

## Understanding the Studley Quad: Uses and Potential Betterment

### Group Research Project Final Report

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ENVS/SUST 3502 Environmental Problem Solving | Dalhousie University

April 10, 2017

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## Executive Summary

This study aimed to identify how members of the Dalhousie community are currently using the Studley Quad. More specifically, the intent of this research is to discover the ways in which the Studley Quad is being used and how we can increase these uses. Throughout this paper, green space will be defined as “..publicly accessible areas with natural vegetation, such as grass, plants or trees ”(Lachowycz & Jones, 2013, p.62) . For the purpose of this study, the Studley Quad is being classified as a green space. An extensive amount of research has shown that there is a strong correlation between green space and mental health. We are defining mental health according to the World Health Organization's definition which is “a state of well being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community,” (2017).

Located in Halifax Nova Scotia, Dalhousie University is the largest university in the city with upwards of 18,000 students (Dalhousie University, n.d.). As Dalhousie is an older campus, there is an increasing priority to pursue updated environmental health and safety standards to assure safe spaces for users. To achieve this, Dalhousie has created several policy documents to guide healthy and sustainable design on campus (Dalhousie Campus Master Plan, 2010 & Dalhousie Natural Environment Plan, 2014).

The Studley Quad is an urban green space in the center of Dalhousie's main Halifax campus, and it connects many campus buildings making it a popular commuter route. The purpose of this study is to identify how Dalhousie students are currently using the Studley Quad to determine how these uses can be increased. As access to green space can positively impact mental health and wellbeing, Dalhousie students will benefit from the improvement of this green space (Nutsford, Pearson, & Kingham, 2013). Using non-probabilistic surveying methods, we gained insight on students' attitudes towards the Studley Quad using a questionnaire, in addition to evaluating behavioural observations on the site. To analyze our data, frequencies of survey results were tallied and visually presented in the form of graphs and charts. We also executed a Chi Square test to compare reported uses of the space to the uses we observed. Together, these methods allowed us to better understand students' attitudes towards the Studley Quad based on how students are currently using the space, and determined what would entice them to use this space more.

The results of this research confirmed that the majority of Dalhousie students questioned believe that they should have access to green space and that spending time in green spaces has the ability to improve their moods. It was identified that currently, the main use of the Quad is walking; a result of this being that the students using this space to commute are using it infrequently for short periods of time. Our questionnaire determined that poor conditions of the grounds and lack of seating have hindered students usage of the Studley Quad. To improve this,

students reported that making the changes they identified would promote them to use the Quad more. The most popular responses for improvements included incorporating more vegetation and increasing seating. This study obtained knowledge on students' perceptions on the importance of the Studley Quad. By evaluating observations and questionnaire responses, the results of this study provided essential information on how we can design campus spaces that better serve the needs of the students; encouraging the use of public green spaces.

## **Introduction and Background**

The mental health and well being of university students has become a topic of large concern in recent years. The stresses associated with meeting deadlines and adjusting to a new environment is taking a toll on young individuals. A survey of 34,000 Canadian postgraduate students was conducted by the American College of Health Association (2013). They discovered that of the students surveyed, 89% felt overwhelmed with their school work, 57% felt overwhelming anxiety, 38% were so severely depressed they found it hard to function, and 10% were considering suicide (Windhorst et al, 2016). These statistics draw attention to the increasing mental health crisis among students, and why green spaces on campus can provide a way of mitigating these stresses.

The importance of green spaces in busy environments such as university campuses can be explained by Kaplan and Kaplan's Art Restoration Theory (ART), which includes hard fascination and soft fascination (Pearson & Craig, 2014). Hard fascination is when people located in urban environments are overstimulated by hardscaped features and must use their attention to overcome negative affects (Pearson & Craig, 2014). Whereas when people are situated in natural environments, it reduces the demand of executive based-decisions and concentrates the individual's attention on natural scenes; this creates feelings of pleasure which is referred to as soft fascination. (Pearson & Craig, 2014). This theory is imperative to this study because it emphasizes the significance of green spaces in over stimulated, urban environments and how they are beneficial to mental health.

