mentees and mentors asking the mentees to list the courses they were most concerned about, and the mentors were asked to list the courses they were best at. This was intended to address potential pairing mismatches and increase the likelihood that mentors were knowledgeable in academic areas that mentees were seeking help for, given the fact that most mentees are drawn to the program for academic reasons.

2. In response to a lower than expected academic benefit reported by the mentees, and some concerns about access to resources reported by both the mentees and mentors, we improved the mentor training by placing more emphasis on academics, providing the mentors with many resources (that they were encouraged to share with their mentees), and through the inclusion of direct quotes from the 2021/2022 mentees explaining how their mentor could have improved.

3. To address concerns over meeting frequency, expressed by mentees, we encouraged the mentors to meet with their mentees at least biweekly.

4. In response to concerns over communication difficulties within mentor-mentee dyads, we included a “getting started” section in our mentor training, where establishing a plan for communicating with their mentees was highlighted, and mentors were provided with mock scenarios that illustrated common difficulties (and solutions).
5. The optional learning sessions (with a monthly frequency) were clearly identified as an area of interest for both mentors and mentees, and so we added monthly optional learning sessions for the mentees on topics identified within the open-ended questions.

6. To facilitate community building among mentors and mentees, we decided to arrange an in-person social at The Wave restaurant at Western.
Chapter 3: Methods, Results, and Discussion for Phase II (Program Evaluation)

3.1: Phase II Overview

The program evaluation phase of our study included both a baseline survey for the mentees and a follow-up survey for the mentees and mentors. In contrast with phase I of the study, which surveyed mentees and mentors who participated in the 2021/2022 offering of our program, phase II of our study investigated the experiences of students enrolled in the 2022/2023 iteration of our peer mentorship program. This iteration of the program featured updates that were derived from feedback obtained during phase I.

3.2: 2022/2023 Peer Mentorship Program Participant Recruitment

We began recruiting mentees and mentors for the 2022/2023 iteration of the Health Sciences Peer Mentorship Program on September 26, 2022, and closed the sign-up survey on October 6, 2022. Prospective student participants were recruited via email, and through the Health Studies Students’ Associations social media accounts (Facebook, Instagram, etc.). The emails and social media posts each contained a link to the program sign-up survey. The sign-up survey (Appendix B) asked students whether they wished to sign-up as a mentee or mentor, and for necessary personal information (name, email). Students who indicated that they were signing up as a mentee were then asked if they would be interested in participating in the program evaluation phase of the study, which would require them to complete the baseline program evaluation survey. If so, mentees were then presented with the letter of information and consent, and, after viewing the letter of information and consent, asked if they agree to participate in the study (implied consent). Upon indicating that they agree to participate in the study, mentees were then presented with the baseline program evaluation survey.
3.3: Mentor Training

In order to be eligible to serve as a mentor in our peer mentorship program, mentors were required to attend a single, one-hour long training session, hosted over Zoom. The training session (Appendix C) was offered on two different dates to allow prospective mentors to attend the session that fit best with their schedules. The topics covered in the training included: the impetus for our program, a very brief overview of the peer mentorship literature, an overview of how our program functions, how to get started with your mentee, communication skills and professionalism, academics, mental and physical wellbeing, university and web-based resources, example scenarios, and a Q&A. These topics were chosen based on personal experience from running previous iterations of the program, the needs assessment results, as well as the integrative review by Wong, et al. 2016, which found that of the programs studied, preparations for mentors included teaching communication skills, roles and responsibilities of the mentor, support services available to students, and teaching strategies.

3.4: Mentee and Mentor Pairing

Mentees and mentors were asked to fill out a short survey to provide the information necessary for pairing. Aside from personal information (e.g., name, email, etc.), students enrolling as mentees were asked which course(s) they are most concerned about taking, while mentors were asked which course(s) they felt most knowledgeable about. In situations where there were not enough mentors to fill the demand for a course (e.g., first year chemistry), we did our best to match the remaining mentees with mentors who appeared to have similar/relevant knowledge. In cases where students enrolled in the program but did not complete the pairing survey, we made the decision to allow them to continue with the program and assigned them randomly, rather than prohibiting them from continuing with the program.
3.5: Mentee Sessions

Based on the needs assessment results, we made the decision to offer optional, personal development sessions for the mentees. The reasoning behind this was to ensure that mentees were receiving high quality guidance in domains which had been deemed highly important by our previous cohorts, and throughout the peer mentorship literature, such as academics, extracurriculars, planning for the future, and well-being. These sessions were between 45-minutes and one-hour long and were hosted over Zoom.

The academic session covered: how university differs from high school, time management and organization, study habits and techniques, picking courses, some ideas after your degree, and provided the mentees with academic resources, such as the Western Writing Support Centre and the Western Career Education site (Appendix C). The future planning session covered: picking a module, opportunities within your degree, getting involved, and a Q&A (with MSc student and Health Studies Students’ Association member, Chris Ruffell). The well-being session was designed around content covered in the courses Kinesiology 2000 (Physical Activity & Health) and Health Sciences 1110 (Personal and Social Determinants of Resilience and Well-being), and was designed to promote physical activity, taking breaks from sedentary behaviour, and effective methods for coping with stress (such as physical activity, reading, and meditating/yoga).

Lastly, based on additional feedback from the needs assessment, we made the decision to make the final session a social event for the mentees and mentors to get together at a restaurant at Western University called The Wave. Students were provided with food and drink, encouraged to socialize with each other, and had the opportunity to play games, such as trivia, for a chance to win various gift cards and merchandise from Western’s Bookstore.
3.6: Program Evaluation Surveys

The goal of the baseline program evaluation survey was to develop a better understanding of first-year students’ thoughts and expectations surrounding the process of transitioning to university. All students enrolled in the program as mentees were invited to complete the survey via email. The survey consisted of a mix of Likert style, open-ended, rating scale, and yes/no questions, and took approximately 10 minutes to complete. Some examples of the questions included: “How comfortable do you feel with transitioning to university?”; “What average do you hope to maintain during your first year at Western?”; “Do you intend to join any other support programs?”; and “How beneficial do you expect this program to be in regard to your transition to university?”. Mentees who completed the survey were given the option to enter a draw for the chance to win a $100 gift certificate to Amazon.ca. Lastly, mentees were asked if they would be interested in participating in the baseline interview component of the study.

For the follow-up surveys, we made the decision to survey both the mentees and mentors. We opted to include mentors in this round of surveys because we felt that they would have valuable insight into how this iteration of program functioned and could provide meaningful suggestions for further improvement. The follow-up surveys were emailed to mentees and mentors from the end of March to the beginning of May 2023. Unique versions of the survey were created for the mentees and mentors. Upon opening the survey, students were presented with the letter of information and consent. After providing implied consent by selecting ‘yes’ to the question “I agree to participate in this study.”, students were given access to the survey proper.

Both versions of the follow-up survey contained Likert-style, rating scale, yes/no, and open-ended questions, and took approximately 10-minutes to complete. After completing the survey,
all students were given the option to add their name to a draw for a $100 gift certificate to Amazon.ca. With respect to the mentees, our primary goal for the follow-up surveys was to compare how mentees felt about the program and their transition to university with the responses they provided through the baseline survey, after having spent nearly an entire academic year enrolled in the program. In light of this, some of the survey questions included: “Did being a mentee in the peer mentorship program help you transition to university-level academics?”; “Were you able to maintain your desired average during your first year at Western?”; “Which of the following did you find to be greatest benefit of the peer mentorship program?”; and “What did you reach out to your mentor for the most?”.

The goal of the mentor surveys was to gain an understanding of how the program functioned from another perspective, and to see if mentors were able to fulfill their duty to their mentee without compromising their own academics and development. As a result of this goal, some of the mentor follow-up survey questions were: “How often did you meet with your mentee?”; “Did you find it challenging to answer your mentee’s academic questions?”; “Did you find the mentor training useful?”; and “Would you recommend that other senior Health Sciences students enrol as mentors in the peer mentorship program?”.

3.7: Quantitative Analysis of Program Evaluation Surveys

The objective of this program evaluation was to evaluate the benefits and drawbacks experienced by the mentees and mentors as a result of participating in the program, and to determine whether or not the updates made during the 2022/23 iteration of the program had a positive impact on student experiences. Like the needs assessment data, survey questions were both summarized with medians for ordinal variables, and frequency tables for dichotomous and nominal variables. We then ran inferential statistics, where appropriate, including tests of
proportion (for nominal data), and Mann-Whitney U tests (for ordinal data). The baseline program evaluation survey that we administered to the 2022/2023 mentees received 35 responses. With regard to the program evaluation follow-up surveys, we received 14 responses from the mentees and 49 responses from the mentors.

3.7.1: Description of the Mentees

Table 13 presents the descriptive statistics for the Likert style questions that we asked the mentees, in order to obtain a description of them at the beginning of the program. Each of these questions were positively keyed and assessed on a scale of 0 to 4.

Table 13. Descriptive Statistics for Mentee Description Questions

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
<th>Nas</th>
</tr>
</thead>
<tbody>
<tr>
<td>How comfortable do you feel with transitioning to university?</td>
<td>35</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>How prepared do you feel for post-secondary academics?</td>
<td>35</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>How confident are you in your ability to study and retain course content?</td>
<td>35</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>How aware are you of the various resources offered by Western?</td>
<td>35</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Out of the mentees who responded to the baseline survey, the comfort level with transitioning to university ranged from 1 (“Somewhat uncomfortable”) to 4 (“Extremely comfortable”), with a median of 3 (“Somewhat comfortable”). In general, this suggests that the students we surveyed felt that they were already somewhat comfortable with transitioning to university. With regards
to level of preparedness for post-secondary academics, the mentees’ responses ranged from 0 (“Not prepared at all”) to 4 (“Very prepared”), with a median of 3 (“Fairly prepared”). This median value indicates that the first-year students generally felt that they were fairly prepared for post-secondary academics.

When asked about their level of confidence in their ability to study and retain course content, the mentees again submitted responses ranging from 0 (“Not confident at all”) to 4 (“Very confident”). However, the median here was 2, suggesting that students were, in general, neither confident or unconfident in their ability to study and retain course content. Lastly, concerning the mentees’ awareness of the various resources offered by Western, answers ranged from 0 (“Not at all aware”) to 4 (“Very aware”). Interestingly, the responses to this question were the most negative of the four, as the median value of 1 indicates that the students were generally not at all aware of the various resources available to them at Western.

At baseline, the mentees were also asked to indicate the average grade range that they were hoping to achieve. These responses are summarized in Table 14.

