Nutrition and Aging Resource Center

2022 Needs Assessment Report

Prepared by: Savannah Schultz MS, RD and Sarah L. Francis PhD, MHS, RD

Submitted on: August 22, 2022

Nutrition and Aging Resource Center Team:
Iowa Department on Aging: Alexandra Bauman RD (Director), Erin Hoisington RD (Nutrition and Aging Content Director), Bambi Press RD (Healthy Aging Director), Caroline McKinney (Nutrition Innovation Director), Marissa Vance, MAC (Communications Manager), Denita De Raad, CAFS (Administrative Assistant)

Iowa State University Team:
Sarah L. Francis PhD, MHS, RD (ISU Director), Savannah Schultz MS, RD (Graduate Research Assistant), Shelley Woodall, RD (Program Assistant)

Schultz, S. & Francis, S.L. (2022). 2022 Needs Assessment Report. Nutrition and Aging Resource Center. https://acl.gov/senior-nutrition/data-evaluation

This project was supported, in part by grant number 90PPNU0002, from the Administration for Community Living, U.S. Department of Health and Human Services, Washington, D.C. 20201. Grantees undertaking projects with government sponsorship are encouraged to express freely their findings and conclusions. Points of view or opinions do not, therefore, necessarily represent official ACL policy.

Needs Assessment

Table of Contents

List of Figures

List of Tables

Executive Summary

The National Resource Center on Nutrition and Aging, otherwise known as the Nutrition and Aging Resource Center (NRCNA), is operated by the Iowa Department on Aging (IDA) and Iowa State University (ISU) in collaboration with the Administration for Community Living (ACL). The NRCNA aims to serve the Older Americans Act Nutrition Services program (NSP) by providing high-quality technical assistance and resources to the aging network.

The Social Marketing Theory (SMT) is successful at ensuring program effectiveness with the key component of community engagement (Step 1: Planning & Strategy); or drawing on the participants to be the experts (French, 2017). Therefore, the initial evaluation of the NRCNA completed Step 1 of the SMT by conducting a needs assessment. The objectives were to:

1. Understand general characteristics of the aging network and service area,
2. Identify aging network's program goals and focus.
3. Identify aging network's preferred training needs, interests, and training modality.

The needs assessment was completed through a 91-question online Qualtrics™ survey. The survey categories were service area; COVID-19 Impact on services; respondent general information; aging perspectives; ACL center awareness; programming training needs & preferences; and demographics.

Snowball sampling was utilized to reach the aging network with a final sample size of 1,910 responses. Data analyses consisted of basic descriptive statistics from SPSS statistical software. More in-depth analyses will be completed later.

Key Findings:

- The top goals for the respondents' organizations: Increasing participation, implementing innovative programs, connecting with healthcare.
- Leading training needs: program evaluation; technology for OAA programs and participants; Navigating network partnerships; business acumen; funding diversification; and diversity, equity, inclusion, and access.
- Preferred training platforms: live webinar; live online courses; face-to-face conference.
- Three most utilized websites for health and nutrition information: Administration for Community Living, National Council on Aging, and the Nutrition and Aging Resource Center.

1. Introduction

Background

The shift of the older adult population becoming the largest age group will offer myriad opportunities for the aging network. The older adult population has been increasing at rates significantly larger (12 times) than the rest of the population over the past ten years (Administration for Community Living [ACL], 2021). In 2060, those aged 65 and older will represent one in every four persons in the United States (ACL).

As people age, it is imperative to recognize the increased risk face during older adulthood regarding independence, health, and well-being. Compared to the younger population, older adults are more likely to have a disability, chronic disease, be at nutritional risk, and lack family or designating support (ACL, 2021; Center for Disease Control [CDC], 2019; Chatindiara et al., 2018; Department on Health and Human Services [HHS], n.d.). Access to evidence-based food and nutrition programs can help ameliorate these conditions.

> ***"All older adults should have access to evidence-based food and nutrition programs that ensure the availability of safe and adequate food to promote optimal nutrition, health, functionality, and quality of life."***
>
> Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior
>
> (Saffel-Shrier, Johnson, & Francis, 2019)

The Older Americans Act (OAA) Nutrition Services program (NSP) is the primary support for the aging population's nutritional needs. The purpose of the NSP is to "reduce hunger, food insecurity, and malnutrition as well as promote socialization and health and well-being of aging people" (ACL, 2022). NSP offers a range of services to achieve this mission and is a key connection point to additional OAA services to aid in maintaining the independence and health of older persons. There are notable benefits of the NSP (Mabli et al., 2017), and with additional support, the NSP could expand and strengthen its impact.

Covid-19 Public Health Emergency

Even before the COVID-19 public health emergency, the NSP experienced difficulties providing services to all those in need (Lloyd & Wellman, 2015). In 2015, 90% of eligible adults with low-income did not receive OAA-funded meal services, and almost all were also food insecure (U.S. Government Accountability Office [GAO], 2015).

The unmet need was exacerbated during the Covid-19 public health emergency due to multi-factorial issues, including increased food insecurity (Meals on Wheels America [MOW], 2022), food supply chain issues (Johansson, 2021), increased food prices (U.S. Department of Agriculture [USDA], 2022) and volunteer and staffing shortages (Swenson, 2022; U.S. Chamber of Commerce, 2022).

Additionally, NSP providers had to manage the changes to program requirements and policy, which were enacted to adapt to the dramatic switch in programming and increased demand (U.S. GAO, 2021). MOW reported on the unmet need during the pandemic for NSP local service providers (Figure 1-1).

86% OF LOCAL PROGRAMS said there was an **UNMET NEED FOR HOME-DELIVERED MEALS IN THEIR COMMUNITY**

29% OF LOCAL PROGRAMS said they would need to nearly double or more than double their home-delivered efforts to **SERVE THE UNMET NEED FOR HOME-DELIVERED MEALS IN THEIR COMMUNITY**

48% OF LOCAL PROGRAMS said they would **NOT BE ABLE TO SUPPORT THEIR CURRENT CLIENT BASE** without continued increased funding

75% OF LOCAL PRORAMS believed they would **LOSE THE FINANCIAL SUPPORT** but keep the clients

Figure 1-1. Nutrition Services Program (NSP) unmet need during the public health emergency (MOW, 2022)

"The purpose of the NRCNA is to build capacity of the senior nutrition programs funded by the OAA to provide high quality, person-centered services and to assist ACL and stakeholders to identify current and emerging issues and opportunities to enhance program sustainability and resiliency (NRCNA, 2022)."

National Resource Center on Nutrition and Aging Overview

The National Resource Center on Nutrition and Aging (NRCNA), otherwise known as the Nutrition and Aging Resource Center, was established to expand the awareness and capacity of the NSP network. MOW hosted the NRCNA from 2011 (established date) through 2020. In 2021, IDA partnered with ISU in a collaboration agreement with ACL to operate the NRCNA for the next five years.

The current NRCNA team (IDA and ISU) is using the Social Marketing Theory (SMT) to guide programming efforts (Figure 1-2) The SMT is a program planning model that applies marketing principles to public health programs (French, 2017; Lefebvre & Rochlin, 1997; Storey et al., 2008) and has been shown to be effective with programs serving the older adult population (Francis et al., 2014; Francis et al., 2011; Francis et al., 2009; Rudolph, & Francis, 2020; Schultz et al., 2021a; Schultz et al., 2021b).

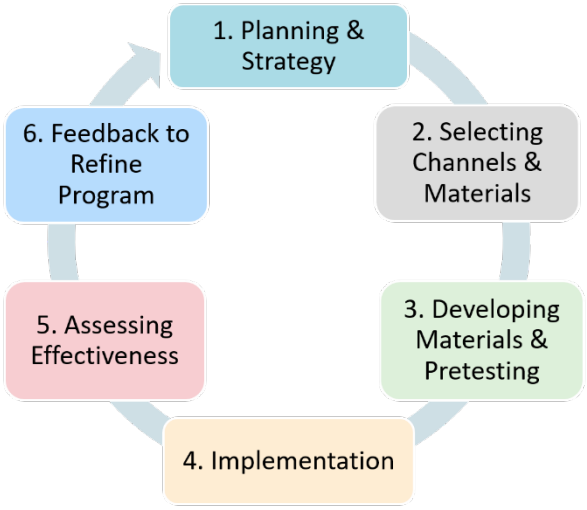

Figure 1-2. Social Marketing Theory

A key principle of the SMT is using upstream communication or having the target population tell the program or organization how it needs to adapt or innovate for there to be behavior change (French, 2017). In this model, the participants are the experts.

Step 1 is the crucial step of obtaining information from the target population, including their unique needs and preferences regarding the program. This feedback will then guide program planning efforts (steps two and three), and the implementation (step four) will be evaluated (step five) to further refine the program (step six), and the cycle continues (Figure 1-2; Lefebvre & Rochlin, 1997).

As the NRCNA transitions to new operators, redefining the program scope through a background information provision strategy is essential.

In order to best serve those in the national aging network, the NRCNA team conducted a national online needs assessment survey among the NSP network in Spring 2022 (SMT Step 1).

2. Methodology

Evaluation Objectives

The long-term goal of conducting a needs assessment was to better understand the contributing factors for NSP support as a means for the NRCNA to best serve the national aging network.

The evaluation goals and objectives are depicted in Figure 2-1. This includes understanding consumers' social, cultural, and environmental factors, needs and preferences for products, location and promotion of resources and services, potential motivators and barriers, and perspectives on competing products (Storey et al., 2008).

The goal was to hear from 600-1000 current and potential NRCNA users identified as anyone in or impacted by the aging network. Inclusion criteria consist of being at least 18 years old and able to read and understand the online survey.

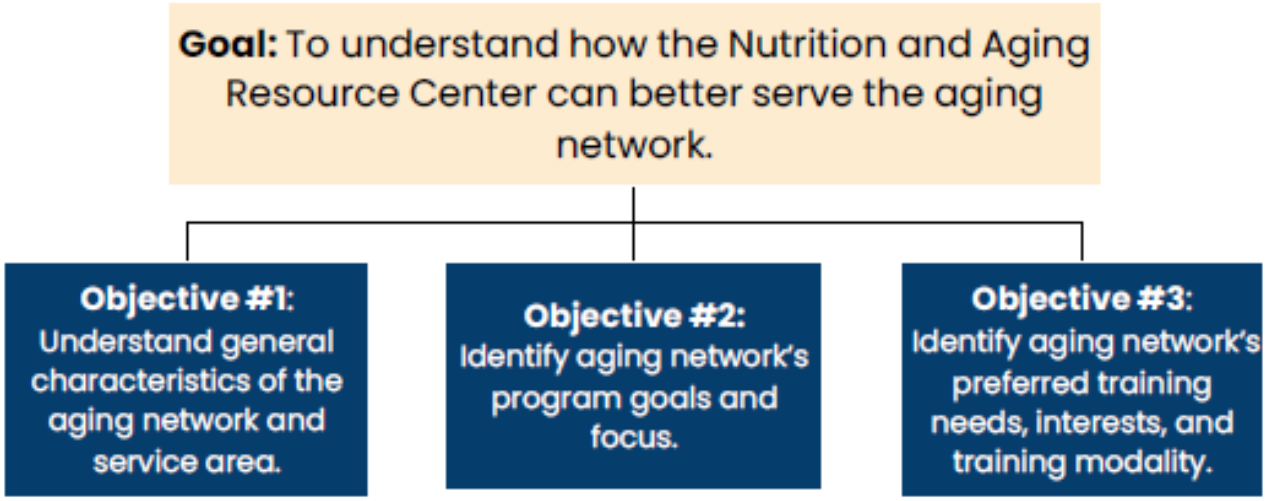

Figure 2-1. Needs assessment goals and objectives

Evaluation Implementation

Data Collection

The data were collected via an online Qualtrics™ survey. This method was chosen to increase the finding's validity and reliability. First, an online survey can be easily shared to reach a national network, maximizing external validity (Trochim, n.d.b). Second, Qualtrics™ offers the ability to require responses, input follow-up questions,

create a variety of question formats, and direct data input and data analysis, which can improve the validity and reliability of the results (Barchard, & Pace, 2011; Evans & Mathur, 2018).

