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Impacts of Meals on Wings (MOW) Program on Volunteers' Perceptions and Motives

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IMPACTS OF MEALS ON WINGS (MOW) PROGRAM ON VOLUNTEERS'
PERCEPTIONS AND MOTIVES

by

Juan Diego Salcedo

A thesis submitted to the Department of Nutrition & Dietetics in partial fulfillment of the
requirements for the degree of Master of Science in Nutrition & Dietetics

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Unpublished work c Juan Diego Salcedo

Table of Contents

Acknowledgments	3
Abstract	4
Chapter 1	
Introduction	5
Hypotheses	7
Chapter 2	
Review of the Literature	
Prevalence of Student Volunteering	8
Impacts of Student Volunteering	10
Food Insecurity Among Seniors	18
The Meals on Wings (MOW) Program	23
Significance of Study	24
Chapter 3	
Methodology	
Study Design	26
Thematic Analysis	27
Chapter 4	
Results	
General – descriptive	29
Major Themes	31
Chapter 5	
Discussion	48
Limitations	51
Applications to practice	53
Conclusion	55
Appendices	
Appendix A: Informed Verbal Consent Document	57
Appendix B: Student Volunteer Interview Guide	58
Appendix C: Student Volunteer Interview Code Book	60
References	74

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Abstract

INTRODUCTION: Food insecurity is a problem in the subpopulation of older adults and the elderly. The following study aimed to explore the perceptions and motives such as career benefits, impacts experienced through volunteering, skills in dietetics, comfort level with seniors, social responsibility, peer modeling, and empathy of student volunteers participating in a food recovery-meal delivery program known as Meals on Wings (MOW) on a college campus in the Southeast.

METHODOLOGY: The study was conducted during July 2021. Semi-structured interviews were administered over the video conference program Zoom to 10 (n=10) student volunteers who volunteered with MOW for at least one semester. Once saturation was reached, answers and self-reflections of volunteers were analyzed following the thematic analysis qualitative study design.

RESULTS: Four major themes were revealed: 1) realization of food insecurity, 2) importance of group work, 3) skills relating to future dietetic practice, and 4) interaction/connection with older clients. Volunteers of MOW realized profound impacts regarding helping the needs of seniors and self-growth in future career settings. Feelings and actions including empathy, self-gratification, social responsibility, and peer modeling were recognized.

CONCLUSIONS: Altruistic and career-building motivations for volunteering were realized from the results of this study. Finding out the reasons and perceptions for why students volunteer may help to acquire more students to join the world of volunteering, provide help to the community, and show that volunteering can be immersed as a part of the educational experience. The inclusion of a school-driven, food recovery-meal delivery program to help meet the needs of seniors may help to get more students to volunteer in the community.

Chapter 1

Introduction

Understanding food insecurity in seniors and volunteering in programs aimed at assisting this population benefits both the seniors and volunteers. Specifically, for college-aged students that volunteer, research has shown that it can improve their self-esteem and amplify critical-thinking development.¹ Volunteering can also increase self-confidence, help in being involved in a mutually beneficial exchange, uplift the compassion for whatever population or group is being helped, and help with having a real sense of self-worth and self-gratification.¹ The following study explores the perceptions and motives such as career benefits, impacts experienced through volunteering, skills in dietetics, comfort level with seniors, social responsibility, peer modeling, and empathy of student volunteers participating in a food recovery-meal delivery program on a college campus in the Southeast.

Food insecurity is an overwhelming problem in developed countries like the United States and developing countries in other areas of the world, especially in the sub-population of older adults. According to Saffel-Shrier S², the definition of food insecurity is “limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”² Food insecurity is an important social determinant of health for seniors that plays a role in the quality of life of this population.² A recent report from 2019 shows that about 5.2 million seniors in the United States (7.1%) were food insecure.³ More seniors were food insecure in 2019 than around the time the Great Recession started in December of 2008.³ Another report showed the real impact of food insecurity on nutrition status: food-insecure seniors did not consume enough of the daily recommended amounts of certain nutrients compared to their food-secure counterparts (13.3%,

9.7%, and 9.2% of daily recommendations of iron, calcium, and protein, respectively).³ While children, pregnant women, and young adults can be food insecure, the prevalence is greatest in the population of older adults. Food insecurity is such a debilitating concern since it affects not just physical health but also mental health conditions such as depression, anxiety, and mental stability. From a review of food insecurity in different populations across the United States, it was found that food-insecure seniors were 2.33 times more likely to experience poor health compared to their food-secure counterparts.⁴ Along with food insecurity there can also be a state of malnutrition, an imbalance between nutrients and the body's needs to maintain homeostasis. Living in a state of food insecurity can lead to intentional or unintentional weight loss, one of the criteria to diagnose malnutrition.² In the case of food insecurity, a state of unintentional weight loss can result since individuals without sufficient food and nutrients cannot obtain calories to be used for energy and/or fat storage. In food-insecure older adults, sarcopenia can also arise. Sarcopenia is a multifactorial condition peculiar to the elderly that consists of loss of skeletal muscle mass and strength due to energy, protein, and nutrient deficiencies.² The prevalence of sarcopenia in older adults in the community ranges from 1-29%.²

The elderly deserve increased attention and help because they tend to live with issues related to activities of daily living such as cooking for themselves, getting dressed, personal and toilet hygiene, and getting up and down from sitting or lying down.⁵ Seniors have unique circumstances to their age group such as fatigue and loneliness.⁵ After the age of 65, it is common to live as a widow. This can bring a wave of social isolation and a subsequent decline in general health, meaning that it is important that they receive increased attention from nearby family or caregivers. Thankfully, there are many food-related programs out there in the community that can help the elderly. Some of these include but are not limited to: Meals on

Wheels (MOW), Supplemental Nutrition Assistance Program (SNAP), Seniors Farmers Market Nutrition Program, Commodity Supplemental Food Program, and the Child and Adult Care Food Program.²

The program being introduced into the literature of volunteer programs fighting against food insecurity is the MOW program and it is an important contribution towards fighting the unfair state of food insecurity in the country. Founded by passionate professors at the University of North Florida, Dr. Wright and Dr. Ross, this program's main vision is to help end food insecurity and the unfairness behind it. This program relies on student volunteers to perform the duties of picking the food up, packaging it into presentable meals, and delivering them to the homes of seniors.

Hypothesis

The research question of the study is: does volunteering in a setting that aims to reduce food insecurity in the senior population create both career- and personal-related benefits for the student volunteer? The main hypothesis is that volunteering in a setting that aims to reduce food insecurity in the senior population will create both career- and personal-related benefits for the student volunteer.

Chapter 2

Review of the Literature

The following literature review will present areas of research on topics of student volunteering and food insecurity among seniors. The main areas of research that will be ventured include the prevalence of student volunteering, overall impacts of volunteering in the college-student population, food insecurity among seniors, and a rundown of the MOW program created by the University of North Florida. This review will lead up to the new study of college student volunteers of nutrition and their perceptions and motives relating to the volunteering done with MOW.

Prevalence of Student Volunteering

Career-related work and volunteer work has always been prevalent in people of all ages, especially college students. College students are busy young adults that usually take on some sort of part-time or full-time work on the side of classwork. While working on the side while attending university classes may be a sound idea, there is not enough volunteering undertaken by college students.⁶ According to the U.S. Bureau of Labor Statistics report from 2015⁷, 15102 individuals with some college degree or associate degree volunteered in 2015 (26.5% of the U.S. population).⁷ There were 27629 individuals with a Bachelor's degree or higher that volunteered during the same year (38.8% of the U.S. population).⁷ Another statistic from the National Conference on Citizenship states that college students between the age of 18-24 volunteer at about twice the rate of their non-college student peers (26.6% vs 13.2%).⁸ Factors like influences from college and university spokespersons to volunteer and service-learning projects in the community tied into academic learning coursework settings may be influencing this statistic of college-aged students volunteering habits in the United States. In general, volunteering in the

college student population has dropped since 2006 and has remained stagnant since 2008.⁶

Volunteering rates for college students in the United States were at an all-time high between 2003 and 2005, this was thought to be related to a response to the tragic events that happened on September 11, 2001.⁶ Between 2013 and 2015, about 26% of college students in the United States were actively volunteering and contributed close to \$7.6 billion to a wide variety of organizations.⁶ Between 2012 and 2015, the top 5 states for college volunteering prevalence were Wyoming (45.9%), Utah (38.5%), Kansas (36.7%), Washington (36.1%), and the District of Columbia (36.1%).⁶

