

**Exploring the Impact of an Intergenerational Volunteer Program with People Living with
Dementia on University Students**

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Abstract

Young adults benefit from forming meaningful relationships with older adults through participation in intergenerational programs. The objective of this study is to evaluate the impact of an intergenerational volunteer program with people living with dementia on various university student characteristics. During an eight to twelve-month period, university students connected virtually or in person with a person living with dementia residing in the community or within a long-term care facility. Six scales were administered to assess changes in empathy, mood, psychological well-being, sensitivity to justice, and attitudes towards older adults and community service. Results demonstrated that young adults experienced adverse challenges during their volunteering experiences which could be attributed to impact of the COVID-19 pandemic. Despite the challenges, students were able to reduce their negative attitudes towards older adults. Findings generated from this study enhance our understanding of university students' experiences volunteering virtually in meaningful one-on-one continued interaction with a person living with dementia although more research is still needed under less stressful global crises.

Résumé

Les jeunes adultes bénéficient de la formation de relations significatives avec des adultes plus âgés en participant à des programmes intergénérationnels. L'objectif de cette étude est d'évaluer l'impact d'un programme de bénévolat intergénérationnel avec des personnes atteintes de démence sur diverses caractéristiques des étudiants universitaires. Pendant une période de huit à douze mois, des étudiants universitaires ont été mis en relation, virtuellement ou en personne, avec une personne atteinte de démence résidant dans la communauté ou dans un établissement de soins de longue durée. Six échelles ont été administrées pour évaluer les changements dans l'empathie, l'humeur, le bien-être psychologique, la sensibilité à la justice et les attitudes envers les personnes âgées et le service communautaire. Les résultats ont montré que les jeunes adultes ont rencontré des difficultés au cours de leurs expériences de bénévolat, qui pourraient être attribuées à l'impact de la pandémie de COVID-19. Malgré les défis, les étudiants et étudiantes ont été en mesure de réduire leurs attitudes négatives envers les personnes âgées. Les résultats de cette étude améliorent notre compréhension des expériences des étudiants universitaires en matière de bénévolat virtuel dans le cadre d'une interaction significative et continue avec une personne âgée, bien que des recherches supplémentaires soient encore nécessaires dans le cadre de crises mondiales moins stressantes.

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List of Abbreviations

CSAS	Community Service Attitudes Scale
df	Degrees of Freedom
EC	Empathetic Concern
FS	Fantasy
FSA	Fraboni Scale of Ageism
FSA-14	Fraboni Scale of Ageism - 14 item version
IRI	Interpersonal Reactivity Index
JSS	Justice Sensitivity Scales
LTCH	Long-Term Care Homes
M	Mean
NA	Negative Affect
n	Sample Size
p	p-value
PA	Positive Affect
PANAS	Positive and Negative Affect Schedule
PD	Personal Distress
PLWD	People living with dementia
PT	Perspective-Taking
PWB	Ryff's Scale of Psychological Well-Being
SD	Standard Deviation
t	t-statistic

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T1	Baseline Timepoint
T2	Four Month Timepoint
T3	Eight Month Timepoint
T4	Twelve Month or Final Timepoint

Chapter 1: Introduction

1.1 Dementia: A Global Public Health Concern

Dementia is a progressive neurological syndrome that is often characterized by an impairment in cognitive abilities such as: language, memory, problem solving, judgement and thinking (Alzheimer Society, n.d.; Marquardt et al., 2014). In 2015, 47 million people worldwide were living with dementia, and this number is expected to reach just under 150 million by 2050 (Livingston et al., 2017). It is a global public health concern that significantly impacts people living with dementia (PLWD), family members, friends, society, and often requires the use of additional healthcare resources (Carone et al., 2014; World Health Organization, 2020). Due to the progressive nature of dementia and gradual deterioration in cognitive function, PLWD can have difficulty engaging in social settings, thus resulting in feelings of loneliness (Moyle et al., 2011). This is especially true of PLWD residing in long term care homes (LTCH) where psychological distress, isolation, and fear are often experienced, ultimately resulting in reduced quality of life (Clare et al., 2008).

1.2 Challenges Experienced by Informal and Formal Caregivers

As dementia progresses, higher levels of care are required to allow for PLWD to live independently, and this care is often provided by informal or formal caregivers. Informal caregivers are family or friends who provide essential emotional, social, and medical support, as well as assistance with completing activities of daily living (Adelman et al., 2014). Notably, family caregivers can experience a range of positive emotions pertaining to their role, including having a sense of accomplishment and purpose whilst strengthening their familial bonds with their loved one (Yu et al., 2018). However, it is well documented in the literature that family caregivers experience significant physical, psychological, social, and emotional challenges as a result of their

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caregiving role (Tatangelo et al., 2018; Yu et al., 2018). Informal caregivers are at an increased risk of depression, burden, physical health problems, social isolation, and financial instability (Brodaty & Donkin, 2009; Lindeza et al., 2020).

Formal caregivers are individuals who are paid to provide higher levels of care to a person with some form of impairment or illness (Hajek et al., 2016). The paid role of formal caregiving within LTCH can be physically and emotionally draining due to the labour-intensive nature of their work and the lack of sufficient staff support (National Institute on Ageing, 2019). As the healthcare system is delivered in the current context, there is simply not enough healthcare workers to manage the increase in demand for long-term care services (Ministry of Long-Term Care, 2020). As a result, formal caregivers simply do not have the time to meet the care needs of residents (Ministry of Long-Term Care, 2020; Unifor, 2020).

Informal and formal caregivers are not the only groups who assist in supporting various needs of PLWD living in LTCH. Volunteers play an integral role in supporting residents in long-term care through facilitating a diverse set of activities including offering meaningful companionship, mealtime assistance, fundraising, and the organization of special activities (Hande et al., 2021). Indeed, engaging volunteers in LTCH can compensate for a lack of staff by assisting and meeting the psychosocial needs of residents (Funk & Roger, 2017; Hande et al., 2021). That is, volunteers engaging with PLWD assist in providing needed social interaction and engagement that staff may merely not have the time or resources to complete (Funk & Roger, 2017). It is recognized that the positive role that volunteers facilitate in LTCH contributes to better quality of life for residents (Hande et al., 2021). Additionally, long-term care volunteers who engage with PLWD offer a chance for over-burdened caregivers to take respite to satisfy their own needs (Garcia et al., 2016).

1.3 Benefits of Volunteering Experienced by Young Adults

Numerous research studies have demonstrated that young adults benefit from forming meaningful connections with older adults (Blais et al., 2017; Lai et al., 2015; Leedahl et al., 2019; Lokon et al., 2017). Indeed, young adults experience a range of positive changes through engaging in community service initiatives, resulting in more well-rounded individuals. Interpersonal changes experienced by young adults include learning to better communicate with other generations, learning to engage with individuals with vastly different lived experiences, and becoming more aware of the challenges other social groups may experience. Young adults who actively engage in community service can strengthen their ability to communicate effectively and develop an understanding of the importance of being able to live autonomously as they age (Blais et al., 2017). Intergenerational programs provide an opportunity for young adults to develop meaningful and important relationships with older adults outside of their immediate social circle, serving as a opportunity to form new friendships and learn from their lived experiences (Blais et al., 2017; Lokon et al., 2012). The experiences of PLWD residing in LTCH will significantly differ from young adults, who may be unaware of the challenges they face. Notably, volunteering has been shown to assist young adults in developing and appreciating the challenges experienced by vulnerable and marginalized populations (Dharamsi et al., 2010). That is, active participation in society fosters a deeper understanding of community needs and how social determinants can influence health (Dharamsi et al., 2010). For young adults, this hands-on experience may serve as an opportunity to recognize the challenges experienced by PLWD and their respective caregivers. External to interpersonal changes, engaging in volunteer initiatives as a young adult can positively contribute to professional development. Volunteering allows young adults to apply what they learn

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in their classes to real-life situations while gaining professional work experience, thus making them more employable in the future (Leedahl et al., 2019; Lokon et al., 2012; Meyer et al., 2019).

Though young adults improve their social and professional skills through interacting with older adults in a volunteer setting, data suggests that these changes can be viewed further if young adults connect with the same individual over an extended period. A study conducted by Lai et al. (2015) demonstrated that nursing students who connected with older adults on a monthly basis over a two year period became more comfortable in their personal interactions. Lai et al. (2015) determined that students reported experiencing more changes within themselves at the third and fourth wave of data collection, occurring during the second year of the program and once the program was completed. During the third and fourth wave of data collection, Lai et al. (2015) noted that students reported feeling more confident connecting with older adults, more engaged in their connections, and were able to convey more clearly what they had learned through their participation. This suggests that the benefits and changes experienced by the nursing students were taking place after an extended period of interaction with older adults (Lai et al., 2015). Thus, changes to students' characteristics may be more visible and impactful if the student participates in a program for an extended period and ideally connects with the same individual over the course of the program.

1.4 COVID-19: A Continued Challenge

With the onset of the COVID-19 pandemic, certain groups in the population have experienced increased challenges and burden. Numerous protocols such as physical distancing, wearing masks in public or crowded spaces, isolation if symptoms present, increased insistence on handwashing and sanitization, and widespread viral testing have been implemented and recommended to slow or halt the spread of the disease (Public Health Agency of Canada, 2020).

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With the onset of public health measures, certain groups in the population, such as older adults with dementia, older adults in LTCH, and their caregivers, have been highlighted as populations with increased risk of morbidity, mortality, in addition to experiencing added burden due to the elimination of social supports (Gardner et al., 2020; Migliaccio & Bouzigues, 2020). During the COVID-19 pandemic, additional restrictions imposed by public health authorities including a total visitor ban, limited duration of visits, requiring visitors to wear full body personal protective equipment (PPE), and increased physical distancing posed challenges for people living in LTCH and their caregivers (Chu et al., 2020). In LTCH, restricting regular visits from family members further isolates individuals from the community (Wu, 2020). Indeed, family caregivers and friends visiting their loved ones in LTCH assist in addressing their social needs, while also ensuring their care recipient is receiving adequate quality of care (Gardner et al., 2020). A precarious balance exists between reducing the risk of transmission and infection in residents while also ensuring their psychosocial needs are met. This is especially significant with PLWD in LTCH, where the physical environment is such that transmission of COVID-19 is highly likely as staff cannot safely social distance while performing personal care activities (Liu et al., 2020; Numbers & Brodaty, 2021).