Green spaces are crucial because of the restorative environment they provided to students. The definition of a restorative environment according to Hipp, Gulwadi, Alves, and Sequeira (2016), is one that "...enables physiological restoration from depleted attention and faculties," (p. 1293). They conducted a study that aimed to connect the association between natural green spaces and perceived restorativeness (Hipp et al. 2016). For most students, university campuses create environments of high stress due to long periods away from home, financial stress, and isolation (Hipp et al. 2016). Their study concluded that perceived greenness facilitated opportunities for restoration that led to improved quality of life for students (Hipp et al. 2016). Therefore, green spaces on campus are important because of the restorativeness they provide to students.

Another study that emphasized the importance of natural environments on university campuses is by McFarland (2008). He showed that just walking to class through a green space positively correlated with an improved quality of life (McFarland, 2008). In addition to understanding how green spaces reduced mental stress, Seitz et al. (2014) conducted a study that was aimed at identifying and improving campus green spaces. The results showed that students enjoyed green spaces with man made structures such as fountains and benches, as well as natural areas like campus parks (Seitz et al., 2014). These contributions highlighted what aspects of natural environments on university campuses helped de-stress students. In addition, another

study researched 280 male students, measuring how nature impacted human health in terms of stress (Parks et al., 2009). Parks and Tsunestuge (2009) concluded that the exposure to nature decreased student's salivary cortisol, pulse rates and blood pressure (Parks et al., 2009). The male students in this study also reported less depressive symptoms when they were exposed to natural environments (Parks et al., 2009)

Incorporating green space into university campuses should be a top priority due to the positive impact of natural green spaces on mental health, as outlined above. There is a high level of stress associated with student life at university which needs to be mitigated in as many ways as possible (Stallman & Hurst, 2016). Implementing green space is a passive way to improve students' mental health. It also provides other benefits such as encouraging physical activity and offering a place for students to gather in a quasi-natural setting. This study is interested in how the Dalhousie Studley Quad can be modified to maximize use. It considered guidelines to increase green space use put forward by other researchers. The perceived safety of the user is a major factor in green space use. Too many trees can make a person feel isolated and unsafe (Bardekjian, Classens, & Sandberg, 2012; Lau & Yang, 2009). Conversely, too much open space discourages users (Roemmich, Balantekin, & Beeler, 2015). Finding a balance between these two extremes is an important consideration when planning public green spaces. Dallimer et al. (2014) presented that people prefer wild-looking spaces to ones that are highly maintained, suggesting that it may increase the disconnect from the urban environment if a space appears neglected. This increases the soft fascination of the area, which can be replicated by increasing the amount of plants or adding water features to the space (Lau & Yang, 2009). Another factor that makes green spaces more enjoyable is having variation throughout the space. Incorporating areas where different activities can take place would draw more students to the area. Quieter, more secluded areas could be used for studying, picnic tables could be inserted for eating and socializing, and open spaces could be used for playing sports or participating in physical activities (Lau & Yang, 2009). Finally, the sense of community in a green space increases its use. It is important for people to feel welcome and included in a space when trying to maximize use (Bardekjian, Classens, & Sandberg, 2012; Seaman, Jones, & Ellaway, 2010).

Green spaces on campus have the additional benefits of providing an urban refuge for species that are being displaced by urbanization as well as providing a hands-on learning opportunity for students. York University in Toronto, Canada, has a native species garden where students can learn about the endemic flora and small fauna (Bardekjian, Classens, and Sandberg, 2012). The University of Ottawa's Husky Energy Courtyard is a recreated boreal forest which serves the same purpose (Sander-Regier, Acheson, Rai, & Chen, 2015). The combination of education and green space would well suit universities by providing an alternate learning space outside.

Studley campus is planned around the Studley Quad; a highly accessible green space that is intended to promote the movement and gathering of individuals (Dalhousie University Campus Master Plan, 2010). As Studley is the main Halifax campus at Dalhousie, it is shared by a large number of students and faculty which is why this location was chosen for this research project. Initially at Dalhousie, green spaces were implemented as an afterthought to new building infrastructure (Dalhousie University Campus Master Plan, 2010). This has resulted with green spaces that are poorly designed with little money left to maintain them; often leaving these spaces with deteriorating walkways and areas of flooding due to poor drainage (Dalhousie University Campus Master Plan, 2010).

The purpose of this research project is to discover how Dalhousie University students are currently using the Studley Quad and how we can increase these uses. By bettering current uses and promoting a variety of additional uses, students would be encouraged to spend more time on the Studley Quad, benefiting from the mental health effects present in green spaces. As there has not been a study like this conducted at Dalhousie University, we will be filling an important knowledge gap that has the potential to better the health of Dalhousie students.