Table 14. Frequency Table of Mentee Expected Grade Ranges

<table>
<thead>
<tr>
<th>What average do you hope to maintain during your first year at Western?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>70 – 74:</td>
<td>4 (11.43%)</td>
</tr>
<tr>
<td>75 – 79:</td>
<td>5 (14.29%)</td>
</tr>
<tr>
<td>80 – 84:</td>
<td>14 (40.00%)</td>
</tr>
<tr>
<td>85+:</td>
<td>12 (34.28%)</td>
</tr>
<tr>
<td>NA:</td>
<td>0</td>
</tr>
</tbody>
</table>
The majority of mentees (n = 14, 40%) hoped to maintain an average within the range of 80-84 percent. The second most popular option was 85+ percent, with 12 mentees (34%) selecting the response. Given that roughly 74% of the mentees were hoping to achieve an average of 80 percent or above, combined with the mostly confident responses outlined above in Table 14, there may have been a mismatch between the confidence and expected performance of the mentees, and ultimately the group may have underestimated the contrast in difficulty between high school and post-secondary education. This mismatch has been observed previously by Lowe and Cook (2003), who found that 57% of the students that responded to their survey did not know how much studying (including attending classes and independent reading) would be required per week upon entering university. Further, 39% of the sample reported struggling with the new workload. This suggests that one of the key functions of a peer mentorship program in an academic setting should be to help students adjust their expectations to the realities of university.

The last two questions were asked of mentees to gain a baseline description of their expectations of the peer mentorship program, and related to the expected benefits of the program, and the topics about which they expected to reach out to their mentor. Table 15 displays the frequencies for these questions. To facilitate comparisons on this dimension, the follow-up survey item concerning topics of inquiry is also presented in Table 15.
Table 15. Frequency Table for Mentee Main Reason for Joining, Anticipate Reaching out for Most, and did Reach out for Most Survey Questions

<table>
<thead>
<tr>
<th>Which of the following benefits was your main reason for joining the program? [baseline]</th>
<th>What do you anticipate reaching out to your mentor for the most? [baseline]</th>
<th>What did you reach out to your mentor for the most? [follow-up]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support: 5 (14.28%)</td>
<td>Academics: 25 (80.64%)</td>
<td>Academics: 6 (54.55%)</td>
</tr>
<tr>
<td>Academics: 22 (62.86%)</td>
<td>Resources: 1 (3.23%)</td>
<td>Resources: 3 (27.27%)</td>
</tr>
<tr>
<td>Social opportunities: 1 (2.86%)</td>
<td>Support: 5 (16.13%)</td>
<td>Support: 2 (18.18%)</td>
</tr>
<tr>
<td>Professional development: 5 (14.29%)</td>
<td>Social opportunities: 0</td>
<td>Social Opportunities: 0</td>
</tr>
<tr>
<td>Other: 2 (5.71%)</td>
<td>Other: 0</td>
<td>Other: 0</td>
</tr>
<tr>
<td>NA: 0</td>
<td>NA: 4</td>
<td>NA: 3</td>
</tr>
</tbody>
</table>

The vast majority of mentees were drawn to the program because of the academic benefits (n = 22, 63%). Similarly, most mentees anticipated reaching out to their mentors for academics the most (n = 25, 81%), and most mentees did end up reaching out to their mentors for academics more often than the other options (n = 6, 54.5%). Using our needs assessment as a reference, this finding is unsurprising as “academics” (in some form) was the most common response (20 out of 21 of respondents) to an open-ended question asking about the topics or challenges about which they most frequently reached out to their mentor.

3.7.2: Program Evaluation – Mentee

To assess the overall benefit of the program, we asked mentees to rate the expected benefit of the program (at baseline) on a positively-keyed Likert-type item ranging from 0 to 10 and compared this to the perceived benefit (at follow-up) on an identical item. Expected benefit scores ranged from 3 to 10, with a median of 7, while actual benefit scores ranged from 1 to 7, with a median of 5. To determine whether the centres of the distributions differed significantly between baseline and follow-up assessments, we ran a Mann-Whitney test to compare baseline
expectations to perceived benefit at the end of the program. Students identified the perceived benefit at the conclusion of the program to be significantly less than their expected benefit, $U = 315, p = .001$.

We also evaluated the self-reported effect of the program on academics for mentees, specifically with regards to their ability to maintain their desired average. Frequencies on this question were almost evenly split with 8 students (57%) indicating yes and 6 students (43%) indicating no. This offers further support to the idea advanced earlier, that students’ confidence and expectations were mismatched considering the jump in difficulty from high school to post-secondary education. To further characterize the perceived overall benefits of the program, we asked mentees to indicate the overall benefit of the program. These results are summarized in Table 16.

Table 16. Mentee description of greatest benefit of the program.

<table>
<thead>
<tr>
<th>What was the greatest benefit of the program?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics: 2 (14.29%)</td>
<td></td>
</tr>
<tr>
<td>Professional development: 1 (7.14%)</td>
<td></td>
</tr>
<tr>
<td>Social opportunities: 1 (7.14%)</td>
<td></td>
</tr>
<tr>
<td>Support: 7 (50.00%)</td>
<td></td>
</tr>
<tr>
<td>Other: 3 (21.43%)</td>
<td></td>
</tr>
<tr>
<td>NA: 0</td>
<td></td>
</tr>
</tbody>
</table>

Interestingly, mentees who completed the follow-up survey generally felt that support was the greatest benefit of the program ($n = 7, 50\%$). In this case, academics only received 2 votes (14%).
3.7.2.1: Accessing Other Services on Campus

We were also interested in the extent to which students accessed other services on campus, and to this end we asked students about their intentions to access other support programs (during the baseline survey) and we also asked students whether or not they actually joined other support programs (during the follow-up survey). Table 17 presents the proportions for both of these questions.

Table 17. Intentions and follow-through in joining other support programs, for mentees.

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you intend to join any other support programs? [baseline]</td>
<td>21 (63.64%)</td>
<td>12 (36.36%)</td>
<td>2</td>
</tr>
<tr>
<td>Did you join any other support programs? [follow-up]</td>
<td>4 (28.57%)</td>
<td>10 (71.43%)</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 17 suggests that many of the students (n = 21, 64%) planned on joining other support programs in addition to the peer mentorship program. Interestingly, the responses to the follow-up survey question suggest that most mentees (n = 10, 71%) did not end up joining additional support programs. Given this contrast, it is possible that our peer mentorship program may have provided a greater array of benefits than students had initially anticipated.

3.7.2.2: Affects of Program on Social Opportunities, Coping, and Familiarity with Benefits of Physical Activity

We were also interested in evaluating how the program affected social opportunities, familiarity with stress coping methods, and familiarity with the benefits of physical activity. Each of these questions were assessed with positively keyed Likert-type items that ranged from 0 (“Strongly disagree”) to 4 (“Strongly agree”). The responses to these baseline and follow-up survey questions are outlined in Table 18.
Table 18. Mentee ratings of social, mental, and physical benefits of peer mentorship, at baseline and follow-up.

<table>
<thead>
<tr>
<th>Item</th>
<th>Baseline</th>
<th></th>
<th></th>
<th>Follow-up</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel that you will have sufficient opportunity to socialize during your first year?</td>
<td>28</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Did being a mentee increase your opportunities to socialize?</td>
<td>14</td>
</tr>
<tr>
<td>Are you familiar with any effective methods for coping with stress?</td>
<td>28</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Did being a mentee increase your familiarity with effective methods for coping with stress?</td>
<td>14</td>
</tr>
<tr>
<td>Are you familiar with the benefits of physical activity on academics and wellbeing?</td>
<td>28</td>
<td>3</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Did being a mentee increase your familiarity with the benefits of physical activity?</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 18 suggests that most mentees felt (at baseline) that they would probably have sufficient opportunity to socialize during their first year (median = 3). If this expectation was borne out, it is understandable that the mentees somewhat disagreed that the program had increased their number of opportunities to socialize (median = 1.50). With regard to familiarity with effective methods for coping with stress, the mentees were (in general) somewhat familiar at baseline (median = 3). At follow-up, the mentees somewhat agreed (median = 2.50) that the program had increased their familiarity with effective methods for coping with stress. Lastly, the first-year students, at baseline, were already quite familiar with the benefits of physical activity (median = 3), which may have left less room for improvement as a result of the program (i.e., most mentees somewhat disagreed that the program had increased their knowledge in this area).
Ultimately, the benefits conferred to the mentees in these areas were small at best. This could be the result of mentees already having, in general, strong baseline scores.

3.7.2.3: Optional Mentee Learning Sessions

A key improvement to the program this year was the addition of optional mentee learning sessions. To identify the perceived (and actual) benefit of these sessions, we asked mentees to estimate the expected value of the sessions at baseline, and the actual value at follow-up. This was assessed using a positively-keyed Likert-type item ranging from 0 to 10. At baseline, 31 mentees responded to this question, and identified the expected value of the optional sessions to have a median value of 7. Nine mentees responded to this question at follow-up and noted that the optional sessions had an expected value of 4. The difference between baseline and follow-up was statistically significant, $U = 217.50, p = 0.01$, suggesting that the optional sessions were significantly less useful than expected.

To assess the extent to which the mentees engaged with the optional sessions, we also asked the first-year students whether or not they planned to attend the optional sessions (at baseline) and whether or not they actually attended the sessions. This information is presented in Table 19.

Table 19. Intention to participate compared with actual participation for the optional sessions.

<table>
<thead>
<tr>
<th>Do you plan to attend the optional learning sessions? [baseline]</th>
<th>Please describe your participation in the optional learning sessions [follow-up]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely not: 0</td>
<td>I attended none: 7 (50.00%)</td>
</tr>
<tr>
<td>Probably not: 1 (3.23%)</td>
<td>I attended some: 5 (35.72%)</td>
</tr>
<tr>
<td>Might or might not: 10 (32.26%)</td>
<td>I attended half: 1 (7.14%)</td>
</tr>
<tr>
<td>Probably yes: 18 (58.06%)</td>
<td>I attended most: 1 (7.14%)</td>
</tr>
<tr>
<td>Definitely yes: 2 (6.45%)</td>
<td>I attended all: 0</td>
</tr>
<tr>
<td>NA: 4</td>
<td>NA: 0</td>
</tr>
</tbody>
</table>
Table 19 suggests that most mentees felt that they would probably attend the learning sessions (n = 18, 58%). None of the mentees indicated that they would definitely not attend and 1 (3%) mentee indicated that they would probably not attend. A fair number were on the fence, though, as 10 (32%) suggested they may or may not attend. Despite these baseline results, the follow-up results show that most mentees did not attend the learning sessions (n = 7, 50%). Out of the respondents, 5 (36%) attended some of the sessions, and 1 student (7%) reported attending most of the sessions. Given that students were aware of the session topics at baseline, this suggests that as the program progressed the mentees may have felt that they no longer required the information being offered.

As can be seen in Table 20, out of all of the sessions offered, the attendance was by far the highest for the end of the academic year social.

Table 20. Optional Learning Session Topics and Attendance Numbers

<table>
<thead>
<tr>
<th>Optional Learning Session Topic</th>
<th>Attendance (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics</td>
<td>14</td>
</tr>
<tr>
<td>Future Planning</td>
<td>5</td>
</tr>
<tr>
<td>Well-being</td>
<td>0</td>
</tr>
<tr>
<td>Social at The Wave</td>
<td>25+</td>
</tr>
</tbody>
</table>

Conversely, the attendance was lowest for the well-being session which, unfortunately, had no students in attendance. Although the attendance for these sessions was modest at best (considering the total number of mentees enrolled), the students who opted to attend said that they found them useful, and reported learning many tips and tricks they were not aware of, particularly from the session on academics.
3.7.2.4: Mentee Meeting Frequency with Mentor

We were also interested in investigating how expected meeting frequency with mentor differed from actual meeting frequency with mentor. These results are presented in Table 21.