In Europe, there is a large discrepancy in student volunteering prevalence between Western and Eastern Europe. From one study analyzing the prevalence of volunteering in 10786 individuals aged between 15 and 30 years old, just over half of the sample were involved in some sort of volunteering role in Western European countries like Ireland Denmark, and the United Kingdom.⁹ 44% of the participants in the Eastern European country of Hungary reported volunteer work, this is below the average prevalence of volunteering in Europe of 58%.⁹ At a university in Hungary, progress in the prevalence of student volunteering has grown over the years. Between 2005 and 2010, the proportion of regular volunteers doubled from 3% to 6% and 26% of the sample had done some sort of volunteer work at some point in their studies in 2010.⁹ In 2015, this statistic grew to 38.8% (the sample included in some areas outside the Hungarian border this time) and to 45.3% by 2019.⁹ In the sample of 2199 higher-education (college) students in 2019 from Eastern European countries including Hungary and Slovakia, 24% of the students were involved in volunteering in a religious organization, 13.2% in charitable organizations, and 10.8% in non-governmental organizations.⁹ Prevalence of volunteering in these areas have all increased since the year of 2010, although the sample size in 2019 included

some countries outside the Hungarian border rather than only students at the University of Debrecen in Hungary.⁹ One reason for the increase in volunteering in Eastern Europe may be the introduction of community service in secondary Hungarian schools in 2012 and the rise of career-focused volunteering roles around the same time.⁹ Another study also focused on the population of Eastern European higher education students involved in volunteering, with a focus on the area of Hungary and countries bordering this country such as Romania and Ukraine. These volunteer students were split into different categories focusing on the level of motivation for volunteering: careerists with postmodern features, volunteers in an anti-volunteering climate, helping new type volunteers, highly motivated and unmotivated volunteers.¹⁰ By category of motivation level for volunteering, the prevalence of volunteers were 27.4% of careerists with postmodern features in Romania, 16.5% of unmotivated volunteers in Hungary, 29.2% highly motivated volunteers in Serbia, 48.9% of anti-volunteering climate volunteers, and 16.9% of helping new type volunteers in Hungary.¹⁰

Impacts of Student Volunteering

There are varying motivations for volunteering within the population of student volunteers. One study of healthcare student volunteers taking a week-long medical service trip (MST) to either rural Mississippi or the Dominican Republic aimed to find out whether primary motivations for volunteering were apparent or if motivations were context-dependent. As part of this experience, 11 students traveled to Mississippi while 24 went to the Dominican Republic; students helped deliver healthcare services to patients in both areas but abilities to help patients were more limited in Mississippi.¹¹ Overall, the researchers made the realization through a mixed-methods approach of a thematic analysis and post-trip Qualtrics survey that students' motivations for volunteering in this setting are context-dependent rather than intrinsically

motivated; in other words, motivations of volunteers take on more of a “behaviorist” (dependent on what benefits will be brought to the individual) approach rather than a “subjectivist” (relating to helping for others, or altruistic motivations) one.¹¹ Some of the main results from the Qualtrics survey mentioned that first-year students had more career-related motivations than second-year students, Mississippi students were less likely to have the motivation to work with other healthcare professionals than students going to the Dominican Republic, and female students had greater altruistic motivations for volunteering than male students.¹¹ With the addition of a thematic analysis, the researchers discovered the main themes of benefits to student growth and the community through MST volunteering but also the possibility of negative effects to the student and community/patients. The benefits uncovered included a better understanding of poverty, the ability to apply learned clinical skills to a foreign area, and the belief that the volunteer work undertaken would help build a well-rounded community.¹¹ Some of these negative effects included the worry of negative side effects of medication administration to patients, the lack of cultural competency between American volunteers and those of the Dominican Republic, and the possibility of taking business away from local medical providers.¹¹

Another study explored the main reasons for volunteering among five Western countries that have frequent student volunteering taking place. This study compared student regular volunteers (those that chose “weekly” or “monthly” on a survey), occasional volunteers (those that volunteered less than once a month), and non-volunteers (university students that did not participate in any volunteering).¹² About 32% of volunteers were in the U.S., about 24% in Canada, and 15% in Australia, New Zealand, and the United Kingdom.¹² Researchers also planned to investigate whether most volunteers were “regular” or “occasional” volunteers.¹² It was found that regular student volunteers reported higher levels of altruistic motivations and

benefits compared to occasional and non-volunteers.¹² Occasional volunteers were slightly more influenced by peer pressure to volunteer than regular and non-volunteers (43.3% vs 42% and 41.5%, respectively).¹² The youth sector was the most popular volunteering sector in all 5 countries while the neighborhood/activist group sector was the least popular (48.2% vs 14.3%).¹² Finally, it was found that most of the volunteers were “occasional” (64.4% of participants) rather than “regular” (35.6% of participants) volunteers.¹²

In another study, medical volunteers (either obstetricians, anesthetists, or midwives) from the United Kingdom and some low-income and middle-income countries (LMICs) were involved in a volunteering program that helped to reduce maternal and newborn morbidity and mortality located in 13 different countries.¹³ These countries included Bangladesh, Ghana, Kenya, India, Malawi, Namibia, Nigeria, Pakistan, Sierra Leone, South Africa, Tanzania, Zimbabwe, and the United Kingdom.¹³ Researchers used a mixed-methods approach consisting of an online survey for medical volunteers from the U.K. and some of the LMICs and qualitative interviews only for volunteers from the U.K. The online survey covered areas such as expectations and challenges, personal/professional impact, and views on the impact of volunteering in these foreign healthcare settings; qualitative methods included key informant interviews and focus group discussions to further explore experiences in the LMICs that the survey may not have caught.¹³ Some of the most common reasons for volunteering included helping people, gaining teaching experience, and improving newborn and maternal care in low-resource settings.¹³ Volunteers reported that this unique volunteering experience helped them to learn about healthcare systems in low-resource settings; on the other hand, some reported that they needed more time than what was expected and that working with some uninterested people made interactions difficult.¹³

Service-learning is an educational way of learning that exposes students to situations that help to enhance their academic learning through real-life experiences.¹⁴ It is a great way to put what is being learned in the classroom into action by also volunteering at a location that applies the concepts learned in the classroom into the real world. It is important to this research being conducted because it is a great way to immerse volunteering as a required action on the side of traditional classroom learning. One undergraduate nursing program took advantage of this style of learning by connecting with a distance research-initiative university. Nursing students participated in a service-learning study focused on an obesity prevention program designed for 7-10-year-old children and their families.¹⁴ The intervention was delivered monthly to 5-7 families at a time over 7 months. The main purpose of this study was to not only provide healthful activities to children and their families but to help amalgamate nursing sciences information into real-world, evidence-based practice that will help nursing students with implementing proper interventions and understanding ethical conduct in research.¹⁴ The researchers planned for the nursing students to participate in activities such as examining health concerns of the public health prevention model, developing written nursing care plans for the population being served, and working one-on-one with families with cooking meals based on created recipes.¹⁴ The student volunteers were able to integrate the knowledge of nursing sciences in evidence-based care of patients and families, help provide nutritional needs to the families, and role play as “teachers” while building teamwork skills for future nurse professional practice.¹⁴ Although it would have made more sense to have dietetic students be involved in this opportunity instead of those in the nursing program, this still helps achieve a sense of evidence-based application into the real world.

Another study involved an interdisciplinary group of students for a collaborative learning experience focused on empathy through the development of a real-world understanding of lived experiences of women in Australia that are either homeless or have experienced domestic violence.¹⁵ In this study, a convenience sample of 48 students from either nursing, architecture, or landscape fields were selected to embark on a learning experience involving group work to develop design guides for refugees through discussions between themselves and other professionals like refugee workers, service providers, academics from health and design faculties, and a journalist specializing in gendered violence.¹⁵ To measure the empathy of students, a pre- and post-intervention scale known as the Comprehensive State Empathy Scale (CSES) was administered to students.¹⁵ Results showed that there was a statistically significant difference between pre- and post-CSES median scores responding to positively worded items in the landscape group (12.5 to 19.0 for females and 14.0 to 21.0 for males, $p < 0.046$ and $p < 0.027$, respectively) but not for the nursing and architecture student groups.¹⁵ The overall consensus is that since nursing students already have more experience with empathy and meeting the needs of ill populations compared to students in the other two groups, it makes sense that there were no paramount differences in pre- and post-intervention scores.¹⁵ One main limitation here is that since this was a convenience sample, results should not be generalizable and more research should be completed in this field of collaborative learning experiences.¹⁵

One study looking at volunteering for individuals with a mental health condition was a randomized controlled trial on patients with schizophrenia. Inclusion criteria for schizophrenic patients included being between the ages of 18-85 years, having a clinical diagnosis of schizophrenia or a related condition, expression of a willingness to participate in the study for at least a year, and had to have a defined level of social isolation of spending less than 60 minutes

per day in any social/recreational hobbies according to the Time Use Survey (TUS).¹⁶ Patients were grouped into either an intervention group where they would have a relationship with a volunteer for 12 months and engage in social activities or a control group where they would solely receive written information about activities they may like to engage in by an unmasked researcher.¹⁶ At the end of the 12 months, participants in the intervention and control groups increased their average time spent in activities per day from 20 to 81 minutes and 17 to 70 minutes, respectively.¹⁶ Although both groups improved in this aspect, improvements increased in similar amounts, thus meaning that the intervention was not superior to the control directions. This was also the largest RCT to include befriending with solely schizophrenic patients (to the knowledge of the researchers).¹⁶

One interesting study involved 51 fourth-year nursing students from the University of Alicante in Spain who volunteered as support staff at an acute mental health inpatient unit (AMHIU) once a month for 6 months.¹⁷ Since nursing students have experience with seeing patients in clinicals in the nursing program they attend, the authors wanted to find out how their attitudes towards mental health patients would change through a pre- and post-intervention *ad hoc* questionnaire that consisted of “Semantic Differential” and “Community Attitudes to Mental Illness (CAMI) scales.”¹⁷ Some of the volunteer participants also took part in semi-structured interviews to find out more about their experiences during volunteering.¹⁷ The results of the pre/post survey showed that nursing students’ attitudes towards mental health patients did not change very much, with many responses of participants either changing overall from positive-like attitudes to neutral attitudes or from neutral attitudes to negative-like attitudes.¹⁹ For the qualitative interviews, many of the participants noted the smiles on the faces of the patients when hanging out with the nursing students and the overall positive impact they brought to the

