


College student motivations for and perceived impacts of volunteering with a nutrition and cooking education program for children

Jessica Soldavini¹  | Lindsey S. Taillie² | Leslie A. Lytle³ |
Maureen Berner⁴ | Dianne S. Ward¹ | Alice Ammerman¹

¹Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

²Carolina Population Center and Department of Nutrition, Gillings School of Global Public Health University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

³Department of Health Behavior, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

⁴School of Government, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

Correspondence

Jessica Soldavini, Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill, 1700 Martin Luther King Jr Blvd, Chapel Hill, NC 27599-7426, USA.
Email: Jessica6@live.unc.edu

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Abstract

To assess among college students their motivations for and perceived impacts of volunteering with Cooking Matters for Kids as part of No Kid Hungry NC. Seventeen college student volunteers responded to an online survey questionnaire assessing their motivations for volunteering and how they were impacted by their experiences. Motivational functions for volunteering (values, understanding, social, career, protective, enhancement) were assessed using the Volunteer Functions Inventory. The strongest motivational functions for volunteering were values and understanding. Students were also strongly motivated to volunteer related to the areas specifically addressed by the program (i.e., nutrition, public health, working with children). Perceived impacts of volunteering included being more comfortable working with children, improving knowledge/skills, gaining experience related to their future career, and having fun. Volunteering with Cooking Matters for Kids benefited college students. Issues addressed by the program and the desire to gain experience motivated students to volunteer.

KEYWORDS

college students, cooking, evaluation, motivation, nutrition education, surveys and questionnaires, Volunteers

1 | INTRODUCTION

Many nutrition and cooking education programs use volunteers to help with program delivery. Although the United States has some government-funded programs that support nutrition and cooking education, such as the Supplemental Nutrition Assistance Program—Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP), these programs have a fairly limited amount of funding and reach (U.S. Department of Agriculture, [n.d.](#); U.S. Department of Agriculture National Institute of Food and Agriculture, [n.d.](#)). With nutrition and cooking education not being systematically addressed through government programs and funding, many US organizations rely heavily on volunteerism to be able to offer these types of programs. This makes understanding what motivates individuals to volunteer especially critical to ensuring that nutrition and cooking education programs are able to reach populations who may benefit from them.

Volunteering with these types of programs can be an excellent opportunity for college students to gain skills and experience, as well as increase their own nutrition and cooking knowledge. While a variety of programs and research studies have involved college students in the implementation of nutrition and cooking education programs (Condrasky et al., [2010](#); Cunningham-Sabo & Lohse, [2013](#); Gatto et al., [2012](#); Isoldi & Dolar, [2016](#); Liquori et al., [1998](#)), we are unaware of research looking at what motivates college students to volunteer with these programs and how they are impacted by their experiences. These are important areas to assess as they can help with volunteer recruitment, developing beneficial experiences for volunteers, and ensuring that positive outcomes for volunteers are not overlooked when evaluating a program.

Research and evaluation around nutrition and cooking education programs typically focus on the program participants and have found these types of programs to have a variety of benefits for program participants (Hersch et al., [2014](#); Muzaffar et al., [2018](#); Reicks et al., [2018](#)). While assessing the impact on program participants should be a main priority in the evaluation of these programs, the individuals providing the nutrition and cooking education program may also be impacted by their experiences. It is important not to overlook this group in evaluating whether a program has positive outcomes.

There has been a small amount of qualitative research conducted on how paraprofessionals working with EFNEP have been impacted by their experiences. These studies have found that EFNEP enhanced the quality of life of its educators, leading to a variety of positive outcomes including increased nutrition knowledge, healthier eating habits, improved teaching and public speaking skills, and greater connections to the community (Auld et al., [2016](#); Hibbs & Sandmann, [2011](#)). We are only aware of one study evaluating how individuals *volunteering* with these types of programs have been impacted by their experiences. Individuals volunteering with the *Stephanie Alexander Kitchen Garden Program*, a school-based gardening and cooking program for children in Australia, benefited from their experiences in a variety of ways including an increased sense of self-worth and enjoyment, opportunities to use their time productively, training and skill development, and an increased sense of belonging (Townsend et al., [2014](#)).