Table 21. Expected meeting frequency versus actual meeting frequency

<table>
<thead>
<tr>
<th>Expected meeting frequency with mentor</th>
<th>Actual meeting frequency with mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per month: 7 (22.58%)</td>
<td>Once per month: 7 (70.00%)</td>
</tr>
<tr>
<td>Twice per month: 9 (29.03%)</td>
<td>Twice per month: 2 (20.00%)</td>
</tr>
<tr>
<td>Weekly: 8 (25.81%)</td>
<td>Weekly: 1 (10.00%)</td>
</tr>
<tr>
<td>Biweekly: 7 (22.58%)</td>
<td>Biweekly: 0</td>
</tr>
<tr>
<td>Daily: 0</td>
<td>Daily: 0</td>
</tr>
<tr>
<td>NA: 4</td>
<td>NA: 4</td>
</tr>
</tbody>
</table>

At baseline, the mentees were almost evenly split across the expected meeting frequencies (excluding “Daily”), however the most common response was “Twice per month” (n = 9, 29%). This is in contrast with the follow-up survey, where the first-year students indicated that “Once per month” was the most common meeting frequency by far (n = 7, 70%). It can be inferred from this that some of the mentees received less support from their mentor than they were hoping for, and some of the mentees needed the support of their mentor less than they were anticipating.

3.7.2.5: Effect of Program on Transition to University

The last area in which we assessed the effect of the program on mentees was transition to university. To this end, within the follow-up survey we asked the mentees: (1) whether their comfort level with transitioning to university increase as a result of the program; (2) if the program helped them transition to post-secondary academics; (3) if their ability to study and retain course content improved as a result of the program; and (4) if their awareness of the various resources offered by Western increased as a result of the program. All of these scales
were assessed using positively-keyed Likert-type items on a scale of 0 (“Strongly disagree”) to 4 (“Strongly agree”). Results are presented in Table 22.

Table 22. Mentee Transition to University

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>n</th>
<th>Median</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did comfort level with transitioning to university increase as a result of the program?</td>
<td>14</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Did the program help you transition to post-secondary academics?</td>
<td>14</td>
<td>2.50</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Did the program improve your ability to study and retain course content?</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Did the program increase your awareness of the resources offered by Western?</td>
<td>14</td>
<td>2.50</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: 0 = “Strongly disagree”; 1 = “Somewhat disagree”; 2 = “Neither agree nor disagree”; 3 = “Somewhat agree”; 4 = “Strongly agree”
Table 22 suggests that, with regards to their comfort level with transitioning to university, mentees “somewhat agreed” that our program helped them transition (median = 3). “Somewhat agree” and “Strongly agree” were tied for the most common response, with 4 selections each. Concerning our program’s influence on the mentees’ transition to post-secondary academics, the median value was 2.50, which falls between “Neither agree nor disagree” and “Somewhat agree”. However, the most common response to this question was “Strongly agree” (n = 5). The mentees generally felt that the program conferred the least benefit with regards to the ability to study and retain course content, as the median value (and most common response) was 2 (“Neither agree nor disagree”). Lastly, the median value for the question “did the program increase your awareness of resources?” was 2.50, which falls between “Neither agree nor disagree” and “Somewhat agree”. The most common response was “Strongly agree” (n = 5). Ultimately, most students seem to have received some degree of benefit in each of the above categories, however there is still room for improvement.

3.7.3: Program Evaluation – Mentor

As can be seen in Table 23, most mentors also reported that meetings took place once per month (n = 31, 74%).
Table 23. Reported Frequencies for the Survey Questions how Often did You Meet with Your Mentee and how Much time did you Dedicate to the Program per Week

<table>
<thead>
<tr>
<th>How often did you meet with your mentee?</th>
<th>How much time did you dedicate to the program per week?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once per month: 31 (73.81%)</td>
<td>One hour: 34 (80.95%)</td>
</tr>
<tr>
<td>Twice per month: 7 (16.67%)</td>
<td>Two hours: 8 (19.05%)</td>
</tr>
<tr>
<td>Weekly: 4 (9.52%)</td>
<td>Three hours: 0</td>
</tr>
<tr>
<td>Biweekly: 0</td>
<td>Four hours: 0</td>
</tr>
<tr>
<td>Daily: 0</td>
<td>More than four hours: 0</td>
</tr>
<tr>
<td>NA: 7</td>
<td>NA: 7</td>
</tr>
</tbody>
</table>

The second most common response was twice per month (n = 7, 17%). Similar to the mentee results, none of the mentors reported having daily meetings. When asked how much time they dedicated to the program per week, the vast majority of the mentors said one hour (n = 34, 81%). The second most popular response (and only other response that was chosen) was two hours per week (n = 8, 19%). Given these results, it is safe to say that the program was not incredibly demanding of the mentors’ time.

To evaluate the extent to which program provided mentors with adequate resources to meet the needs of their mentees, we asked them: (1) whether or not it was challenging to answer academic questions; (2) if the mentor training was useful; (3) did you have access to the necessary resources; and (4) was your mentee a good match. The responses to these questions are summarized in Table 24.
Nearly all of the mentors reported that they did not find it challenging to answer their mentee’s academic questions (n = 41, 98%), with 1 (2%) finding it challenging to answer questions regarding academics. Of the 42 mentors who gave their opinions on the usefulness of the mentor training session, the majority (n = 31, 74%) indicated that they felt the training was useful. Conversely, 11 mentors (26%) did not find the training to be useful.

When asked whether or not they had access to the resources necessary to fulfill their obligations to their mentees, most of the mentors said that they did (n = 33, 92%). Three (8.33%) felt that they did not have access to the resources they needed. To obtain feedback from the mentors regarding the quality of the pairs, we asked them whether or not they felt that their mentee was a good match for them. Again, most mentors (n = 30, 81%) reported that their mentee was a good match, with 7 (19%) reporting they did not think that their mentee was a good match for them. Overall, the mentor responses to these four questions were very positive, suggesting that the experience that our program provided the 2022/2023 mentors was generally a positive one.

Additionally, we asked the mentors about the topic that their mentee most commonly reaching out to them for. This information is presented in Table 25.
Table 25. Frequency Table of the Most Common Topics that Mentees Reached out to Mentors for

<table>
<thead>
<tr>
<th>For which topic did your mentee most commonly reach out to you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics: 29 (78.38%)</td>
</tr>
<tr>
<td>Resources: 3 (8.11%)</td>
</tr>
<tr>
<td>Support: 4 (10.81%)</td>
</tr>
<tr>
<td>Social Opportunities: 0</td>
</tr>
<tr>
<td>Other: 1 (2.70)</td>
</tr>
<tr>
<td>NA: 12</td>
</tr>
</tbody>
</table>

According to mentors, the first-year students sought help with academics the most (n = 29, 78%). The second most common topic was support (n = 4, 11%), which was the area that the mentees cited as the greatest benefit of the program. Only 3 (8%) reported that the most commonly requested topic was resources.

3.7.3.1 Mentor Personal and Professional Development

To assess the personal and professional development experienced by the 2022/2023 mentors as a result of participating in the peer mentorship program, the mentors were first asked whether or not they felt that the program had aided in their development. If the mentors selected “Yes”, they were presented with a series of positively-keyed Likert style questions on a scale of 0 (“Strongly disagree”) to 4 (“Strongly agree”) that corresponded to the Western degree outcomes, and also touched on their ability to teach others, communicate, and manage responsibilities, which allowed us to assess the ways in which they felt that they had grown. Thirty-two of the 38 mentors (84%) who responded to the question about whether or not being a mentor aided in their personal or professional development indicated that it did help with their personal and/or
professional development. Table 26 presents the specific domains in which mentors felt they
grew as a result of their participation in the program.

Table 26. Descriptive Statistics for the 2022/2023 Mentor Development Survey Questions

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>Median</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptable problem solver?</td>
<td>30</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Community builder</td>
<td>30</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>15</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Global learner</td>
<td>30</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>16</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Future-focused planner</td>
<td>30</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>18</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Critical thinker</td>
<td>30</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>18</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Innovative leader</td>
<td>30</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Ability to teach others</td>
<td>36</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>13</td>
<td>12</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Ability to Communicate</td>
<td>36</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>16</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Ability to Manage Responsibilities</td>
<td>36</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>15</td>
<td>7</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: 0 = “Strongly disagree”; 1 = “Somewhat disagree”; 2 = “Neither agree nor disagree”; 3 = “Somewhat agree”; 4 = “Strongly agree”

Table 26 suggests that mentors felt that their participation led to positive development (i.e.,
greater than the midpoint of the scale) in all six of the degree outcomes, as well as the three
additional outcomes that we assessed within this question. Although every outcome had a median
of 3, it is worth noting that “Community builder” (as with the 2021/2022 cohort), “Innovative
leader”, and “Ability to teach others” had “Strongly agree” selected the most (n = 9). Conversely,
the “Adaptable problem solver” outcome had “Strongly disagree” selected the most (n = 4).

3.7.3.2 Mentor Sentiment Regarding the Peer Mentorship Program

Finally, we quantitatively evaluated the mentors’ sentiment towards the program with the
survey questions “Would you recommend that other senior Health Sciences students enrol as
mentors in the peer mentorship program?” and “Do you feel that having a peer mentorship program available to you in your first year of university would have improved your transition to post-secondary education?”. The latter question was assessed with a positively-keyed Likert-type scale ranging from 0 (“Strongly disagree”) to 4 (“Strongly agree”). All of the 35 mentors who responded to the question about recommending the program to other senior Health Sciences students indicated that they would recommend the program to other senior Health Sciences students.

Results for the Likert-type item assessing perceived effectiveness of the program at aiding transition to university are presented in Table 27.

Table 27. Descriptive Statistics for Mentor Opinions on Having a Program in Their First Year

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>n</th>
<th>Median</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you feel that having a peer mentorship program available to you in your first year would have improved your transition to post-secondary education?</td>
<td>35</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td>19</td>
<td>14</td>
</tr>
</tbody>
</table>

Note: 0 = “Strongly disagree”; 1 = “Somewhat disagree”; 2 = “Neither agree nor disagree”; 3 = “Somewhat agree”; 4 = “Strongly agree”

Most mentors either strongly agreed (n = 19) or somewhat agreed (n = 14) that having a peer mentorship program available to them in their first year of university would have helped them transition to post-secondary education (median = 4). No mentors selected either of the ‘disagree’ options for this question. Given the results presented in this sub-section, our program was clearly beneficial (in multiple ways) and was, overall, a positive experience for the mentors enrolled in it.
3.8: Program Evaluation Open-Ended Questions

As with the needs assessment (phase I), the data we collected within the open-ended questions did not lend itself to a formal qualitative analysis, as we did not seek out rich descriptive data from the participants within this survey. Rather, the open-ended questions that we posed of participants were intended to provide us with information about response options that were not provided to participants within the survey. To this end, we reviewed the responses submitted for each question and grouped similar responses into categories. This allowed us to count the frequency of these additional responses, within each question. Responses to the open-ended questions asked of the mentors at follow-up are summarized in Table 28. Of the open-ended questions posed to mentees at baseline and follow-up, only two received responses. Therefore, we opted to simply summarize their findings in text.