In addition to challenges related to physical distancing, behavioral and psychological symptoms (BPSD) of dementia pose a threat to the safety of both PLWD and long-term care staff during COVID-19. BPSD are a group of challenging non-cognitive behaviours that make conforming to safety guidelines more challenging (Cerejeira et al., 2012; Numbers & Brodaty, 2021). BPSD may present as heightened feelings of anxiety or depression, difficulty sleeping, aggression, agitation, wandering, apathy, abnormal motor changes, hallucinations, and a change in appetite (Cerejeira et al., 2012; Feast et al., 2016). In particular, symptoms of BPSD, such as wandering and agitation, hinder efforts to enforce appropriate social distancing resulting in

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increased lockdown protocols (Numbers & Brodaty, 2021). In LTCH, PLWD may be accustomed to an environment that promotes their ability to wander and move through rooms freely (Olson & Albensi, 2021). Over the course of the pandemic, this behaviour would have been discouraged and limited to halt the spread of COVID-19. Additionally, PLWD may experience challenges with understanding and adapting to the changes imposed by COVID-19 and struggle to remain socially distanced (Keng et al., 2020). Informal caregivers of PLWD may be required to expend additional energy reminding and protecting PLWD from COVID-19, placing additional stress on themselves (Hwang et al., 2021). Finally, PLWD residing in LTCH have experienced increased feelings of social isolation and loneliness, as opportunities to engage with peers and family were significantly decreased (Curelaru et al., 2021).

Informal caregivers of PLWD residing in community dwelling neighborhoods and LTCH have experienced a range of challenges, new emotions, and barriers as a result of public health restrictions and lack of access to services during the COVID-19 pandemic. Notably, caregivers have experienced a heightened sense of fear and anxiety providing care to their care recipient. However, the anxiety and fear experienced by informal caregivers cannot be traced back to a single cause, but rather it is a complex problem that requires intervention. Family caregivers may experience increased anxiety surrounding the need to continuously protect PLWD from contracting COVID-19 (Hwang et al., 2021). Notably, family caregivers have reported heightened fear that their loved one will get COVID-19 and require hospitalization (Vaitheswaran et al., 2020). Family caregivers of PLWD have also reported they experience fear that their care recipient will contract and pass away from COVID-19 (Hwang et al., 2021). Caregivers have worried that their loved ones residing in LTCH will not receive the same degree of care and attention that family and friends may provide (Lightfoot et al., 2021). In a cross-sectional study conducted with 835

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informal caregivers, Cohen et al (2021) reported that informal caregivers indicated that the type of care, time spent providing care, and self-reported caregiver burden had increased during the pandemic (Cohen, Kunicki, et al., 2021). This is to say, caregivers have experienced a range of negative emotions, including fear and anxiety, pertaining to their caregiving role.

Another complex area in which caregivers have been impacted is their access to additional external services that support their ability to provide adequate care. Prior to the COVID-19 pandemic, caregivers residing with their care recipient in the community have been reliant on social and voluntary services to supplement and provide care (Armitage & Nellums, 2020; Cohen, Nash, et al., 2021). During the pandemic, family caregivers have reported fewer social interactions and reduced social networks for themselves and for their care recipient (Lightfoot et al., 2021). This is of concern because for caregivers of PLWD in the community, reducing access to respite services and social engagement opportunities requires the caregiver to take on the primary responsibility of meeting their loved ones social needs and their physical needs (Hwang et al., 2021). It is imperative that moving forward, voluntary and social services are available to caregivers of PLWD to increase their access to adequate support. These services are important to not only meet the everyday care needs of PLWD but during times when additional needs arise such as lockdowns, and in more extreme cases, global pandemics. This is important as caregivers have reported that being able to take time for themselves reduced feelings of caregiver stress (Lightfoot et al., 2021).

Recognizing the significant impact of stopping in-person social activities, many programs for older adults have shifted to remote-delivery to try and maintain social connections for older adults in LTCH and within the community. As this shift is occurring, an opportunity emerges in research to explore how and in what way virtual programs can meet everyone's needs. Indeed,

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organizations aimed at improving the well-being of PLWD have adapted their programs to continue in spite of physical distancing restrictions by implementing remote sessions (Chu et al., 2021). Currently, limited data is available demonstrating the effectiveness of utilizing virtual or remote delivery platforms to foster intergenerational connections with older and younger adults. This thesis aims to address this gap by exploring the various changes experienced by university students connecting with PLWD over an extended period in a largely virtual setting.

1.5 Setting the Context : The REVIVRE Pilot Project

Research such as the REVIVRE program (Recherche sur le Vieillissement et l'intégration du Vécu en Résidence) have demonstrated the beneficial impact of connecting young adults to PLWD. REVIVRE is a person-centered intergenerational pilot program that aims to connect university students to older adults residing in LTCH in the Ottawa and Welland Region (Garcia et al., n.d., 2016). This program paired students to a person living with dementia and required that they visit in-person twice a week for three hours, for a total of six hours per week, over the course of 18 months (Garcia et al., 2016). Students were able to engage in conversations, outside walks, games, mealtime assistance, and other meaningful activities (Garcia et al., n.d.). Data retrieved through focus groups indicated that older adults and students experienced a sense of empowerment from each other (Garcia et al., 2016). In addition, volunteer students provided an opportunity for informal caregivers to take time for respite and were considered as a positive addition to the LTCH (Garcia et al., 2016). Though the REVIVRE pilot project furthered knowledge on the benefits of engaging in intergenerational relationships with PLWD, the impact of the experience on student participants was not examined in any detail. Administration of more rigorous scales of measurement might shed light onto the potential benefits to students volunteering with this population in LTCH.

1.6 Impact on Students: A Novel Approach

Student volunteering has been shown to offer numerous benefits not only to the young adult, but also to communities, universities, and volunteer organizations (Haski-Leventhal et al., 2020). Engaging student volunteers provides an opportunity for universities to build strong relationships with their communities (Haski-Leventhal et al., 2020). Additionally, demonstrating that university students are active members and contribute positively to their community helps bolster the reputation of the academic institution (Haski-Leventhal et al., 2020). Volunteer organizations that utilize university student volunteers benefit from their free-labour and skills (Haski-Leventhal et al., 2020). Previous research exploring the impact of participation in intergenerational programs on young adults has largely focused on modifying their perceptions and attitudes towards aging and older adults (Leedahl et al., 2019; Lokon et al., 2017). These studies often utilize qualitative research methods such as semi-structured interviews and self-reflection journals rather than assessing impact utilizing quantitative tools that explore a wide range of variables. For instance, it is possible that students' overall well-being and mood would improve through engaging in meaningful activities and conversation with PLWD. Additionally, such experiences might contribute to a deeper recognition of unfair situations and circumstances. This richer knowledge base might help volunteers better understand what PLWD are feeling which, in turn, can contribute to high quality of care (Brown et al., 2020). Understanding if students' attitude towards volunteering changes after participating in a volunteer program is important in determining how students reflect on their role as members of civil society, and how and in what way they may want to sustain this role in the future. Finally, further research is needed to examine how participation in intergenerational programs can impact students' attitudes towards aging and in a broader context to emphasize the overall benefits of engaging with older adults.

1.7 Research Questions and Objectives

The objective of this study is to evaluate the impact of an intergenerational volunteer program with PLWD on various university student characteristics. Specifically, the study is designed to explore how voluntary participation in a program broadly impacts university students' perceptions, attitudes, and general state of well-being before and after engaging with PLWD. This program explores a vast array of changing characteristics in students who are interacting with PLWD residing in LTCH and in the community, virtually or in-person. The following research question was used to guide this thesis project: How does participating in an intergenerational volunteer program with PLWD on a weekly basis influence students' attitude, perceptions, and state of well-being? More specifically, it was hypothesized that scores on measures of well-being, mood, empathy, sensitivity to justice, and attitudes towards older adults and community service would improve after involvement in an adapted version of the REVIVRE program as described previously.

Chapter 2: Methods

2.1 Participant Recruitment

English or French speaking undergraduate and graduate students from the University of Ottawa were recruited for this study. Students were recruited from professors' classes and the Community Engagement Navigator, a platform available to students that lists volunteer postings within the University and in the community (See Appendix A). For students recruited from professors' classes, a recruitment email was distributed to professors teaching courses at the University of Ottawa (see Appendix B). Professors were offered the option to share the recruitment materials with students online (i.e., post the recruitment flyer on their course website), share a pre-recorded recruitment presentation, or invite a member of the research team to present the program live. The research team recruitment material was shared with a variety of academic disciplines (e.g., Health Sciences, Social Sciences, Arts, Science).

2.2 Study Design

Participant data was measured before participating in the intergenerational volunteer program (i.e., baseline) and at 3 follow-up time points (i.e, four months, eight months, and 12 months/final timepoint).

2.3 Procedure

Participant recruitment commenced in September 2020 and continued on an ongoing basis. The research coordinator or a graduate student from the research team met with all interested students to further explain the research project, answer questions, and assess whether the program was a right fit for the student. Following the preliminary meeting, consent was obtained and students were asked to complete an interest survey (see Appendix C). The interest survey explored the student's language(s) of preference, availability, rationale for volunteering in a healthcare

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setting, and personal interests. Written consent and the interest surveys were obtained by email. Students were also required to show proof of a valid police record check and a certificate of completion for the TCPS:2 Core research ethics training module. If students were volunteering in person in a long-term care home, they were required to have a preliminary meeting with the volunteer coordinator and attend a virtual orientation session. In person volunteers were required to provide proof of COVID-19 vaccination and proof of a negative Tuberculosis test.

Prior to connecting with a person living with dementia, students were required to attend and complete mandatory online training modules offered by the research team. These included presentations on the aging process, the LTCH setting, person-centered care, and about dementia and how to interact with PLWD. Training continued to be offered on an ongoing basis throughout the duration of the student's placement. Students voluntarily attended continued education sessions presented by people with expertise working or interacting with PLWD (e.g., health professionals, caregivers, researchers). For instance, students could listen to the lived experiences of informal caregivers of PLWD and from students who had participated in a similar program, with an opportunity to ask questions they may have about engaging with someone who has dementia. Students could also attend a seminar exploring a video on Teepa Snow's Gems and the brain change model, followed by a discussion with the research team (Snow, 2012).