AMHIU.¹⁷ Engagement in educational strategies like this harmonious to the undergraduate nursing curriculum allows nursing students to become more aware of mental health problems in patients that they may not be experiencing in their undergraduate university classwork.¹⁷ Some of the main limitations included the small sample size and the likely chance of there being social desirability bias from participants.¹⁷

Another study looked at social isolation status in seniors during the pandemic and how telephone calls by medical students could mitigate social isolation. In this intervention known as the Seniors Overcoming Social Isolation (SOS) program, primary care providers identified seniors at risk for increased social isolation during the pandemic and enrolled them into the SOS program. The program coordinator of the SOS program contacted first-year medical students for participation in the study. Methods of going about the phone calls included the provision of an introduction script and social history/well-being questions to ask the senior participants.¹⁸ 14 medical student volunteers made 25 phone calls to seniors that were isolated due to varying reasons. Topics that were talked about included sources of support for seniors, seniors' past life, COVID-19-related topics, health, and isolation and how seniors coped with it. After these calls, student volunteers were instructed to complete a post-call online survey that focused on perceived impacts and self-reflections of the calls.¹⁸ The results showed that calls were generally well-received by the seniors and that seniors expressed lots of appreciation for the calling and support. On the other hand, some student self-perceived impacts were that the calls disrupted some seniors, the realization that there was a lot of patience needed with them (especially those with cognitive difficulties), and that the calls made some students feel empowered and inspired by listening to the stories of seniors and making a positive impact.¹⁸ Some of the student volunteers had stated that they would call about 36% of the older adults again for follow-ups

from the initial calls; unfortunately, data regarding these follow-up calls were not collected, making this a major limitation of the study. Other limitations included small sample size, the referral of older adults by a medical provider rather than randomization of them to different student volunteers, and the fact that the intervention was completed in one single location (making generalized conclusions to other areas of socially isolated seniors difficult).¹⁸

One study focused on student physician assistant (PA) volunteer students and their work with those living with low incomes. Volunteer work was focused on assessing chief complaints, improvement of communication skills with the underserved, and application of skills learned in PA school like how to care for underserved populations in the field.¹⁹ PA volunteer students were assessed by a 15-item scale focusing on subjects such as knowledge, skills, interest in future work with the underserved, and self-efficacy. A 7-point Likert scale ranging from 1 to 7 (“not at all” to “a great deal”) was used to pick how the subjects mentioned above were rated; a mean of these items was used to generate results.¹⁹ These subjects were based on the volunteering done by these students at a student-run free healthcare clinic helping to serve individuals and families with incomes up to 150% of the federal poverty line.¹⁹ It was found that the subject that was responded most positively to by PA volunteers was the effect of their experiences during volunteering, one of the three sub-scales from a scale developed by Smith et al.¹⁹ Also, speaking Spanish was highly associated with higher levels of self-efficacy ($p < 0.01$) related to volunteering at this clinic.¹⁹ In Canada, an evaluation of a multi-service-learning, community-based organization was conducted to find out about the experiences of the college students volunteering at this organization. This organization was founded to help meet the needs of the poor in neighborhoods in Saskatchewan, Canada.²⁰ A survey of 31 closed-ended questions was administered to all student volunteers to assist in searching for the main motivation for

volunteering in this experience. This survey was administered between July and August of 2013.²⁰ Overall, most students found their purpose in volunteering shifted away from being a means of improving their resumes to helping vulnerable groups and giving back to the community.²⁰ Since this was only a cross-sectional study and response bias may be elevated due to volunteers with positive experiences being more likely to respond to the survey, data may not be generalizable to other settings.²⁰ Besides these factors, this is yet another important study aiding to seek the “why” in student volunteering.

Finally, there was another study focusing on a student-run volunteering center helping underserved populations in Florida. Although exact activities and duties of student participants were not listed in this study, the main focus of the study was to investigate topics such as self-efficacy, comfort, compassion, and interest in caring for the underserved and uninsured by future primary care physicians.²¹ All volunteers and non-volunteers of this student-run healthcare clinic completed a 95-item survey investigating knowledge, self-efficacy, and comfort level when working with those that need it the most.²¹ Students were between the ages of 20 and 40. For influences of attitude towards working with the underserved, 62% and 26% of volunteers reported strongly agreeing and agreeing to a positive influence in attitude, respectively.²¹ Besides this, there were no other significant findings.²¹

Food Insecurity Among Seniors

A review of over 80 journal articles focusing on home-delivered meals for food-insecure seniors was conducted in 2015.²² Overall, most of the articles were of cross-sectional design and were descriptive rather than outcome-focused. For the articles that did have primary outcomes for evaluation of interventions, outcomes were mostly focused on nutritional status through self-reported intake by older participants.²² Overall, while home-delivered meal programs seem to be

effective based on the current research surrounding the topic, there should be careful consideration for areas that have scarce resources and higher concentrations of food-insecure seniors.²² The authors concluded that future research must be focused on evaluating the efficacy and effectiveness of home-based meal programs for older, food-insecure seniors to shed more light on the cost-effectiveness of conducting these types of programs.²² It is likely that many families of seniors are not even aware of the presence of these home-based meal delivery programs in the communities they reside in.

The Older Americans Act (OAA) of 1965 was a groundbreaking act that helped meet the needs of older Americans through nutrition services such as home-based and congregate meal programs.²² The largest home-delivered meal program of the OAA is the Meals on Wheels program. One study was completed with the main objective being to gauge the extent to which method of food delivery under this program would best reduce feelings of loneliness of older adults. Having meals dropped off to the homes of seniors once a week rather than multiple times a week may save costs associated with meal delivery; notwithstanding, this may exacerbate loneliness and have an all-inclusive negative impact on the health of seniors.²³ Researchers compared participants on the waitlist for Meals on Wheels with a general sample population of aging older Americans on outcomes such as mental health, self-rated health, falls/fear of falling, having hazards in and out of the house, and needed assistance with shopping or preparing food.²³ Within the participants on the Meals on Wheels waitlist, researchers randomized them into a group receiving daily, fresh meals; a group receiving multiple frozen meals on one day; and a control group staying on the waitlist until services were available.²³ Within the Meals on Wheels participants split into the three randomized groups, participants receiving daily, fresh meals reported better improvements in self-rated health, mental health, reduction of falls, and feelings

of loneliness compared to the participants in the other two randomized groups.²³ In general, seniors applying for Meals on Wheels tend to be much more at risk to have worse mental health, more falls, presence of hazards in and out of the house, and inability to prepare or shop for groceries alone compared to a general sample of aging older Americans.²³ These results display the obvious needs of older Americans that are food insecure and the initiative to recommend these kinds of community programs more often.

In order to continue and increase meals provided by home-delivery meal programs to more older Americans, there will need to be evidence of more funding to these programs by each state in the United States. According to a Meals on Wheels financial statement report from 2015, out of the total revenue of \$7564588 that the program receives, only a meager 3% of the funding comes from the federal government; the other 97% come from corporate/financial grants, contributions, program service fees, membership dues, annual conference, and other sources of income.²⁴ This sad, but unfortunate statistic clearly emphasizes the need for more government funding for home-delivered meal programs. Aging in place is a concept that would help many older adults live longer and happier lives if they plan for it properly. Ways to work toward this include keeping in constant contact with family members, consulting geriatric care managers for assistance with finances and insurance information, and living a life consisting of movement and exercise to prevent disabilities related to activities of daily living.²⁵ One study investigated the savings and costs for different states in the U.S. if each state were to increase the number of older adults over the age of 65 receiving meals under the Title III of the OAA by 1%.²⁶ Researchers estimated Medicare enrollment reports of low care residents' dual eligibility, using the average nursing home Medicaid daily payment rate specific to each state, and using the average Title III-C2 (nutrition services – home-delivered meals) spending per client in each state.²⁶ All these

measures were taken from the year 2009 to estimate what would have happened if more states recommended home-based delivery meal programs to seniors during that year.²⁶ Some of the main results found were that the total number of new clients served by these programs could have been 392594, 26 states could have had annual savings to state and federal governments, and 22 states would suffer additional costs.²⁶ Although some states would have additional costs if they were to increase the number of seniors receiving meals by 1%, the researchers believe that eventually there would be savings in these states in the long run. More meals to low-income seniors mean a higher chance of a better quality of life for them, so proper evidence like this must continue to be put out to help state government officials realize the importance of senior involvement in home-delivered meal programs like Meals on Wheels.²⁶

A study of older adults dually eligible for Medicaid and Medicare in the state of Maryland looked into participation in SNAP benefits between the years of 2009-2012 and whether participation in SNAP is associated with reduced admission into nursing homes.²⁷ Although this program does not deliver meals to the homes of seniors, SNAP is another source of help for low-income or food insecure individuals that provides nutrition assistance through an Electronic Benefits Transfer (EBT) card that has a certain limit and can be used as a debit or credit card to purchase foods and goods.²⁸ The results of this study showed that only 38.6% of the participants used SNAP between 2009-2012 (a large majority of the participants were eligible for SNAP) and those using SNAP had a 23% lower odds of further admission to nursing homes compared to participants that were not using SNAP (OR = 0.77).²⁷ These results show that not enough older individuals take advantage of benefit programs like SNAP and that nursing home admissions could be reduced if more individuals in the community use up these resources to their advantage.