## Methods

For this project, data was collected on how Dalhousie students were currently using the Studley Quad and what students would like to see changed. The population was chosen to be students because they make up the majority of the Dalhousie community and they are the ones who are experiencing high levels of stress (Dalhousie University, 2014; Dallimer et al., 2014). Non-probabilistic sampling and observations were used to collect the data, sampling purposively and strategically (Palys & Atchinson, 2014). Given the time frame allotted for data collection (3 weeks) and the limited access to student lists and contact information, non-probabilistic sampling was the best possible option.

A paper questionnaire was chosen as the data collection tool because it has high return rates when administered in person and clarifying questions could be asked by the respondents on the spot (Palys & Atchinson, 2014). The questionnaire only contained nine questions, this made the participation time very short. Questions being asked were aimed to provide us with clear understanding of opinions on green space and its importance, how students are currently using the Quad, what limits this use, and what improvements students would most like to see in the space. A similar study conducted by Lau and Yang (2009) at Hong Kong University also used a paper questionnaire and we took direction from their survey format.

Data collection took place in two phases. The first phase consisted of passively observing individuals on how they were using the Studley Quad. Two observers were placed in a central location on the Quad; one recorded the number of people seen walking, socializing, sitting, exercising, studying, and eating, while the other mapped where each of these activities were occurring. No identifying information was recorded on the students being observed. Due to the variable weather the week data collection occurred (March 20-24, 2017), observations were only collected on Tuesday, March 21st and Wednesday, March 22nd. 228 observations were collected over these two days. As the main reason people go outside is to enjoy nice weather, we believed that we would not see many people on the Quad on days when the weather was unfavourable (Schipperijn et al., 2010).

The second phase of data collection involved handing out questionnaires to students in the Killiam Library Atrium and the Dalhousie Student Union Building. These locations were deemed to be areas where students from many faculties would be found; thus avoiding faculty based biases. Two researchers approached a potential respondent and said the script seen in Appendix 1. If a student responded that they were interested in completing the questionnaire, it was given to them. The researchers did not watch the respondents as they recorded their answers. Once the questionnaire was complete, the respondent was given a researcher's email and their alpha-numeric code. This code was randomly generated for each of the questionnaires and could be used to withdraw from the study within 4 days if the respondent chose to do so. Chocolate or apples were given to the participant after they had finished the questionnaire. 58 questionnaires were returned, which exceeded our initial target of 50.

The questions the participants were asked were designed to provide insight of students' use of the Studley Quad, their current satisfaction with the space and what changes they would like to see (Appendix 1). The first two questions focused on whether access to green space was important and whether green space improved the mood of the participant. These were to gauge the general opinions of the participant on the topic of the study. The following questions were directly addressing the current use of the Quad. We wanted to collect data to be able to compare how Dalhousie students said they were using the Quad compared to our observations. Next, the questionnaire asked if participants were satisfied with the current state of the Quad. We asked this question before inquiring about potential improvements because we did not want our improvement options to influence the answers of the respondents.

Pearson's Chi-Square test was used to determine whether the observations gathered had a significant relationship to the questionnaire responses (De Veux et al., 2014). The participants' answers to the question "How do you currently use the Studley Quad (select all that apply)," were denoted as the expected value. In doing this, we made the assumption that our respondents were being truthful in their answers. An alpha value of 0.05 was used for this test. While we did not survey the people we observed, we assumed that both forms of data collection would represent the Dalhousie student population.

### *Study Limitations*

In respect to validity, one concern that has arisen from this research involves the observation portion of our data collection. As the people being observed were not approached, nor asked any questions, the researchers assumed that the individuals being observed were Dalhousie students. Backpacks and the age of the observed were two indicators used. However, there is potential that younger staff, faculty members or people who were not members of the Dalhousie community were mistakenly observed.

Another issue that our study faced is reliability. We conducted our data collection during the early Canadian spring. This meant that the weather was extremely variable and there was snow on the ground. If we had gathered information during the summer, it can be assumed that our results would have differed as students would presumably be more likely to spend more time outside (Schipperijn et al., 2010).