The survey was initially opened for three weeks with a planned two-week extension during February and March 2022. To facilitate survey completion, the NRCNA staff created a three-minute video showing respondents how to fill out the survey and why it was important to do so (Aging Nutrition, 2022).

Snowball sampling was utilized to reach NSP providers that may be otherwise hard to reach (Trochim, n.d.b) and the nationwide clientele base of the NRCNA. Initial informants were provided the survey through NRCNA platforms, including the e-newsletter, technical assistance services, listservs, stakeholder meetings, and social media. Informants were then encouraged to forward the survey to others who fit the description and whose input would be valuable (Rossi et al., 2018). Survey content details were not shared to minimize self-selection bias.

Survey Design

The survey questions were based on the evaluation objectives, which were identified through the principles of the SMT. Multiple expert groups reviewed the questions to ensure validity, coverage, and clarity, including ACL, IDA, ISU, and the Research Institute for Studies in Education (RISE). Figure 2-2 outlines the survey categories and tools with the number of questions in paratheses.

Ageism was assessed with the World Health Organization Ageism quiz (World Health Organization, 2019). Aging perspectives questions were included due to the the harmful effects of ageist beliefs when providing service to older adults (Chang et al., 2020). Valid tools were utilized for the aging perspectives.

The **Facts on Aging Quiz** is a valid and reliable tool to assess aging knowledge and misconceptions (Breytspraak & Badura, 2015; Van der Elst et al., 2014). Respondents answered 'true' or 'false' to only the nutrition statements to maintain relevancy and minimize the burden for respondents.

The **Expectations Regarding Aging (ERA)** 12-item tool has been proven to be reliable and valid (Sarkisian et al., 2002; Sarkisian et al., 2005). Respondents rated how true or false ERA statements were for cognitive functioning as well as physical and mental health. Total ERA and domain scores are produced. There is no defined optimal cut off score, rather higher scores reflect expecting maintance and achievement, whereas lower scores indicate expecting decline with aging for the three domains.

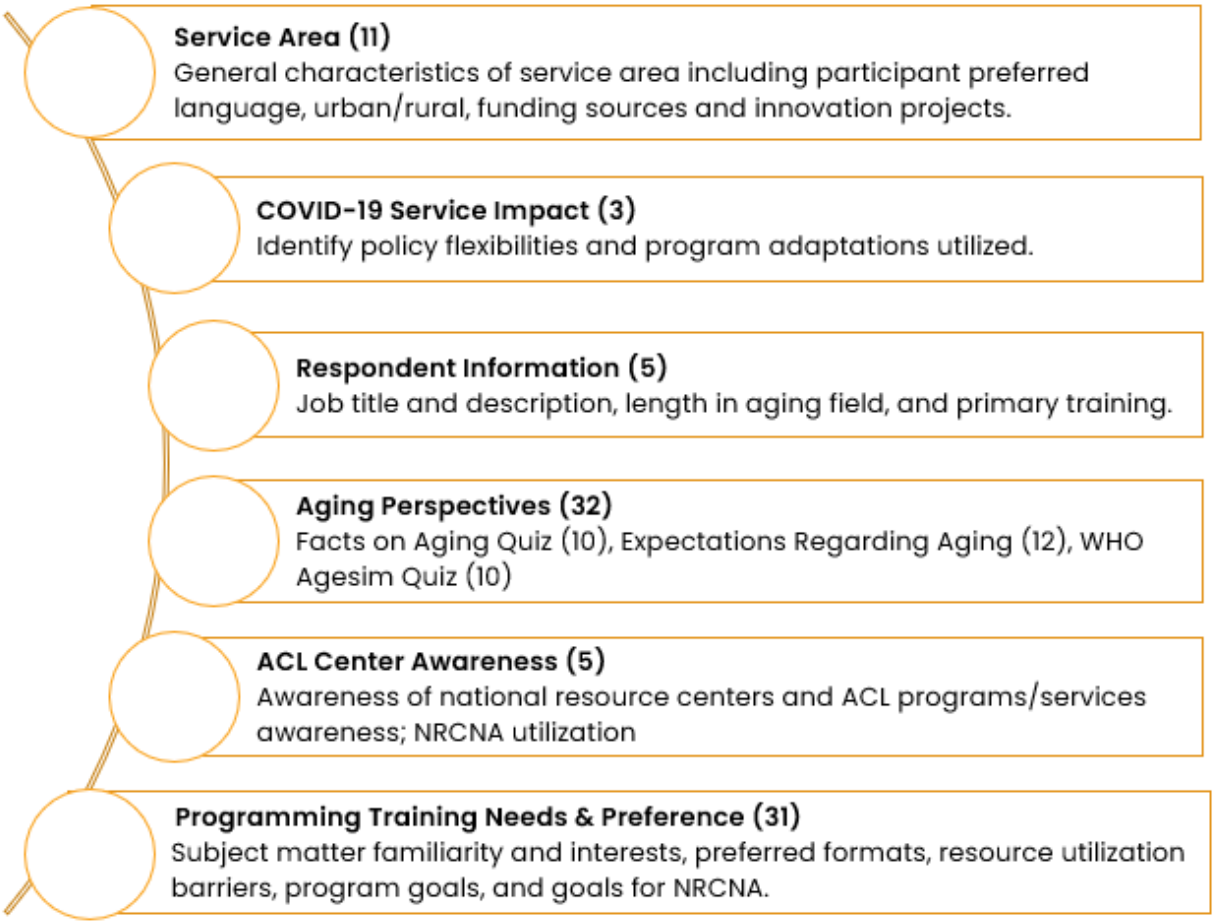

Figure 2-2. Survey categories with the number of questions and descriptions

Data Analysis

We received 2,684 responses. In order to ensure the responses we included in the analysis were from actual participants the data was cleaned for bots and/or inattentive respondents. Yarrish and others (2019) define bots as humans or computer programs looking to receive the survey's incentive.

RISE completed the data cleaning in order to minimize bias and ensure the credibility of results and methods (Chen, 2015, p. 14). Figure 2-3 outlines the data cleaning protocol applied through which 774 responses (28.8% of original sample) met the criteria for exclusion. **The final sample size was 1,910 (191% goal response rate).**

Descriptive statistics were completed to report survey findings using SPSS 26.0. Variable scoring was conducted as directed. Some questions required calculations. Missing cells were coded as missing and excluded when reporting overall

percentages. Further analyzes examining relationships between select variables as well as potential modeling will be completed at later dates by ISU and RISE in consultation with the NRCNA team.

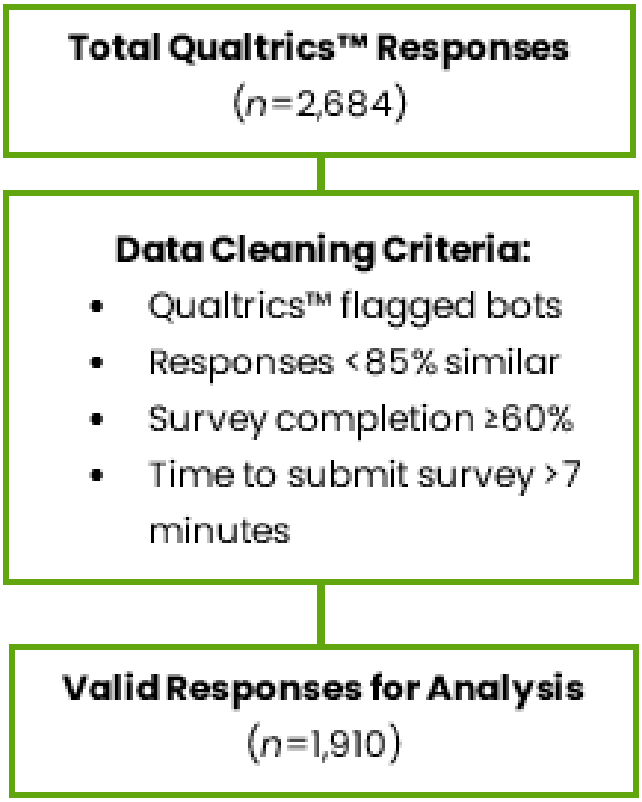

Figure 2-3: Data cleaning protocol

3. Findings

Objective 1. Understand General Characteristics of the Aging Network and Service Area

Sociodemographics

Respondents were primarily female (63%), non-Hispanic (90%), and white (87%) persons (Table 3-1). One-third (32%) obtained a bachelor's degree, and the average age was 50 years old, with a range of 65 years.

Table 3-1. Respondent Demographics (n=1,910)

Characteristic	Number	Percentage
Gender (*n*=1,765)		
Female/Transgender Female	1114	63.2
Male/Transgender Male	629	35.7
Gender variant/non-conforming	2	0.1
Prefer not the answer	16	0.2
Not listed	4	0.9
Age (years) (*n*=1,708)		
20 to 29	89	5.2
30 to 39	545	31.9
40 to 49	270	15.8
50 to 59	235	13.8
60 +	569	33.3
Educational Attainment (*n*=1,763)		
High school or less	276	15.7
Associate degree or some college	617	35.0
Bachelor's degree or higher	869	49.3
Spanish, Hispanic, or Latin-X (*n*=1,756)		
No	1575	89.7
Yes	155	8.8
Do not wish to answer	26	1.5
Race (*n*=1,763)		
American Indian or Alaskan Native	36	2.0
Asian	19	1.1
Black or African American	107	6.1
Native Hawaiian/ Other Pacific Islander		
White	14	0.8
More than one race	1538	87.2
Other	14	0.8
Do not wish to answer	4	0.2
	31	1.8

Service Attributes

Two out of three respondents had management responsibilities. Still, there was a range of job duties that were selected from food service (22%), direct customer service (19%), registered dietitian (10%), to transportation services (8%), which suggests meal site managers may be responsible for a wide variety of tasks. Respondents were primarily providers (39%) or governmental employees (22%) and had worked in the aging field for six to ten years (33%).