Another study focused on the overwhelming impact of the initial COVID-19 wave and lockdown on low-income adults across the U.S. A survey was administered to 1478 participants across the U.S. with incomes under 250% of the federal poverty line. Different subjects of the survey included basic needs challenges, what the workplace was doing to adjust to the pandemic/lockdown, and COVID-19's expected impact on employment and income.²⁹ A few of the biggest takeaways from the results were 41% of adults with very low food security reporting not having enough food to feed themselves or their families; working adults with food insecurity were more likely to have their work hours reduced compared to their food-secure counterparts, and 52% of very low-food security adults were more likely to lose their occupation if they missed too many days of work compared to 18% of adults with high food security.²⁹ Future studies will need to measure the long-term impact of the pandemic in low-income and regular-income adults across the United States. It is also important to consider the impact that this initial wave of COVID-19 made on seniors with low incomes. Attention and care should be brought to this important subpopulation.

Duval County has one of the highest rates of food insecurity in the country with 20.1% of all adults in the area being food insecure.³⁰ 25.4% of households with seniors in the city of Jacksonville deal with food insecurity, more than the national average.³¹ These are valid but unfortunate statistics that reflect the present status of adults and seniors alike. The fight against food insecurity must continue as we must assure our beloved community members that there is help in the world. While there are some food delivery programs out there for the food insecure, we need more low-cost programs that rely on student volunteers for optimal performance. One study investigated the prevalence of food insecurity among older adults utilizing a sample of U.S. community-dwelling older adults between the ages of 50-80. A six-item short form of the

USDA Food Security Survey Module was used to assess the confirmation of food insecurity in this population.³² The primary outcomes of the study were the total number of chronic conditions (comorbidities) and physical health status.³² After completion of the survey and data analysis, the researchers found that 14% of the sample were food insecure and 54% of this food insecure sample had two or more chronic conditions compared to 41% of the food secure individuals having two or more conditions ($p < 0.001$).³² It was also found that having food insecurity was associated with significantly higher odds of presenting with 2-3 and 4 or more chronic conditions versus solely 0-1 conditions after sociodemographic characteristic adjustment.³² Although a short form of the USDA survey was used and self-report of health data was the base of the results (this is a disadvantage of having a cross-sectional design), this new data adds to the literature on the prevalence of food insecurity among older adults and how comorbidities may increase the likelihood of being food insecure.³²

The Meals on Wings (MOW) Program

With food insecurity being a major problem in the northeast area of Florida, MOW is yet another important home-delivered meal program assisting in the fight against food insecurity. MOW is a food recovery, repacking and delivery program that utilizes student volunteers to recover, package, and deliver meals directly to the seniors' homes. The primary goal of the MOW program is to assist individuals on the waitlist for the MOW program through the delivery of healthy, nutritious meals to their places of residence. Student volunteers recover unused, prepared food from 6 area hospital partners; this is food that would normally be wasted. The student volunteers then repackage the recovered food into nutritious meals which are then delivered directly to the seniors' home. The volunteers that are responsible for driving from the hospitals and to the seniors' homes are awarded gas cards at the end of each semester as a kind

thank you for all the hard work they have put in. Since its inception in 2018, MOW has recovered over 45000 pounds of food that would have been otherwise wasted and delivered over 46500 meals. At this rate, the program is set to be a top player in the fight against food insecurity in the northeast Florida region and it relies on student volunteers.

One of the unique things about this program is that not only does it deliver food but it also helps with outcomes on the status of loneliness and isolation in seniors through social contact. Few studies highlight the outcomes of these positive impacts on seniors through meal delivery. One qualitative study was designed to respond to the outcomes of the topic at hand by exploring the self-perceived impacts of the MOW program on older adults over the age of 55 and seniors on the Meals on Wheels waitlist. Semi-structured interviews were performed on 10 of these older adults who have been receiving meals from MOW for at least 3 months to find out self-perceptions of seniors' food security status, well-being, and nutrition health.³³ Some of the main themes extracted from the interviews were balanced meals meeting needs, decreased feelings of isolation and loneliness, worrying less about food running out, and less overall need for food pantries and/or food assistance programs.³³ The seniors highlighted the impact that visits from volunteers made on them by stating thoughts such as “they seem to be concerned of how you are doing and what you plan on doing for the day, and things I’ve got to do. Very friendly.” And “feel happier? Yes... to communicate more with more people.”³³ This paper exemplified the impact that healthy meals can have on seniors and older adults that need assistance.

Significance of Study

This study will help in filling the gap in the research of the perceptions of students on their volunteer work and the benefits it may bring them and those they are helping. The introduction of this study should push for more student volunteers to get out into the community

and use their motivations for volunteering to make a difference in the world. Once students realize the impacts that they make when volunteering, this may increase their motivation to continue to help and assist in fulfilling the internal self-perceptions of volunteering that they've been looking for all along. There are little to no studies in the literature focused on nutrition and dietetics undergraduate college students and their volunteer work of fighting against food insecurity in Northeast Florida. This study will introduce volunteer work of these students in this area, adding to the literature on students of health science programs.

The perceptions of nutrition and dietetics student volunteers on the impact of volunteering for a university-affiliated food-delivery program have yet to be investigated. Interviews with willing student participants may disclose themes that will describe topics such as career benefits, comfort level with seniors, and social responsibility/empathy for others. The research question is stated as follows: does volunteering in a setting that aims to reduce food insecurity in the senior population create both career- and personal-related benefits for the student volunteer? The main hypothesis is that volunteering in a setting that aims to reduce food insecurity in the senior population will create both career- and personal-related benefits for the student volunteer.

Chapter 3

Methodology

A qualitative study design was used to aid in converging the thoughts and ideas of the participants for a better understanding of the theories at hand. Attention to detail was applied to make sure all data were relevant and applicable to the research question at hand.

Study Design

The qualitative design, thematic analysis, was used to help organize the results of the study. For the recruitment of participants, all current and former volunteers of the MOW program were emailed by one of the research organizers, Dr. Ross during July 2021. The email went over the research study and the contributions that participants would make by participating in one interview via Zoom. The only inclusion criteria were that they had to be a UNF student and had to have completed at least one full semester of volunteering with the program. Links to Zoom interviews with set dates and times were sent to participants who agreed to participate in the study. This study was approved by the UNF Institutional Review Board (IRB).

Semi-structured interviews were performed from July to August 2021. Each Zoom interview began with an introduction from the interviewer (myself); a review of the consent form to make sure the participant was fully agreeable to continuing; and introduction questions going over topics such as current academic status, length of volunteer time with MOW, and primary role as a volunteer of MOW. The consent form described details about the study, letting participants know that no identifying information would be included in the transcription, that they could withdraw from the study at any point if they wanted to, and a message saying that there would not be a negatively impacted relationship with the university if the participant chose not to participate. Interviews were conducted in a semi-structured style format and lasted between 30-60 minutes in

length. The questions following the introduction questions covered two main (and possibly overlapping) topics: professional growth/resume building and connections with others (empathy, social responsibility, etc.). Other questions asked throughout the interviews aimed to get an idea of why participants were answering the way they were. Questions that were asked throughout the Zoom interview can be found in the interview guide in the appendix section at the end of this paper. The descriptive statistics section in the results groups student participants by gender, status/class, length of time volunteering with MOW, primary functioning role with MOW, and any previous volunteer setting the participant may have been involved with before joining MOW.

10 participants responded to the e-mails and agreed to participate. Those that did not volunteer with MOW for at least one full semester were excluded from participation. A total of 10 participants were interviewed. The interviews were transcribed using the built-in transcription tool in Zoom and then reviewed and edited for clarity. The transcripts were then analyzed independently by two members of the research team. Analysis from each member was cross-checked and a final thematic analysis was developed. The frequency of responses by participants for each main theme is mentioned in the results section.

The semi-structured interview presents a case where volunteers are questioned about their volunteer experience through a guide of pre-determined and follow-up questions that pursue the answers of the respondents in real-time. These follow-up questions are important to obtain a thorough idea of the thought processes behind the volunteers. It is important to remember that the interviewer must always stay neutral and avoid any questions that may fit his or her internal bias that can alter the results of the study.³⁴ The interviewer must also keep the process of data collection ethical; staying within the code of ethics in research and avoiding ethical dilemmas that can arise at any point if the interviewer is not careful is vital.³⁵

Thematic Analysis

A thematic analysis consists of identifying, organizing, and reporting themes or categories found through a set of data.³⁴ During data analysis, transcribed interviews were gathered and themes/categories were revealed. The main themes were founded throughout the qualitative data of the participants and then divided into relevant subthemes. This form of data organization provides a detailed and complex interpretation of the data that can help interested individuals understand the nuances of the topic at hand.³⁴ One way to help cease data collection is known as saturation. Saturation is the concept of hearing the same themes/answers for the questions multiple times. Once saturation is reached, data collection is not necessary anymore.³⁶

Chapter 4

Results

This section will present the overarching results gathered from the semi-structured interviews and the analysis of data from transcription and formation of a code book. The following chapter presents the results in two separate areas: an overview of general descriptive statistics and the layout of the themes and subthemes comprehended from the code book. The themes and subthemes section presents the most common and agreed-on perceptions and motives of participants volunteering with a food recovery-delivery program formed by a Southeastern college campus.