Little research exists on what motivates individuals to volunteer with nutrition and cooking education programs and we are unaware of research specifically related to college students and these types of programs. An evaluation of the *Stephanie Alexander Kitchen Garden Program* found that motivations for volunteering with the program were related to supporting the school and what it was trying to do, supporting the program (related to concern about children's diets), the opportunity to use skills they had, and the opportunity to personally benefit from the experience (Townsend et al., [2014](#)). Clary et al. ([1998](#)) describe six motivational functions that volunteering may serve for individuals:

- Values: allows individuals to express values related to concerns for the welfare of others.
- Understanding: allows individuals to learn from the opportunity and gain new knowledge, skills, and experiences.
- Social: allows individuals to spend time with friends or engage in activities that individuals who are important to them view favorably.
- Career: allows individuals to gain career-related experience.

- Protective: allows individuals to feel less guilty about being more fortunate than others or address personal problems.
- Enhancement: allows individuals to grow and develop psychologically.

While these motivational functions have been found to be relevant for college student volunteers in past research (Clary et al., 1998; Gage & Thapa, 2012; Johnson et al., 2017; Moore et al., 2014), they have not specifically been examined in college students volunteering with nutrition and cooking education programs. Understanding what motivates college students to volunteer with nutrition and cooking education programs is helpful for recruiting future volunteers and developing volunteer experiences that are most beneficial to those involved.

Cooking Matters, a campaign of the national nonprofit Share Our Strength, helps low-income individuals learn to prepare healthy meals on a limited budget through its nutrition and cooking education courses and resources (“Cooking Matters,” n.d.). *Cooking Matters* programming is offered by organizations across the United States and volunteers often teach the courses (“Cooking Matters,” n.d.). According to data from Share Our Strength, between July 2000 and August 2021 18,641 individuals volunteered with *Cooking Matters* programs across the United States to provide 34,115 courses that reached over 907,000 individuals (personal communication, September 1, 2021). No Kid Hungry NC, based at the Center for Health Promotion and Disease Prevention at the University of North Carolina at Chapel Hill, has implemented *Cooking Matters for Kids* courses, which are designed for 3rd–5th grade children, since the spring of 2017. The instructors for these courses are primarily college student volunteers.

College students are an important group to focus on when conducting research and evaluation related to volunteering as they make up a large proportion of individuals who volunteer and have been shown to benefit in a variety of ways from their volunteer experiences (Gage & Thapa, 2012). In conducting research on volunteer motivations, it can be helpful to focus specifically on college students rather than combining them with all other types of individuals as they may have different reasons for volunteering. As an example, other researchers have described how college students often view volunteering as a learning experience or something that can help them achieve a future paid position, whereas other types of individuals may volunteer because of social or normative pressures (Vianen, Nijstad, & Voskuil, 2008). The ways in which college students are impacted by their volunteer experiences are also likely to have some differences compared with noncollege students.

The objective of this exploratory study was to assess among college students the motivations for and perceived impacts of volunteering with *Cooking Matters for Kids* through No Kid Hungry NC.

2 | METHODS

2.1 | Overview of volunteer opportunities

The *Cooking Matters for Kids* curricula consists of six, 2-h lessons that cover topics such as MyPlate, fruits and vegetables, whole grains, reading food labels, sugar, and making healthy choices at the grocery store and when eating out. Each lesson includes a nutrition and hands-on cooking activity. No Kid Hungry NC offered *Cooking Matters for Kids* lessons to children in afterschool programs located near the University of North Carolina at Chapel Hill. Due to the time constraints of the afterschool programs where the program was held, most lessons were divided in half and offered as 1-h lessons with the nutrition lesson offered 1 day and the cooking activity offered another. The volunteer time commitment was approximately 2 h for each lesson (30 min for set-up, 1 h for lesson, and 30 min for clean-up), not including the time driving to and from the afterschool program. The lessons were led by a team of volunteers at each participating afterschool program over the course of the semester. Many organizations offering *Cooking Matters* programming have two different roles for volunteer instructors (culinary instructors and nutrition instructors), however, No Kid Hungry NC had one instructor role so students had the opportunity to lead both nutrition and cooking activities.

The majority of individuals volunteering with *Cooking Matters* were students at the University of North Carolina at Chapel Hill. Volunteer opportunities were promoted to students through a variety of university listservs as well as to students volunteering or interning at the Center for Health Promotion and Disease Prevention. College student volunteers consisted of both undergraduate and graduate students from a variety of majors.