One factor we had to determine early on was how we were going to define the terms green space and mental health. Throughout researching, many synonymous terms were used as substitutes for green space such as landscapes, nature, or public open spaces. In addition, mental health often encompasses mental illness, but not always. This ambiguity and inconsistency of terms can be problematic when it comes to comparing and analyzing outcomes of studies (Hassen, 2016). In order to reduce this issue, we attempted to incorporate information from studies that used the same terms as us or had clearly defined them similarly.

Using a paper questionnaire to collect our data meant that we were not actively involved in questioning the participants. Clarification was provided if a participant asked. However, there is the possibility that some participants misinterpreted some of the questions or did not fully understand what a question was asking. Despite some clarification, there appears to have been some ambiguity of terms that may have affected our results. First, one of our questions asked how students "currently" used the Quad. Unfortunately, students may have interpreted this in different ways. Some may have thought that we were specifically asking about winter use, while others may have interpreted it as how they have used the Quad in the past. Another case of

misunderstanding was seen in the same section where one individual filled in the ‘other’ line with “softball”. We consider softball as a physical activity but the respondent did not.

This study had a very compact timeline. There was only one week to collect data and thus we had to work around both the weather and our own schedules. Unfortunately, this resulted in there only being two days that passive observations could be made on the Studley Quad.

## Results

### *Perception of Green Space*

Question one from the paper questionnaire asked respondents if they felt it was important for students’ to have access to green spaces (Appendix 1). 94.8% of participants believe that it is important, while 56.9% strongly agreeing, 37.9% agreeing and only 1.7% strongly disagreeing. The remaining 3.5% of participants were neutral to the statement.

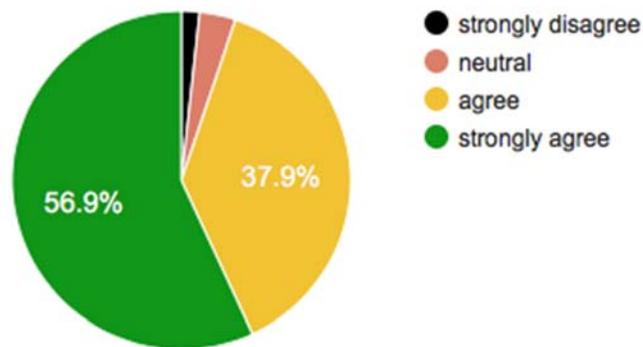


Figure 1. Results from question 1 of the questionnaire (Appendix 1)

Such a large number of respondents strongly agreeing with this statement shows a strong desire for quality green spaces among Dalhousie students. The results from question two found that 87% of students believe that having access to green space improves their mood, with 8.6% being neutral to the idea and 3.5% disagreeing. With 87% of students reporting improvement in their moods with access to green space, green space usage should be encouraged and improvements to green spaces should be made on a regular basis.

### *Current uses*

Question three asked how frequently respondents use the Studley Quad. The results found that 56% of participants use the Quad less than three times a week. 13.8% use it zero times a week, 43.1% use it one to three times a week, 24.1% use it four to six times a week, 8.6% use it seven to nine times a week, and 10.3% use it ten or more times a week. Alone, these results suggest

that over half of the respondents use the Quad under three times a week, but the results of the fourth question reveal how it is being used which was an essential consideration for our analysis. 91.4% of students reported using it for walking, 17.2% sit somewhere on the Quad, 10.6% use it as a study space, 20.7% use it as a space for socializing, and 6.9% use the space for physical activity. 13.8% reported using the Quad to enjoy nature, as well as 2.5% declares they use the space for other purposes (writing and softball).

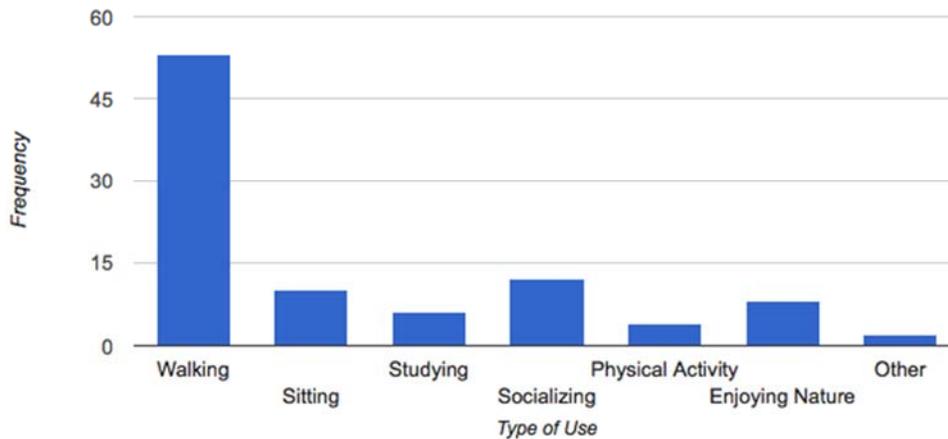


Figure 2. Findings from question four of the questionnaire (Appendix 1).