3.8.1 Mentee Responses to Open-Ended Questions, Baseline

The only open-ended question that we received responses to for the mentee baseline survey was “Please indicate the other support program(s) you intend to join”, which was posed as a follow-up to “Do you intend to join any other support programs?” if “Yes” was selected. We received 6 responses to this question, which included: i) Biology Mentorship Program (n = 4); ii) Chemistry Resource Room (n = 1); and iii) International Student Peer Guide (n = 1).

3.8.2 Mentee Responses to Open-Ended Questions, Follow-up

As was the case at baseline, the only open-ended question to which we received a response among mentees was “Which other support program(s) did you join?”; this was a follow-up to “Did you join any other support programs?” if “Yes” was selected. We received 4 responses to this question, which included: i) Biology Mentorship Program (n = 1); and ii) Learn to Thrive (n = 3).
3.8.3 Mentor Responses to Open-Ended Questions, Follow-up

The first open-ended question that we asked the mentors at follow-up was “Questions regarding which academic subject were the most difficult for you to answer?”; this was a follow-up to “Did you find it challenging to answer your mentee’s academic questions?” if “Yes” was selected. We received 1 response to this question, which was “First Year Chemistry”.

The second open-ended question was “What should be covered in the mentor training to make it more useful?”; this was a follow-up to “Did you find the mentor training useful?” if “No” was selected. We received the responses i) how to engage with mentee better (n = 1); ii) course-specific information (n = 2); and iii) training was unnecessary (n = 2).

Next, we asked the mentors “Why was your mentee not a good match for you?”; which was a follow-up to “Do you feel that your mentee was a good match for you?” if “No” was selected. For this question, the 7 responses we received can be summarized as mentee did not seem to be interested in the program/was unresponsive.

We also asked the mentors “Better access to which resources would have increased your ability to support your mentee?”; which was a follow-up to “Do you feel that you had sufficient access to the resources needed to support your mentee?” if “No” was selected. We only received two responses to this question, one of which suggested academic resources, and the other course-specific resources.
Table 28. Responses to open-ended questions asked of mentors

<table>
<thead>
<tr>
<th>Item</th>
<th>n</th>
<th>Questions regarding which academic subject were the most difficult to answer?</th>
<th>What should be covered in the mentor training to make it more useful?</th>
<th>Why was your mentee not a good match for you?</th>
<th>Better access to which resources would have increased your ability to support your mentee?</th>
<th>Why would you recommend the program to other Health Sciences students?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions regarding which academic subject were the most difficult to answer?</td>
<td>1</td>
<td>First Year Chemistry (n = 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What should be covered in the mentor training to make it more useful?</td>
<td>5</td>
<td>How to engage with mentee better (n = 1)</td>
<td>Course-Specific Information (n = 2)</td>
<td>Mentee did not seem to be interested in the program/was unresponsive (n = 7)</td>
<td>Academic resources (n = 1)</td>
<td>Great leadership experience/aided in personal growth (n = 11)</td>
</tr>
<tr>
<td>Why was your mentee not a good match for you?</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Better access to which resources would have increased your ability</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to support your mentee?</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why would you recommend the program to other Health Sciences students?</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lastly, mentors were asked “Why would you recommend the program to other Health Sciences students?”; this was a follow-up to “Would you recommend that other senior Health Sciences students enrol as mentors in the peer mentorship program?” if “Yes” was selected; we also had a follow-up question prepared for mentors who indicated they would not recommend the program, however none of the mentors indicated that they would not recommend the program. In total, we received 29 responses to this question, which could be divided into the following categories: i) great leadership experience/aided in personal growth (n = 11); ii) it is rewarding to help others (n = 11); iii) I remember what it was like for me in my first year (n = 4); and iv) does not require a lot of time considering the positive impact (n = 3).

3.8.4 Open-Ended Questions Discussion, Program Evaluation

Taken together, the results from the program evaluation open-ended questions suggest that the program could be improved further by: i) including more course-specific resources (such as for first year biology and chemistry in particular) for both the mentees and mentors; ii) including more academic-related information in the mentor training; and iii) further assisting mentees and mentors in making contact with each other, and helping them stay in contact with each other. Given the low number of responses to the mentee open-ended questions, it is difficult to draw supplemental insight regarding the mentees’ overall happiness with the program, however, the mentor results make it clear that the mentors felt very positive about our program (like the 2021/2022 cohort of mentors).

3.9: Program Evaluation Conclusion

Overall, based on the survey responses presented in this chapter, our peer mentorship program was successful in helping first-year students feel more comfortable with transitioning to university, adapt to post-secondary academics, and increased students’ awareness of the
resources made available by Western. Despite the fact that the most common reason expressed for participation in the program by mentees, in both the 2021/22 and the 2022/23 implementations of the program, was academics, many first-year students actually found support to be an equally, if not more valuable, benefit of participation.

The overall benefit of the program was, however, less than expected and uptake within the optional learning sessions that we added in the 2022/23 implementation of the program was also less than expected. We believe that this stemmed from the unrealistic expectations expressed by many of the mentees within the program. It is conceivable that this resulted in them feeling negative towards resources provided to them when reality set in. That being said, there is still clearly room for the program to improve further. Considering the feedback that we received from the program evaluation, some of the ways that the program could be further improved include:

- Implementing additional means of keeping the mentees and mentors in contact;
- Encouraging greater meeting frequency;
- Revamping some of the learning sessions to make them more appealing to the mentees, and/or promoting the learning sessions better;
- Helping first-year students manage their expectations with regard to academic performance during the first year of university;
- Provide mentees with a means of obtaining assistance with courses/topics their assigned mentors are not familiar with; and
- Pair mentees and mentors even earlier in the academic year (ideally before the end of September).
Chapter 4: General Discussion

4.1: Needs Assessment

The purpose of the present study was to i) explore the literature surrounding peer mentorship programs and post-secondary completion rates; ii) determine the needs of Health Sciences students at Western with regards to a peer mentorship program; iii) evaluate the degree to which the 2021/2022 iteration of the program was meeting the needs of these students; and iv) improve the program for the 2022/2023 academic year using feedback provided by the 2021/2022 cohort of students and re-evaluate the program. With respect to determining the needs of our students and evaluating the 2021/2022 offering of the program, the needs assessment that we conducted for phase I of our study gave the students that our program serves the opportunity to relay to us what they were hoping to get out of the program and provide us with suggestions for improving the program.

Overall, the mentees who enrolled in the 2021/2022 peer mentorship program were underwhelmed by the level of assistance that they received with transitioning to university and the level of academic benefit that was conferred to them by participating. Upon reviewing the survey responses submitted by this group, it became clear that there were several underlying issues with the program that contributed to this sentiment. First, the mentees and mentors showed significant disagreement on what constitutes an appropriate meeting frequency. While the mentors were largely happy with biweekly meetings, perhaps because it allowed them to support their mentees with fewer compromises to their own schedule, the majority of the mentees who completed the survey did not agree that this was desirable. Using the open-ended responses for additional context, some mentees were not hoping for more frequent meetings per se, but rather more consistent meetings with their mentor. For some of the mentees, it became difficult to reach
their mentor after first making contact. Subsequently, it is understandable that dissatisfaction with the program could arise in these circumstances, particularly if the mentee were unable to reach the mentor during an especially stressful time, such as preparing for their first post-secondary level exam.

Another issue with this version of the program was the lack of focus on providing the mentees with direct academic benefits. It was clear through the feedback that we received, that although there are a variety of reasons that students enroll in peer mentorship programs, the most common reasons that students had been joining ours were consistently related to academics. Given this fact, our program was inherently not suited for our target demographic, as we did not have any academic components built in. Rather, we would pair first-year students with upper-year students and expect the upper-year students to do the heavy lifting. This proved to be problematic, as the mentors were not equipped with any resources to assist them; their knowledge may have been outdated; and none of the mentors were/could be versed in every subject. Expanding on the latter, although the mentees were overall satisfied with the mentors they were matched with, a number of mentees reported that their mentors did not have a skillset that matched their needs. This is a difficult issue to address with a peer mentorship program, as mentors are often the limiting reagent of expansion. This is even more difficult to address in a faculty such as Health Sciences at Western, where a large proportion of first-year students are interested in similar career paths (i.e., going to medical school), and not everyone can be assigned to a mentor who is experienced in this regard. However, we still felt that our matching process could be improved.

A third issue with our program that became apparent from the mentees’ needs assessment results was the lack of social activities/structured events incorporated into the design of our
program. When we set up the program for the 2021/2022 academic year, we did not account for the possibility that students might want our program to offer events as well; we assumed that the mentees were only seeking out the program to receive support from an upper-year student (specifically for academics), and that the extent of the social opportunities provided by the program would be meetings between the mentees and mentors (online or in-person). This desire for social opportunities may also have been compounded by the COVID-19 pandemic.

In contrast with feedback provided by the mentees, from the perspective of the mentors our program was already quite successful, based on their responses to the needs assessment survey. The mentors felt that they were mostly able to participate in the program without compromising their available time for other responsibilities; they perceived few drawbacks to being a mentor; they largely felt comfortable answering their mentees’ questions; they felt that the program helped them grow and develop in meaningful ways (as assessed by the Western degree outcomes); and the majority of the mentors reported that their mentee was a good match for them. The mentors did, however, offer a few suggestions for improving the program. Interestingly, many of the mentors said that they had difficulty contacting their mentees. In fact, they cited this as the number one reason that they did not meet with their mentees more often. Additionally, although only one mentor reported having difficulties answering their mentee’s academic questions, a few of the mentors suggested that they could have improved the support that they were providing to their mentees if they had additional academic resources available to them.

4.2: Improvements for the 2022/2023 Program

Given the feedback provided by both the mentees and mentors during the needs assessment phase of the study, we made several changes to the program for the 2022/2023
academic year to address the issues, and ultimately improve the benefits being provided by the program. The first change that we made was the inclusion of a separate pairing survey to address match quality. The survey asked the mentees to list the courses they were most concerned about, and the mentors were asked to list the courses they were best at. We would then try our best to find the closest match between mentee and mentor. To address the low level of academic benefit, we equipped the mentors with additional academic resources (which they were encouraged to share with their mentees) and implemented optional learning sessions (a program feature that both mentees and mentors favoured during the needs assessment), the first of which was dedicated to academics. The pairing survey was also intended to increase the level of academic benefit provided by the program, as most mentees would be matched with a mentor who was knowledgeable with at least one course in which the mentee expected to struggle.