2.2 | Study design and participants

Individuals were eligible to participate in the study if they volunteered with *Cooking Matters for Kids* through No Kid Hungry NC at least one semester (the program was offered each fall and spring) between the spring of 2017 and spring of 2020, which included all semesters *Cooking Matters for Kids* was offered by No Kid Hungry NC before data collection, and were a college student when they volunteered. Volunteers who were not college students at the time they volunteered were excluded as we were specifically interested in college students' experiences. Volunteers who helped only with data collection and were not instructors for the lessons were not invited to participate as they were not engaged in providing nutrition and cooking education to the children, which was the focus for this study. A total of 78 students were invited to participate in the study. Although focusing on a small sample of volunteers from one program may limit the generalizability of the results and ability to draw firm conclusions, this study was meant to be exploratory in nature. The results can be used to inform the development of future larger and more rigorous studies. The types of motivations and impacts found in this study could be helpful for identifying items to assess in future studies of college students who volunteer with nutrition and cooking education programs.

An online survey link was sent to eligible participants through Qualtrics online survey software four times between May 27, 2020, and June 16, 2020. The survey was sent using personalized survey links so students could only complete the survey once. The email address available for most students was their university email address, so students who had already graduated may not have seen the email invitation if they no longer used that email account. Some students had shared their personal email addresses with the program lead and this email address was used instead to help ensure that students who had graduated received the email. This study was reviewed and determined to be exempt by the Institutional Review Board at the University of North Carolina at Chapel Hill.

2.3 | Measures

Motivations for volunteering with *Cooking Matters for Kids* were assessed using the Volunteer Functions Inventory (VFI). The VFI was developed by Clary et al. (1998) to assess the six motivational functions of volunteering (values, understanding, social, career, protective, enhancement). It is the most widely used questionnaire to assess volunteer motivations and has been used in numerous studies in a variety of settings and populations (Chacón et al., 2017). It also has good psychometric properties (Clary et al., 1998). Because this study was exploratory in nature, we wanted to include questions from this tool as a starting point to see if the previously identified volunteer functions applied to our population. The VFI consists of 30 possible reasons for volunteering related to the motivational functions listed above. Respondents are asked to indicate how important or accurate reasons are in the volunteer work that they do using a response scale from 1 (not at all important/accurate) to 7 (extremely important/accurate) (Clary et al., 1998). The No Kid Hungry NC *Cooking Matters for Kids* volunteer application included a section for students to prepare a statement of interest with the following prompt: "Please prepare a brief statement describing why you are interested in volunteering with No Kid Hungry NC's *Cooking Matters for Kids* Program and what you hope to gain from this experience." Anecdotal comments from volunteers and responses to these statements were also reviewed and used to develop additional closed-ended questions based on areas addressed by *Cooking Matters for Kids* (i.e., cooking, nutrition, teaching). The survey included an open-ended question for students to describe what motivated them to volunteer with the program.

Questions on the perceived impacts of volunteering were assessed using a series of statements with potential impacts that are rated on a scale of 1 (completely disagree) to 7 (completely agree). The potential impacts were derived from anecdotal comments received by the program lead on how volunteers have been impacted by their experiences volunteering. There was also an open-ended question for volunteers to describe how they have been impacted by their experience.

The survey included questions asking for information on the student, such as year in school when volunteering, major, and semesters volunteering with *Cooking Matters for Kids*. Students were asked how satisfied they were with their volunteer experience and whether they recommended volunteering to others. There were also open-ended questions asking what they liked most and least about volunteering with *Cooking Matters for Kids* and any additional feedback they wanted to share about their volunteer experience.

2.4 | Analysis

Responses to questions on volunteer motivation were scored from 1 (completely disagree) to 7 (completely agree). Mean scores were calculated for each volunteer function as well as each individual reason for volunteering to determine the most common reasons for volunteering both in terms of categories of functions of volunteering and individual reasons. As with motivations for volunteering, mean scores were calculated for each function of volunteering and individual perceived impact. Frequencies were calculated for questions on year in school, semesters volunteering, satisfaction, and whether they recommended the program to others. Open-ended responses were coded using Atlas.ti and key themes were summarized.