The research coordinator matched participants based on the interests and availability of the person living with dementia and student. Participating students were matched to a person living with dementia residing in LTCH or within the community. Students who connected with PLWD in a long-term care home or in the community were required to connect virtually between December 2020 to August 2021. In some instances, caregivers participated in the first meeting between paired students and PLWD to introduce their loved one and assist in fostering a

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connection. Following the initial virtual meeting, students would then connect with the person living with dementia using Zoom, Skype, or over the telephone. As of August 2021, students connecting with a person living with dementia residing in a long-term care home were able to connect in person, provided there were no active COVID-19 outbreaks. Students who had been engaging with PLWD living in LTCH were given the choice to continue meeting virtually or in-person once health directives were modified. To ensure safety of all research participants, students connecting with PLWD residing in the community continued to connect virtually regardless of COVID-19 restrictions. The research team consulted the LTCH and abided by the University of Ottawa process for in-person research activities (University of Ottawa, 2021).

Students were expected to connect with the same person living with dementia twice a week for two hours, for a total of four hours per week, over the course of eight to 12 months. In the REVIVRE pilot project, students connected with a person living with dementia twice a week for three hours over the course of 18 months (Garcia et al., 2016). Feedback from participants in the pilot project demonstrated that two hours per visit was a preferred length of time (Garcia et al., n.d.). In some instances, students would only connect with a person-living with dementia once a week if it was preferred by the individual or if the student was volunteering in a long-term care home. Students were provided a document outlining potential online activities and topics of discussion to help foster a connection with the person living with dementia that was paired with them. During the program, students tracked their hours on the Community Engagement Navigator. Upon completion of the program, students were provided a certificate outlining the total number of hours they committed to volunteering.

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2.4 Measures

Scales of assessment were offered in English or French if a version was available. For the purpose of this thesis, participants chose to complete the baseline and follow up surveys in English.

Table 1.

Measures used with student volunteers

Name of Tool	Reference(s)	Targeted Area	Subscales	Psychometric Properties ^a	French Version	Administration
Community Service Attitudes Scale (CSAS)	(Bringle et al., 2004; Shiarella et al., 2000)	Views towards engaging in community service	<ul style="list-style-type: none"> • Normative Helping Attitudes • Connectedness • Costs • Awareness • Benefits • Seriousness • Career Benefits • Intentions 	Good internal consistency with coefficient alpha scores for subscales ranging from .72 to .93.	No	Baseline and twelve months
Interpersonal Reactivity Index (IRI)	(Davis, 1980, 1983)	Empathy	<ul style="list-style-type: none"> • Perspective taking • Fantasy • Empathetic Concern • Personal Distress 	Good internal consistency with coefficient alpha scores for subscales ranging from .70 to .78.	Yes	Baseline and twelve months
Justice Sensitivity Scales (JSS)	(Schmitt et al., 2005)	Feelings towards unfair situations	<ul style="list-style-type: none"> • Victim Perspective • Perpetrator Perspective • Observer Perspective 	Good internal consistency with coefficient alpha scores for subscales ranging from .89 to .92.	Yes, but perpetrator sensitivity scale is unavailable	Baseline and twelve months
Ryff's Scale of Psychological Well-Being (PWB)	(Ryff, 1989a, 1989b)	Well-being	<ul style="list-style-type: none"> • Self-acceptance • Purpose in life 	Good internal consistency with coefficient	Yes	Baseline and twelve months

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			<ul style="list-style-type: none"> • Positive relations with others • Personal growth • Environmental mastery • Autonomy 	alpha scores for subscales ranging from .86 to .93. ^b		
Fraboni Scale of Ageism (FSA-14)	(Boudjemad & Gana, 2009; Fraboni et al., 1990)	Attitudes and perceptions towards older adults	<ul style="list-style-type: none"> • Stereotypes • Separation • Affective Attitudes 	Good internal consistency with coefficient alpha reported as .86.	Yes	Baseline, four months, eight months, and twelve months
Positive and Negative Affect Schedule (PANAS)	(Watson et al., 1988)	Mood	<ul style="list-style-type: none"> • Positive Affect • Negative Affect 	Good internal consistency with coefficient alpha scores for PA ranging from .86 to .90 and NA ranging from .84 to .87.	Yes	Baseline, four months, eight months, and twelve months

^a: Psychometric properties are presented for the English versions of the student measures.

^b: reflects internal consistency of 20-item parent scale.

Note: Psychometric properties for the English FSA-14 are unavailable. Psychometric properties have been presented for the original English FSA.

2.4.1 Perception and Attitude

2.4.1.1 The Community Service Attitudes Scale

The Community Service Attitudes Scale (CSAS) is a 46-item scale that was developed to assess university or college students' views towards engaging in community service (Perry et al., 2014; Shiarella et al., 2000). The CSAS was primarily developed through exploration and modification of Schwartz's model of altruistic behaviour to assess young adults attitudes towards engaging in volunteering initiatives (Schwartz, 1977; Shiarella et al., 2000). The CSAS is measured on a seven-point Likert-type scale that ranges from "strongly disagree" to

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“strongly agree”, or “extremely likely” to “extremely unlikely” (Shiarella et al., 2000). At the present time, no French version of the CSAS is available. The CSAS was administered at baseline and twelve months.

2.4.1.2 The Justice Sensitivity Scales

The Justice Sensitivity Scale (JSS) is a 30-item questionnaire that measures an individual's feelings towards unfair circumstances (Schmitt et al., 2005). Questions are divided into three distinct subscales: the victims' perspective, the observers' perspective, and the perpetrators' perspective (Schmitt et al., 2005). Each subscale is comprised of ten questions and participants may select from six responses ranging from “not at all” to “exactly” (Schmitt et al., 2005). A modified version of the French JSS is available, including only the victim and observer scale, and was available based on participants preference (Faccenda et al., 2008). The JSS was administered at baseline and twelve months.

2.4.1.3 The Fraboni Scale of Ageism

The Fraboni Scale of Ageism (FSA) is a 29-item questionnaire that attempts to measure attitudes and perceptions towards older adults (Fraboni et al., 1990). The FSA was developed using three dimensions: antilocution, avoidance, and discrimination, based on Alport's five levels of prejudice (Fraboni et al., 1990). The FSA is measured on a four-point Likert format scale with the following response options: strongly disagree, disagree, agree, and strongly agree (Fraboni et al., 1990). A revised and shorter 14-item version of the FSA (FSA-14) was used for the purpose of this study. The FSA-14 explores three redefined dimensions from the original FSA: stereotypes, separation, and affective attitudes (Boudjemad & Gana, 2009). A French version of the FSA-14 was available based on participants preference (Boudjemad & Gana, 2009). For this

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study, a four-point Likert scale was utilized. The FSA-14 was administered at baseline, four months, eight months, and twelve months.

2.4.2 Empathy, Well-being and Mood

2.4.2.1 The Positive and Negative Affect Schedule

The Positive and Negative Affect Schedule (PANAS) is a 20-item scale that measures two independent dimensions of mood (Watson et al., 1988). Ten words are dedicated to measuring positive affect (PA) and the other ten are intended to measure negative affect (NA) (Watson et al., 1988). Positive affect explores the degree to which an individual feels “enthusiastic, active, and alert” (Watson et al., 1988, p. 1063). An example of terms used to explore positive affect include: interested, attentive, inspired, and proud (Watson et al., 1988). Negative affect explores “subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness.” (Watson et al., 1988, p. 1063). Participants can choose from five responses including: very slightly or not at all, a little, moderately, quite a bit, and extremely (Watson et al., 1988). Based on the expected timeframe, the PANAS can be modified to ask participants how they feel at the present time, today, over the past couple days, during the past week, over the past few weeks, in the past year, or in general (Watson et al., 1988). For the purposes of this thesis project, participants were asked to respond to the PANAS how they felt at the present moment. A French version of the PANAS was available based on participants preference (Gaudreau et al., 2006). The PANAS was administered at baseline, four months, eight months, and twelve months.

2.4.2.2 Ryff's Scale of Psychological Well-Being

Ryff's Scale of Psychological Well-Being (PWB) is a questionnaire that is used to explore six dimensions of well-being including: self-acceptance, purpose in life, positive relations with

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others, personal growth, environmental mastery, and autonomy (Ryff, 1989b). Each subscale includes nine questions and participants may choose between six response options: strongly disagree, disagree somewhat, disagree slightly, agree slightly, agree somewhat, and strongly agree (Ryff, 1989b). Numerous versions of the PWB scale exist, such as: an 18 item, 42 item, 54 item, and 84 item version. The 18-item version uses three questions per dimension and has demonstrated an inability to measure the subscales related to well-being adequately (Ryff, 1989b). Thus the 18-item version can lose a substantial amount of meaningful data (Burns & Machin, 2009). For the purpose of this study, the 54-item questionnaire was used in order to accurately measure well-being while still being mindful of the time this questionnaire takes to complete. A French version of the 54-item PWB scale was available based on participants preference (Bouffard & Lapierre, 1997). Ryff's scale of psychological well-being was administered at baseline and twelve months.

2.4.2.3 The Interpersonal Reactivity Index

The Interpersonal Reactivity Index (IRI) is a 28-item questionnaire that measures four distinct characteristics of empathy (Davis, 1983). The IRI explores empathy as a multidimensional construct and can be further divided into four subscales including: perspective taking, fantasy, empathetic concern, and personal distress. Each subscale is composed of seven question, and participants select from five responses ranging from “does not describe me well” to “describes me very well” (Davis, 1983). A French and English version of the IRI was available based on the participants preference (Davis, 1983; Gilet et al., 2013). The IRI was administered at baseline and twelve months.

2.5 Demographic Questionnaire

Prior to connecting with a person living with dementia, participants were asked to complete a demographic questionnaire (see Appendix D). The demographic questionnaire gathered data on

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students' year of birth, gender, ethnicity, language capabilities, program of study, and faculty at the University of Ottawa. The demographic survey was developed after the first round of students started participating in the program and for some participants it was completed after baseline data collection. This factor did not influence the data gathered through the demographic questionnaire as responses used in the analysis are consistent and unlikely to change over the course of the program.

2.6 Meaningful Activity Survey

Student participants were asked to complete a meaningful activity survey on a weekly basis. After the student completed their visit(s) for the week, they would complete the meaningful activity survey through a Survey Monkey link. The first component of the weekly survey gathered data on the date of each visit, if devices or online platforms were used, activities completed during the session, time spent on each activity, residents' level of engagement, and general observations. The second component of the meaningful activity survey explored if students experienced any challenges with the technology used and if they were able to resolve it. The third component of the meaningful activity survey explored if the students had connected with the caregiver of a person living with dementia. If required, students could complete a section indicating if they had missed one or both visits. The meaningful activity survey served as a means for the research team to ensure that students were connecting with a person living with dementia on a consistent basis and were effectively communicating if visits were cancelled or modified. Students were asked to complete the meaningful activity survey each week regardless of whether they visited that week or not. If they missed the visit, students would indicate that they did not connect with a person living with dementia and included an explanation.