The Quad is currently used primarily as a walking path between classes for most of the students who participated in our study. The fifth question asked participants how much time on average they would spend on the quad. 67.2% reported spending less than 10 minutes, 22.4% said they usually spend 10-20 minutes on the Quad, 7% said 20-30 minutes, and 3.5% said they usually spend more than 30 minutes on the Quad. These results are consistent with those of the main land use we found. If the majority of students are reporting using this space as a thoroughfare to access other places, it makes sense that they would not be spending excessive time on the Quad.

*Improvements to Quad*

The results of the 6th question revealed that 31% of students are satisfied with the current state of the quad, 22.4 % of students are not satisfied with the current state of the quad, and the other 46.6% of students feel indifferent towards the state of the Quad. Question 7 looked at what factors have negatively affected students’ use of the quad, and the results found that 51.7% of students said that the condition of the grounds and not enough seating reduced their use of the quad, 46.7% of students said they did not have enough time, and 13.7% of students said that their reduced use of the quad was due to one or multiple of the following; layout of the space, not enough shade, not enough vegetation, would rather go somewhere else, and/or other. The results of question 8 found that 71.4 % of students wanted to see an increase in the amount of seating and vegetation, 42.1% wanted improved walkways and 36.9% of students would like to see art/design features in the quad. Finally, question 9 revealed that if these changed were made to the Quad, 98% of students said they would use the space more.

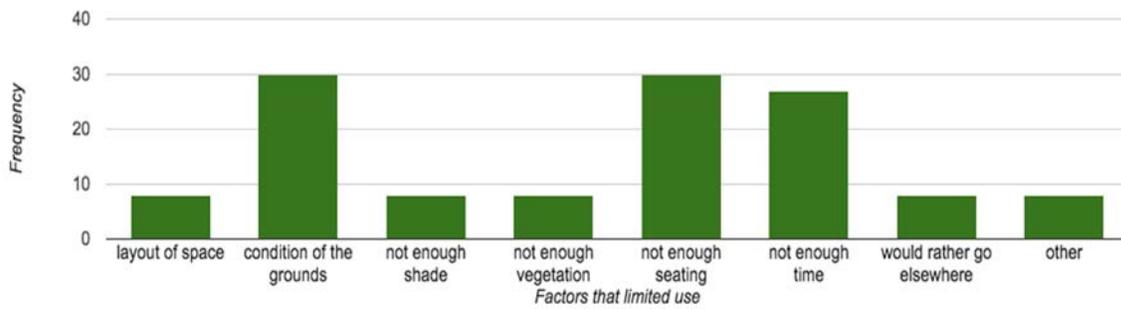


Figure 3. Findings from question six of the questionnaire (Appendix 1).

To summarize, our findings included results that suggest the majority of students believe green space access is important for students to have. In addition, access to green space improves the majority of students’ moods. Currently, the Quad is mostly used as a walking path, and on average, the majority of students using this space are there for less than 10 minutes each visit. The majority of students found that the condition of the grounds and the lack of seating negatively influenced their use of the quad and an increase in vegetation and seating would increase their use of the quad.

*Observations versus responses*

To test if the actual current uses of the Quad were represented by our questionnaire results, a Chi Square test was used. The alpha value was set to 0.05. For the purpose of this test, the null hypothesis was that there was no significant difference between the observations and the reported uses, while the alternative hypothesis was that there was a significant difference between the two sets of data. Table 1 shows the p-values that were calculated. The only activity that showed a statistically significant difference between the observed and expected values was walking (p=0.00016).

Table 1: p-values of activities on the Dalhousie Studley Quad when comparing the observations and the questionnaire responses (expected).