3 | RESULTS

Of the 78 volunteers invited to participate, one email bounced, 27 opened the survey link, 24 consented to participate, and 17 completed the full survey. Table 1 shows the characteristics of volunteers completing the survey. Volunteers were from a variety of majors with nutrition (six students) and human development and family studies (four students) having the most respondents. Respondents volunteered between one and three semesters, with a little over half of the sample volunteering one semester. The majority of respondents volunteered while they were juniors (six students) and/or seniors (nine students).

Table 2 shows the mean scores from the VFI. The functions with the highest mean scores were values (mean: 6.36, SD: 0.76), understanding (mean: 6.07, SD: 0.66), and career (mean: 5.01, SD: 1.04). The functions with the lowest mean scores were protective (mean: 3.92, SD: 1.31), social (mean: 4.36, SD: 1.29), and enhancement (mean: 4.54, SD: 1.07). As with the closed-ended questions, values and understanding were the most common themes related to the VFI for the open-ended responses. One respondent reported “Food insecurity is important to me, and I believe if you can teach kids nutrition at a young age they will take it with them for the rest of their life which leads to better health outcomes.” Table 3 shows motivation to volunteer based on the areas addressed by *Cooking Matters for Kids*. Mean scores for the different areas ranged from 5.76 (SD: 1.35) for cooking and 6.71 (SD: 0.47) for food insecurity. All 13 of the individuals who provided an open-ended response to the question on motivations to volunteer mentioned the areas the program addressed as being motivators, with nutrition, working with children, public health, and cooking being mentioned most frequently. One volunteer stated “I decided to volunteer with CMK because I love cooking, healthy eating, am working towards a degree in public health, and I love teaching and working with kids.”

Table 4 shows the ways students reported being impacted by their experience volunteering with *Cooking Matters for Kids*. The items with the highest mean scores were having fun (mean: 6.41, SD: 0.71), being more comfortable working with children (mean: 5.82, SD: 1.42), and improving teaching skills (mean: 5.53, SD: 1.33). Key

TABLE 1 Characteristics of *Cooking Matters for Kids* volunteers in the sample

	n (%)
Major[†]	
Epidemiology	1 (6%)
Nutrition	6 (35%)
Nursing	2 (12%)
Human development and family studies	4 (24%)
Hispanic linguistics	1 (6%)
Political science	1 (6%)
Chemistry	1 (6%)
Biology	1 (6%)
Environmental science	1 (6%)
Psychology	1 (6%)
Not reported	1 (6%)
Semester(s) volunteering with <i>Cooking Matters for Kids</i>[†]	
Spring 2017	4 (24%)
Fall 2017	3 (18%)
Spring 2018	3 (18%)
Fall 2018	5 (29%)
Spring 2019	3 (18%)
Fall 2019	5 (29%)
Spring 2020	4 (24%)
I don't remember	1 (6%)
Number of semesters volunteering with <i>Cooking Matters for Kids</i>	
1	9 (53%)
2	3 (18%)
3	4 (24%)
Don't remember	1 (6%)
Year in school when volunteering with <i>Cooking Matters for Kids</i>[†]	
Freshman	0 (0%)
Sophomore	3 (18%)
Junior	6 (35%)
Senior	9 (53%)
Masters student	3 (18%)
Doctoral student	1 (6%)
Other	0 (0%)

TABLE 1 (Continued)

	n (%)
Year in school during 2019–2020 academic year	
Freshman	0 (0%)
Sophomore	1 (6%)
Junior	0 (0%)
Senior	7 (41%)
Masters student	3 (18%)
Doctoral student	1 (6%)
I graduated before the 2019–2020 academic year	4 (24%)
Other (5th year senior)	1 (6%)

[†]Volunteers were able to select more than one response.

themes from the open-ended responses included improving their knowledge/skills, gaining experience related to their future career, and gaining an understanding of the importance of nutrition education for children. One respondent stated “Personally, I began to see the value in promoting early exploration of nutrition for kids. In the future when I have children, I’ll take the lessons that I’ve learned in CMFK, particularly exposing children early on to different fruits and vegetables, and allowing children to have tasks in the kitchen.”