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The meaningful activity survey has been modified and improved over the course of the program through feedback from the students and the research team. The most recent version is available in Appendix E. For this study, the meaningful activity survey was only used to determine how many times students connected with PLWD. The devices/online platforms used, type of activities completed, residents' level of engagement, general observations, challenges with technology, and connections with caregivers were not assessed. The decision not to use this data for the thesis is discussed in further detail later in the thesis.

2.7 Data Analysis

Descriptive statistics were conducted on age, gender, race, language preferences, and program/faculty of study. Changes in JSS, PANAS, CSAS, IRI, PWB, and FSA-14 scores between baseline and follow-up were analyzed using dependent t-tests. Quantitative data was analyzed using IBM-SPSS (v28.0) software.

Chapter 3 Results

Between December 2020 and April 2022, a total of 11 participants completed the volunteer intergenerational program. Notably, when completing the final survey, one participant completed half of the survey resulting in 11 participants completing the FSA, PANAS, and IRI (n=11) and 10 participants for the CSAS, PWB, and JSS (n = 10). Depending on when students were recruited and matched, data collected at each timepoint varied across participants in relation to where they were in their academic programs. The timepoints (i.e.: T1, T2, T3, and T4) do not reflect a specific month when the scales of assessment were administered. Student timelines varied depending on recruitment as some students completed T1 in early fall, beginning of winter, etc.

3.1 Participant Demographic Information

The age reported of participants in the intergenerational volunteer program was 21 to 23 years of age. Participants in this study were primarily female (90.9%), identified as South Asian (n = 3, 27.3%), Asian or Pacific Islander (n = 2, 18.2%), White or Caucasian (n = 2, 18.2%), Middle Eastern (n = 2, 18.2%), North African Arab (n = 1, 9.1%), and Black or African Canadian (n = 1, 9.1%).

Table 2.

Student Demographic Characteristics

Student Variables	n	Percent (%)
Gender		
Female	10	90.9
Male	1	9.1
Race/Ethnicity		
Black or African Canadian	1	9.1
Asian or Pacific Islander	2	18.2
Middle Eastern	2	18.2
White or Caucasian	2	18.2
North African Arab	1	9.1
South Asian	3	27.3
Language ^a		

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English	10	90.9
Both English and French	1	9.1
English Fluency		
Advanced	10	90.9
Fluent	1	9.1
French Fluency		
Beginner	10	90.9
Advanced	1	9.1
Additional Fluency ^b		
Yes	10	90.9
No	1	9.1
Program of Study		
Nursing	1	9.1
Health Sciences	7	63.6
Psychology	2	18.2
Health Sciences – Graduate level	1	9.1
Faculty		
Health Sciences	8	72.7
Science	1	9.1
Social Sciences	2	18.2

^a Reflects the language participants reported using most often.

^b Reflects the number and percentage of students who answered “yes” to being fluent in another language other than English or French.

A majority of the participants indicated that the language they use most often is English (90.9%) and considered their fluency in English to be advanced (90.9%). For French, participants indicated their fluency level was beginner (90.9%). Ten students indicated that they were fluent in a language other than English or French (90.9%). A majority of the sample identified their faculty of study as Health Sciences (72.7%). Participant demographic information is available in Table 2.

3.2 Frequency and Type of Volunteering

Participants (n = 11) reported volunteering on average 40.91 times over the course of the program (SD = 16.36). The minimum reported value was 15 visits, and the maximum reported value was 75 visits. Most participants connected with a person living with dementia virtually (n = 10, 90.9%). Student participants visited once or twice per week based on availability, student

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schedules, and the preference of the person living with dementia and their caregiver. The data collected to report the number of times student participants volunteered was not always consistently collected through the weekly meaningful activity survey. The implication of this finding is discussed further in the limitation section of this thesis. Of the participants who connected virtually, most indicated that they connected with a person living with dementia living in the community (n = 9, 81.8%). One participant (n = 1, 9.1%) connected virtually with a person living with dementia in a long-term care home. Of the total sample, only one participant (n = 1, 9.1%) connected with a person living with dementia virtually living in a long-term care home and transitioned into an in-person connection over the course of the program.

3.3 Results from Positive and Negative Affect Schedule

Positive affect and negative affect mean scores decreased at each timepoint between T1 and T4. For positive affect, results demonstrated that there was no significant difference at T2 and T3. There was a significant decrease in positive affect between T1 (M = 37.27, SD = 8.84) and T4 (M = 31.27, SD = 9.69); $t(10) = 2.650$, $p = .024$. For negative affect, results demonstrated that there was no significant difference at any timepoint. Results are available in Table 3 and Table 4.

Table 3.

Positive and Negative Affect Schedule Student Mean Scores

Subscale	T1		T2		T3		T4	
	M	SD	M	SD	M	SD	M	SD
PA	37.27	8.84	36.36	7.06	36.00	6.70	31.27	9.69
NA	18.64	4.74	17.36	6.64	17.20	7.66	16.64	7.23

Note: n=11. For T3, n =10 on the negative affect (NA) and positive affect (PA) scales. Scores on the negative affect and positive affect subscales can range from 10 – 50.

Table 4.

Paired Samples T-Test Results from the Positive and Negative Affect Schedule

Subscale	T1 to T2			T1 to T3			T1 to T4		
	t	df	p	t	df	p	t	df	p
PA	.650	10	.530	.000	9	1.000	2.650	10	.024*

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NA	.552	10	.593	.845	9	.420	.733	10	.480
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Note: n=11. For T3, n =10.

*p < .05

3.4 Results from Interpersonal Reactivity Index

There was no significant difference between T1 and T4 for the Perspective-Taking Scale, Fantasy Scale, Empathetic Concern Scale, or Personal Distress Scale. Results are available in Table 5.

Table 5.

Paired Samples T-Test Results from the Interpersonal Reactivity Index

Subscale	T1		T4		t	df	p
	M	SD	M	SD			
PT	20.18	4.00	19.90	2.02	.273	10	.791
FS	18.64	5.41	16.27	5.41	1.380	10	.198
EC	21.82	3.19	21.64	3.91	.329	10	.749
PD	12.82	3.84	13.00	2.93	-.219	10	.831

Note: n = 11. The minimum score possible is 0 and the maximum is 28. PT = Perspective-Taking. FS = Fantasy. EC = Empathetic Concern. PD = Personal Distress.

*p < .05

3.5 Results from Ryff's Scale of Psychological Well-being

There was no significant difference between T1 and T4 for the autonomy, environmental mastery, personal growth, positive relations with others, and self-acceptance subscales. For the purpose in life subscale, results demonstrated there was a significant change between T1 (M = 41.10, SD = 8.70) and T4 (M = 37.50, SD = 8.03); $t(9) = 2.260$, $p = .050$. Results are available in Table 6.

Table 6.

Paired Samples T-Test Results from Ryff's Scale of Psychological Well-Being

Subscale	T1		T4		t	df	p
	M	SD	M	SD			
Autonomy	33.80	6.70	33.70	4.40	.059	9	.955

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Environmental Mastery	36.70	5.87	34.00	7.56	1.104	9	.298
Personal Growth	45.50	4.77	46.60	3.31	-.751	9	.472
Positive Relations with Others	38.90	10.56	38.70	5.76	.056	9	.957
Purpose in Life	41.10	8.70	37.50	8.03	2.260	9	.050*
Self-Acceptance	33.60	10.95	33.20	9.10	.131	9	.899

Note: n = 10. The minimum score possible is 9 and the maximum is 54.

*p < .05

3.6 Results from the Justice Sensitivity Scales

There was no statistically significant difference between T1 and T4 for the victim sensitivity scale, the observer sensitivity scale, or the perpetrator sensitivity scale. Results are available in Table 7.

Table 7.

Paired Samples T-Test Results from the Justice Sensitivity Scales

Subscale	T1		T4		t	df	p
	M	SD	M	SD			
Victim	2.51	1.19	2.44	1.12	.207	9	.841
Observer	2.65	1.40	2.70	.90	-.150	9	.884
Perpetrator	2.72	.97	2.86	.89	-.500	9	.629

Note: n = 10. The minimum score possible is 0 and the maximum is 5. Victim = Victim Sensitivity Scale. Observer = Observer sensitivity scale. Perpetrator = Perpetrator Sensitivity Scale.

*p < .05

3.7 Results from the 14-Item Fraboni Scale of Ageism

Results demonstrated there was no significant difference between T1 and T2 and T1 and T4. There was a significant change between T1 (M = 19.91, SD = 3.42) and T3 (M = 17.10, SD = 2.88); $t(9) = 3.10$, $p = .013$. Results are available in Table 8 and Table 9.

Table 8.

14-Item Fraboni Scale of Ageism Student Mean Scores

Scale	T1		T2		T3		T4	
	M	SD	M	SD	M	SD	M	SD
FSA-14	19.91	3.42	18.27	3.32	17.10	2.88	17.27	3.52

Note: n = 11. At T3, n = 10. The minimum score possible is 14 and the maximum is 56.

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Table 9.

Paired Samples T-Test Results from the 14-Item Fraboni Scale of Ageism

Scale	T1 to T2			T1 to T3			T1 to T4		
	t	df	p	t	df	p	t	df	p
FSA-14	1.354	10	.205	3.10	9	.013*	1.862	10	.092

Note: n = 11. For T3, n = 10.

*p < .05

3.8 Results from the Community Service Attitudes Scale

Results demonstrated there were no significant changes in normative helping attitudes, connectedness, costs, awareness, benefits, seriousness, and intentions. There was a significant change in how students perceived their career benefits between T1 (M = 6.45, SD = .685) and T4 (M = 5.65, SD = .784); $t(9) = 2.954$, $p = .016$. Results are available in Table 10.

Table 10.