Descriptive Statistics

The final number of participants that consented to participate and complete the one Zoom interview was ten (10).

Table 1 shows descriptive statistics for participants grouped by gender, status/class, length of time volunteering with the program, primary role with the program, and previous volunteer setting before joining MOW.

Table 1: Descriptive statistics of participants

Characteristic	Frequency	Percent
<u>Gender</u>		
Male	1	10%
Female	9	90%
<u>Status/Class</u>		
Undergraduate	3	30%

Graduate	1	10%
Dietetic intern	1	10%
Graduate student/Dietetic intern	3	30%
Dietitian	2	20%
<u>Length of Volunteering Time</u>		
0-6 months	1	10%
7-12 months	1	10%
13-18 months	6	60%
19-24 months	2	20%
<u>Primary Role with MOW</u>		
Receiving/Packaging	2	20%
Packaging/Delivering	4	40%
All three	2	20%
Student Coordinator	2	20%
<u>Previous Volunteer Experience</u>		
Food Bank	5	50%
Student Exchange/Study Abroad Program	1	10%
Soup Kitchen	1	10%
Garden	1	10%

Food Recovery/Food Delivery	1	10%
None	1	10%

The main roles at MOW included receiving and packaging, packaging and delivering, and being a student coordinator. Receivers picked up bundles of food at hospital kitchens that would have otherwise been thrown away and drove them to the packaging room at UNF. Deliverers took the organized, aesthetic-looking meals and drove them over to the apartments/houses of seniors in need. Packers organized the bulk of food brought to UNF into presentable, healthy meals. Those that received or delivered usually also packaged meals, hence the combination of packaging into both categories. Student coordinators are involved with organizing schedules, communicating with hospitals and any other community partners, and hopping into volunteering roles whenever necessary.

Themes and Subthemes

Four main themes were discovered: realization of food insecurity, importance of group work, skills relating to future dietetic practice, and interaction/connection with older clients. The main theme of realization of food insecurity includes subthemes such as increased empathy, increased thankfulness, and learning about food insecurity versus seeing it in real life. The main theme of importance of group work includes subthemes such as friendship development, networking with professors, working with students in versus out of the classroom, improved communication skills, and working together through adversity. The main theme of skills relating to future dietetic practice includes subthemes such as leadership, resume building/matching to internships, and kitchen skills like meal preparation/presentation and planning and

time/temperature precautions. The main theme of interaction/connection with older clients includes subthemes such as initiative to improve quality of life, making a difference, active listening, COVID-19 leading to isolation, and self-gratification. All ten participants agreed to being aware of/realizing the themes of realization of food insecurity, importance of group work, skills relating to future dietetic practice and interaction/connection with older clients. Table 2 presents the themes, subthemes, and associated participant quotes.

Table 2: Main themes, subthemes, associated examples/quotes from participants, and response frequencies

Themes	Subthemes	Examples from Participants	Participant Response Frequency (%)

<p>Realization of food insecurity</p>	<p>Increased empathy</p> <p>Increased thankfulness</p> <p>Learning about food insecurity vs seeing it in real life</p>	<p>“... I don’t think I’ve realized to what extent other people were experiencing hardships until I started volunteering and it gave me a whole new sense of what empathy means...if you don’t get into the grass roots of it, you know, it’s going to be hard for you to really understand how to help people...”</p> <p>“Okay, so I think what most students can probably identify with is that empathy factor that you get when you start</p>	<p>100%</p>
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		<p>volunteering and you're actually delivering the meals to people..."</p> <p>"It also helped improve my empathy... I had this one lady, we showed up and we just, her whole face just lit up, and she's like, I'm so happy you're here, I haven't eaten yet today. And it just kind of hit home, you're like, oh, okay, you're welcome."</p> <p>Moving from a third- world country not thinking that food insecurity is a thing</p>	
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		<p>in the U.S. and then seeing it in front of you</p>	
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<p>Importance of group work</p>	<p>Friendship development</p> <p>Networking with professors</p> <p>Working with students in vs out of the classroom</p> <p>Improved communication skills</p> <p>Working together through adversity</p>	<p>“... and then also connecting with like-minded students.</p> <p>Before that, I had never interacted with somebody that was interested in nutrition like I was”</p> <p>“...getting to work with Dr. Ross and Dr. Wright and the kind of impact that like watching their careers and the way they operate and stuff like really, for me at least it made me more passionate about nutrition”</p> <p>“...just being able to do</p>	<p>100%</p>
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		<p>something outside of course work together...and being able to do something that we all genuinely enjoy and we see we're making an impact in the community together... I think that was a really great experience and something so unique.”</p> <p>“...when you find comfort in communicating and spending honestly that is intimate time, especially if it's you and just one other person getting to</p>	
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		<p>know them, getting comfortable with them, it does make working together easier when you do reach the senior center...”</p> <p>“We wouldn't have been able to do it if we had all worked by ourselves. If we hadn't worked as a team, we would not have been able to deliver. We delivered over 100 meals before 10 o'clock one time. That was because all of us were working</p>	
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		together for one goal...”	
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<p>Skills relating to future dietetic practice</p>	<p>Leadership</p> <p>Resume building/matching to internships</p> <p>Kitchen skills (meal preparation/presentation and planning, time/temperature precautions)</p>	<p>“I gained a lot of leadership and confidence in myself, in my ability to be a leader.”</p> <p>“...not only are you helping people but you’re also gaining stuff from it so like leadership or like being empathetic and things like that, you’re growing as a person as well and you’re helping people so there’s not really any way to lose when you’re doing that.”</p> <p>“The Florida Department of</p>	<p>100%</p>
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		<p>Agriculture and Consumer Services dietetic internship... the director had come and seen our program and I think he was really impressed with the way that we operated and I think, because I had that involvement, it had given me the edge to get into the internship.”</p> <p>“...you want it to be aesthetically appealing to them, it to be colorful and nutritious, and, and so having the opportunity to do that in actual practice, not</p>	
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		<p>just learning in the classroom but engaging in that activity, I think, is going to be a tremendous asset.”</p> <p>“And then, you know, just other skills in general, it always, it’s always good to have a sense of foodservice skills and now that transporting that food can be very important, as far as understanding like the time and temperature safety of it, so that’s something that I can</p>	
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		<p>be mindful on later on if I wanted to, say, like, start a food prescription program, I know how long if I need to be transporting it around to people, that, like, what the time and temperature safety would be for that.”</p>	
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<p>Interaction/connection with older clients</p>	<p>Initiative to improve quality of life</p> <p>Making a difference</p> <p>Active listening</p> <p>COVID-19 leading to isolation</p> <p>Self-gratification</p>	<p>“She’s more interested in lowering her blood pressure and she’s really just full of questions whenever I come down to her house and tells me about what her doctor said it’s just she took it upon herself to start her journey and she said that this program has really launched that.”</p> <p>“...I really like being able to help people and see that gratitude on their faces, and even if you don’t, it’s still nice knowing</p>	<p>100%</p>
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		<p>that you did something productive to make a difference in somebody else's life who really may have needed help."</p> <p>"Just being that smiling face or that listening ear at the moment, someone who's just checking in to see how they're doing that day and, how their week has been."</p> <p>"Food is sensitive and it's vulnerable and it's the most intimate thing you can put into the body,</p>	
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		<p>so being able to speak to somebody in a therapeutic way is actually very beneficial...”</p> <p>“Yes, and especially with the COVID pandemic just the amount of people that it affected, especially in the elderly population, it was really eye-opening...”</p> <p>“...and I think that a lot of them tend to live alone, so, you know, that interaction and being able to talk to them,</p>	
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		<p>you get that sense of, you know, when people are experiencing that social isolation, I think because they're so excited to see you, or they're so happy that you stopped by..."</p> <p>"Yes, I hope, it's not self-gratifying but knowing that hey you know what, um, I made someone else's day, it it just makes me happy that at least I'm doing something good."</p>	
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Chapter 5

Discussion

These results have shown that there are many important and unique benefits of student volunteers assisting homebound seniors through a food recovery-meal-delivery program. The results reveal more than one primary reason for volunteering – students didn't just have altruistic motivations but also motivations related to career building. Rovers J mentioned¹¹ that there can be “behaviorist” or “subjectivist” approaches to volunteering; this study had both approaches incorporated into the minds of the volunteer participants. In the interviews, many participants discussed their motivations for volunteering related to topics such as social responsibility, empathy, gratitude, resume building, and skill improvements for a future career. Many interesting perspectives stuck out from the interviews, leading to the creation of the themes and subthemes described in the results section. For the first theme, “realization of food insecurity”, many students described in detail how they would have never previously thought about the hardships of living as a food-insecure individual or family until they got out in the community and saw it for themselves. Volunteering with MOW gave participants opportunities to do this. One volunteer explained how moving from one geographical location to another changed her perspective on food insecurity. She explained that after moving away from a third-world country, she did not think that food insecurity was a real issue in the United States like it was in her home country. She then went on to describe that her perspective on this completely changed once she started volunteering with MOW and getting out into the communities in Jacksonville. Another participant elucidated her major shift in perspective about this realization: “...I don't think I've realized to what extent other people were experiencing hardships until I started volunteering and

it gave me a whole new sense of what empathy means... if you don't get into the grassroots of it, you know, it's going to be hard for you to really understand how to help people..."