Students were satisfied with their experience volunteering with *Cooking Matters for Kids*, with 14 (82%) reporting they were very satisfied and 3 (18%) reporting they were somewhat satisfied. All but one of the students had recommended volunteering with *Cooking Matters to Kids* to others. When asked what they liked most about volunteering with *Cooking Matters for Kids*, the majority of respondents reported interacting with the children. One respondent stated, “I like working with the kids and seeing their different reactions to the food we made.” The most common theme for what respondents liked least about volunteering with the program was related to course logistics, such as the timing and locations of the classes. One respondent stated, “The drive to the school was pretty far for me, I spent an hour driving in total each day.”

4 | DISCUSSION

The areas addressed by *Cooking Matters for Kids* were strong motivators to volunteering for the college students in the sample. This has been found in past research on college students as well, with love of sport being shown to be the strongest motivator for undergraduate sports management volunteers (Johnson et al., 2017). The two strongest motivational functions for volunteering with *Cooking Matters for Kids* were understanding and values, which is what has been found in past research on college students volunteering with other types of activities (Clary et al., 1998; Gage & Thapa, 2012; Johnson et al., 2017; Moore et al., 2014). The students in the sample felt the issues addressed by *Cooking Matters for Kids* were important and wanted to gain knowledge, skills, and experiences related to those areas as well as help the children served by the program.

Understanding what motivates volunteers can be helpful for volunteer recruitment as well as designing meaningful volunteer opportunities for students. Clary et al. (1998) found that VFI scale scores were significantly associated with how appealing, persuasive, and influential college students found advertisements for volunteering that were based on the different motivational functions for volunteering. With many volunteers being motivated by understanding and wanting to gain knowledge, skills, and experience related to the areas addressed by the program,

TABLE 2 Volunteer Functions Inventory Scores Among *Cooking Matters for Kids* Volunteers

Item	Mean	SD
Protective		
Overall scale score	3.92	1.31
No matter how bad I have been feeling, volunteering helps me forget about it	5.00	1.32
By volunteering I feel less lonely	4.00	1.97
Doing volunteer work relieves me of some of the guilt over being more fortunate than others	3.29	1.86
Volunteering helps me work through my own personal problems	3.29	1.36
Volunteering is a good escape from my own troubles	4.00	2.06
Values		
Overall scale score	6.36	0.76
I am concerned about those less fortunate than myself	6.00	1.17
I am genuinely concerned about the particular group I am serving	6.29	0.69
I feel compassion towards people in need	6.41	0.94
I feel it is important to help others	6.65	0.79
I can do something for a cause that is important to me	6.47	0.62
Career		
Overall scale score	5.01	1.04
Volunteering can help me to get my foot in the door at a place where I would like to work	4.41	1.84
I can make new contacts that might help my career	4.94	1.60
Volunteering allows me to explore different career options	5.06	1.30
Volunteering will help me to succeed in my chosen profession	5.47	1.33
Volunteering experience will look good on my resume	5.18	1.01
Social		
Overall scale score	4.36	1.29
My friends volunteer	3.29	2.14
People I'm close to want me to volunteer	2.82	1.91
People I know share an interest in community service	5.65	1.32
Others with whom I am close place a high value on community service	5.12	1.32
Volunteering is an important activity to the people I know best	4.94	1.34
Understanding		
Overall scale score	6.07	0.66
I can learn more about the cause for which I am working	6.12	0.78
Volunteering allows me to gain a new perspective on things	6.18	0.73
Volunteering lets me learn things through direct, hands on experience	6.29	0.77
I can learn how to deal with a variety of people	6.00	1.00

TABLE 2 (Continued)

Item	Mean	SD
I can explore my own strengths	5.76	0.90
Enhancement		
Overall scale score	4.54	1.07
Volunteering makes me feel important	4.65	1.41
Volunteering increases my self-esteem	4.00	1.80
Volunteering makes me feel needed	4.88	1.36
Volunteering makes me feel better about myself	4.47	1.42
Volunteering is a way to make new friends	4.71	1.16

TABLE 3 Areas addressed by *Cooking Matters for Kids* that motivated college students to volunteer

Item	Mean	SD
Food insecurity	6.71	0.47
Working with children	6.35	1.11
Community service	6.29	0.92
Building relationships with children	6.24	1.25
Public health	6.06	1.48
Nutrition	5.94	1.03
Fun/enjoyable activity	5.94	1.14
Teaching	5.82	1.24
Cooking	5.76	1.35

nutrition and cooking education programs can also consider the types of training and professional development opportunities that they offer to their volunteers to help both better prepare students for their volunteer tasks as well as help increase the benefits to the individuals volunteering.