In response to communication difficulties, we included a “getting started” section in our mentor training, where establishing a plan for communicating with their mentees was highlighted, and mentors were provided with mock scenarios that illustrated common difficulties (and solutions). During the training, we also encouraged the mentors to meet with their mentees biweekly, as we felt this would help remedy communication difficulties and provide the mentees with a meeting frequency closer to what they were expecting. Lastly, we made the decision to make the final optional learning session a social event, to promote community building and address the call for more structured events/social events.

4.3: Program Evaluation

The responses we received from the mentees and mentors to the program evaluation surveys suggested that many of our changes were successful in improving our program. The mentees reported higher scores for questions regarding the program’s role in their transition to
university, level of academic benefit received (and ability to study and retain course content), and awareness of resources than we saw from our needs assessment. Additionally, the mentees ended up joining fewer additional support programs than they had initially intended. Finally, we held a social event for the mentees that approximately 25 students attended, which we considered to be a success.

With regards to the mentors, only 1 (out of 42) found it challenging to answer their mentee’s academic questions, the vast majority found the training to be useful, almost all said that they had access to the necessary resources to support their mentees, and 81% indicated that their mentee was a good match for them. Ultimately, as with the 2021/2022 cohort, the 2022/2023 mentors felt that the program was successful, with all mentors saying that they would recommend other Health Sciences students get involved with the program, and most reporting positive development in all Western degree outcome areas (as well as ability to teach others, ability to communicate, and ability to manage responsibilities).

Although the program was considerably more successful than the previous iteration, and many of the updates appear to have been worthwhile, the 2022/2023 program did have some failures. First, meeting frequency seems to have decreased rather than increase. Most of the mentors reported that they only met with their mentees once per month this time around. Further, many of the mentors still reported having difficulties contacting their mentees. Perhaps this cohort of mentees required less assistance than the previous, given the increase in transition and academic scores previously mentioned. Meeting more than once per month, however, would likely have additional benefits for the mentees, as there are many ‘insider tips’ to be learned from upper-year students, even if the mentee feels that their academic performance is at a level with which they are comfortable. Next, the optional learning sessions were not as popular as the needs
assessment responses led us to expect. The academics-focused session was the most popular session (excluding the social event), and only (approximately) 14 first-year students attended. Conversely, the least popular session (the session that was planned to cover mental and physical wellbeing) had no students in attendance.

Although we provided the mentors with additional resources that seemed to be appreciated, some of the mentors reported that providing them with course-specific resources would further improve the level of support they are able to provide their mentees. It was reported that even when the mentor is knowledgeable about the course for which the mentee is seeking help, there is a chance that the course structure, course content, and/or professor may have changed in the years since the mentor took the course themselves, reducing their ability to assist their mentee. Finally, despite the many positive responses received from mentees within the program evaluation surveys, the overall benefit of the program reported by the mentees at follow-up was lower than the benefit they expected to receive (based on their baseline scores).

4.4: Further Improvements

Based on the feedback we received during the program evaluation phase of our study (phase II), we feel that the 2023/2024 iteration of the Health Sciences peer mentorship program could be more successful at achieving its overarching goal of helping students transition to post-secondary education by implementing the following changes:

- Implementing additional means of keeping the mentees and mentors in contact;
- Encouraging greater meeting frequency;
- Revamping some of the learning sessions to make them more appealing to the mentees, and/or promoting the learning sessions better;
• Helping first-year students manage their expectations with regard to academic performance during the first year of university;

• Provide mentees with a means of obtaining assistance with courses/topics their assigned mentors are not familiar with; and

• Pair mentees and mentors even earlier in the academic year (ideally before the end of September).

4.5: Study Limitations

We feel that the present study had the following limitations:

1) The mentee follow-up program evaluation survey had a very low sample size (n = 14). Given that over 110 first-year students enrolled in our program, the results presented for the mentee program evaluation follow-up survey may not be representative of the actual experiences of the mentees in the 2022/2023 program and may not be generalizable to other peer mentorship programs.

2) In general, the samples that we surveyed were small and specific. The present study gathered the opinions of a relatively small subset of undergraduate students who were enrolled in an undergraduate degree in the Health Sciences, at a single university in Canada. Therefore, the results that we have presented may not be replicated if the study were, for example, conducted again with students pursuing an undergraduate degree in business at a college in the United States.

3) Initially, our study was intended to be a mixed methods design, involving baseline and follow-up interviews, with a formal qualitative analysis of the interview data as well as the open-ended survey responses. Unfortunately, only two mentees were interested in participating in the baseline interviews, none of the mentees agreed to participate in the
follow-up interviews, and this prevented us from conducting a high-quality qualitative analysis of the survey responses. Subsequently, although we feel that our study has uncovered many valuable insights regarding the transition to university and peer mentorship programs, it is likely that we have missed out on some of the rich, personal findings that could have only been brought to light through the use of qualitative methods.

4) Our intent with the present study was to be descriptive, not inferential, and so we determined that we did not need to carry out an a priori sample size calculation. As a result of this, and considering the number of students who did respond to our surveys, any generalization beyond our sampling frame should be done with caution.

5) Chris Ruffell, the MSc student who recruited participants, created and administered the surveys, led the monthly sessions, trained the mentors, communicated with students, and handled the day-to-day operations of the program may have inadvertently introduced bias through his participation as a researcher in the present study. Chris recently completed his undergraduate degree in the Health Sciences program that was studied and additionally, served as a member of the Health Studies Students’ Association (the student council for the undergraduate Health Sciences program that we studied) for 5 years (including 2 years as president). Because of this, he had met a number of the mentees and mentors who enrolled in this study. These factors may have resulted in bias in the survey results (likely positive), as students who knew Chris may have desired to provide a positive assessment of the program. Further, the years Chris spent working on the program may have influenced the interpretation of the results, leading to a more positive presentation of the data that was collected than appropriate.
4.6: Conclusion

To date, the Health Sciences peer mentorship program has helped hundreds of (undergraduate) first-year Health Sciences students make the transition from high school to post-secondary academics. Through this study, we were able to develop what once amounted to arbitrarily matching a first-year student with an upper-year student into a full-pledged peer mentorship program, designed using feedback provided by the students it once served. While the program achieved considerable success during the 2022/2023 academic year, there is still room for further improvement, as we have covered throughout this chapter. Drawing on the findings that we have presented, individuals running/designing peer mentorship programs at post-secondary institutions may want to consider: i) prioritizing academic benefits for mentees; ii) helping students manage their expectations with regards to academics; iii) ensuring mentees and mentors are a good match; iv) helping pairs remain in contact/encourage high meeting frequency; v) creating pairs as early in the academic year as possible; vi) providing high-quality mentor training; and vii) using student feedback to shape the program, if their target student population is similar to the one that we have studied. Further research should be conducted with larger samples; undergraduate programs in other fields; and employing a more robust approach to data analysis (i.e., a mixed methods design).
References


Evans, P. (2023, January 26). *Rent increased more than 18% last year for new tenants, new numbers show.* CBC. https://www.cbc.ca/news/business/cmhc-rent-report-1.6726764


Guerra, L. C. (2022, February 16). *Non-completion in Postsecondary education: Why are so many students not finishing their courses?* Johnson Shoyama Centre for the Study of Science and Innovation Policy.


Jones, A. M. (2023, April 5). *Food prices are expected to keep going up by five to seven per cent in 2023: Report*. CTVNews. https://www.ctvnews.ca/lifestyle/food-prices-are-expected-to-keep-going-up-by-five-to-seven-per-cent-in-2023-report-1.6345014


OECD. (2023, January 1). *About the OECD.* OECD.Org. https://www.oecd.org/about/


Dear Dr. Andrew Johnson

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the WREM application form for the above mentioned study, as of the date noted above. NMREB approval for this study remains valid until the expiry date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

This research study is to be conducted by the investigator noted above. All other required institutional approvals and mandated training must also be obtained prior to the conduct of the study.

Documents Approved:

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Document Type</th>
<th>Document Date</th>
<th>Document Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Evaluation Followup, Mentor (20210707)</td>
<td>Online Survey</td>
<td>07/Jul/2021</td>
<td>1</td>
</tr>
<tr>
<td>Peer Mentorship Needs Assessment Draw (20210707)</td>
<td>Online Survey</td>
<td>07/Jul/2021</td>
<td>1</td>
</tr>
<tr>
<td>Needs Assessment, Mentee</td>
<td>Online Survey</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Needs Assessment, Mentor</td>
<td>Online Survey</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>PE Baseline, Mentee</td>
<td>Online Survey</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>PE Followup, Mentee</td>
<td>Online Survey</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>PE Followup, Mentor</td>
<td>Online Survey</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Email Script, Needs Assessment (2022 02 08)</td>
<td>Recruitment Materials</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Email Script, Mentee Initial Invitation (2022 02 08)</td>
<td>Recruitment Materials</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Email Script, Mentor Initial Invitation (2022 02 08)</td>
<td>Recruitment Materials</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Email Script, Mentee Followup Survey (2022 02 08)</td>
<td>Recruitment Materials</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>Email Script, Mentor Followup Survey (2022 02 08)</td>
<td>Recruitment Materials</td>
<td>08/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>LOL Needs Assessment (2022 02 14)</td>
<td>Implied Consent/Assent</td>
<td>14/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>LOL PE Baseline (2022 02 14)</td>
<td>Implied Consent/Assent</td>
<td>14/Feb/2022</td>
<td>1</td>
</tr>
<tr>
<td>LOL PE Followup (2022 02 14)</td>
<td>Implied Consent/Assent</td>
<td>14/Feb/2022</td>
<td>1</td>
</tr>
</tbody>
</table>

No deviations from, or changes to the protocol should be initiated without prior written approval from the NMREB, except when necessary to eliminate immediate hazard(s) to study participants or when the change(s) involves only administrative or logistical aspects of the trial.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario. Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB. The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.
Please do not hesitate to contact us if you have any questions.

Sincerely,

Ms. Katelyn Harris, Ms. Zoe Levi, Research Ethics Officer on behalf of Dr. Randal Graham, NMREB Chair

*Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations).*
Date: 18 January 2023

To: Dr. Andrew Johnson

Project ID: 119363

Study Title: Health Sciences Peer Mentorship Project

Application Type: Continuing Ethics Review (CER) Form

Review Type: Delegated

Date Approval Issued: 18 Jan 2023 16:26

REB Approval Expiry Date: 15 Feb 2024

Dear Dr. Andrew Johnson,

The Western University Non-Medical Research Ethics Board has reviewed this application. This study, including all currently approved documents, has been re-approved until the expiry date noted above.