Of note, is one in five respondents reported being in the aging field for greater than 15 years. Most (46%) did not expect to work in the aging network but now enjoy it, and around one-third (34%) have always wanted to work in it. Almost all (86%) felt their primary education/training prepared them for their job.

Responses were received from all 10 ACL regions and were evenly distributed (Figure 3-1).

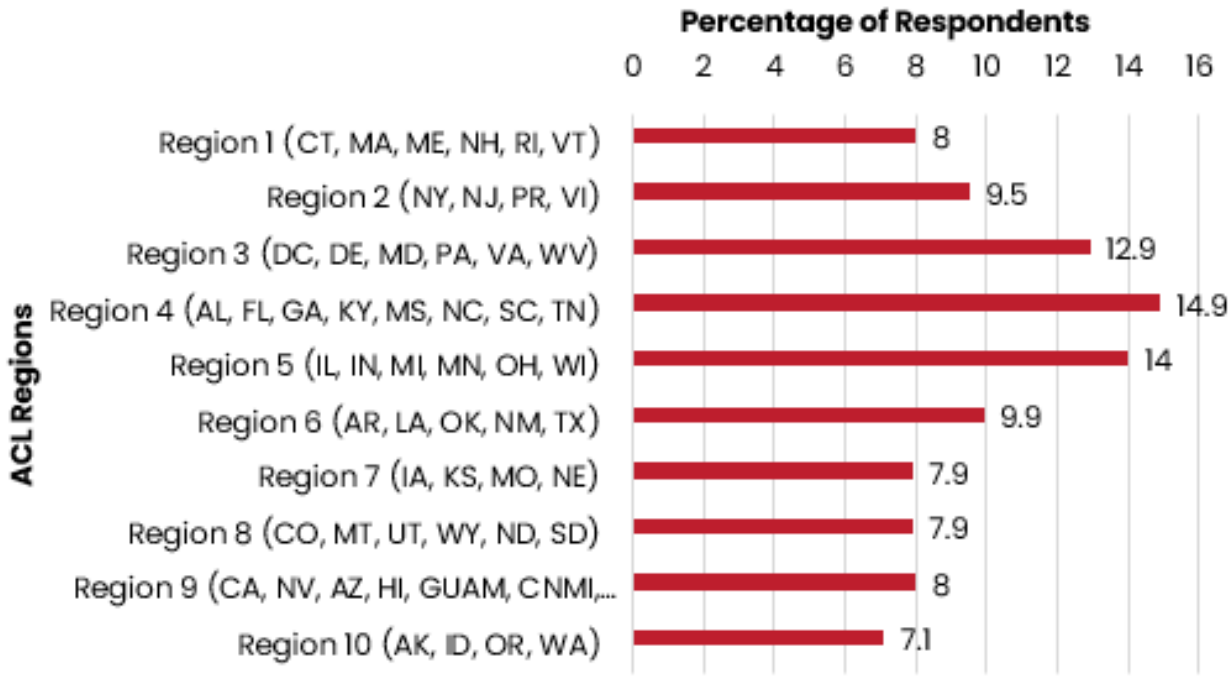

Figure 3-1. ACL Region of Respondents (n= 1,909)

The service areas were more rural and urban (Figure 3-2) compared to the U.S. neighborhood distribution (21% rural, 52% suburban, 27% urban; U.S. Department of Housing and Urban Development, 2017). However, rural, and urban populations tend to have health, economic, and social inequalities, which is who the NSP targets (CDC,

2017; Lewin, Watson, & Brown, 2017). Three out of four respondents reported a different service neighborhood type than their primary service neighborhood type.

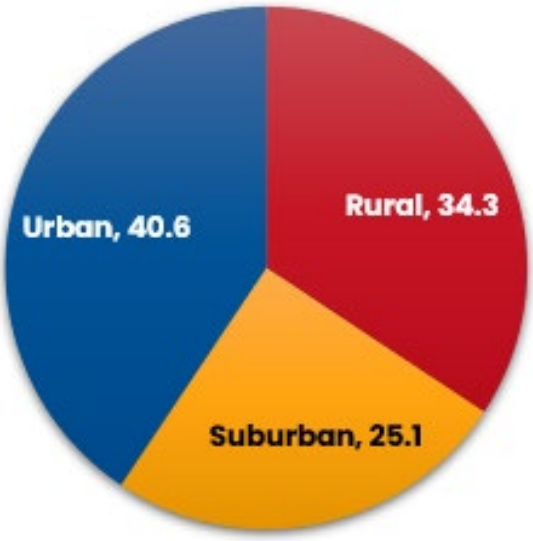

Figure 3-2. Neighborhood Type of Primary Service Location (n= 1,892)

Furthermore, two out of five respondents reported providing services to 1,000 to 5,000 clients annually (Figure 3-3).

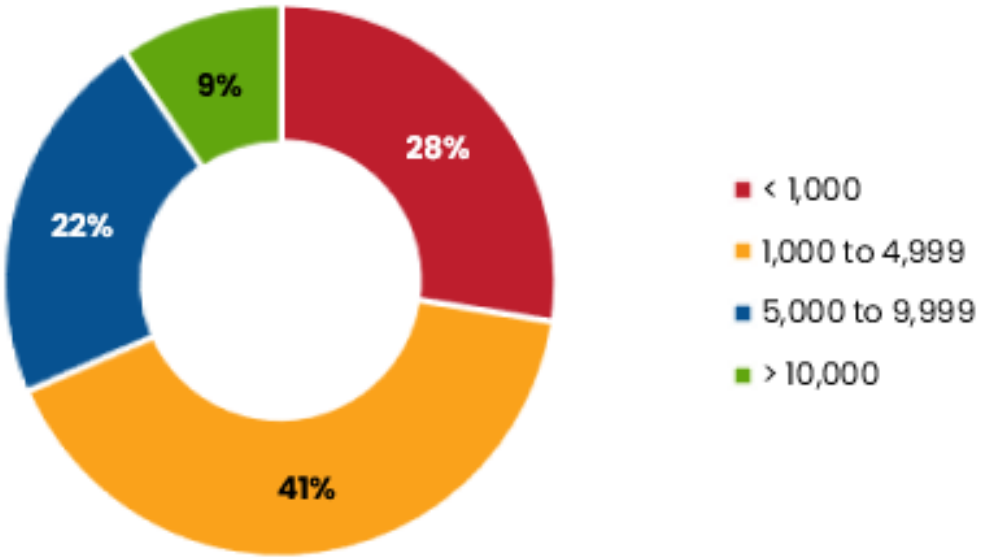

Figure 3-3. Number of Clients Served (n=1,885)

Finally, English and Spanish are the most common languages for the clientele being served by the respondents (98.3% and 27.2%, respectively). The NRCNA will work toward making resources available in both languages.

Aging Perspectives

Insight into the aging perspectives of those who serve the older adult population is imperative. Recent studies report ageism having detrimental impacts on an aging persons physical and mental health (Chang et al., 2020; Ober Allen et al., 2020). Consequently, aging adults with positive views on aging feel more comfortable being themselves (88%), have a strong sense of purpose (80%), feel more positive about aging (67%), and think their life is better than they thought it would be (65%) (Ober Allen et al., 2020).

Table 3-2 shows the respondents' aging perspectives. The scores for each area were low suggesting low aging knowledge, moderate ageist viewpoints, and moderate aging expectations. To enhance the aging perspectives of those working within the national aging network, the NRCNA is:

- providing a two-part webinar series on ageism (SMT Step 3-4),
- applying Reframing Aging framework, https://www.reframingaging.org/, to our products and presentations (SMT Step 2),
- and are promoting non-center training opportunities to expand the aging knowledge among national aging network (SMT Step 2).

Table 3-2. Aging Perspectives of Respondents (n=1,910)

Aging Perspective (maximum score)	Mean	Standard Deviation
Aging Knowledge (max= 10)	5.9	1.8
Ageism (max= 8)	5.0	1.9
Expectations Regarding Aging (max=100)		
Overall	54.4	18.7
Physical Health	51.0	20.6
Mental Health	59.3	24.6
Cognitive Functioning	52.7	22.1

4. Findings

Objective 2. Identify aging network's program goals and focus.

The top goals for the respondents' organization in the next two years were:

1. Increasing participation,
2. Implementing an innovative program for congregate nutrition, and
3. Connecting with healthcare.

Satisfaction surveys were the most common tool reported for ensuring services are person-centered (Figure 4-1). Based on these findings, the NRCNA has overseen several training sessions related to evaluation including (SMT Step 4):

- Facilitating quality improvement sessions at the National Association of Nutrition and Aging Services Program (NANASP) conference (Austin TX; May 2022) and ADvancing States Home and Community-Based Services (HCBS) conference (Washington DC; August 2022)
- Delivering an evaluation session at the 2022 Innovations in Nutrition Grantees annual meeting. Dr. Sarah Smith (ISU) provided this.

Almost one-half of respondents (45.0%) indicated they received funding for an innovation project. The most common funding source was ACL (20.1%), followed by local organization (16.9%), and another state agency (16.5%). Figure 4-2 outlines the innovation focus areas.

The top five areas were:

- Meal delivery,
- Focused on populations with limited incomes,
- Nutrition education,
- Evidence-based programming, and
- Social isolation.