The motivations for volunteering were similar to the impacts found as well as what students reported enjoying most about their volunteer experiences. Understanding (learning from the opportunity and gaining new knowledge, skills, and experiences) was one of the strongest motivators and improved knowledge and skills in the areas that students reported motivating them to volunteer were found among students in the sample. Improvements in knowledge and skills have been found with other nutrition education programs among EFNEP paraprofessionals (Auld et al., 2016; Hibbs & Sandmann, 2011) and volunteers with the *Stephanie Alexander Kitchen Garden Program* (Townsend et al., 2014). An evaluation of *Cooking Healthily on a Penny*, a program where medical students provide weekly cooking demonstrations at a farmer's market, found that among participating students, 60.5% learned something about nutrition, 42.4% learned something about cooking, and 94.7% learned nutrition education skills (Hashimi et al., 2020). With poor dietary quality a concern among college students (American College Health Association, 2020), volunteer opportunities with nutrition and cooking education programs could also be viewed as public health interventions for this population in addition to the target audience of the program. With high rates of food insecurity among college students (Nikolaus et al., 2019), including at the university where the college

TABLE 4 Ways college students were impacted by their experiences volunteering with *Cooking Matters for Kids*

Item	Mean	SD
I improved my nutrition knowledge	5.29	1.26
I improved my cooking skills	4.47	1.70
I improved my teaching skills	5.53	1.33
I improved my public speaking skills	5.35	1.37
I improved my ability to work as part of a team	5.41	1.42
I am more comfortable working with children	5.82	1.42
I began eating healthier	4.53	0.80
I began cooking more often	4.35	1.22
I built relationships with children in the program	5.35	1.41
I build relationships/friendships with other volunteers	5.12	1.22
My future career goals were impacted	4.24	1.68
I gained experience related to my future career goals	5.00	1.62
I had fun	6.41	0.71

students in this sample attended (Soldavini & Berner, 2020), volunteering with programs such as *Cooking Matters* that teach how to prepare healthy meals on a limited budget may be especially beneficial.

Working with children was one of the areas addressed by *Cooking Matters for Kids* that motivated students to volunteer the most. Becoming more comfortable working with children received one of the highest mean scores for how students were impacted by their volunteer experience and the majority of students reported interacting with children to be what they liked most about volunteering with the program.

Future research and evaluation projects involving volunteers should consider assessing what motivates their volunteers and how they have been impacted by their experiences. Programs may want to consider examining what motivates individuals from not only the individuals currently volunteering with them but also the individuals in the populations they recruit from to help understand what about their volunteer opportunities individuals may be interested in and use that information when developing volunteer recruitment materials. Understanding what motivates their volunteers can also help with creating more meaningful volunteer experiences. Research and evaluation activities should also assess how these types of programs impact their volunteers. For nutrition and cooking education programs using college student volunteers, such as *Cooking Matters for Kids* included in this study, examining the impact of volunteering on dietary behaviors and other outcomes among college student volunteers can be important for assessing the overall impact of the program. By focusing on assessing outcomes in only the target population, these programs could be missing out on capturing key outcomes of their interventions.

This study has a variety of strengths. To the authors' knowledge, it is the first study to assess motivations for and perceived impacts of volunteering with nutrition and cooking education program among college students. It included both undergraduate and graduate students as well as students from a variety of majors. The study also used the VFI, which has been used in numerous past studies, allowing the results to be compared to research on volunteer motivations in other populations. This study is not without limitations. The sample size was fairly small and limited to volunteers from one program so results may not be generalizable to students from other universities or volunteering with other programs. The response rate to the survey was only 22% of those invited. Only having university email addresses for students who had graduated meant that many graduates may not have ever seen the survey invitation. It is possible that volunteers that were more satisfied with their experience were more likely to

complete the survey. The amount of time that had passed since students volunteered may have impacted how well they were able to remember the information asked by some of the questions, such as what motivated them to volunteer.

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CONFLICT OF INTERESTS

Jessica Soldavini led No Kid Hungry NC's Cooking Matters for Kids program and supervised the volunteers included in the study.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Jessica Soldavini  <http://orcid.org/0000-0003-1718-235X>

PEER REVIEW

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