Paired Samples T-Test Results from the Community Service Attitudes Scale

Subscale	T1		T4		t	df	p
	M	SD	M	SD			
Normative Helping Attitudes	6.24	.770	6.25	.746	-.084	9	.935
Connectedness	6.14	1.10	5.95	1.10	.824	9	.431
Costs	3.58	1.75	3.78	1.26	-.399	9	.699
Awareness	6.50	.611	6.31	.816	.881	9	.401
Benefits	6.33	.755	5.63	1.022	2.143	9	.061
Seriousness	5.80	.910	5.70	.910	.418	9	.685
Career Benefits	6.45	.685	5.65	.784	2.954	9	.016*
Intentions	6.20	.820	5.93	.858	1.100	9	.300

Note: n = 10. The minimum score possible is 1 and the maximum is 7.

*p < .05

Chapter 4 Discussion

4.1 Interpreting the Data

The objective of this study was to evaluate the impact of an intergenerational volunteer program with PLWD on various university student characteristics. Specifically, this study was designed to explore how participating in an eight-to-twelve-month intergenerational volunteer program broadly impacts university student's perceptions, attitudes, and general state of well-being.

Results demonstrated that students experienced a significant decrease in positive affect after completing the program. Students did not experience any significant change in negative affect. Positive affect is considered the degree to which an individual feels "enthusiastic, active, and alert" (Watson et al., 1988, p. 1063). A student experiencing high positive affect would have more energy and increased concentration and enthusiasm (Crawford & Henry, 2004; Watson et al., 1988). Inversely, experiencing low positive affect is considered a state of "sadness and lethargy" (Watson et al., 1988, p. 1063). Thus, over the course of the program, students demonstrated that they had a shift in mood and felt increased levels of sadness and a lack of energy. Perhaps relatedly, student participants in this intergenerational volunteer program, also demonstrated a decrease in purpose in life between baseline and the end of the program. Experiencing high purpose in life is when an individual has sense of purpose and experiences meaning in life (Ryff, 1989b). Experiencing a high purpose in life is understood as having a sense of direction and "aims and objectives for living" (Ryff, 1989b, p. 1072). Experiencing low purpose in life indicates that an individual is experiencing a lack of meaning in their lives, minimal goals for the future, and "has no outlook or beliefs that give life meaning" (Ryff, 1989b, p. 1072).

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Numerous factors may influence why students experienced a shift in positive affect and purpose in life. Undeniably, the unprecedented COVID-19 pandemic has significantly impacted young adults in a diverse series of ways. The student participants whose data has been analyzed as a part of this thesis project would have been connecting with a person living with dementia during a period in which strict public health restrictions were enforced and regulations were continuously changing (Canadian Institute for Health Information, 2022). A series of public health measures were implemented to mitigate the spread of the virus such as social distancing, strict lockdowns, and ceasing in-person activities (Elharake et al., 2022). For students in particular, they would have experienced additional stressors as in-person learning at university centres was modified to virtual settings (Atlam et al., 2022). Additionally, student participants in the intergenerational program would have been connecting with a person living with dementia who may also be struggling during the pandemic. Residents living in LTCH may have experienced increased feelings of frustration, loneliness, and distress as a result of the lockdown measures and lack of social interaction (Ickert et al., 2021). More specifically, PLWD residing in LTCH may have experienced additional challenges as they may not have been aware why certain restrictions were imposed, such as visitor restrictions, resulting in increased responsive behaviours (Ickert et al., 2021). Moving out of the long-term care setting, PLWD residing in the community and their caregivers experienced additional stressors including difficulty accessing necessary social and community support (Roach et al., 2021). Thus, student participants were connecting with a group of individuals who were likely also experiencing negative thoughts and emotions during the COVID-19 pandemic. In terms of the previous pilot project (REVIVRE) that guided this study, participants connecting in this program were permitted to connect in-person and engage in a variety of activities including going on walks together, playing games, or assisting during mealtime (Garcia et al., n.d.). Facilitating

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intergenerational programs online limits the range of activities participants can engage in and requires significant planning and logistics to ensure participants have access to tablets and Wi-Fi. Notably, the student participants were able to overcome the aforementioned challenges and implement creative activities to foster a connection with a person living with dementia. The implication of this finding is that despite engaging in meaningful social connection on a regular basis, connecting virtually may not have been able to mediate the challenges students experienced during the current global climate.

Another student characteristic that was strongly impacted over the course of the program was how students perceived their career benefits. The career benefits subscale explores if students perceive that their career prospects will benefit from volunteering (Shiarella et al., 2000). In this study, the results indicated that there was a decrease in how students perceived their careers would benefit from volunteering by the end of this program. Various factors may have influenced why students perceived their careers would not benefit as much post-participation, largely as a result of the way the study was implemented. Initially, the study was intended to be conducted in-person where students would have been able to enter the LTCH, meet staff members and fellow volunteers, and gain experience connecting with individuals in the healthcare sector. Of the student sample, most participants connected with a person living with dementia virtually in the community (n=9). Only one student connected with a person living with dementia virtually living in a long-term care home and one student connected virtually and in-person in long-term care home.

Students connecting with PLWD virtually in the community would not have been provided an opportunity to meet healthcare workers including nurses, personal support workers, or long-term care administrators. Largely, their volunteer circle would have only involved caregivers, PLWD, and the research team. Besides monthly mini-conferences, students would have not met

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individuals working in healthcare and gerontology and all mini-conferences were held virtually. Only two questions are posed to explore students perceived career benefits including “I would make valuable contacts for my professional career” and “I would gain valuable experience for my resume” (Bringle et al., 2004; Shiarella et al., 2000, p. 292). These questions may not have fully captured the students experience of connecting with a person living with dementia in a virtual setting. Considering the COVID-19 pandemic is an ongoing challenge, the implementation of virtual programs may continue regardless of public health restrictions. Thus, further exploration is required to fully understand why students perceived that their virtual volunteering experience did not provide future career benefits.

Another factor that may influence why students perceived their career benefits as less favorable at the end of the program could be contributed to their scores at baseline. The CSAS utilizes a 7-point scale with responses ranging from strongly disagree to strongly agree, or extremely unlikely to extremely likely (Shiarella et al., 2000). At baseline, students mean scores were 6.45 (SD = .685) indicating that they felt that participation in the intergenerational volunteer program would benefit their careers. At the end of the program, students mean scores were 5.65 (SD = .784) which still demonstrates a high score reflecting that students felt as though participation would benefit their careers. Students may have experienced a decrease in perceived career benefits as the mean scores reported at the beginning of the program were very high and would have been challenging to improve upon.

Another student characteristic that changed during the program was students’ attitudes towards older adults. The only significant change occurred at the eight-month mark demonstrating that students’ views towards older adults became less negative. This change in students attitudes towards older adults has been a focal point in evaluating intergenerational programs and is

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supported by previous research demonstrating that active participation is an effective method to change students attitudes (Blais et al., 2017; Leedahl et al., 2019; Lokon et al., 2012, 2017; Penick et al., 2014; Rubin et al., 2015). At the present time, there is significant variation in the length and duration of intergenerational programs (Gerritzen et al., 2020). For university students, participation in intergenerational programs typically operates over the course of an academic term, approximately eight to twelve weeks (Jarrott et al., 2021). Despite the short duration, intergenerational programs that have been implemented (e.g., four to twelve week long programs) have reported positive changes in students attitudes towards aging and older adults (Gonzales et al., 2010; Leedahl et al., 2019; Lokon et al., 2012; Penick et al., 2014). In this study, change was not captured at the four-month mark and was only reported at the eight-month mark. A factor that may have influenced why change was not visible within the students at an earlier time point was the method in which the program was facilitated. Minimal data is available surrounding what impact connecting virtually has on university students' participating in intergenerational programs with PLWD. The implication of this finding is that consideration should be given to increasing the duration of virtual intergenerational programs to ensure that student participants can experience the positive effects of participation. More importantly, research surrounding the effectiveness of virtual programs on modifying student characteristics should be further explored to determine if different program structures and durations are required for virtual programs to yield positive change.

Despite the challenges that young adults experienced over the course of the program, the students were still able to engage in meaningful connections with PLWD. This is highlighted by the fact that despite reaching the twelve-month mark of the program, some student participants connected with the research team and inquired if they could continue to connect with the person

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living with dementia that they connected with in the program. This suggests that though students did experience negative emotions over the course of the program, they still perceived their participation and engagement to be meaningful. Continuation of the volunteer program outside of the eight-to-twelve-month commitment demonstrates that students felt and experienced a meaningful connection with a person living with dementia that may not have been captured using the scales of assessment.

Overall, the hypotheses set out in this study were not supported. Some of the results retrieved from this program suggest that students were impacted through participating in a volunteer intergenerational program with PLWD. Despite experiencing challenges, students reported less ageist attitudes towards older adults. Though the study utilized a small sample size, the results suggest that students can still benefit from connecting with PLWD in a virtual setting. Further research is required to substantiate the results retrieved from this study.

4.2 Limitations

One limitation of the project is the small sample size. Recruitment commenced in September 2020 and data collection for the purposes of this thesis ended April 15, 2022. In this time period, 11 students completed the program. The limited sample size is largely a result of challenges experienced during the COVID-19 pandemic, including delays in connecting participants in a timely manner. Despite the small sample size, the results are still relevant as this project is ongoing.

Additionally, six participants in this sample started connecting with a person living with dementia in December 2020 prior to the ethics modification requesting the addition of five of the scales of assessment was approved. After ethics approval was received in January 2021, the six students were sent the baseline survey. All students starting the program after January 2021 were

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sent the baseline questionnaire prior to completing the mandatory training requirements and connecting with a person living with dementia.

Another limitation of the study is there were changes required to the program as the pandemic progressed. Initially, this study was intended to be conducted in person in LTCH. Unfortunately, the implementation of public health measures to halt the spread of COVID-19 required no in-person visits in LTCH. This required the research team to adapt to the restrictions to ensure that PLWD and caregivers would still be able to benefit from additional support from a young adult at a time when social connections were crucial. Notably, the research team had to modify the design of the program as new information came to light and restrictions were increased or lessened. Thus, the impact of COVID-19 and the change in program structure may have impacted the results. Despite these modifications, the research team has learned valuable knowledge and strategies on how to implement intergenerational programs in a virtual setting that can be applied to future programs.