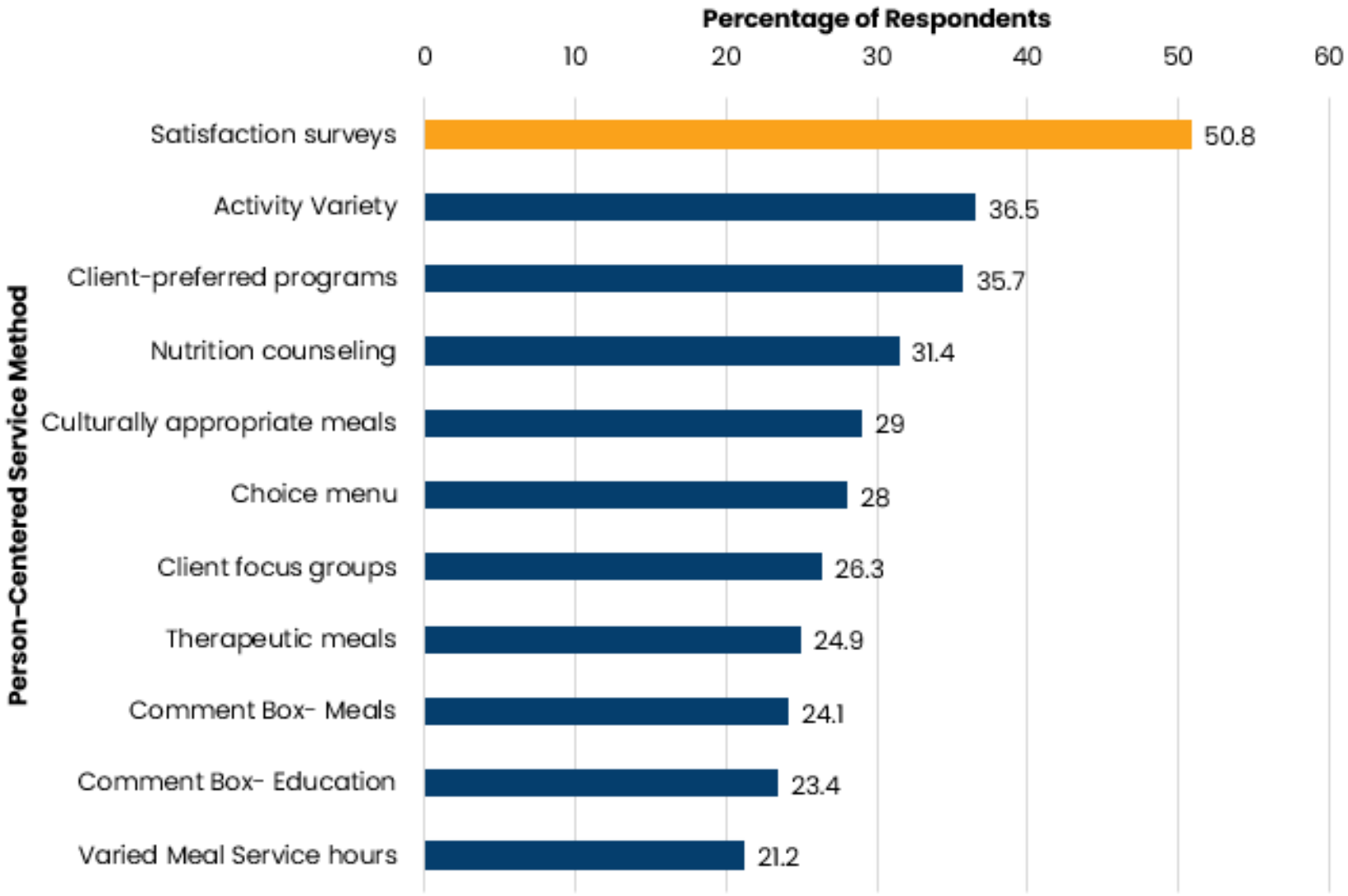

Figure 4-1. Methods for Ensuring Person-Centered Services (n=1,796)

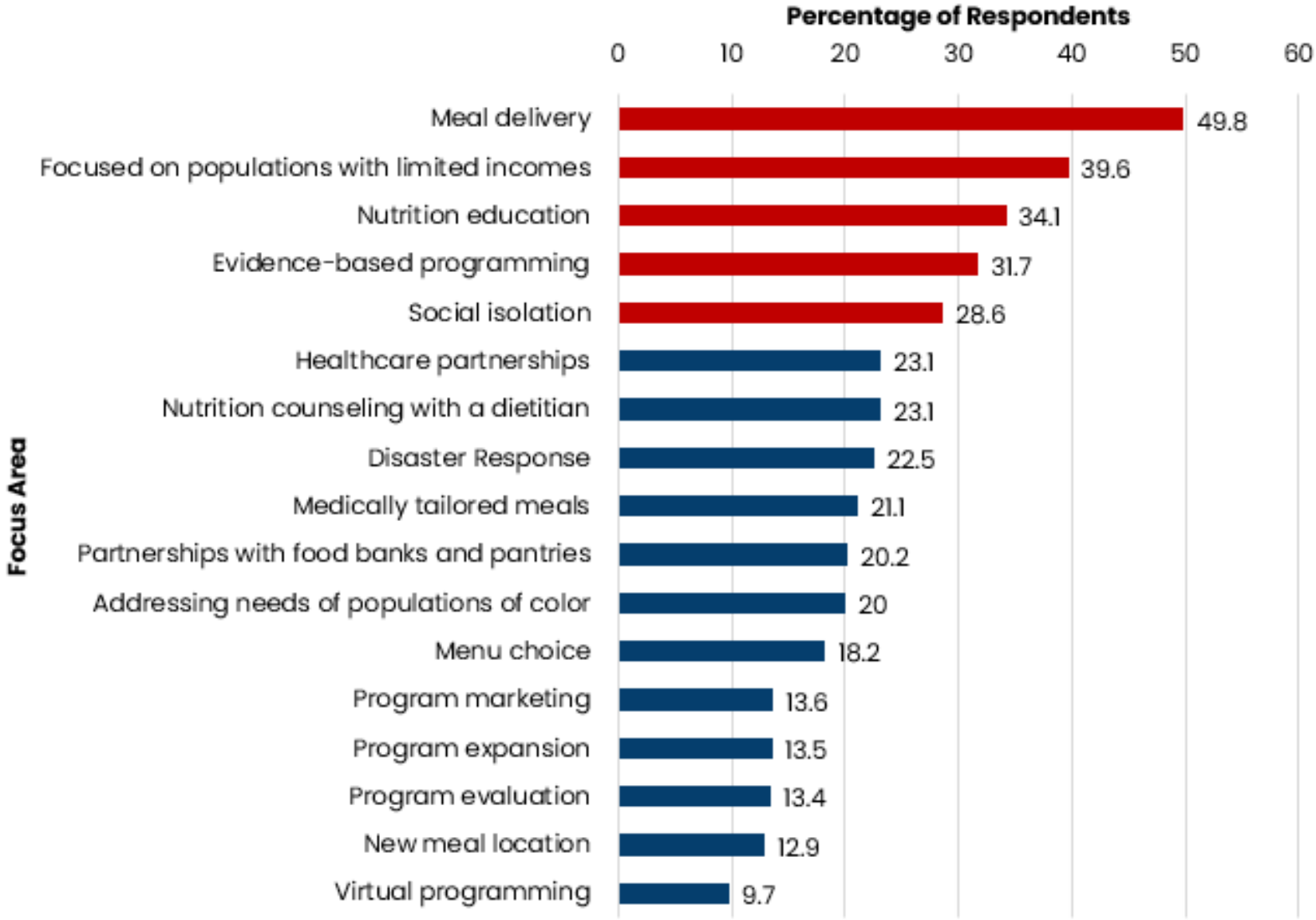

Figure 4-2. Innovation Project Focus Area (n=845)

Two out of five had not received innovation project funding due to the lack of:

- staff time (39.2%),
- funding (34.5%),
- awareness (31.0%) and,
- knowledge (28.1%).

Other barriers were not seeing a need (21.6%), unsure of where to start (20.3%) and not having research experience (18.8%).

The NRCNA is actively working to address the barriers toward applying for innovation funding. Some steps currently taken are listed below.

1. The NRCNA created a quickinar with Drs. Nandita Chaudhuri and Sarah Francis talking about the benefits of the INNU grants (January 2022). (SMT Step 4)
2. Lightening talk videos are being developed. At the 2022 INNU annual meeting, ISU filmed lightening talks for all grantees present. These videos will highlight each INNU project and be shared on the NRCNA website and social media platforms. (SMT Steps 2-4)
3. Developed a template for and conducted a training on completing a capstone project report. This session was filmed for future training opportunities as well. (SMT Step 2)
4. Conference presentations and session about INNU grants with current and past grantees sharing their experiences. (SMT Step 4)

In addition to these activities, the NRCNA is continuing to explore other ways to share the work that is being done throughout the United States to help facilitate others in replicating the projects beyond the INNU granting mechanism.

Covid-19 Public Health Emergency Impacts

The COVID-19 public health emergency shifted the focus and programming for many in the aging network. Respondents reported on new service delivery method(s) they implemented because of the public health emergency as well as which ones they plan to continue to utilize (Figure 4-3).

The most common new method was grab and go meals or drive through meals (862, 45.4%). Respondents also noted the COVID-19 flexibility policies they utilized. Each policy was widely used with all options having at least 400 responses (~20%). The most popular policy was the larger transfer authority between congregate to home delivered (815, 44.9%).

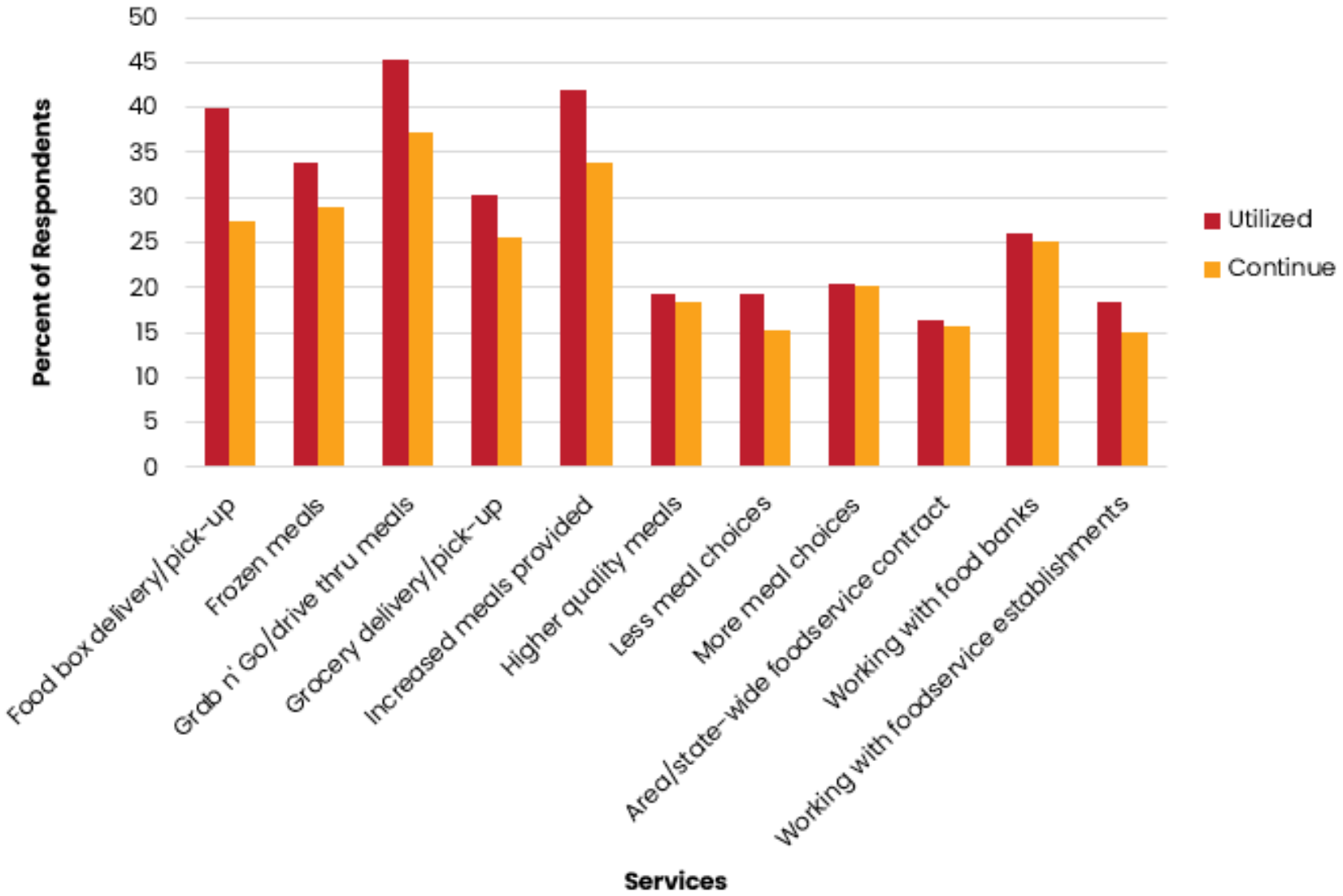

Figure 4-3. Service Delivery Methods Pre (n=1,898) and Post Covid-19 (n=1,845)

Current awareness and utilization of Aging Network resources and services

Table 4-1 lists resource centers from the highest averaged awareness score to the lowest score. The respondents ranked their awareness on a Likert scale of 1= Very Low, 2= Low, 3=Moderate, 4= High, 5= Very High.