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

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario. Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB. The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

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

Sincerely,

The Office of Human Research Ethics

Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations).
Appendix B1: Needs Assessment, Mentor

1. On average, how often did you talk to/meet with your mentee?
   - Biweekly
   - Weekly
   - 2-3 times per week
   - 3+ times per week

2. Do you think that you should have met with your mentee more often? (Yes/No)

3. What barriers prevented you from meeting with your mentee more often (e.g., lack of time, unable to reach mentee)? (open-ended)

4. Were you able to provide support to your mentee without compromising the time available for...
   - Academics
   - Extracurriculars and volunteering
   - Social activities

5. To what extent did you have to compromise your time for each activity? This indicates the extent to which your time was compromised - for example, indicating 10% would mean that your time was compromised by 10% owing to your participation in the peer mentorship program. Indicating 100% would mean that your time for this activity was entirely compromised by your participation in the peer mentorship program. (scale of 0 to 100)
   - Academics
   - Extracurriculars and volunteering
   - Social activities

6. What caused you to have to compromise on your academics or other commitments? (openended)

7. Were there any drawbacks to being a mentor in the program? (Yes/No)

8. What drawbacks did you experience? (open-ended)

9. Did you feel comfortable answering your mentee's academic questions? (Yes/No)

10. What caused you to feel uncomfortable when answering your mentee's academic questions? (open-ended)

11. Do you feel that you had sufficient access to the resources needed to support your mentee? (Yes/No)

12. What resources would have helped you to better support your mentee? (open-ended)
13. Do you feel that you were matched with a mentee whose needs matched your knowledge and skills? (Yes/No)

14. What challenges did you face when trying to engage with your mentee? (open-ended)

15. Do you feel that your experience as a mentor aided in your personal and/or professional development? (Yes/No)

16. In what ways did being a mentor aid in your personal/professional development? (scale of 1 to 5; Strongly disagree to Strongly agree)
   • Adaptable problem solver (hopeful, self-confident, resourceful, and creative)
   • Community builder (authentic, empathetic, collaborative, and self-aware)
   • Global learner (equitable, globally aware, and socially responsible)
   • Future-focused planner (goal-oriented, motivated, organized, and self-directed)
   • Critical thinker (curious, engaged, and reflexive)
   • Innovative leader (integrity, judgement, and intercultural communication)

17. In your opinion, would the program benefit from the inclusion of recurring (biweekly, weekly, etc.), structured sessions featuring activities and/or lectures focused on topics such as academics, social opportunities, professional development, mental wellness, etc.? (Yes/No)

18. Please list any potential activities or lectures that you would be interested in. (open-ended)

19. How often should we have these group sessions?
   • Monthly
   • Once every three weeks
   • Biweekly
   • Weekly

20. What suggestions do you have to improve the program for future offerings? (open-ended)
Appendix B2: Needs Assessment, Mentee

1. To what extent did the peer-mentorship program improve your transition to university?
   • Not at all
   • Slightly
   • Moderately
   • Quite a bit
   • Extremely

2. To what extent did the peer-mentorship program benefit you academically?
   • Not at all
   • Slightly
   • Moderately
   • Quite a bit
   • Extremely

3. On a scale of 1 to 5 (where 1 is “not at all”, and 5 is “perfectly”), to what extent did your assigned mentor suit your needs? (scale of 1 to 5)

4. How knowledgeable was your mentor in regard to the courses that you were seeking help for?
   • Not knowledgeable at all
   • Somewhat knowledgeable
   • Neither unknowledgeable nor overly knowledgeable
   • Knowledgeable
   • Very knowledgeable

5. On average, how often did you speak to/meet with your mentor?
   • Biweekly
   • Weekly
   • 2-3 Times per week
   • 3+ Times per week

6. Do you consider the frequency of the meetings with your mentor to have been appropriate (i.e., I would have liked to meet either more or less frequently with my mentor)? (Yes/No)

7. How often would you have liked to have met with your mentor? (open-ended)
8. With what topics or challenges did you find yourself most commonly reaching out to your mentor? (open-ended)

9. Did you ever feel hesitant to reach out to your mentor?
   • Never
   • Infrequently
   • Sometimes
   • Frequently
   • Always

10. What caused you to feel hesitant to reach out to your mentor? (open-ended)

11. In what areas could your mentor have improved? (open-ended)

12. Overall, what rating would you give to your assigned mentor? (scale of 0 to 10; inadequate to exceptional)

13. What challenges did you experience during your first year at Western that were not addressed by the peer-mentorship program? (open-ended)

14. Did you have any negative experiences within the peer-mentorship program that you would like to share? (Yes/No)

15. Please describe these negative experiences. (open-ended)

16. In your opinion, would the program benefit from the inclusion of recurring (weekly, biweekly, etc.), structured sessions featuring activities and/or lessons focused on topics such as academics, social opportunities, professional development, mental wellness, etc.? (Yes/No)

17. Please list any potential activities or lectures that you would be interested in. (open-ended)

18. How often should we have these group sessions?
   • Monthly
   • Once every three weeks
   • Biweekly
   • Weekly

19. Will you consider applying to be a mentor in your third/fourth year of study? (Yes/No)

20. What suggestions do you have to improve the program for future offerings? (open-ended)
Appendix B3: Program Evaluation (Baseline), Mentees

1. How comfortable do you feel with transitioning to university?
   • Extremely uncomfortable
   • Somewhat uncomfortable
   • Neither comfortable nor uncomfortable
   • Somewhat comfortable
   • Extremely comfortable

2. How prepared do you feel for post-secondary academics?
   • Not at all prepared
   • Slightly prepared
   • Neither prepared or unprepared
   • Fairly prepared
   • Very prepared

3. How confident are you in your ability to study and retain course content?
   • Not at all confident
   • Slightly confident
   • Neither confident or unconfident
   • Fairly confident
   • Very confident

4. What average do you hope to maintain during your first year at Western?
   • 70-74
   • 75-80
   • 80-85
   • 85+

5. Which course are you most concerned about taking?
   • Social Determinants of Health
   • Personal Determinants of Health
   • Resilience and Wellbeing
   • Biology
   • An elective
6. How aware are you of the various resources offered by Western?
   • Not at all aware
   • Slightly aware
   • Neither aware or unaware
   • Fairly aware
   • Very aware

7. Which of the following benefits was your main reason for joining the program?
   • Support
   • Academics
   • Social opportunities
   • Professional development
   • Other

8. Please describe your main reason for joining the program. (open-ended)

9. The program will feature monthly sessions on topics such as academics, mental health and wellbeing, professional development, and an introduction to Western's resources. Do you plan to attend the program's monthly sessions?
   • Definitely not
   • Probably not
   • Might or might not
   • Probably yes
   • Definitely yes

10. Based on the session topics mentioned in question 9, how valuable do you expect the monthly sessions to be for you? (scale of 0 to 10)

11. How often do you expect to meet with your mentor?
    • Once per month
    • Twice per month
    • Weekly
    • Biweekly
    • Daily
12. What do you anticipate reaching out to your mentor for the most?
   • Academics
   • Resources
   • Support
   • Social opportunities
   • Other

13. Please describe what you anticipate reaching out to your mentor for the most. (open-ended)

14. Do you intend to join any other support programs? (Yes/No)

15. Please indicate the other support program(s) you intend to join. (open-ended)

16. How much importance do you place on making social connections during your first year?
   • None at all
   • A little
   • A moderate amount
   • A lot
   • A great deal

17. Not including the Peer Mentorship Program, do you feel that you will have sufficient opportunity to socialize with other students during your first year?
   • Definitely not
   • Probably not
   • Might or might not
   • Probably yes
   • Definitely yes

18. Are you familiar with any effective methods for coping with stress? (scale of 1 to 5; “Strongly disagree” to “Strongly agree”)

19. Are you familiar with the benefits that regular physical activity can have on academics and wellbeing?
   • Not familiar at all
   • Slightly familiar
   • Moderately familiar
   • Very familiar
• Extremely familiar

20. Are you familiar with the FHS Engage app? (Yes/No)

21. How valuable do you see the FHS Engage app being during your time at Western?
   • Not at all valuable
   • Little value
   • Moderately valuable
   • Fairly valuable
   • Extremely valuable

22. Which platform(s) do you plan to use to communicate with your mentor?
   • Facebook
   • Instagram
   • Email
   • FHS Engage
   • Other

23. Please indicate which other platform(s) you plan to use to communicate with your mentor. (open-ended)

24. How beneficial do you expect this program to be in regard to your transition to university? (scale of 0 to 10)
Appendix B4: Program Evaluation (Followup), Mentors

1. I agree to participate in this study.
   • Yes
   • No

2. How often did you meet with your mentee(s)?
   • Once per month
   • Twice per month
   • Weekly
   • Biweekly
   • Daily

3. How much time did you dedicate to the program per week?
   • One hour
   • Two hours
   • Three hours
   • Four hours
   • More than four hours

4. Did you find it challenging to answer your mentee(s)'s academic questions? (Yes/No)

5. Questions regarding which academic subject were the most difficult for you to answer? (open-ended)

6. Did you find the mentor training useful? (Yes/No)

7. What should be covered in the mentor training to make it more useful? (open-ended)

8. For which topic did your mentee(s) most commonly reach out to you?
   • Academics
   • Support
   • Resouces
   • Social opportunities
   • Other

9. Please indicate for which topic your mentee(s) most commonly reached out to you (openended)

10. Do you feel that your mentee(s) was a good match for you? (Yes/No)
11. Why was your mentee(s) not a good match for you? (open-ended)

12. Did being a mentor in the peer mentorship program aid in your professional development? (Yes/No)

13. In what ways did being a mentor aid in your personal/professional development? (scale of 1 to 5; Strongly disagree to Strongly agree)
   • Adaptable problem solver (hopeful, self-confident, resourceful, and creative)
   • Community builder (authentic, empathetic, collaborative, and self-aware)
   • Global learner (equitable, globally aware, and socially responsible)
   • Future-focused planner (goal-oriented, motivated, organized, and self-directed)
   • Critical thinker (curious, engaged, and reflexive)
   • Innovative leader (integrity, judgement, and intercultural communication)

14. Do you feel that you had sufficient access to the resources needed to support your mentee(s)? (Yes/No)

15. Better access to which resources would have increased your ability to support your mentee(s)? (open-ended)

16. Did your ability to teach others improve as a result of being a mentor in the peer mentorship program? (scale of 1 to 5; Strongly disagree to Strongly agree)

17. Did your ability to communicate with others improve as a result of being a mentor in the peer mentorship program? (scale of 1 to 5; Strongly disagree to Strongly agree)

18. Did your ability to manage your responsibilities improve as a result of being a mentor in the peer mentorship program? (scale of 1 to 5; Strongly disagree to Strongly agree)

19. How many mentees were you paired with? (1 or 2)

20. Were you able to provide equal levels of support to both of your mentees? (Yes/No)

21. What prevented you from being able to provide equal levels of support to both of your mentees? (open-ended)

22. Do you feel that having a peer mentorship program available to you in your first year of university would have improved your transition to post-secondary education? (scale of 1 to 5; Strongly disagree to Strongly agree)

23. Would you recommend that other senior Health Sciences students enrol as mentors in the peer mentorship program? (Yes/No)
24. Why would you recommend that other senior Health Sciences students enrol as mentors in the peer mentorship program? (open-ended)

25. Why would you not recommend that other senior Health Sciences students enrol as mentors in the peer mentorship program? (open-ended)
Appendix B5: Program Evaluation (Followup), Mentees