Another primary theme uncovered related to the importance of group work, this described the experiences volunteers had working together with other volunteers and faculty. MOW hosted a fast-paced volunteer experience consisting of putting together as many meals as possible from the food received from the connected local hospitals and sending them to seniors. The volunteers gained a real sense of connection with other students while they packaged the meals for delivery. For example, the volunteers worked together to package the meals, think of aesthetic presentations for healthy meals, wash any dirty dishes, and carpool out into the communities. One participant reflected on her team experience with other volunteers, mentioning the value of being able to work with others external to the normal academic setting: "...just being able to do something outside of course work together... and being able to do something that we all genuinely enjoy and we see we're making an impact in the community together... I think that was a really great experience and something so unique." Sometimes dietetics faculty members would also join in and assist with preparation. This is an action that was never required of the faculty, but they have such a vigorous passion for the field that they simply did not mind. The volunteers appreciated this help tremendously and some mentioned how they wouldn't have been accepted to dietetic internships if it weren't for the connections made with the faculty members during this volunteer experience.

A study focusing on an interdisciplinary group of students for a collaborative learning experience noticed an increase in empathy in architecture and landscape field college students,¹⁵ something that was also realized in the dietetic students volunteering with the MOW program. Fourth-year nursing students who volunteered as support staff at an acute mental health inpatient

unit (AMHIU) noticed profound overall positive impacts they brought to the mental health patients by spending time with them.¹⁷ This impact from volunteering was also recognized in our study of dietetic students; positive influences were formed from productive conversations with seniors while delivering nutritious meals. Volunteers felt feelings of self-gratification from making profound impacts in the lives of the seniors in need, emotions that were additionally felt in medical students making phone calls to isolated seniors.¹⁸ Students volunteering at a community organization in Saskatchewan, Canada felt a shift in self-perceptions of volunteering from resume building to altruistic motivations.²⁰ Similarly, the MOW volunteers felt that they found both kinds of motivations from helping seniors in need. Although group work was an important contribution to volunteer work in other studies found in the literature,^{14,15} MOW volunteers were the only student volunteers that verbally stated the importance of working together in the qualitative interviews. The realization of food insecurity was another concept that was not recognized by participants in other studies in the literature.

The literature has an ample body of research studies about student volunteering in the fields of health science such as nursing and physician assistants; there are little to no studies focusing on dietetics students in the volunteering field. The MOW program consists of not only college students from the nutrition and dietetics program but different students of a wide variety of majors including healthcare and non-healthcare settings. This factor of catering to multiple majors is something that has only been found in one study exploring a collaborative learning experience between students from nursing, architecture, and landscape design programs.¹⁵ This multifariousness is something that helps to bring in students of varying personalities, knowledge backgrounds, and cultures to provide a joint effort regarding making a difference – providing healthy meals to seniors for reduction of food insecurity in this case. The results of this research

will assist in filling in this gap in the literature concerning the heterogeneity of college student volunteers. Another gap that this study addresses is the uplifted motivations for college student volunteers to embark on the mission to decrease food insecurity prevalence in the senior population. The results of this study revealed that college student participants in the MOW program established their perceptions for volunteering in the community including altruistic motivations and potential career-related benefits. With some professionals in the dietetics industry looking for eager interns or employees to join the workforce while recognizing the importance of this type of volunteering, future volunteers can perhaps be propelled to join other like-minded students on this contribution to lend a hand to populations in need. This can inspire future volunteers to get out into the community and help programs such as home-delivered meal programs of the OAA receive more funding from the national government. It is known that there is a need for more programs relating to home-delivered meals for seniors in the community.²

There is not enough research on program outcomes and efficiency of university-affiliated food assistance programs that rely on volunteers to help community populations in need. Although the Rovers J¹¹ and Julia-Sanchis¹⁷ studies involved the use of student volunteers as medical service trip clinical helpers and support staff, respectively, no other studies found in the literature were related to supporting OAA programs through the creation of similar programs run by student volunteers with tied connections to universities. Studies such as these may inspire university program directors across the country to develop similar programs helping food security in seniors while promoting volunteering to boost efficiency in reaching outcomes for seniors and volunteers alike.

Limitations

There are limitations in this study that ought to be considered. First, the sample size of MOW study participants is one of convenience and not randomization. Our sample of participants is not generalizable to other settings. For future research in the field of student volunteering, there is a need for carefully considered sampling ideas that collect students from a wide variety of universities using collection methods relating to randomization. This would assist in increasing sample size generality. For further strength in sampling, the collection of volunteers from universities in varying geographical locations would be a strong indicator of a study design of quality. Similar qualitative studies like Rovers J¹¹ and Donnelly S¹⁵ had the same drawbacks to their study designs; this is customary with the nature of the qualitative study design. Another limitation of consideration is social desirability bias. This is a kind of response bias in which participants will tend to answer questions or statements in a particular way so that they can be viewed positively by others and be seen as having good behavior. With plenty of the questions in the interview guide (including the probing/follow-up questions) constituting the space of positive actions and mannerisms in social settings relating to empathy for older adults, participants may feel the pressure to answer positively to questions in order to avoid negative thoughts or perceptions from others. For participants that answer positively to the optimistic questions with authentic, genuine meaning, this kind of bias does not apply to this group. This response bias usually presents with a specific type of sampling bias known as the voluntary response bias. This bias consists of an uneven representation of a study sample due to some participants being more likely to agree to study participation compared to others. For example, student volunteers in our study who had a pleasant experience with MOW were more likely to agree to participate as opposed to others who may have had drawbacks or unpleasant exposures with the volunteering experience. This was evident in our results as there was not a single negative response attached

to any of the questions asked in the Zoom interviews. Sample sizes that bring in a mix of positive and negative responses will naturally have an improved internal validity for the qualitative design. Future studies with MOW or similarly functioning community meal delivery programs should be driven to collect a larger sample size of student volunteer participants to avoid the voluntary response bias.

Application to Practice

These findings illustrate the need for novel and cost-effective programs to help mitigate the problem of food insecurity among seniors. There are many different applications to practice for the modern practicing registered dietitian (RD). In the field of dietetics, there is an overwhelming number of career opportunities that aid in improving the quality of life of many different populations; some of these areas include inpatient clinical, outpatient office/clinic space, community assistance/public health policy, research, food science, and foodservice settings such as kitchens in hospitals or schools. Food insecurity is an unfortunate status that is widespread not only in underdeveloped nations but also in the United States. As mentioned in the results section, some participants discerned the need for assistance in the communities of Jacksonville. RDs are the leaders of food assistance in the community space. They must actively promote the need for help in these communities and use their resources to reach out to other professionals and stakeholders that can contribute to a safer world where no individual worries about where their next meal or form of eating will come from.

Unfortunately, volunteering can be seen as “boring” or “uncool” by adolescents and young adults.¹² RDs must serve as role models for younger adults and grade school-aged students by getting out into the community and ending the stigma of “boring” volunteering. When students begin to see the purpose behind volunteering and how it can benefit not only

themselves but also community members around them, this is how the reputation of volunteering can improve for the better.

As mentioned throughout the paper, food insecurity can exacerbate the state of poor mental health in the senior population. Many seniors struggle with mental health issues such as loneliness and social isolation; having to deal with food insecurity only makes these problems harder to manage. These unfortunate, real-life complications can be lessened with the help of RDs and other community stakeholders getting out into the community to reduce the prevalence of mental health issues in these populations by shining more attention on them. Continuing to support these programs such as the home-delivered meals and congregate meal programs through word of mouth can assist these seniors that need help the most.

There are also applications to practice for those in educational settings such as students and professors. With a few of the studies found in the literature review examining service-learning, there are important implications for student involvement in this form of learning. This is a great way to expose volunteers to real-world settings that make use of theories and concepts learned in the classroom setting. The MOW program is no different. While dietetic students typically take community nutrition courses and learn about food insecurity and poverty in different populations, there is no way to apply the learned information until they get out into the community and witness these circumstances for themselves. A few of the participants of this study volunteered with MOW to satisfy the volunteering requirement in their community nutrition courses. During the interviews, these participants illustrated their passions for helping seniors and realizing benefits in themselves; they may have volunteered with MOW even if the act of volunteering was not a requirement for them to graduate. In the future, more university-affiliated programs like MOW ought to be structured as service-learning environments for

college students so that they may apply the acquired information to the real world. Professors and department advisors across the country must collaborate regarding this idea to make service-learning volunteering ubiquitous. This may increase the prevalence of volunteering for not only healthcare college students but also students in other departments.

Conclusion

The results of this paper exemplify the reasons why students volunteer in community settings. As seen here, different motivations and perceptions of volunteering incorporated altruistic and career-building reasons for doing so. Student participants stated many different reasons with some including increased empathy and thankfulness through food insecurity realization in the area, friendship development and networking with professors through fast-paced group work, skills relating to future dietetic practice such as kitchen setting skill development and leadership, and intimate connections with seniors through active listening and positive conversations.