Another limitation of the study is the validity of the number of times each student connected with a person living with dementia. The research team relied on the participants completing the meaningful activity survey on a weekly basis to track their progress. Missing data from the weekly meaningful activity survey poses a significant problem as this survey was used to determine if students were in fact connecting with a person living with dementia when they were supposed to. If students were missing surveys because they were not volunteering, the research team would need to intervene as not following through on their commitment significantly impacts PLWD and their caregivers who are depending on these visits. If students continuously missed surveys, the research team sent email reminders to complete their entries. In some instances, students would not complete the weekly surveys until a few weeks had passed, despite being sent

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reminders. Therefore, this data should be interpreted with the understanding that the results may not accurately reflect how many times students truly volunteered. As a result of this challenge, the research team reminded students of the importance of completing this survey in a timely manner and highlighted that this survey needs to be completed regardless of if they visited that week. It is important to ensure that students are completing their scheduled visits and collect data surrounding their experience while also being mindful of not placing additional burden on participants. This implication is discussed in further detail in the future directions chapter of this thesis.

Another limitation arises from implementation of the FSA-14 scale. The FSA-14 was developed in French and the psychometric properties of this scale are only available for the French version. For the purposes of this study, the FSA-14 was administered using a four-point Likert scale instead of the intended five point Likert type scale (Boudjemad & Gana, 2009). Thus, results generated from analysis of the FSA-14 should be interpreted with caution as further research is required on administration of the scale in English.

Another limitation of the interpretation of the students' experiences in this program is that no analysis was performed on the duration and type of activities the dyads engaged in. In this study, only the number of times students volunteered, the ways in which students connected with a PLWD (e.g., virtual or in-person), and the scales of assessment were analyzed. Further exploration into the types of activities that PLWD and students participated in would offer insight into their level of engagement and meaningfulness of their connections and experience.

4.3 Future Directions

The implementation of this program highlights the importance of conducting intergenerational research and fostering programs to connect PLWD with young adults. This study adds to the current body of knowledge by focusing on how forming meaningful relationships with

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a person living with dementia over an extended period impacts university students. Based on the results from this study, future directions have been highlighted that could improve the experience of participants and further assess the experiences of university student participants in intergenerational programs.

4.3.1 Improving the Experience of Participants

A future direction that could improve the experience of participating in an intergenerational program from the student perspective is creating an app or platform to streamline the process of recruiting, matching, administering surveys, and communicating with participants. The current process requires significant time and effort from the research team to adequately screen students, ensure all training is complete, match them appropriately to a person living with dementia, administer weekly and follow up surveys, and monitor their volunteering status. If an app were available that could track the availability of participants and permit caregivers, PLWD, and students to be more engaged in the matching process by selecting each other instead of being assigned, it would remove a significant task from the research team and allow for all participants to feel more engaged in the process. Additionally, developing an app that could administer weekly and follow up surveys could assist in ensuring students complete these requirements in a timely manner as the surveys would be readily available on their mobile devices.

Additionally, future research projects should aim to recruit a more diverse selection of participants. Notably, this study had a small sample size (n=11). Of the total sample, 10 of the participants identified as female and only one participant identified as male. As well, most of the participants identified as being part of the faculty of health sciences (n=8). Recruiting more male students, as well as students from a variety of faculties (e.g., Education, Arts, Engineering, Law, Business, Social Sciences) adds value to the program. Having a more diverse sample will permit

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PLWD to have an opportunity to connect with someone with similar interests and allow students from various backgrounds to gain experience working with older adults, develop new skills, and learn from the experience.

4.3.2 Exploring the Student Experience

The results retrieved from this study provide insight into how university students are impacted after participating in an intergenerational volunteer program with PLWD. As a result of the COVID-19 pandemic, students were required to halt in-person classes and transition to unfamiliar online learning platforms (Atlam et al., 2022). The total shift to a virtual environment in many facets of their lives could have resulted in students feeling overburdened by connecting online. All 11 participants in this study started and completed the program between December 2020 and April 2022. As this intergenerational program is still ongoing and actively connecting PLWD to students, a new sample of students are available to analyze that participated under different circumstances. After April 2022, students were more likely to connect with PLWD in-person in LTCH. Future research should take this opportunity to determine if the same results are seen in students who connected predominantly in person as opposed to online. As social connections and events return to an in-person environment, an opportunity exists to assess if the same results could be viewed if students were not always connecting virtually and had more in-person activities available.

Another direction for future research to further understand the university student experience is including analysis of qualitative data. Each week, students were asked to complete the meaningful activity survey which explored what activities the students engaged in with PLWD. Options were left very open for students to participate in activities that they felt would interest the person living with dementia with guidance from the caregiver. Notably, students engaged in a

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variety of activities that required different levels of preparation and engagement on the young adult's part. In this study, only the scales of assessment were analyzed to offer insight into how students were impacted through participating in the volunteer intergenerational program. Utilizing a mixed methods approach by administering an open-ended survey, interview, or focus group would permit the research team to explore the meaningfulness of students' connections and experiences and explore why some students wanted to continue volunteering beyond the twelve-month period. Implementing a mixed methods approach would also provide context into how and in what way students experienced the program overall.

Finally, this research study permitted students to engage with PLWD and complete activities they were interested in with minimal guidance. Some additional educational opportunities were provided through training programs prior to connecting with a person living with dementia or through monthly mini conferences. Future research aiming to measure the impact of volunteering in intergenerational programs on university students should consider implementing an intervention that helps change student characteristics. For example, attitudes towards older adults were measured in this study using the FSA-14 at four timepoints. However, the research team did not implement a protocol, provide additional resources, or implement training modules that would attempt to change students' attitudes towards older adults. Utilizing an intervention program would permit for researchers to learn what training or structure is required to help foster more positive attitudes towards older adults among students.

4.4 Lessons Learned: A Path Forward

The implementation of this program has provided valuable insight into the vast experiences of university students participating in an intergenerational volunteer program with PLWD. Though this program was initially intended to be facilitated in person, the modification to a virtual

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environment yielded data on how intergenerational programs can continue to operate in an online setting. Numerous suggestions have been derived from the students' experiences to hopefully guide the success of future virtual intergenerational programs.

A key lesson that the research team has learned through implementing this program is the importance of recognizing the time commitment required to facilitate activities. Many aspects of the program require frequent communication between participants and the research team, as well as communication within the team. It requires significant time for the research team to onboard new students into the program, ensure all training has been completed, match participants, and verify surveys are being submitted. It is imperative that future research studies and community initiatives are aware of the significant time required to support intergenerational programs. Notably, for the research team to support this ongoing study, it required a full-time research coordinator and assistance from volunteers. As this intergenerational program expands to include more participants in a variety of settings, more time and resources are required to support the participants and the program. One suggestion that decreased the amount of work for individuals on the team was implementing a weekly student check-in. The research coordinator and any research team members who assisted with the student component met on a weekly basis to flag any potential challenges. In this meeting, the team was able to highlight specific participants that needed surveys or reminders to be sent as well as relevant updates. These meetings served as an opportunity for the team to highlight any participants that were not completing their meaningful activity surveys, so that the research coordinator could follow up in a timely manner to see if any additional support was needed. Structuring meetings like this not only promotes a team environment but ensures that all members stay informed of any changes.

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Another lesson learned through implementation of this program is finding methods to increase student retention in the program. It is important to recognize that significant time is involved to participate and facilitate the program for both the student participants and the research team. It takes significant time for the research team to set up training for students, provide all resources necessary to engage in the program, and upon completion of all preliminary requirements, match participants to a person living with dementia. As referenced in Appendix C, each student completes an interest survey, as does the person living with dementia, which requires time to review submitted documents and match participants based on common interests. Therefore, it is challenging when students drop out before even starting the program or within the first couple of weeks because they did not fully grasp the time commitment required. It is important that student participants recognize that their participation in the project directly impacts PLWD and their caregivers. Participants need to understand that engaging in this volunteer program is not a short-term commitment but is a long-term commitment that takes between eight to twelve months to complete. Therefore, the research team suggests that during the preliminary meeting with the student prior to signing the consent form, it is vital that students clearly understand the duration and time commitment required to participate in the volunteer program in order for the research team to weed out any individuals early on before expending unnecessary energy into the onboarding process.

Notably, the research team recognizes the time commitment required on their part to facilitate the program, it is also equally as important to recognize the time commitment required from the students. The research team recognizes that it is a significant request to ask students to volunteer four hours per week and complete weekly and follow up surveys. It is important to acknowledge that this one volunteer program is likely not the only weekly commitment students

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are active in. As an example, all participants in this sample were students who have their own unique course requirements and deadlines. It is likely some of the students may also have one or more part-time jobs, other volunteer positions, or even their own caregiving responsibilities. While it is important to implement strategies to increase student retention in the program, it is equally as important to consider the workload that students are undertaking as participants in this research study. It is imperative that when asking students to participate in a time-intensive initiative like this program, modifications and consideration are given to reducing any additional burden placed on students. One noted area that related to students dropping out of the program was the time required to complete weekly surveys, read email correspondence from the research team, and connect with a person living with dementia. An area that was altered over the course of the program to ease the burden on students was reformatting emails to highlight the most relevant information. If students received an email that required them to complete the meaningful activity survey or additional surveys, they were constructed as easy to read and automatically drew attention to the provided links so that students could complete the surveys. Additionally, the research team recognized that each student has individual course requirements such as papers, midterms, and final exams that are often due in the same week. In addition, students deserve time-off to relax, recuperate, and meet their own psychosocial needs. In order to reduce any additional stress, the research team highlighted that taking time off from volunteering was possible at different timepoints. The only request the research team made was that if the student needed to take time-off from volunteering for whatever reason, this was communicated to the caregiver and the research coordinator to make alternative arrangements. Further exploration into how to improve students' experiences and reduce any additional burden or stress associated with the volunteer program should be explored.

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Indeed, learning from experiences, and altering the program as deemed necessary has been a focal point and an opportunity to learn the best practices to ensure a successful program. This is very important, as the overarching goal of implementing a volunteer intergenerational program is ensuring sustainability. Finding methods to streamline the facilitation of this program has larger implications for other intergenerational programs and the lessons learned through this project can hopefully be used as a guide for other researchers.

Chapter 5 Conclusion

In conclusion, the following research study experienced ample challenges through implementation of the program during the COVID-19 pandemic. Initially, this study was intended to be conducted in-person in LCTH located in the Ottawa area. The research team chose to continue the program and modify the study to be conducted online as it was recognized that PLWD in LTCH and the community, caregivers, and young adults may benefit from receiving social interaction virtually. Through modifications to the structure of the program, the research team was able to connect PLWD to students at the University of Ottawa from a variety of academic disciplines. Though the sample size recruited between September 2020 and April 2022 (n=11) remains too small for conclusions to be drawn on the students' experiences, the data suggests that students experienced adverse challenges. These challenges may be related to the detrimental impact of COVID-19 on students lives, the impact of the intergenerational program itself, or the means in which student participants connected to PLWD. The data retrieved from this study demonstrates that future research is required to understand how and in what way students' experiences are impacted by volunteering in intergenerational programs during a pandemic. As the program is continuing an ongoing basis, an opportunity exists to further analyze the data retrieved with a larger sample size.