Activity	p-value
Walking	0.00016
Sitting	0.156
Socializing	0.109
Exercising	0.109
Studying	6

*Limitations of current uses*

Part of our analysis included questioning students on which factors of the Studley Quad have hindered and limited their use of the space. Our questionnaire identified that poor condition of the grounds (i.e. icy, muddy, snowy, etc.) and lack of seating were the most prominent issues. Poor condition of the grounds can make the space inaccessible for some students, and potentially undesirable for many students. The lack of seating on the Quad decreases the likelihood that students will sit and spend longer periods of time in this space. It has been proven that by simply providing seating amenities, individuals are more likely to start spending time in spaces that did not previously offer this convenience. By assuring seating options are provided and conveniently located, the use of a space can be significantly increased (Project for Public Spaces, 2009). By addressing unsatisfactory ground conditions and insufficient levels of seating, the Quad can become a more functional space for students.

*Ideal improvements/additions*

Once the factors that limited students' use had been identified, it was essential to determine which factors could incentivize students to use the Studley Quad more than they currently do. To achieve this, a 'select all that apply' question was included on our questionnaire asking students what they would like to see changed about the Quad. The two largest responses were to incorporate more vegetation and increase seating. The popular response of students desiring more vegetation on the Quad aligned with the purpose of our study, confirming that students prefer access to green space and feel that for the majority, it improves their mood. The common response of increasing the level of seating on the Quad aligns with our findings from factors students' identified that have limited their usage. It is important to mention that in addition to more vegetation and increased seating, several less popular improvements were also identified. These improvements included improving the condition of walkways and adding art/design features to the Quad. Overall, these findings were indicative of students' feelings towards green space and determined the most important factors that could improve usage of this space.

**Discussion**

The goal of our research question was to determine how Dalhousie students were currently using the Studley Quad and how those uses could be increased. Our rationale for this study was related to mental health. Studies have shown that access to green space aids in restoring de-stressing their minds through providing calm environments (University of Washington, 2015). The findings demonstrated by our study prove that students care about campus green spaces. It was found that the majority of individuals surveyed strongly agreed that it is important for students to have access to green space, and that spending time in green spaces did improve their mood.

As expected, the majority of respondents reported that walking was the most prevalent use of the Studley Quad. In attempt to understand why students are not currently using the quad as much as they could be, it was found that poor condition of the grounds and limited seating were the two main discouraging factors. The most popular potential improvements to the Quad

were increased vegetation and additional seating. 71.4% of respondents claimed that they would use the Studley Quad more actively if more vegetation was incorporated. These results were consistent with the findings of McFarland et al (2008), whose study on green spaces and perceived quality of life showed that students would prefer to see more grass and plants around their campus (Mcfarland et al, 2008). These factors would foster additional uses of the Studley Quad, incentivising students and ideally increasing the amount of time they spend in this space.

Statistical analysis using the Chi-square test showed that the only activity that rejected the null hypothesis when comparing the observed and questionnaire data was walking. This result was surprising as walking was the predominant use of the Quad for both the questionnaire (91.3% of respondents) and the observed students (92.5%). This slight discrepancy can potentially be explained by the weather. The week of March 22, 2017 showed temperatures that ranged from  $-10^{\circ}\text{C}$  to  $8^{\circ}\text{C}$  when we were conducting our study. This may have increased the percentage of students seen walking because students did not want to spend the long periods of time in the cold associated with the other activities like sitting or socializing (Diffey, 2011). In addition, the condition of the grass and the sidewalks were not ideal for exercising due to the presence of ice and snow. A study by Tucker and Gilliland (2007) show that physical activity is reduced during periods of poor weather. Despite other activities showing large differences between the observed and the expected (questionnaire) results, the frequency of responses in those categories tended to be quite low so the differences were not statistically significant in this study.

Generally, our study findings confirmed our initial assumptions that the majority of students were using the Studley Quad for the purpose of commuting. There was some disconnect found where students had reported a multitude of uses of the Quad that were not observed. While these differences were not found to be statistically significant, we determined that this inconsistency is most likely attributed to students' miscomprehension of the question "how do you currently use the quad?". This question has a substantial amount of ambiguity in reference to what the term "current" means. If "current" was interpreted as this year, for example, reported uses may have included activities that occur during the warmer months in which case they would not have been observed by the researchers. In future studies, this should be clarified further to say "how have you used the Quad in the past" or "how do you use the Quad during winter semester".