When there is a real purpose behind the actions of volunteering, it is simpler to understand why volunteering can be paramount. The more awareness that is brought to these topics, the more students will be driven to participate to assist in the community through volunteering. While there is more attention being brought to the needs of seniors through food delivery programs and volunteers, there is a need for more research in this field. Future research should include more studies involving students from different universities across the country and the different majors offered by these universities. Obtaining students of different majors will be a substantial method to find out perceptions and motives of volunteering that may be similar or different to those of healthcare students. As this research study showed, obtaining the

perceptions and motives of student volunteers through a qualitative study design may be a groundbreaking way to find out why they volunteer and what drives them to do so.

Appendices

Appendix A: Informed Verbal Consent Document

Informed Consent Document*

You are invited to take part in a research study being conducted by a team of researchers from the University of North Florida. We are conducting a research study on the Meals on Wings program. Specifically, we will be measuring the impact of the program on the student volunteers participating in the program.

If you take part in this project, you will be asked to complete one interview via Zoom. If you consent to this interview, it will be recorded for accuracy; however, no identifying information will be included in the transcription and it will be destroyed immediately after it is transcribed or within 3 months of today’s date, whichever occurs first and no identifiers will be used in the transcript. We expect it to take approximately 30-60 minutes of your time. Your responses will be confidential. Only the UNF research team will have access to your full name and telephone number. All research materials will be stored in a locked file cabinet in the locked research office.

There are no foreseeable risks for taking part in this project while others may benefit from the information we learn from the results of this study. Participation is voluntary and there are no penalties for deciding not to participate, skipping questions, or withdrawing your participation. Choosing not to participate in the interview will not negatively impact your relationship with the program or university.

If you have any questions or concerns about this project, please contact me.

If you have questions about your rights as a research participant or if you would like to contact someone about a research-related injury, please contact the chair of the UNF Institutional Review board by calling (904) 620-2498 or emailing irb@unf.edu.

Thank you for your consideration.

Sincerely,	
Lauri Wright	Jen Ross
Principal Investigator	Co-Investigator
l.wright@unf.edu	j.ross@unf.edu
904-620-1436	904-620-2328

_____ (print name) verbally attested that he/she is at least 18 years of age and agrees to take part in this research study.

Researcher Printed Name: _____

Signature: _____ Date: _____

Appendix B: Student Volunteer Interview Guide

Exploring the Impact of Volunteering with Meals on Wings

Interview Guide

Thank you for participating in this interview. We are interested in learning about how volunteering with the Meals on Wings program might have impacted your career, social responsibility and empathy. As we discussed when we reviewed the informed consent, this interview is confidential, and the interview notes/recordings will be kept private. We will not use your name or any information that could identify you in any of our reports. You may choose not to answer questions or end this interview at any time. Your participation in this study will not affect your relationship with the University of North Florida (UNF) or the Department of Nutrition and Dietetics.

Recording Consent:

This interview will be recorded for accuracy. No identifying information will be included in the recording and it will be destroyed immediately after transcription or within 3 months of today's date, whichever occurs first. Do you consent to the audio recording of this interview?

Yes: _____ No: _____

If recording consent is granted, proceed with the following questions:

Interviewee Information

First, we will ask a few questions about you and your involvement with the Meals on Wings program.

- What is current status (undergraduate, dietetic intern, dietitian, graduate student, etc.) and major?
- How long did you volunteer with Meals on Wings?
- What was your primary role with Meals on Wings?

Opening Questions

- Tell me a little bit about any previous volunteer experiences you may have had before volunteering with Meals on Wings.
- What initially drew you to volunteering with Meals on Wings?

Key Questions (career benefits/impact)

We're going to move on to discussing some potential career benefits/impact you may have experienced from volunteering with the program.

- Discuss some of the benefits that you have experienced from volunteering with Meals on Wings.
- If applicable, do you think volunteering helped you secure a dietetic internship?

- If applicable, do you think volunteering with Meals on Wings improved your skills in dietetic practice (whether it be in the internship or as a dietitian)?
 - If so, name specific skills.
- Do you think volunteering with Meals on Wings made you a better practitioner (for example, more sensitive to the needs of the elderly/food insecure)?
 - If so, how?
- Did volunteering with Meals on Wings impact what area of dietetics you would like to practice in or what population you work with? Or other work in you're in a different field?
- Did volunteering with Meals on Wings make you feel more comfortable working with seniors?

Key Questions- (social responsibility, peer modeling, empathy)

Another important component to this research is investigating the impact that volunteering may have on our empathy and social responsibility.

- How important would you say volunteering or giving back to the community is?
 - Consider the following statement: "Meaningful public service is very important to me." Would you agree? Why or why not?
- Consider the following statement: "I enjoy making other people feel better." Is that true for you? Elaborate.
 - Meals on Wings is a program that relies on a group volunteers working together. Is there value for you in working with your peers? Elaborate on what that means to you.

Closing Questions

- Are there other impacts to volunteering with Meals on Wings that I didn't cover?
- Do you have any questions or comments about the project for me?

Thank you for taking the time to meet with me today, your contribution to this project is greatly appreciated

Appendix C: Student Volunteer Interview Code Book

Concept	Code	Example	Frequency
<p>a. Discuss some of the benefits that you have experienced from volunteering with MOW.</p>	<p>a. Benefits for self and client b. Benefits for the client c. Benefits for self</p>	<p>a. “So by volunteering, it's like taking that, taking away some of that stress, you know, knowing that hey even though it's pandemic, I still could do something for the community, you know I could still help... And what I've seen with the clients, because when I started it was delivering because we were not allowed on campus so just seeing the joy, you know from from the eyes of our clients...” b. “She is really loving this program like does not only well there's all of them enjoy the social interaction, but one in particular has really taken an interest in her health.” c. “And so I really got experience in that, and then as a dietitian and everything when I become one I'm learning how to make meals.” d. “Okay, so I think what most students can probably identify with is that empathy factor that you get</p>	<p>a. 4 b. 1 c. 5</p>

		<p>when you start volunteering and you're actually delivering the meals to people...”</p> <p>e. “So I felt like I gained a lot from working as part of the team, I felt important from doing that.”</p> <p>f. “I gained a lot of leadership and confidence in myself, in my ability to be a leader.”</p> <p>g. “...being able to help seniors who at in many cases are homebound, right... I have been given the opportunity to work with peers, who are also have the same mindset of wanting to be able to give back and help the community...”</p> <p>h. “So I feel like it allowed me to can, like appreciate what I have... like realizing like how much of a difference my five minutes made to someone else because it reminded me to like stop and appreciate what I have.”</p> <p>i. “I definitely learned leadership skills.”</p> <p>j. “And being able to interact with them, that’s gratifying I think to me and to the people that we would deliver to.”</p>	
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<p>b. If applicable, do you think volunteering helped you secure a dietetic internship?</p>	<p>a. Yes b. No c. Still taking undergraduate classes d. Applying to internship soon</p>	<p>a. "I guess when I, when I volunteered it was more like I wanted to do something, instead of being cooked up instead of you know, being wrapped in my own world with all the stresses, I know it's, it's a way for me, not only to give back, but also to see you know what, no matter how I think my situation is grim, um there's actually more people that are less fortunate, you know just just seeing that makes me thankful." b. "I think, I mean, it shows that you're ready for a career, cause I mean that's what a lot of feel the dietetics is helping people I mean that's, that's what it is." c. "It did um I believe, let's see, I've talked with two of the directors, for the internship program and they mentioned that I had put my diet and the meals on wings volunteering on my application and they said that is a wonderful experience and they loved how I went into depth." d. "Definitely, definitely 100%. I don't think I would</p>	<p>a. 7 b. 1 c. 1 d. 1</p>
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		<p>have been accepted if it wasn't for that.”</p> <p>e. “Yes. Not only the hours that I put in, I think I probably had over 100 by the end, but also the relationships that I formed with my professors, and my peers, and being able to network through them, it helped a lot.”</p> <p>f. “Yeah, 100%. I think the, the knowledge that you gain there, the leadership skills and then just knowing the like connections that you make with Dr. Wright and Dr. Ross and the students, it just creates such a strong bond between everybody that I feel like there's no way that you can't succeed and get an internship down the line.”</p> <p>g. “Yes, I, I absolutely hope so...”</p> <p>h. “The connections I made with Dr. Ross and Dr. Wright, they helped me a lot but also like learning about food insecurity led me to be, which led me to my internship program, one of my internship rotations...”</p> <p>i. “I do think it'll help. One, with</p>	
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		<p>leadership communication I'm recognizing the need and also, just like seeing where our career and specialties can come in."</p> <p>j. "Yes... And I think personally, I don't think I would have gotten a dietetic internship without having that experience..."</p>	
<p>c. If applicable, do you think volunteering with MOW improved your skills in dietetic practice (whether it be in the internship or as a dietitian)?</p> <p>a. If so, name specific skills.</p>	<p>a. Yes – in the internship</p> <p>b. Yes – as a dietitian</p> <p>c. Yes – as a future dietitian</p> <p>d. Yes – as a dietitian and in the internship</p> <p>e. No</p>	<p>a. "Yeah. I really think so..."</p> <p>b. "It did because not only do I know the inner workings of the kitchen in a hospital and such, I know food, I know food safety, I know how to make meals..."</p> <p>c. "I think definitely it, helped me, it's going to help me as I move into the dietitian role, especially in food service and community."</p> <p>d. "Sure. Being able to speak to members of the community and also communicating back with our professors and those hospital staff, it helped my communication skills."</p> <p>e. "Yeah I think so..."</p> <p>f. "Yes, I do because it's an opportunity to</p>	<p>a. 1</p> <p>b. 1</p> <p>c. 6</p> <p>d. 1</p> <p>e. 0</p>