Overall, respondents were the **most aware** of their state and local **Aging and Disability Resource centers** (Table 4-1). The resource centers respondents were **least familiar** with were focused on **marginalized groups** included the LGBTQ+, Indigenous, BIPOC, and Native American community and more. Table 1 lists resources centers from the highest averaged awareness score to the lowest score. The respondents ranked their awareness on a Likert scale of 1= Very Low, 2= Low, 3=Moderate, 4= High, 5= Very High. To help better promote awareness of these valuable resources, the NRCNA is exploring ways to collaborate with the other centers, particularly those serving marginalized groups (e.g., webinars, sharing resource in the e-newsletter, etc.).

Table 4-1. Awareness of Aging-Related Resource Centers

National, State & Local Resource Center	Mean Score
Aging and Disability Resource Centers (state and local)	**3.23**
National Falls Prevention Resource Center (hosted by National Council on Aging, NCOA)	3.06
Centers for Independent Living (state and local)	3.02
National Alzheimer's and Dementia Resource Center (hosted by Research Triangle Institute)	2.93
National Center on Elder Abuse (hosted by University of Southern California)	2.89
National Resource Center on Chronic Disease Self-Management Education Programs (hosted by the National Council on Aging, NCOA)	2.89
National Resource Center on Nutrition and Aging (hosted by Iowa Department on Aging)	2.88
Aging Network Business Practice, Planning and Program Development (hosted by USAging)	2.78
National Aging Information and Referral Support Center (hosted by ADvancing states)	2.78
Senior Medicare Patrol National Resource Center (host by Northeast Iowa Area Agency on Aging)	2.70

National Resource Center on Lesbian, Gay, Bisexual and Transgender (LGBT) Aging (hosted by SAGE)	**2.66**
National Aging Resource Consortium for Racial and Minority Seniors	**2.60**
National Indigenous Women's Resource Center	**2.49**
National Resource Centers on Native American Aging	**2.46**
National Resource Center for American Indian, Alaska Native, and Native Hawaiian Elders (hosted by the University of Alaska Anchorage)	**2.42**
National Resource Center for Hawaiian Elders (hosted by Ha Kupuna)	**2.42**

Using the same Likert scale, respondents rates their awareness for services provided through the Older Americans Act (Table 4-2). The services with the **highest rated awareness** were the **Congregate Nutrition Program** and the **Home Delivered Nutrition Program**. The **lowest rated awareness** were the **Options Counseling** and **Material Aid**.

The higher awareness of the meal programs was not surprising as this survey was sent to those in the NSP. However, these outcomes provide insight on what services the NRCNA may want to provide more information on in order to increase awareness.

Table 4-2. Older Americans Act Programming Awareness

Program	Mean Score
Congregate Nutrition Program	**3.63**
Home Delivered Nutrition Program	**3.62**
Nutrition Education	3.46
Information and Assistance	3.42
Transportation	3.41
Health Promotion and Disease Prevention	3.39
Nutrition Counseling	3.35
Evidence-Based Health Program	3.33
Adult Day Care/Day Health	3.32
Caregiver Support	3.31
Case Management	3.27
Chore	3.27
Homemaker	3.27

Elder Abuse Prevention Awareness (EAPA) Assessment and Intervention	3.25
Legal Assistance	3.22
Options Counseling	**3.08**
Material Aid	**3.02**

Nutrition and Aging Resource Center Awareness

The overall awareness of the NRCNA was low with 2 in 3 respondents indicates 'very low' to 'moderate' awareness (Figure 4-4). Furthermore, 28.8% had not utilized the resource center. For those who do access the NRCNA, two out of three do so via the computer. This information is helping inform the revision of the website since it impacts how users interact with the site.

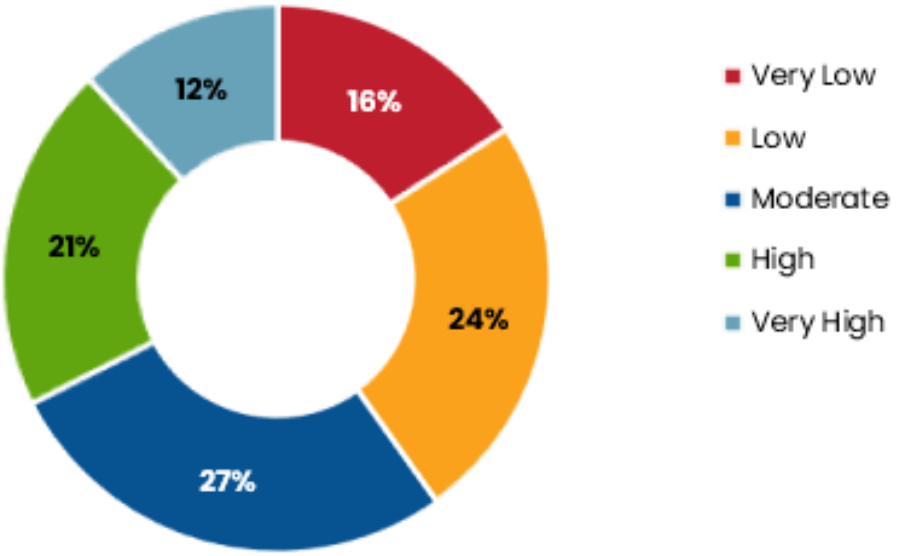

Figure 4-4. Nutrition and Aging Resource Center Awareness (n=1,902)

For those who had not utilized it, the main barrier was not knowing about it (Figure 4-5).

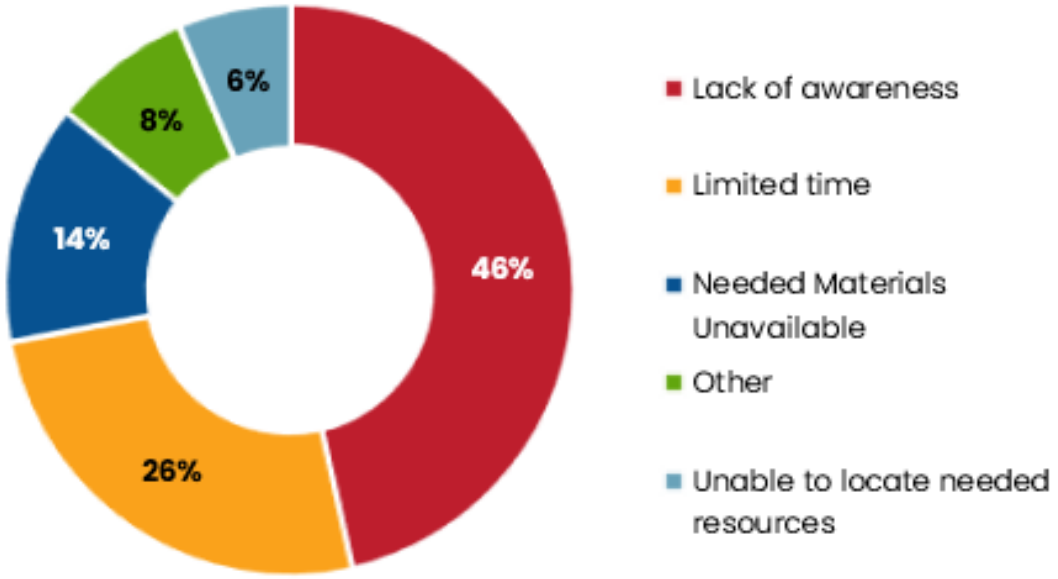

Figure 4-5. Reasons for Not Utilizing the NRCNA (n=540)

The NRCNA team is addressing the lack of awareness by:

- Leading sessions at national conferences (e.g., the National Health Outreach conference, Society for the Nutrition and Behavior, Food and Nutrition Conference Expo, etc). (SMT Steps 2-4)
- Designing and purchasing promotional materials for sharing at outreach events (i.e., pens, notepad, travel mugs). (SMT Steps 2, 4)
- Wearing name tags with the NRCNA logo for team members when presenting on behalf of the center. (SMT Steps 2, 4)
- Promoting NRCNA training opportunities with outside agencies and organizations (e.g., universities, professional groups, etc). (SMT Step 4)
- Establishing a social media presence using the platforms most used by respondents (SMT Steps 2, 4).

5. Findings

Objective 3. Identify preferred marketing strategies, resource formats, and topics.

Respondents rated their familiarity and interest for 56 NSP relevant topics. Based on these findings, the NRCNA will focus on high interest and low familiarity topics.

Figure 5-1 illustrates where each topic was in relation to the rated interest and familiarity for the aging network. It is important to note the minimal difference in mean scores for all topic items. Moreover, no topic has a mean familiarity score lower than two, which reflects being "somewhat familiar." The lowest mean interest score was 1.8, which would most closely reflect "somewhat interested."

Using these data, the NRCNA team is developing an asynchronous 10-module online OAA University course (SMT Steps 2-4). This course will be developed using a canvas platform and will address the topics identified as low familiarity and high interest (Figure 5-1).

Part one will discuss programming participation and promotion; business management (running a program), partnerships, and menu planning basics.

Part two will entail targeting those at greatest economic and social needs, working with older adults, business management (personnel management), menu planning (meeting your clients' needs), and diversifying funding.

Each module within the course will include questions to evaluate knowledge transfer as well as videos, interviews etc to ensure the modules are interactive and engaging. This will help participants feel as though they are in a face-to-face class.

Additionally, the data will guide further prioritization for content topics. Of note, respondents may rate a topic "low" for interest simply due to lack of awareness (Montoya et al., 2017).