Future research should aim to explore the relationship between young adults and PLWD utilizing a mixed methods approach to gather data that demonstrates changes within the young adult and provides an in-depth exploration into the meaningfulness of the relationship. Additionally, further analysis should be conducted on the activities that PLWD and young adults completed during the program, their motivations for participation, and how they perceived the experience. Finally, further exploration into methods to promote sustainability of the program

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outside of a research context is required to ensure that intergenerational volunteer programs can continue to operate effectively within the community.

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Appendices

Appendix A: Example of an Official Posting of the Volunteer Program on Community

Engagement Navigator

***Most recent posting on the community engagement navigator has been included below. Some modifications have been applied and are reflected in the posting.

Placement Summary

Placement number: 188

Session: 2023, Winter

English Title: EntourAGE

French Title: EntourAGE

Community Partner: uOttawa_Faculty of Health Sciences_REVIVRE! project

Community Partner Website: N/A

Division: N/A

Details

Placement Type: Open for all students

Placement Status: To be approved

Hours required: 64

French Description: SVP vous référer aux détails en anglais.

English Description:

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About the EntourAGE program

The aim of this research study is to evaluate a person-centered volunteer program where persons living with dementia can engage in one-on-one interactions with high-school, college and university students. This study is part of the EntourAGE program. The program is based on a project called REVIVRE which was pilot tested in Ottawa and St. Catharines. The EntourAGE program will be scaled-up by expanding the program to other locations based on lessons learned from the pilot study and by enhancing the evaluation of the program. Specifically, this research will examine the impact of the program on persons living with dementia (e.g., quality of life), their caregivers (e.g., stress) and high-school, college, and university students (e.g., positive attitudes towards older adults).

HOW CAN YOU HELP

Each student will be matched with a resident based on common interests and preferred language. As a student, you will be asked about these interests in a survey when the study begins.

Each student will have the opportunity to be matched in-person or virtually. Students who choose to volunteer in-person will have a list of participating sites where they can choose to be matched (i.e., long term care homes, retirement homes, adult day care programs and community organizations serving older adults). Each student will be matched with a person living with dementia based on common interests and preferred language. As a student, you will be asked about these interests in a survey when the study begins

Each student will visit the person living with dementia twice a week for 2 hours, for a total of 4 to 12 months. This means you should be volunteer for, on maximum, 4 hours per week in 2-hour blocks. During the study, students will also be invited to participate in a mini-conference every

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month with a panel of health professionals, caregivers of people living with dementia, and dementia experts. The goal of the mini-conference is to answer any questions that volunteer may have regarding the resident or their experiences, and to provide ongoing training and support from an interdisciplinary group of professionals

Note:

- 1) If there are any COVID-19 restrictions in effect, all interactions will be done virtually. Students will connect with both the caregiver. Depending on the resident's needs, students will either have virtual meetings with the resident independently, both the caregiver and resident, or the caregiver.
- 2) For in-person visits, the students will meet with the resident only. Students may need to wear masks, maintain 2 metre-distances from residents, and get frequent covid-19 testing.

Time Frame: AM, PM, Evening, Weekend, Other (Flexible hours – to be determine)

Contacts

Placement Contact: Robitaille, Annie

Email Address: Redacted

Telephone: N/A

Contact Managed by: Redacted

Placement Managed by: N/A

Placement Qualifications

Placement Language: English or French

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Candidate requirements: No specific job requirements needed for this job

Security Clearance: Police Record Check (CRC)

Candidate requirement (French): SVP vous référer aux détails en anglais.

Candidate Requirements (English):

- Undergraduate French or English-speaking students from any program at the University of Ottawa. Also accepting students who speak additional languages.
- Available for a minimum of 4 months or up to one year, 4 hours a week (2-hour visits twice a week)
- Satisfy all volunteer requirements set by the centres. May include the following: pre-screening interview, police record check, a research ethics course, and mandatory orientation training. When in-person visits commence, additional safety measures will need to be followed.

Placement Learning Objectives: Enhance social awareness and active citizenship

Placement Location: Home

Placement Sectors: Health

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Appendix B: Participant Recruitment Email Shared with University of Ottawa Professors

Subject line – Inquiry: Sharing Recruitment Material with [title of course]

Hello Professor,

My name is Michaela and I'm a graduate student in the Faculty of Health Sciences working under the supervision of Dr. Annie Robitaille. We are looking for university students to participate in an 8-12-month volunteer program at the [name of LTCH]. The aim of this research project is to develop and evaluate a person- centered volunteer program within long-term care homes where persons living with dementia can engage in one-on-one interactions with university students.

May I recruit students from your class? If you're willing, I can either:

1. Send you the recruitment poster to post on Brightspace
2. Send you a 5- minute pre-recorded recruitment presentation to post on Brightspace
3. Give a 5-minute recruitment presentation during a lecture or your choice

Please let me know which option works best for you. Do not hesitate to contact me if you have any questions or concerns. I have copied Dr. Annie Robitaille, the principal investigator, and [name of research coordinator], the research coordinator on this email.

Kindest regards,

Michaela Adams (She/Her)

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Appendix C: Interest Survey (Student)

1. Name of Student _____
2. Telephone Number _____
3. Email Address _____
4. With which gender do you identify? _____
5. If under 18, indicate your age and birthdate _____
6. Language (s)

	Language(s) understood	Language(s) spoken
English	<input type="checkbox"/>	<input type="checkbox"/>
French	<input type="checkbox"/>	<input type="checkbox"/>

Please specify and other language: _____

7. Emergency Contact's Name _____
8. Emergency Contact's Telephone Number _____
9. Emergency Contact's E-mail Address _____
10. Please Indicate your current availabilities

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00am – 12:00pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12:00pm – 4:00pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4:00pm – 8:00pm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. What do you hope to gain by participating in the study? What do you think you will get by participating in the study? _____

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12. Please detail your experiences related to work and volunteering. Remember to indicate your long-term care experiences. You can also include your personal experiences related to loved ones with dementia, who have had a heart attack or who are living with other chronic conditions that affect adults. _____

13. Please select as many hobbies/interests that apply

- | | | | |
|--|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/> Family | <input type="checkbox"/> Parties | <input type="checkbox"/> Restaurant | <input type="checkbox"/> Cards |
| <input type="checkbox"/> Music | <input type="checkbox"/> Travel | <input type="checkbox"/> Shopping | <input type="checkbox"/> Golf |
| <input type="checkbox"/> Sporting Events | <input type="checkbox"/> Swimming | <input type="checkbox"/> Cycling | <input type="checkbox"/> Crafts |
| <input type="checkbox"/> Friends | <input type="checkbox"/> Dance | <input type="checkbox"/> Cinema | <input type="checkbox"/> Cooking |
| <input type="checkbox"/> Sports | <input type="checkbox"/> Cottage | <input type="checkbox"/> Exercise | <input type="checkbox"/> Gardening |
| <input type="checkbox"/> Bowling | <input type="checkbox"/> Boats | <input type="checkbox"/> Driving | <input type="checkbox"/> Museum/Galleries |
| <input type="checkbox"/> Singing | <input type="checkbox"/> Conference | <input type="checkbox"/> Reading | <input type="checkbox"/> Writing |
| <input type="checkbox"/> Watching television | <input type="checkbox"/> Painting | <input type="checkbox"/> Sewing | <input type="checkbox"/> Talking on the phone |
| <input type="checkbox"/> Animals | <input type="checkbox"/> Knitting | <input type="checkbox"/> Collecting | |

14. Are there other hobbies, interests, skills or talents you would like to share? We'd like to be creative in what we offer residents! _____

15. What interests you with regards to healthcare? _____

16. Do you want to pursue a career in health care? _____

- a. If you answered YES to the question above, what are your goals? (e.g. occupation, research speciality in particular, etc.) _____

17. Comments _____

If you have any question please contact:

[Name of Research Coordinator], Research Coordinator at [Email of Research Coordinator].

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Appendix D: Student Demographic Questionnaire

Demographic Survey (Student)

1. Participant Code _____
2. What year were you born? _____
3. Which gender do you most identify with?
 - a. Male
 - b. Female
 - c. Prefer not to answer
 - d. Not listed (please specify) _____
4. What race of ethnicity do you identify with?
 - a. Indigenous
 - b. Hispanic of Latino
 - c. Black or African Canadian
 - d. Asian or Pacific Islander
 - e. Middle Eastern
 - f. White or Caucasian
 - g. Prefer not to answer
 - h. Not listed (please specify) _____
5. Which is the language you use most?
 - a. English
 - b. French
 - c. Both English and French
 - d. Prefer not to answer

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- e. Not listed (please specify) _____
6. What is your fluency in English?
- a. Beginner
 - b. Intermediate
 - c. Advanced
 - d. Prefer to not answer
 - e. Other (please specify) _____
7. What is your fluency in French?
- a. Beginner
 - b. Intermediate
 - c. Advanced
 - d. Prefer to not answer
 - e. Other (please specify) _____
8. Are you fluent in another language other than English or French?
- a. Yes
 - b. No
 - c. Prefer to not answer
9. What is your program of study? _____
10. Which faculty is your program of study a part of?
- a. Arts
 - b. Education
 - c. Engineering
 - d. Health Sciences

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- e. Law – Civil Law
- f. Law – Common Law
- g. Medicine
- h. Science
- i. Social Sciences
- j. Telfer School of Management

11. Do you have previous knowledge about Alzheimers disease and other types of dementias?

- a. I have taken a full course about dementia/I know a lot about dementia.
- b. I have briefly talked about dementia in a class/I know a little about dementia.
- c. I don't know much about dementia
- d. Prefer not to answer
- e. Other (please specify) _____

12. Do you have any experience working with people living with dementia? Please select all that apply.

- a. I have or had a family member who is living with or had lived with dementia
- b. I have volunteered with people living with dementia in a long-term care home
- c. I have volunteered with people living with dementia in the community
- d. I have experience working with people living with dementia through paid work
- e. I do not have experience working with people living with dementia
- f. Prefer to not answer
- g. Other (please specify) _____