		<p>learn in the classroom but then put that into practice in real life...”</p> <p>g. “Like empathy you know, like um, I was raised, like you know, a certain way, this showed me like a different population of the world, a different demographic...”</p> <p>h. “I do think so...”</p> <p>i. “Oh, definitely both!”</p>	
<p>d. Do you think volunteering with MOW made you a better practitioner (for example, more sensitive to the needs of the elderly/food insecure)?</p> <p>a. If so, how?</p>	<p>a. Yes – sensitive to needs of the elderly</p> <p>b. Yes – sensitive to needs of the food insecure</p> <p>c. Yes – to both</p> <p>d. No</p>	<p>a. “Actually both. I would say both.”</p> <p>b. “Yes, and especially with the COVID pandemic just the amount of people that it affected, especially in the elderly population, it was really eye-opening...”</p> <p>c. “So yes, I think I got very good experience and sympathizing and empathizing with patients who are elderly that need assistance and are food insecure.”</p>	<p>a. 5</p> <p>b. 3</p> <p>c. 2</p> <p>d. 0</p>

		<p>d. “Yes, yes, definitely. I think, I think that anyone who volunteers with the program just changes as a person, and I think that I can attest to that as well...”</p> <p>e. “...and seeing that the food insecurity is so prevalent, even just in Jacksonville. I’ll be able to give them more resources if I have a patient who maybe doesn’t have access to food...”</p> <p>f. “So she started getting better, and then she started taking our meals again, and it was just like, I started to grow empathetic overseeing like little things like that.”</p> <p>g. “Yes, I definitely think that its helped me have more visibility to the level of food insecurity out there.”</p> <p>h. “So yes, it has helped me become a better practitioner, because I get a whole plethora of ages and I speak to them, based on their ages and based on their specific needs and Meals on Wings has helped showed me</p>	
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		<p>the needs of the elderly population...”</p> <p>i. “Yes, um, like, like you said, like it'll definitely help me with the older population and um, populations with a clinical diagnosis...”</p> <p>j. “Oh yeah, definitely.”</p>	
<p>e. Did volunteering with MOW impact what area of dietetics you would like to practice in or what population you work with? Or other work in you're in a different field?</p>	<p>a. Yes – clinical nutrition</p> <p>b. Yes – community nutrition</p> <p>c. Yes - geriatrics</p> <p>d. Yes – unsure which field</p> <p>e. No – clinical nutrition</p> <p>f. No – pediatric nutrition</p> <p>g. Unsure – clinical nutrition</p> <p>h. Unsure - pediatrics</p>	<p>a. “No, I still want to, entering this program, I still wanted to do um, renal and also diabetes...”</p> <p>b. “Yes... but I really have always been interested in community nutrition and helping people in the community, cause I mean that's who needs it.”</p> <p>c. “I am actually really wanting to focus on pediatric nutrition... I've certainly feel that learning about seniors and food insecurity in that area um it's important but for me specifically I didn't learn or did it doesn't apply for me.”</p> <p>d. I'm not 100% sure, right now... I know that my experience, at least with Meals on Wings, definitely will always be part of what I'm doing in the future...”</p>	<p>a. 2</p> <p>b. 1</p> <p>c. 1</p> <p>d. 2</p> <p>e. 1</p> <p>f. 1</p> <p>g. 1</p> <p>h. 1</p>

		<p>e. “Uh, maybe. I have a very strong draw towards clinical dietetics...”</p> <p>f. “Yeah... I want to at least start off in clinical...”</p> <p>g. “You know I believe it has, I believe that I'm still finding my niche...”</p> <p>h. “I always knew I wanted to work with children, I still want to work with children, I don't know if it influenced me...”</p> <p>i. “I have been inspired to work at the clinical field of nutrition and I feel like with my experience at Meals on Wings, just like seeing what led them up to their, to some of these clients to their disabilities and to their diagnosis, I kind of want to prevent that.”</p> <p>j. “Definitely love working with the older population... because of the experience I have with Meals on Wings...”</p>	
<p>f. Did volunteering with MOW make you feel more comfortable working with seniors?</p>	<p>a. Yes b. No</p>	<p>a. “Yes, it actually has.” b. “Yes...” c. “It did...” d. “Yeah definitely, definitely 100%.” e. “Yes.”</p>	<p>a. 10 b. 0</p>

		<p>f. “Yeah... now I’ll have full conversations with the seniors.”</p> <p>g. “Actually I do...”</p> <p>h. “Oh yeah definitely.”</p> <p>i. “Yeah definitely...”</p> <p>j. “Oh yeah, definitely.”</p>	
<p>g. How important would you say volunteering or giving back to the community is?</p> <p>a. Consider the following statement: “Meaningful public service is very important to me.” Would you agree? Why or why not?</p>	<p>a. Important</p> <p>b. Not important</p>	<p>a. “Well, you know the saying that no man is an island.”</p> <p>b. “I think it’s extremely important...”</p> <p>c. “Um, so I would say that it is certainly very important...”</p> <p>d. “Very important. Like on a scale of 1 to 10 I would say a 10...”</p> <p>e. “Um, very important.”</p> <p>f. “I would say it’s, it’s really important...”</p> <p>g. “I definitely think it’s important...”</p> <p>h. “It’s huge...”</p> <p>i. “Um, on a scale of 1 to 10, definitely 10.”</p> <p>j. “I think it’s so important. I could almost argue that everybody should do it in their lifetime at least once!”</p>	<p>a. 10</p> <p>b. 0</p>
<p>h. Consider the following statement: “I enjoy making other people feel better.” Is</p>	<p>a. Yes – self-gratification/empathy</p> <p>b. Yes – social responsibility</p>	<p>a. “Yes, I hope, it’s not self-gratifying but knowing that hey you know what, um, I</p>	<p>a. 3</p> <p>b. 3</p> <p>c. 3</p> <p>d. 1</p>

<p>that true for you? Elaborate.</p>	<p>c. Yes – connection with those in need/the elderly d. Yes – creating positive mindset e. No</p>	<p>made someone else's day, it it just makes me happy that at least I'm doing something good.” b. “Oh yeah... I mean everyone deserves to be happy and taken care of.” c. “...keeping people joyful and happy um that is very helpful and um medicinal in a way.” d. “Yeah the connection with, with the older population, just those that need it in general, so it's very important...” e. “It is true for me... And so, it feels good to make them feel good.” f. “That’s definitely true for me... it’s like you see people that are struggling and you want to go out of your way to help them.” g. “I do enjoy helping people feel better... someone who's just checking in to see how they're doing that day and, and how their week has been.” h. “Um, I definitely like making people feel better...I try to keep things positive, look at the best things.” i. “Yes it’s very true, and whenever I make</p>	<p>e. 0</p>
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		<p>other people feel better definitely makes you feel better, makes my day brighter and it makes me feel like I've done something right for the day.”</p> <p>j. “Yes... I really like being able to help people and see that gratitude on their faces...”</p>	
<p>i. MOW is a program that relies on a group of volunteers working together. Is there value for you in working with your peers? Elaborate on what that means to you.</p>	<p>a. Yes – meeting others/sharing experiences</p> <p>b. Yes – resolving social isolation from COVID-19</p> <p>c. Yes – making impacts with others</p> <p>d. No</p>	<p>a. “Yeah... I was able to not only share my experience to the junior ones, but also able to interact with the lesson we did with the Grad students and be able to get like some advice from them.”</p> <p>b. “I, yes... COVID again, you know all of us had to go to remote instruction. And we didn't get ourselves any social interaction with each other, I mean we see each other through a screen and getting the opportunity to go to Meals on Wings and see and actually speak with our peers as we're working had a huge impact, and we all, I think we all needed it for sure.”</p> <p>c. “Yes, so I felt that working with my peers and everything, most of us at Meals on Wings were</p>	<p>a. 6</p> <p>b. 1</p> <p>c. 3</p> <p>d. 0</p>

		<p>nutrition and dietetic students, and so we were able to develop friendships.”</p> <p>d. “...being able to do something that we all genuinely enjoy and we see we're making an impact in the community together...”</p> <p>e. “We all relied on each other to get each of our jobs done and having a new person come in and teaching them how to do it, it really helps kind of the synergy of the whole thing, we all work together so well, I think.”</p> <p>f. “Gaining like that valuable insight and then also connecting with like-minded students. Before that, I had never interacted with somebody that was interested in nutrition like I was.”</p> <p>g. “I would, because we are able to leverage each other's experiences and perspectives... so we can just leverage each other's ideas and perspectives I think that's a great opportunity to do that with your peers.”</p> <p>h. “Yes... see my friends, my peers outside of the um, outside of the</p>	
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		<p>classroom you know, making connections with them, you know, spending time with them, learning from them and their experiences, seeing them make an impact, seeing me make an impact, seeing our, like, all our whole cohort, you know, come together...”</p> <p>i. “...when you find comfort in communicating and spending honestly that is intimate time, especially if it's you and just one other person getting to know them, getting comfortable with them, it does make working together easier when you do reach the senior center...”</p> <p>j. “...I think it was really great to connect with people and some of them are still really good friends of mine, and dietitians who I speak to all the time and, you know, I really like that I had that opportunity to connect with other in a group and learn how to, you know, operate in a group better.”</p>	
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