	Highest interest	Higher Interest	Middle	Lower Interest	Lowest Interest
Lowest Familiarity	• Assessing services impact • Technology for OAA programs, • Technology for participants	• Navigating network partnerships • Business savviness • Diversifying funding • Culturally diverse menu planning		• CMS reimbursement	• Medical nutrition therapy • Medically tailored meals • Sustainable food systems • Community gardens • Office hours opportunities
Lower Familiarity	• Diversity, equity, and inclusion • Partnerships with healthcare • Funding sustainability for programs • Innovative congregate nutrition models	• Marketing/promotion • Partnerships with local suppliers/ vendors/producers (e.g., farmers, food hubs) • Referral systems with other OAA programs	• Medicare	• Public policy and advocacy • Virtual health programming	• Food waste management (e.g., donations, composting) • Modified diets • Medicaid
Middle	• Long-term program planning	• Food supply chain disruptions	• Malnutrition		• Partnerships with local government and political figures
Higher Familiarity	• Increasing program participation • Utilizing data	• Food access • Emergency planning • Partnerships with food banks and pantries	• Food boxes and groceries • Monitoring	• Nutrition counseling • Recruiting and retaining staff • Calculating meal cost	• Food sensitivities • Purchasing and contracting • Hiring practices
Highest Familiarity	• Program planning • Collaborating with community partners	• Senior Centers • Prioritizing clients • Nutrition education • Referrals to other nutrition assistance programs • Quality assurance	• Food safety	• Volunteering • Voluntary contributions • Dietary guidelines	• Alternative meal delivery services • The purpose of the OAA Nutrition program

Figure 5-1. Matrix of NRCNA Training Needs and Preferences

Learning Platform Preferences

One survey section was dedicated to understanding the preferred formats and methods for NRCNA resource and service delivery. Respondents were able to select multiple responses for this section of questions; 1,792 completed this question. For longer continuing education and training, the **three leading preferred formats were 1) Live webinars, 2) Live online course series, and 3) Face-to-face conference** (Figure 5-2).

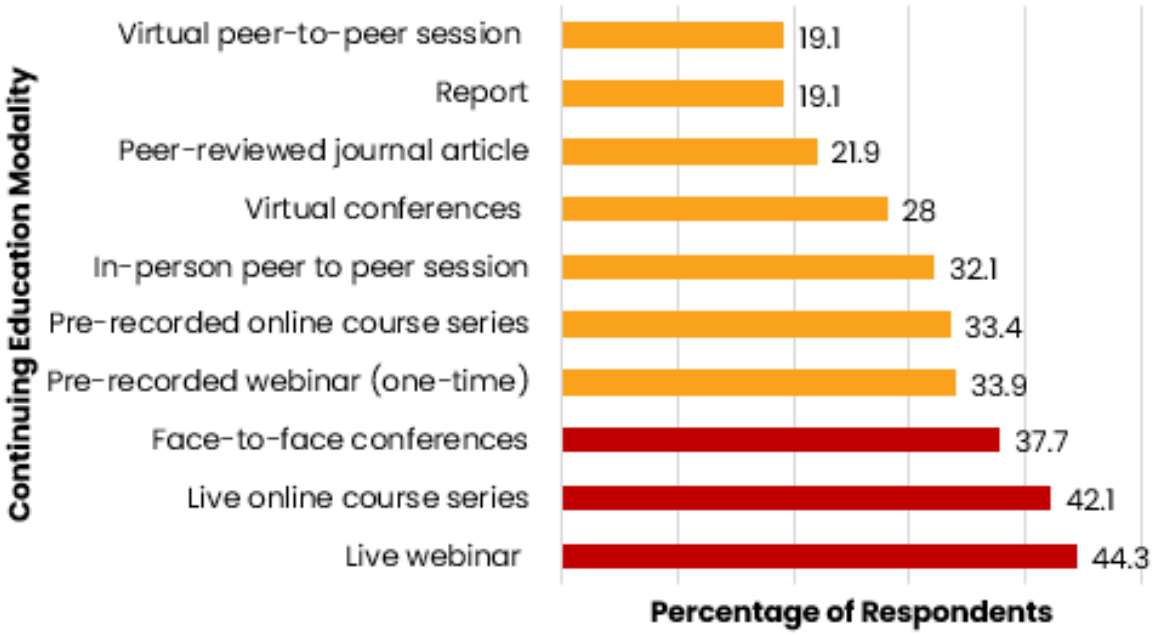

Figure 5-2. Learning Platform Preferences (n=1,792)

Two out of five respondents stated limited time as a barrier to training participation. One out of three reported scheduling conflicts, expenses, and access (not offered) as limitations for engaging in training and/or continuing education (Figure 5-3).

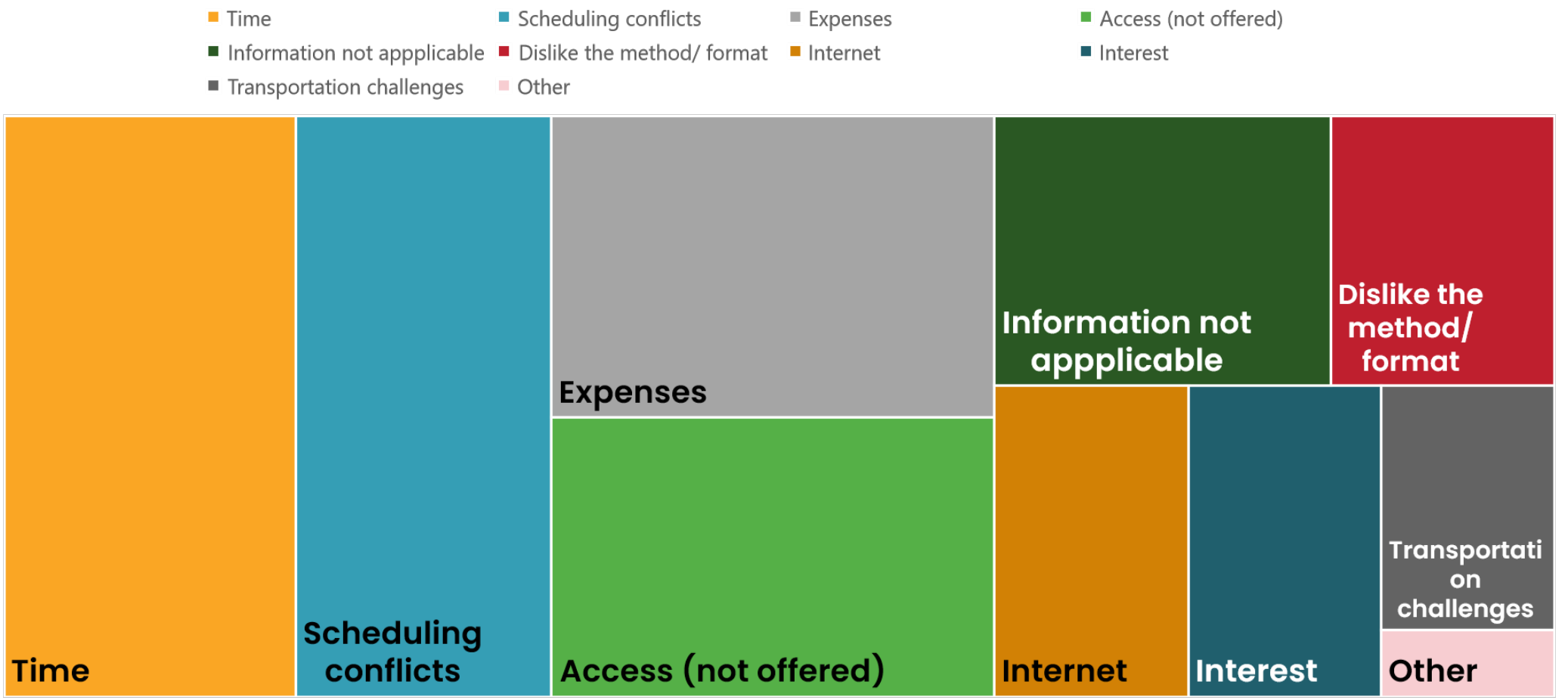

Figure 5-3. Barriers to Training Participation (n=1,783)

We had anticipated that time would be a leading barrier for participating in professional development education and training (Jeong et al., 2018; Mlambo, Silén, & McGrath, 2021; Zhang, Shi & Lin, 2019). Therefore, the NRCNA inquired about the formats for relaying "quick" information from the aging network; 1794 responses were received (Figure 5-4). **Email was the most popular method** (from a peer-to-peer listserv).

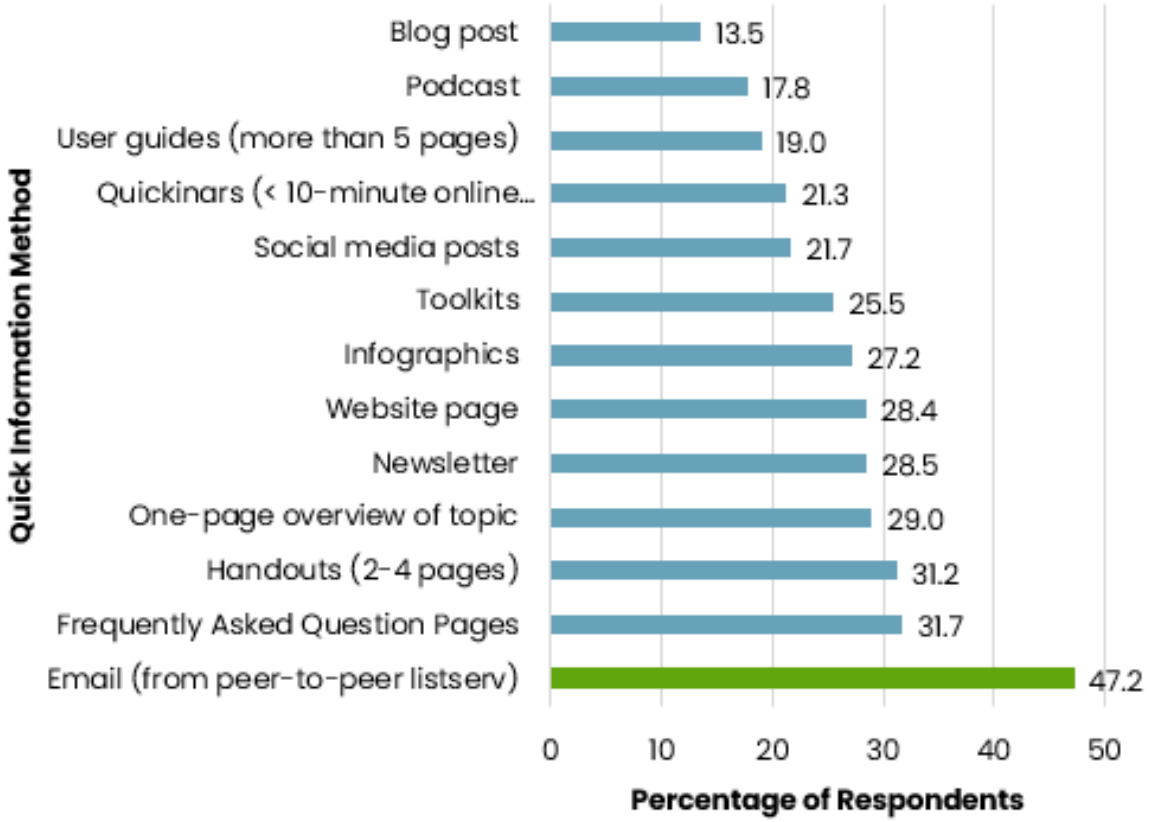

Figure 5-4. Preferred Method for Relaying "Quick" Information (n=1,794)

Sources of Information

Table 5-1 outlines the preferred print media formats. The NRCNA is working on a portfolio of printed resources using a variety of templates (e.g., short handouts, info graphics, FAQ sheets, etc.).