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13. If you do have experience working with people living with dementia, either through paid or unpaid work, please describe your role(s). _____

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Appendix E: Meaningful Activities Survey

Identification

1. Participant Code _____
2. Which week does your visit pertain to? Please select one of the following:
 - a. November 29 – December 5
 - b. December 6 – December 12
 - c. December 13 – December 19
 - d. December 20 – December 26
 - e. December 27 – January 2
 - f. January 3 – January 9
3. Did you visit this week?
 - a. Yes
 - b. No

First visit of the week

1. Date of visit #1 _____
2. Which device did you use this week?
 - a. Telephone
 - b. Tablet/Ipad/Laptop
 - c. Not applicable. I visited in person
 - d. Other (Please specify) _____
3. Which platform did you use?
 - a. Zoom
 - b. Skype

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- c. Facetime
 - d. Not applicable. I visited in person
 - e. Other (please specify) _____
4. Indicate the activities that occurred during the session. _____
5. Indicate the amount of time spent on each activity. _____
6. Describe how the resident engaged in each activity. For example, “The resident listened when watching television.” _____
7. Any other observations? _____

Second visit of the week

1. Did you visit more than once this week?
 - a. Yes
 - b. No

Second visit of the week continued

1. Date of visit #2 _____
2. Which device did you use this week?
 - a. Telephone
 - b. Tablet/Ipad/Laptop
 - c. Not applicable. I visited in person
 - d. Other (please specify) _____
3. Which platform did you use?
 - a. Zoom
 - b. Skype

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- c. Facetime
 - d. Not applicable. I visited in person
 - e. Other (please specify) _____
4. Indicate the activities that occurred during the session. _____
 5. Indicate the amount of time spent on each activity. _____
 6. Describe how the resident engaged in each activity. For example, “The resident listened when watching television.” _____
 7. Any other observations? _____

Technology Questions

1. Did you face any issues with technology this week?
 - a. Yes
 - b. No
 - c. I didn't use any technology when I visited the PLWD

Technology questions continued

1. Which issues with technology did you face? Please explain the issue and, if applicable, the impact it had on specific activities. _____
2. Were you able to resolve issues with technology (please explain)? _____

Caregiver questions

1. Were you in contact with a caregiver this week?
 - a. Yes
 - b. No

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Caregiver questions continued

1. Which ways were you in contact with a caregiver?
 - a. A caregiver joined a virtual call with the PLWD and I. If yes, please explain.

 - b. A caregiver joined an in-person visit with the PLWD and I. If yes, please explain.

 - c. I was in contact with a caregiver to discuss the PLWD or the visits. If yes, please explain. _____
 - d. Other. If yes, please explain. _____
2. Click yes to continue with the survey
 - a. Yes

Missed 1 visit

1. Why did you only visit once this week? _____

Missed two visits

1. Why did you not visit this week? _____

Anything else?

1. Do you have any questions or concerns? _____

Appendix F: Information Letter and Consent Form (Student)



INFORMATION LETTER AND CONSENT FORM
(Student)

Study: Social inclusion of people living with dementia and their caregivers using an intergenerational program.

Dear Madam, Sir,

This letter is to inform you of a research project being conducted by researchers from the University of Ottawa. This project has been funded by the Social Science and Humanities Research Council of Canada (SSHRC).

What is the purpose of this study?

The aim of this research project is to evaluate a person-centred volunteer program where persons living with dementia (PLWD) can engage in one-on-one interactions with university students. This project is based on a project called REVIVRE which was pilot tested in Ottawa and St. Catharines. This volunteer program will be scaled-up by developing the program in Montreal and Ottawa based on lessons learned from the pilot study and by enhancing the evaluation of the program. Specifically, this research will examine the impact of the program on the quality of life of persons living with dementia, caregiver burden and psychological distress and positive attitudes towards older adults (i.e. reduce ageism) by the university students.

What will my participation involve?

During the restrictions of Covid-19, all interactions will be done virtually (over the phone or video chat). Students will communicate with both the caregiver and person living with dementia. Depending on the needs of the person with dementia, students will have virtual interactions with either the person with dementia only, the caregiver and the person living with dementia together, or the caregiver only. When in-person visits are permitted, students will meet with the person living with dementia only. All the participants can choose to continue virtual interactions only.

Participants will be selected on a first come, first served basis, granted they satisfy the volunteer requirement. This may include a preliminary interview, a police record verification, providing proof of immunization, completing a 2 step TB test, complete a course on research ethics, and mandatory training sessions.

Each student will be matched with a PLWD based on common interests and preferred language. As a student, you will be asked about these interests in a survey when the study begins. You will then visit the PLWD twice a week for 2 hours, for a total of 8 to 12 months. This means you should be volunteering for, on maximum, 4 hours per week in 2-hour blocks. On several occasions during in-person sessions, a research assistant will sit nearby to observe the sessions. The research assistant will watch the session and rate the PLWD's level of engagement in the activities he/she observes.

In return, you will receive extensive educational training from health professionals. Your role as a student volunteer will be to acquaint yourself with the PLWD and help them participate in activities of their choice. Assigned students and caregivers can exchange emails/ phone numbers with each other so that they can discuss the volunteering experience.

☎ 613-562-5800 ext. 2983
☎ 613-562-5632

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Once per week, students will complete an online questionnaire to identify the activities they participated in with the PLWD. Students will fill out additional questionnaires on 4 occasions (baseline, four months, eight months, and 12 months). The data will be analyzed by the researchers throughout the study and will only be accessible to the research team. During the study, students will also be invited to participate in a mini-conference every month with a panel of health professionals, caregivers of people living with dementia and dementia experts. The goal of the mini-conference is to answer any questions that the volunteers may have regarding the PLWD or their experiences, and to provide ongoing training and support from an interdisciplinary group of professionals.

What are the benefits of my participation?

Students will learn a lot about dementia and gain experience working with a population that is primarily geriatric. Students will obtain firsthand training from experts and receive training materials (pamphlets, guides, PowerPoint documents, etc.) and support during the course of the program.

What are the potential risks of my participation?

There are potential risks associated when working with a vulnerable population (for example, PLWD), such as the possibility of encountering aggressive behaviors. These risks are lessened through training, supervision and guidance of competent community centre staff, and guidance provided by researchers and professionals. When entering senior community centres, there is also the potential risk of being exposed to infections. However, when an outbreak occurs, all volunteers are informed that they are no longer allowed to enter the unit that is affected. They will also be notified when it is safe to return.

Participation in this study is voluntary. You have the right to leave the study at any time without any repercussions to yourself or your education.

Is there anything I can do if I found this experiment to be emotionally upsetting?

If you feel any distress or anxiety after participating in this study, please feel free to contact: The Distress Centre of Ottawa at 613-238-3311 (<http://www.deottawa.on.ca>), or the Ottawa Mental Health Crisis Line at 613-722-6914 (www.crisisline.ca).

For audit purposes, the only organizations that may require access to the study files under the supervision of the researcher are the Proctor Officer for Ethics in Research at the University of Ottawa. All data collected will be secured in a locked cabinet and stored in a password protected computer database. No information will contain your name. You will be identified by a code. Only summarized findings will be reported (no individual data) and individual data will only be consulted by the research team. The data collected will be kept for five years following the end of the study. After this period, all electronic data will be securely deleted, and all paper documentation will be shredded.

Will I be compensated for my participation?

At the end of the study, students will receive a certificate outlining the number of hours they volunteered. For information on your rights as a research participant, please contact the Protocol Officer for Ethics in Research, University of Ottawa, ~~Tokovos~~ Tokovos Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

You can contact the project coordinator or the principal investigator for additional information:

Project Coordinator:

[REDACTED]

IMPACT OF AN INTERGENERATIONAL VOLUNTEER PROGRAM



Research Coordinator, Faculty of Health Sciences, Interdisciplinary School of Health Sciences
University of Ottawa

[REDACTED]

Principal Investigator:

Annie Robitaille

Assistant Professor, Faculty of Health Sciences, Interdisciplinary School of Health Sciences
University of Ottawa

[REDACTED]

Please keep this information letter for your own records. We sincerely thank you for your interest in this study.

IMPACT OF AN INTERGENERATIONAL VOLUNTEER PROGRAM



CONSENT FORM (Student)

I, the undersigned [*name*] _____, voluntarily agree to participate in this study as described in the information letter. The objective of this study is to evaluate a person-centred volunteer program.

I have received and carefully read the information letter and understand that I will participate in all required training prior to the initial contact with my assigned PLWD. I also understand that I will grant the researchers permission to collect information about my interests, so that I can be matched to a PLWD with similar interests. I understand that data might be used in student projects, and that the results of this study will only be used for the needs of this research project.

The risks and discomfort associated with these tasks have been explained to me. I have asked all questions I had in regard to this matter and I am satisfied with the answers that were provided. I understand that I have the right to withdraw from this study at any time and without any repercussion to myself or my academic standing. If I so desire, any data collected until the time of my withdrawal can be removed from the analyses.

I have received a copy of the information letter and consent form

Name: _____

Signature: _____ Date: _____

SPACE RESERVED FOR THE PROJECT COORDINATOR

I have described the study to the appropriate person and insured that he/she understands the consequences involved.

Name: _____

Signature: _____

Date: _____

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Appendix G: Ethics Certificate from the University of Ottawa Research Ethics Board

06/06/2022

Université d'Ottawa

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-03-20-5405
Titre du projet / Project Title	Social Inclusion of people living with dementia and their caregivers using an Intergenerational program
Type de projet / Project Type	Recherche de professeur / Professor's research project
Statut du projet / Project Status	Renouvelé / Renewed
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	11/06/2020
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	10/06/2023

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Annie ROBITAILLE	École Interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences	Chercheur Principal / Principal Investigator
Francis DUCHARME	Université du Québec à Montréal	Assistant de recherche / Research Assistant
Linda GARCIA	École Interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences	Co-chercheur / Co-investigator
Giovanna BUSA	École Interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences	Assistant de recherche / Research Assistant
Michaela ADAMS	École Interdisciplinaire des sciences de la santé / Interdisciplinary School of Health Sciences	Assistant de recherche / Research Assistant

Conditions spéciales ou commentaires / Special conditions or comments

550, rue Cumberland, pièce 154 Ottawa (Ontario) K1N 6N5 Canada 550 Cumberland Street, Room 154 Ottawa, Ontario K1N 6N5 Canada

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