In regards to existing studies, our findings were consistent with those conducted about green space and mental health. Brymer et. al (2010) stated that exposure to natural environments improved individual's well-being and reduced stress. A study conducted by Abu-Ghazze (1999) determined that the main use of green spaces at the University of Jordan was walking to class. It also identified that students became more attracted to a space because they used it as a pass through space as well as a resting place (Abu-Ghazze, 1999). The majority of our respondents reported spending less than 10 minutes on the Quad, while a similar study by Lau and Yang found that the majority of their students at Hong Kong University spent 10 to 20 minutes on their green space (2009). When reviewing any study looking at outdoor use it is necessary to take climate into consideration and we can assume that this difference was due to this. Students' in previous studies have reported that attractive green spaces provide an important component to the campus environment and that they contribute to the experience of student life (Speake, Edmondson & Nawaz, 2013). These results confirm the importance of green space on university campuses which should be prioritized to assure they are accessible for students.

## **Conclusion**

### *Recommendations for action and future research*

Based on the results from our study, recommendations for action begin with the desires of the students representing the Dalhousie population. In order to increase usage, the space needs to function properly for the intended users of the space. According to our questionnaire, the majority of respondents said they would use the Studley Quad more if the improvements they identified were made. The results of the study determined that incorporating more vegetation and increasing seating options were the two factors that were most desired by students. By making these improvements, increased and diversified uses of the Quad will be encouraged and students will ideally spend more time here. As a result, an increased number of students will benefit from the positive mental health effects associated with spending time in green spaces.

Based on our findings, there are several areas related to green space and mental health that should be researched in the future. First off, a long-term, in depth study on the direct effects of green space on mental health could be conducted at Dalhousie University. In order to evaluate effects of green space on mental health, potential measures could be self-reported symptoms of mental illnesses, levels of behavioral development, and levels of cognitive development (World Health Organization [b], n.d.). The data collected from a study like this would provide direct information from the site of interest which would relate health benefits to Dalhousie students.

If the Dalhousie administration decided to make the additions students identified in our questionnaire, a pilot project should be trialed on the Studley Quad. Pilot projects are useful because they can gauge the benefits and weaknesses of a plan before it is implemented on a large scale (Bassi, 2010). A follow-up study would be required to determine if the reported changes did increase usage of the Studley Quad. If such a study showed positive results, this could encourage the improvements to be implemented on other green spaces on Dalhousie campuses and to other university campuses around the world.

## **Acknowledgements**

We would like to thank our teaching mentor, Molly Fredeen, for her continuous support, insight, and feedback on this project. We thank Dr. Christopher Greene for his knowledge and his suggestions on improving our study. We would like to thank all of the students who agreed to participate in our study and are appreciative of Dalhousie University for letting us use the spaces to conduct our study.

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## Appendix 1: Recruitment Script and Questionnaire

“Hello, my name is \_\_\_\_\_. I am conducting a study on how students use the Studley Quad for my environmental science class, in order to determine ways it could be improved. On behalf of my study group, I am administering this questionnaire today. Are you a student here at Dalhousie? (If so), Would you like to provide your feedback for our study?”

### Improving the Studley Quad:

In completing this questionnaire, you are giving the researchers permission to use your anonymous answers in a study about the Studley Quad. No identifying information will be collected or kept on file. If you would like to see the results of the study, you can sign up to the email list provided. There will not be a chance to withdraw once you have completed and handed in this questionnaire.

**Researchers:** Andrea Dorton, Chantelle Fynn, Reya Manerikar, Caeden Mills & Chelsey Rudolph

#### 1. Rate this statement:

“It is important for students to have access to greenspace/open space/outdoor space”.

Strongly disagree      Disagree      Neutral      Agree      Strongly Agree

#### 2. Rate this statement:

“Access to greenspace improves my mood”.

Strongly disagree      Disagree      Neutral      Agree      Strongly Agree

#### 3. How many times are you on the Studley Quad per week?

0      1-3      4-6      7-9      10+

#### 4. How do you currently use the quad? (Please select all that apply).

- Walking
- Sitting
- Studying
- Socializing
- Physical Activity
- Enjoying Nature
- Other (please specify): \_\_\_\_\_

#### 5. How much time, on average, do you spend on the Studley Quad?

Less than 10 minutes      10-20 minutes      20-30 minutes      30+ minutes

#### 6. Are you satisfied with the current state of the quad?

Yes      No      Indifferent

#### 7. Which of these have limited your use of the quad? (please select all that apply).

- The layout of the space