Table 5-1. Preferred Print Media Formats (n=1,786)

Type of Printable Material	Number	Percentage
Informational handouts (2-4 pages)	761	42.6
Nutrition education newsletters	729	40.8
Frequently Asked Question pages	638	35.7
Marketing toolkits	637	35.7
Customizable products	634	35.5
Example surveys	599	33.5
Newsletter	525	29.4
One-page overview of topic	496	27.8
Pamphlets or brochures (folded)	474	26.5
Infographics	470	26.3
Tip sheets	416	23.3
Social media toolkits	390	21.8
Posters	349	21.8
Quality assurance toolkit	254	14.2

The most reported means of accessing nutrition, physical activity, and general health information was Facebook (Figure 5-5). There were many options from which respondents could choose. Those that received less than 10% of total respondents utilizing it were excluded from Figure 5-5 (i.e., television news channels, Pinterest, talk shows and Snapchat).

Since Facebook was the leading source, the NRCNA is focusing on providing research-based nutrition, physical activity, and general health information on the NRCNA Facebook page as well as other social media platforms (SMT Steps 2-4).

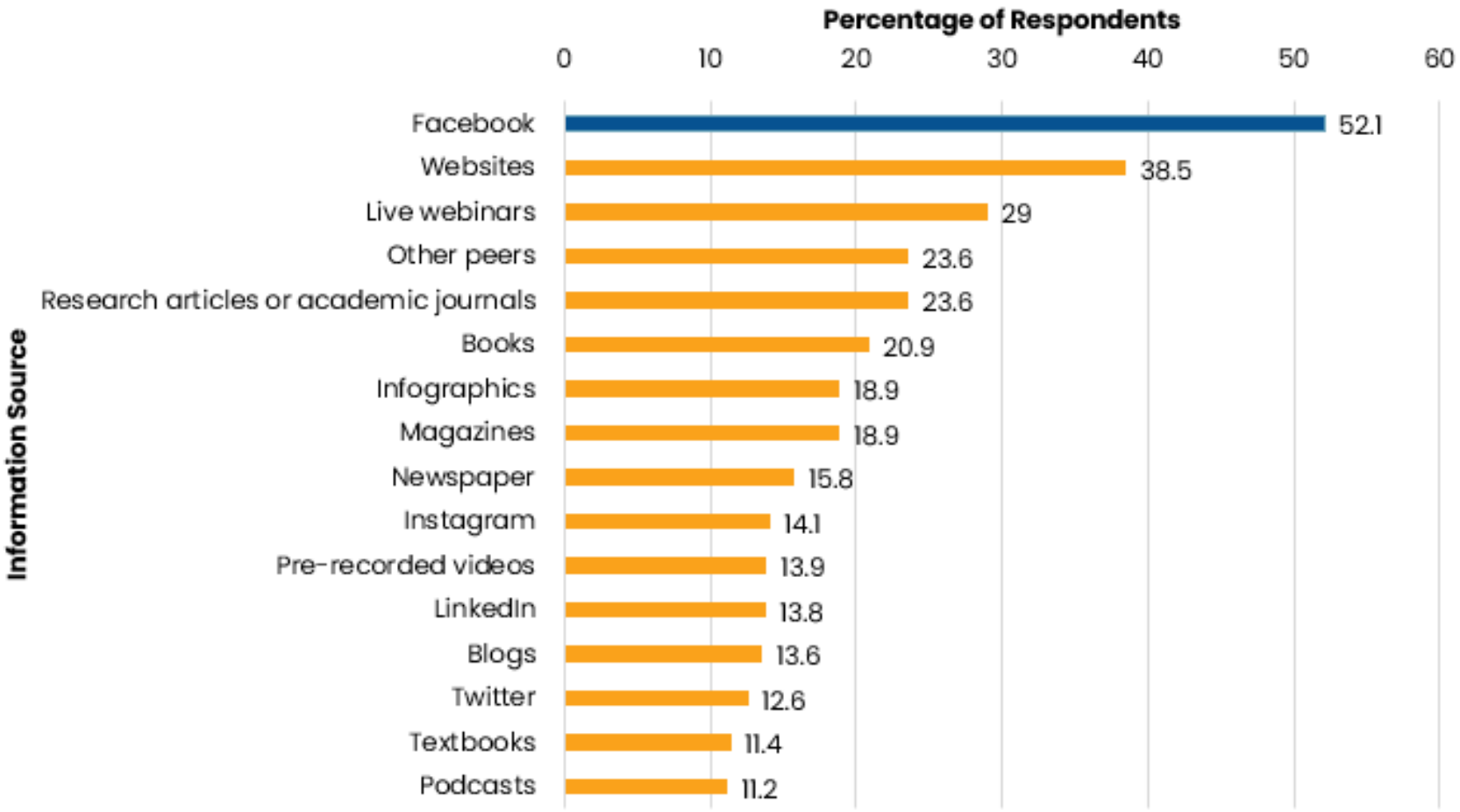

Figure 5-5. Nutrition, Physical Activity, and General Health Information Sources (n=1,789)

The second most popular nutrition and health information source for our respondents was websites. This was not surprising as websites are a common of nutrition and health information source for many populations (Adamski et al., 2020).

For the 626 respondents who selected websites as a resource, **the top three most utilized websites were from the: Administration for Community Living, National Council on Aging, and the Nutrition and Aging Resource Center** (Figure 5-6). The options that received less than 10% of respondents were excluded from Figure 5-6 (i.e., blogs, the Center for Science in the Public Interest, Fight BAC, and the National Agricultural Library).

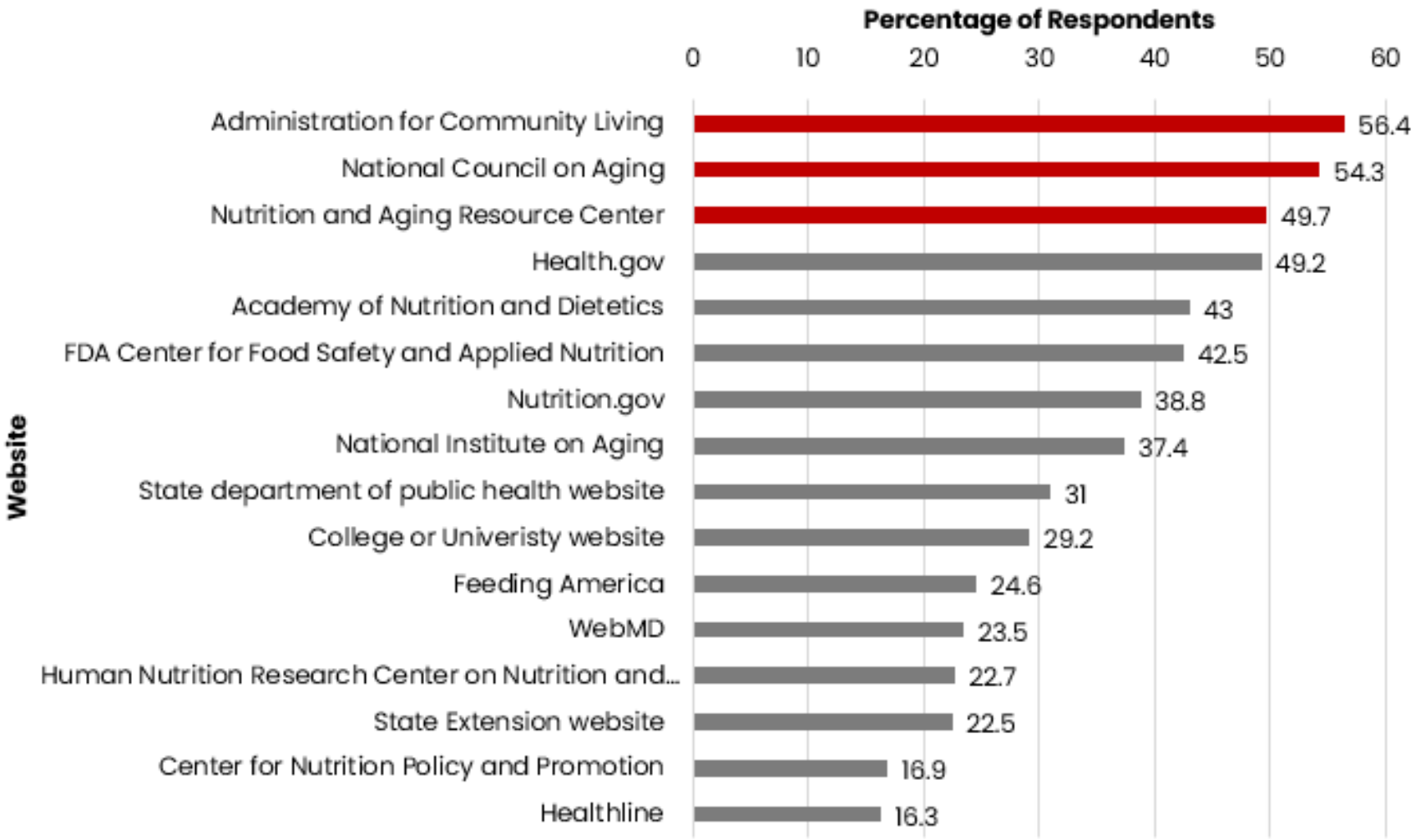

Figure 5-6. Often Used Websites for Seeking Nutrition and Health Information (n=626)

Conferences

The NRCNA aims to engage the aging network by presenting and attending conferences. Unfortunately, 51.1% of the respondents shared they do not attend national conferences either in person or virtually. However, 17.2% of those not currently attending national conferences stated they would like to. Of those who do attend national conferences, 30.5% attend one annually.

Similarly, 47.2% of respondents stated they did not attend regional, state, or local conferences; 14.4% of whom said they would like to. One out of three reported attending one conference annually.

The most popular national conference attended by respondents is the **Meals on Wheels America Conference** while the most reported attended regional, state or local conference was the **State Aging Conference** (Table 5-2).

Table 5-2. Conferences Respondents Attended

Type of Conference	Number	Percentage
NATIONAL CONFERNCES (*n*=850)		
Meals on Wheels America Conference	**338**	**39.8**
American Society on Aging Conference (ASA)	300	35.3
National Association of Nutrition and Services Programs (NANASP)	276	32.5
Food and Nutrition Conference and Expo (FNCE)	264	31.1
Age+Action Conference (NCOA)	228	26.8
National Home and Community Based Services Conferences (HCBS)	220	25.9
USAging	127	14.9
Title VI Conference	90	10.6
Other	75	8.8
REGIONAL, STATE, OR LOCAL CONFERENCES (*n*=914)		
State Aging Conference	**516**	**56.5**
Local Health Conferences	362	39.6
Local Public Health	326	35.7
State Dietetic Association Conference	237	25.9
State Public Health	122	13.3
Other	85	9.3

Cost was the most cited barrier for attending national conferences, whereas at the regional level the barriers were more evenly distributed across perceived barriers. COVID-19 was an often-cited barrier for in-person conferences (Figure 5-7).