1. Did being a mentee in the Peer Mentorship Program increase your level of comfort with transitioning to university? (scale of 1 to 5; Strongly disagree to Strongly agree)

2. Did being a mentee in the Peer Mentorship Program help you transition to university-level academics? (scale of 1 to 5; Strongly disagree to Strongly agree)

3. Did being a mentee in the Peer Mentorship Program improve your ability to study effectively? (scale of 1 to 5; Strongly disagree to Strongly agree)

4. Our baseline survey asked which first-year course you were most concerned about taking. Please describe your performance in this course.
   - Much worse than expected
   - Worse than expected
   - What I expected
   - Better than expected
   - Much better than expected

5. Were you able to maintain your desired average during your first year at Western? (Yes/No)

6. Do you feel that being a mentee in the Peer Mentorship Program helped you to accomplish this? (Yes/No)

7. Did being a mentee in the Peer Mentorship Program increase your awareness of the various resources offered by Western? (scale of 1 to 5; Strongly disagree to Strongly agree)

8. Which of the following did you find to be the greatest benefit of the Peer Mentorship Program?
   - Support
   - Academics
   - Social opportunities
   - Professional development
   - Other

9. Please describe what you found to be the greatest benefit of the Peer Mentorship Program. (open-ended)

10. Please describe your participation in the program's monthly sessions.
    - I attended none of the sessions
• I attended some of the sessions
• I attended half of the sessions
• I attended most of the sessions
• I attended all of the sessions

11. How valuable did you find the monthly sessions? (scale of 0 to 10)

12. On average, how often did you meet with your mentor?
   • Once per month
   • Twice per month
   • Weekly
   • Biweekly
   • Daily

13. What did you reach out to your mentor for the most?
   • Academics
   • Resources
   • Support
   • Social opportunities
   • Other

14. Please describe what you found yourself reaching out to your mentor for the most. (openended)

15. Did you join any other support programs? (Yes/No)

16. Which other support program(s) did you join? (open-ended)

17. How important was making social connections during your first year at Western?
   • Not at all important
   • Slightly important
   • Moderately important
   • Very important
   • Extremely important

18. Did being a mentee in the Peer Mentorship Program increase the number of opportunities you had to make social connections? (scale of 1 to 5; Strongly disagree to Strongly agree)

19. Did being a mentee in the Peer Mentorship Program Increase your knowledge of methods
for effectively coping with stress? (scale of 1 to 5; Strongly disagree to Strongly agree)

20. Did being a mentee in the peer mentorship program increase your knowledge of the benefits of regular physical activity on academics and wellbeing? (scale of 1 to 5; Strongly disagree to Strongly agree)

21. Which platform(s) did you use to communicate with your mentor?
   - Facebook
   - Instagram
   - Email
   - FHS Engage
   - Other

22. Please indicate which other platform(s) you used to communicate with your mentor. (openended)

23. How beneficial was this program in helping you to transition to university? (scale of 0 to 10)
The Health Studies Students' Association's
Peer Mentorship Program
2022/2023

Mentor Training

Chris Realf - Senior Advisor, HSSA
Dr. Andrew Johnson - Associate Dean (Undergraduate Programs), Faculty of Health Sciences

Who am I?
- Born and raised in London
- Senior Advisor, HSSA (fifth year)
- Second-year master's student in HRS (spec. M&M)
- Fourth-year running the program
- Passionate about using quantitative methods to improve society (peer mentorship, orthopedics, antidepressants)

Agenda
- Objectives / outcomes of the training
- Impetus for the program
- Literature
- Overview of the program
- Starting out
- Communication / professionalism
- Academics
- Mental & physical wellbeing
- Resources
- Scenarios
- Q & A

Objectives / Outcomes of the Training Session
1) Prepare Mentors for challenges that may arise in the course of supporting a Mentee
2) Familiarize Mentors with Western's resources
3) Revisit the objectives of the Peer Mentorship Program to the mentors
4) Get mentors to start thinking about the key transition areas
5) Provide an outline for the program
6) Help Mentors get started
7) Answer and address remaining questions and concerns

Impetus for the Program
- Improve the transition from high school to university through:
  1) Teaching effective academic strategies
  2) Fostering mental & physical wellbeing
  3) Highlighting available resources
  4) Being there for support
  5) Modeling professional behaviour

What does the literature say?
- Mentorship appears to be a successful approach to managing the academic preparation, lack of social and academic support, and other social challenges faced, and may enhance mentee retention and success rates for high school students.
- Mentorship programs (reported GPA) yields (increased sense of connectedness) produced increased satisfaction, reduced stress, reduced level of anxiety, and reduced likelihood of dropout.
- Lavigna (2015) found that of the 14 mentee programs they studied, only 2% lost mentor training, whereas the majority continued the training for the programs that included mentor training.
- The majority of programs were developed in response to maintain the transition from high school to university.
- Mentors develop interests, how to study effectively.
- Students should be incorporated in the design of the program.
- Core skills of a mentor: communication, leadership, empathy.
Overview of the Program

1) Needs assessment
2) Enrollment
3) Mentor training
4) Pairing by course(s)
5) "Monthly sessions for mentees"
6) Program evaluation

Needs Assessment Results

- Feedback from Mentees:
  i) Most commonly reached out for academics (how to study, course selection, degree progression, etc.)
  ii) Second most common: how to connect/get involved, clubs, social opportunities, etc.
  iii) "Did you ever feel hesitant to reach out to your mentor?"
     - For those who said yes, most common response:
       "I didn't want to bother them."

Negative experiences

- Negative experiences are real but do happen
- They almost always occur like this:
  "There was barely any effort put into the mentorship. I was left on hold multiple times."
- You are expected to make time to meet with your mentor at least once per week (if they want)

Overview of the Program

1) Needs assessment
2) Enrollment
3) Mentor training
4) Pairing by course(s)
5) "Monthly sessions for mentees"
6) Program evaluation

Needs Assessment Results

- Feedback from Mentors:
  i) Mostly positive; felt like they genuinely helped someone and that they themselves grew over the course of the program
  ii) Most common challenge: mentee won't respond; unsure how to answer questions; shy mentee
  iii) Most common reason for not meeting expectations/withdrawing: time

Program Evaluation

- Baseline survey for mentees
- First semester interviews with mentors and mentees
- Second semester interviews with mentors and mentees
- End of program survey for mentees and mentors
Starting Out
- How will you contact each other?
- How often will you meet?
- How will you meet?
- What are your Mentor's main concerns?
- Setting boundaries

Communication / Professionalism
- Be considerate (workload, pandemic, transition, gap)
- Critique constructively and kindly
- Due diligence and accountability
- How to write good emails

Academics
- Organization / time management
- Study habits / methods
- How to do readings
- Tactics for scantron exams
- Tactics for short answer / essay questions
- Choosing the right courses
- Planning for the future

Academics: Time Management
- A schedule (daily or physical) is key
- The majority of 'key dates' are available in September
- Plan for studying, readings, meetings, exams, due dates, etc.
- Ultimately, success is typically a function of time spent on school; be honest with yourself

Academics: Readings
- What’s important? Honestly, everything
- Make time to learn instead of hoping it won’t be on the exam
- Take good notes (use headings, go in order, easy to find course, etc.)
- Consider the course at hand: e.g., 151110 (Econometrics and Well-Being) likely won’t include questions about research methods if the readings cover studies that have been done

Academics: Exams
- Studying is highly subjective; here’s what worked for me:
  - Multiple choice:
    - A - C
    - D
    - E
    - F
  - Essay questions:
    - Make sure to study course content
    - Create a writing template
    - Practice is key

  - Written:
    - Need to study course content
    - Create a writing template
    - Practice is key

  - Online learning:
    - Play the game
    - Practice is key

  - https://www.purplewall.co.uk/contents/
  - http://www.elearning.org.uk
Academics: Choosing Courses / Future Planning

- boil it down
- Prerequisites
- CV (independent study, practice, Scandinavia)
- Academic counseling
  - https://www.uwo.ca/fhs/dhs/academic_counseling/
  - https://www.uwo.ca/health/psych/index.html

Mental Wellbeing

- Common challenges:
  - Feeling overwhelmed (time management?)
  - Feeling isolated (getting involved?)
  - Dealing with a bad grade (bigger picture)

We are not professionals

- it’s okay to speak from experience, give advice, and provide comfort
- But: when in doubt, refer
- “Support, advise, refer.”

Physical Wellbeing

- Benefits of physical activity: reduced stress/anxiety, improved cognitive function, increased self-esteem, etc.
- Where to start:
  i) Canadian guidelines: 7000 – 10 000 steps per day, 150 minutes of MVPA per week; take breaks from sitting; no less than 7 hours of sleep
- Schedule it if need be
- “The best exercise…”

Resources

- http://career.uwo.ca
- https://www.uwo.ca/fhs/dhs/academic_counseling/
- https://www.uwo.ca/health/psych/index.html
- http://writing.uwo.ca
- https://www.uwo.ca/vdl/learning/

Example Scenarios (Breakout Groups)

1) Your mentor meets with you, and they are clearly in distress. It comes to light that they received a “bad grade” on their most recent exam. You attempt to console your mentee, but they express doubts about continuing university and demonstrate behaviour that you consider to be troubling from a mental health perspective. What might be a good course of action?

2) Your mentor meets with you, and they express concern about an upcoming exam. After chatting for awhile, it becomes apparent to both of you that the course they are struggling with is one that you’ve taken before. Your mentor asks you to send them the notes and readings, and to share everything that you recall from the exam. How should you navigate this situation?
Frequently Asked Questions

- I'm not sure how to answer my mentee's academic questions, what should I do?
- My mentee won't respond to me, what should I do?
- I am no longer able to be a mentor in the program, what should I do?

Some Ideas from Past Mentors

- Check-in meetings with mentors
- HSSA events for mentees/mentors

Summary

- Support, advise, refer
- Try and meet once a week
- Plenty of resources available for anything and everything
- Focus on transition & “I wish I knew…”
- Becoming a university student is multidimensional and requires a holistic approach
- Set boundaries/take care of yourself as well
- Academic guidance is great, but don’t be complete in mentoring
- Refer to the slides
- Reach out

Q & A

- Any questions or concerns?

Thank you for your time!

Please don’t hesitate to contact me at:
The Health Studies Students’ Association’s Peer Mentorship Program 2021/2022
Mentee Session 1 - Academics

Objectives and Outcomes of the Session
- Provide time management and organization strategies
- Introduce mentees to some good study habits
- Highlight important considerations when choosing courses and discuss some of my best/favourite courses
- Cover some of the opportunities within the BSc degree
- Get mentees to start thinking about some of the options available after completing their degree
- Familiarize mentees with some of Western’s academic resources
- Answer any remaining questions to the best of my ability

How University Differs from High School:
1) You are your own boss
   - Homework is essential
   - Fight procrastination
   - Find the silver lining
   - Learn how you learn best
   - Teach yourself

How University Differs from High School:
2) The work is more challenging
   - Higher workload
   - More in-depth lectures
   - More independent study

How University Differs from High School:
3) Studying is mandatory
   - Build a habit
   - Aim for at least one, two-hour Session per week
   - What’s best for you?
   - Solo/group; setting; time; etc.
   - Think in assessment terms

Agenda
- Objectives and outcomes of the session
- How university differs from high school
- Time management/organization
- Study habits and techniques
- Picking courses
- Opportunities within your degree
- Some ideas for after your degree
- Resources
- Q & A
How University Differs from High School:

- Long-term perspective
- Concepts often build upon each other
- Understanding > memorizing
- Academic success confers opportunity
- Good grades stand out

Time Management and Organization

- Plan ahead
- Calendar (at least 1 week)
- Assignment Schedule
- Prioritize grades
- Treat university like a job

Calendar and Assignment Schedule Examples

Study Habits and Techniques

- Academic success is typically a function of time spent
- Summarize twice
- Group by category
- Create quizzes
- Acronyms

Picking Courses

- Interest vs. blind
- What do you need?
- What is relevant?
- What looks good?
- Meet with your academic counsellor
- My best/favourite courses: Comp Sci 1083, HS 3111 (law), HS 3040 (management), Astro 2021 (life), Astro 2002 (origin), Bz 2295, Soc 2172 (ed), HS 3840 (econ)

Opportunities Within Your Degree

- Which specialization to pursue?
- Practicum
- Independent study
- Extracurriculars
Some Ideas for After Your Degree

- Med school
- MPH
- HRS
- Law school
- Epidemiology and biostatistics
- Dental school
- Clinical trials
- Audiology
- OT
- PT

Resources

- http://careers.uwo.ca
- https://www.uwo.ca/ths/hs/academic_counselling/
- http://writing.uwo.ca
- https://www.uwo.ca/adc/learning/

Q & A

- Any questions for me about anything?

Thank you for attending. Best of luck with your academics!
Overview

- A bit about me
- Picking a module
- Opportunities within your degree
- Research positions
- Career outcomes
- Additional education
- Getting involved
- Additional advice
- Questions

A bit about me first...

- Second year MSc student
- Current research: Peer mentorship, clustering effects, informed consent in the context of antidepressant drugs
- Undergrad in Health Sci.
- From London
- Serving my fifth year on the HSSA
- Favorite undergrad courses:
  - Health Sci. 3840 (Intro to Health Economics)
  - Business 2295 (Basis for Sciences)
  - Astronomy 2022 (The Origin of the Universe)

Picking a module

- Options:
  - Health and Aging
  - Health Promotion
  - Health Science with Biology
  - Nutrition Sciences
  - Regular Health Sci.

- What are you interested in?
- What do you hope to do with your degree?
- My advice:
  - Do not select a module based on the title.
  - Do not select a module that has a fee and you don’t benefit you.
  - Do not select a module that doesn’t align with your career.
  - Do not teach too many more years.
  - Do consider workload and enjoyment.
  - Do consider the average you must maintain for your next step.

Picking a module pt. 2

- Health and Aging, Health Promotion, and Rehabilitation Sciences are great if you are interested in being an LNAI.
- Health Science with Biology is interesting and the most difficult module and has a relatively high workload. However, if you enjoy science, this module might be more appealing.
- Nutrition Sciences is a good choice if you are interested in the field of nutrition.
- Always try to choose a module that aligns with your interests and career goals.

Important opportunities within your degree

- Practicum:
  - Takes up either 0.5 or 1.0 credits
  - One of the best opportunities to gain practical experience
  - You may be able to get a placement in the field you’re interested in, which could lead to a job after graduation.
  - Good way to get a reference.
  - Easy grade.
  - Must be fourth-year honours or 7.5% completion overall.
  - If you plan to take this for the sake of grades, you should ensure that your next step accepts it (e.g., 7.5%).
My practicum experience

- ETO Public Health Consultant
- Research Assistant
- Full-time
- Conducted research on the disproportionate effects of COVID-19 on vulnerable populations, such as indigenous peoples, older adults, children, women, and the homeless
- Demonstrated research findings through social media using infographics created in Canva, upon completion of a knowledge translation project
- Attended multiple conferences, including "Structural Violence" hosted by Cornell, and "Youth Justice" hosted by Men’s Health and Community Services, in order to create reports to inform my supervisors

Important opportunities within your degree

- Independent Study
  - Takes up to 3 or 5 credits depending on workload
  - I was able to do more independent study than expected, however this seems to have changed
  - Requires extra hours in research experience
  - Must work in a group and work together to come up with a project that the supervisors may prefer that you do
  - The topic should be what you would like to do and can accomplish in 4.5 months
  - Ideally, you will have already formed a relationship with the supervisor you choose through attending their courses, checking their research, etc.
  - Even if you have not had a pre-existing relationship, you can still be assured of an extension in the fall
  - Great way to secure a reference
  - Requires: literature review and 50-75 page paper average
  - Requires you to be in touch every few weeks
  - Note: the supervisor does not need to be in the School of Health Studies

My independent study experience

- Methods for calculating confidence intervals around effect size estimates using the statistical software: R
- Half-time
- Supervised by Dr. Andrew Johnson
- Developed knowledge with the supervisor through the HIPP program
- Research proposal: R, review, learning
- Output was more than a short "story" using R Markdown
- Challenging, but great experience, relatively easy grade, and improved my relationship with my supervisor

Research positions

- Great way to get research experience
- Fun and rewarding if you like research
- Potentially a paid position
- Do a good job and get a reference

- Typically, the best process:
  - Think about your interests
    - Find a prof that is doing what you like
    - Think about your past projects
    - Start thinking about a project you would like to do, and try to find a prof that would be useful to you
    - Develop a relationship with the prof (e.g., classes, office, etc.)
    - Also if you have any research projects that you could be a part of for payment

My experience with research positions

- Was a Research Assistant for the last six years of my undergraduate studies
- During the time I was paid to read and sort papers, and work on my own projects (e.g., independent study, undergraduate research internships, etc.)
- In high school, my Research Assistantship became a graduate fellowship
- Now I am a co-investigator on a study with Dr. Andrew Johnson and S. Macleod, entitled "The effects of a supplement on the cognitive and physical health of older adults in a shared living setting"
- The study hypothesis was that a large proportion of antidepressant drug users are not fully aware of the drug they are taking to treat depression.
- Will be using a survey panel to survey a large number of antidepressant users

Getting involved

- Getting involved isn't all about your university
- Sometimes extracurriculars can be just as valuable if not more
- Joining clubs, student councils, etc., can increase your sense of belonging, provide you with an opportunity to give back, and help you develop skills such as leadership and communication
- Western has over 300 clubs; there is almost certainly a club out there for you
- Even if you're not the most demanding extracurricularly, typically, students who pursue positions on student councils and other extracurriculars with the time commitment per week are usually less than 50 hours
How I decided to get Involved: The HSSA

- The Health Studies Students' Association (HSSA) represents the undergraduate students enrolled in the School of Health Studies.
- The HSSA gave me the opportunity to:
  - work in a team of 20+ students
  - develop my public speaking skills
  - think critically through the planning of events, creation of budgets, writing, passing of motions (politics)
  - and so much more

My Journey with the HSSA

1) At the end of second year I applied to be the VP of Finance. I was selected for an interview and then selected for the position.
2) Having spent a year as the VP of Finance, I felt that I had the knowledge and experience to become President. Subsequently, I ran and was elected.
3) I served as President for 2 years.
4) Only undergraduate students can serve as the main roles, so when I began my master’s, I became one of the Senior Advisors for the new President.
5) This is my second year as Senior Advisor, next year I will be moving on from the HSSA after serving for 5 years.

Q & A

Ask me Anything
The Health Studies Students' Association’s Peer Mentorship Program 2022/2023

Mentee Session 3 - Well-being

Defining Well-being

- The World Health Organization defines "health" as "...the state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 2023)
- Within health, well-being encompasses quality of life and the ability of people and societies to contribute to the world with a sense of meaning and purpose.
- It is important to note, however, that well-being is a subjective concept.
- This means that the concept of well-being is specific to each individual.

Two Major Components of Well-being

1) Mental Well-being
2) Physical Well-being

- Both are critical to your overall health and happiness
- Both are maintained in different ways and require effort
- It can be difficult to find time to take care of both, particularly as university students

Mental Well-being

- More commonly referred to as mental health
- More than the absence of mental disorder
- Determined by a wide range of factors (e.g., socioeconomic status, biology, and environment)
- Good mental well-being is necessary to realize your potential and cope with the stresses of life
- An individual's mental health impacts on their relationships, work, etc.

Benefits of Good Mental Well-being on Academics

- Reduced anxiety when completing assessments (i.e., exams, assignments, etc.)
- Greater amounts of energy to complete tasks (and ultimately higher productivity)
- Better focus
- Greater resilience when dealing with challenges, such as worse than expected marks or a heavier than average workload
- Increased level of happiness and better outlook on the future
- Better relationships with peers

Effective Methods for Coping with Stress and Supporting Mental Well-being

- Take breaks to rest (even if they are short ones)
- Take quick breaks to do something you enjoy to "reset" yourself
- Reach out to others around you (they are likely to be dealing with the same challenges)
- Read a book
- Listen to music
- Meditate
- Get enough sleep
Physical Well-being

- The ability to get the most out of our daily activities without undue fatigue or physical stress.
- More than the absence of a physical ailment.
- Involves exercise and nutrition.
- Contributes to mental health.
- Important to develop good practices young as it is highly related to quality of life in later years.

Benefits of Good Physical Well-being on Academics and Mental Health

- According to the CDC, students who are physically active tend to:
  - have better grades
  - higher attendance
  - superior cognitive performance (e.g., memory)
  - and better classroom behaviors (e.g., on-task behavior).
- With regard to mental health, physical activity:
  - Improves self-esteem
  - Improves concentration
  - Improves sleep quality (which, as we discussed, will make you feel better).

How to Practice Good Physical Well-being

- Regular physical activity: Canadian government recommends 150 minutes of moderate-vigorous physical activity per week.
- Break up bouts of sedentary behavior: at a minimum, for every 1 hour of sitting try and get up for 10 minutes.
- You do not need to reach any weight-related levels of physical activity - it all helps.
- Walking can be fit into almost everyone’s day.
- Aim for over 10000 steps, both Apple and Android phones have free pedometers available.
- Nutrition is just as crucial: eat 3 balanced meals per day and avoid overeating.

Questions?
Thank you for attending!
# Curriculum Vitae

**Name:** Chris Ruffell

**Post-secondary Education and Degrees:**
- The University of Western Ontario, London, Ontario, Canada, 2016-2021 BHSc
- The University of Western Ontario, London, Ontario, Canada, 2021-2023 M.A.

**Related Work Experience:**
- VP Finance, Health Studies Students' Association, The University of Western Ontario, 2018-2019
- Cancer Prevention Team Member, Canadian Cancer Society, 2019-2021
- President, Health Studies Students' Association, The University of Western Ontario, 2019-2021
- Research Assistant, ETIO Public Health Consultants, 2020-2021
- Senior Advisor, Health Studies Students' Association, The University of Western Ontario, 2021-2023