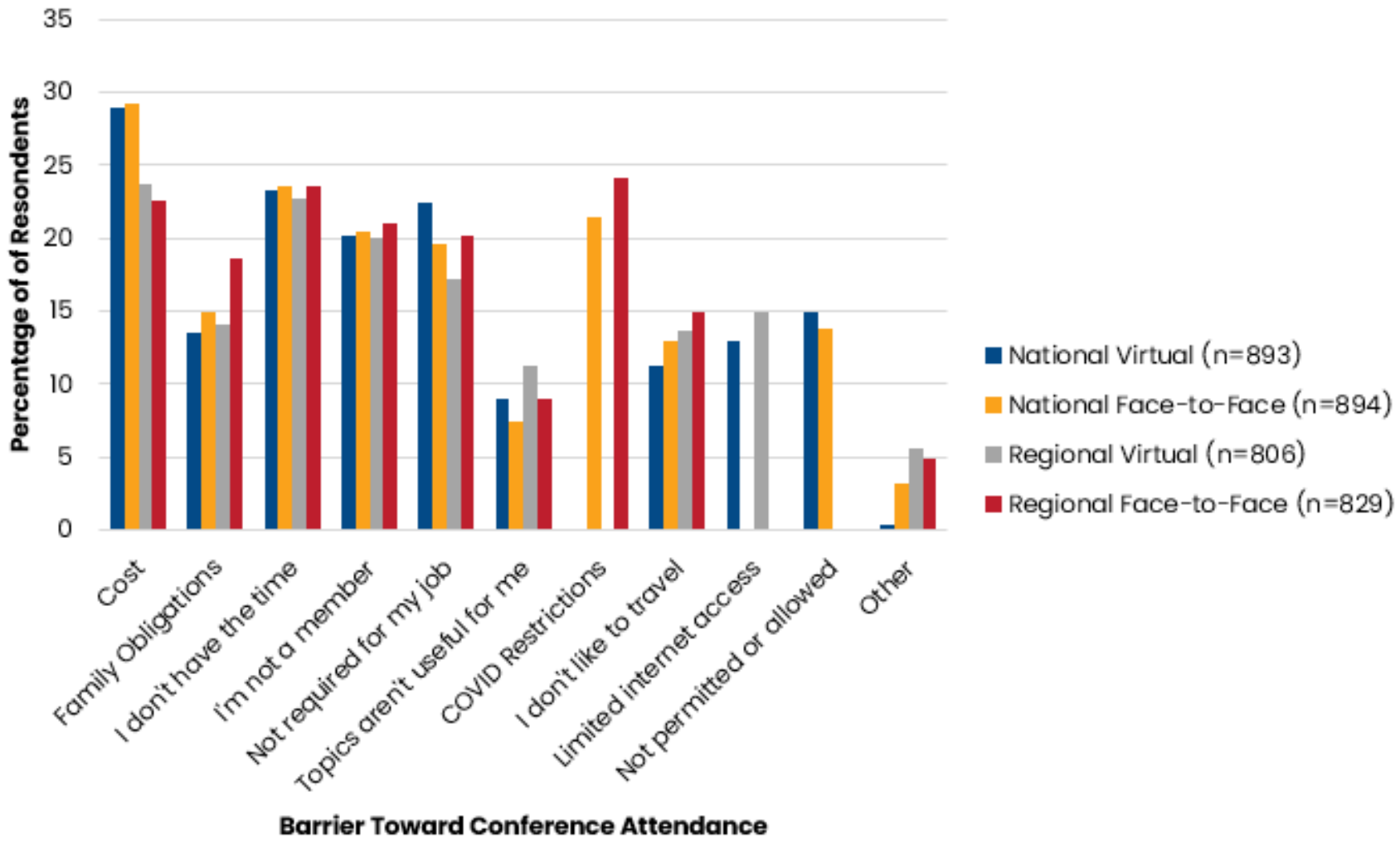

Figure 5-7. Barriers Toward Conference Attendance

The NRCNA team is using the conference information to develop a presentation plan for the next four years. Our outreach efforts will include presenting at the leading conferences attended by many aging network partners (SMT Step 4).

Conclusions

These findings have provided a wealth of information for how the NRCNA can best serve the national aging nutrition network. The NRCNA teams at the IDA and ISU are using these data to inform and guide future resource center activities over the course of the next four years. Additionally, the ISU team will be finalizing an evaluation plan to measure the impact of these endeavors and to identify any areas for further improvement (SMT Steps 5-6). The finalized plan will be integrated into the preliminary logic model developed prior to this analysis (Figure 6-1).

Communication Plan

The NRCNA aims to be adaptable and transparent with the aging nutrition network thus will share these findings as appropriate to the national aging nutrition network stakeholders. The recipients of the 2022 Needs Assessment Report will vary based on the stakeholders' current positions thus the reporting formats will be adapted as needed. At this time, it is anticipated that the dissemination process will include:

- **Comprehensive report** shared with the NRCNA team and ACL.
- **Presentation to members of the aging network** (e.g., SUAs) highlighting the key findings from the needs assessment.
- **Research manuscripts** discussing the needs assessment findings. The anticipated journals include the *Journal of Nutrition in Gerontology and Geriatric*, *Journal of Nutrition Education and Behavior*, *Journal of Public Health, and Gerontology and Geriatrics Education*.
- **Professional conferences** (e.g., Meals on Wheels America, National Association of Nutrition and Services Programs, USAging, etc) highlighting key findings and soliciting feedback during the session.
- **Research presentations** at professional conferences (e.g., Aging Society of America, Food and Nutrition Conference and Expo Gerontological Society of America, Society for Nutrition Education and Behavior, etc).
- **NRCNA Branded charts and figures** for accuracy and consistency across presentations.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	*Short*	*Medium*	*Long*
Administration for Community Living (ACL) Nutrition and Aging Resource Center (NRCNA) Staff • Iowa Department of Aging (7) • Iowa State University (4) Contracted staff, organizations, and services NRCNA Grant Community Partners Social Marketing Theory	Identify and monitor **needs** and **demands**. Develop and provide relevant **resources, content,** and **services**. Utilize various platforms and formats for **dissemination**. Provide **technical assistance**. Carried out by: • SUA Listserv and monthly meetings • INNU Listserv and meetings • Website, social media, and Canvas Course • Conferences • Stakeholder meetings • Webinar and Quickinars • Program Evaluation and Quality Assurance • Marketing	Aging Network Senior Nutrition Program (SNP) Network • State Units on Aging • Area Agency on Aging • Local Service Providers • Innovation in Nutrition Grantees Stakeholders Dietitians SNP Community & Beneficiaries	Increase **awareness** and **knowledge** of: • NRCNA • Subject matter • SNP Improve **attitudes** towards: • NRCNA • Subject matter • Aging and SNP Network • SNP	Increase **communication on subject matter and NRCNA** among the Aging and SNP Network. Increase **implementation of action items from NRCNA resources** at SNP. Increase **utilization** of: • NRCNA services and resources • SNP among the older adult population	Increase for SNP: • **Capacity** • **Funding** Improve for SNP: • **Outcomes** for participants, including an increase in older adult food security • **Cost-efficiency** • **Respect** Improve **credibility** of: • NRCNA services and resources • SNP among the older adult population and beneficiaries • Dietitians in the Aging Network Aging Network views NRCNA as a national leader.

Assumptions	External Factors
The Aging and SNP Network needs the NRCNA services due to 1) the dynamic needs of the diverse older adult population, and 2) the limiting capacity of the SNP Network to provide NRCNA services. Accurately identifying programming and training needs and preferences produces relevant and accessible content and services. Therefore, increasing awareness, knowledge, and utilization of NRCNA resources and services. Overall, the NRCNA builds the capacity and impact of the SNP to enhance the program's sustainability and resiliency.	• Aging Network's capacity, technology competence, social media usage, knowledge, and interest • SNP organizational structure and services • Older adult population • Older Americans Act policy • Online platforms • Available inputs

Figure 6-1. Preliminary NRCNA Logic Model

References

Administration for Community Living (ACL). (2021). *A Profile of Older Americans: 2020*, 1-15. Retrieved from: https://go.iastate.edu/7QBB9L

Administration for Community Living (ACL). (2022). *Nutrition services.* Retrieved from: https://acl.gov/programs/health-wellness/nutrition-services.

Administration for Community Living (ACL). (2022). *Older Americans Act.* Retrieved from: https://acl.gov/about-acl/older-americans-act-oaa

Aging Nutrition. (2022, February, 23). *Nutrition and Aging Resource Center 2022 needs assessment introduction video* [Video]. YouTube. https://www.youtube.com/watch?v=mlDXMWBfabc

Barchard, K. A., & Pace, L. A. (2011). Preventing human error: the impact of data entry methods on data accuracy and statistical results. *Computers in Human Behavior, 27*(5): 1837-1839. doi: 10.1016/j.chb.2011.04.004

Breytspraak, L., & Badura, L. (2015). *Facts on Aging Quiz* [revised; based on Palmore (1977; 1981)]. Retrieved from: http://info.umkc.edu/aging/quiz/.

Centers for Disease Control and Prevention (CDC). (2017). *Rural health.* Retrieved from: https://www.cdc.gov/ruralhealth/about.html.

Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities, & Division of Human Development and Disability. (2019). *Disability and Health Data System (DHDS) Data.* [Data set]. Centers for Disease Control and Prevention. Retrieved from: https://dhds.cdc.gov

Chang, E. S., Kannoth, S., Levy, S., Wang, S. Y., Lee, J. E., & Levy, B. R. Global reach of ageism on older persons' health: a systematic review. *PLoS ONE, 15*(1): e0220857. https://doi.10.1371/journal.pone.0220857

Chen, H-T. (2015). *Practical program evaluation: Theory-Driven Evaluation and the Integrated Evaluation Perspective* (2nd ed.). Thousand Oaks, CA: Sage. ISBN: 978-1-4129-9230-5.

Chatindiara, I., Williams, V., Sycamore, E., Richter, M., Allen, J., & Wham, C. (2018). Associations between nutritional risk status, body composition and physical performance among community-dwelling older adults. *Australian and New Zealand Journal of Public Health, 0*(0). https://doi.10.1111/1753-6405.12848

Evans, J. R., & Mathur, A. (2018). The value of online surveys: a look back and a look ahead. *Internet Research, 28*(4).

Francis, S. L., MacNab, L. & Shelley, M. (2014). A theory-based newsletter nutrition education program reduces nutritional risk and improves dietary intake for congregate meal participants. *Journal of Nutrition in Gerontology and Geriatrics, 33*(2), 91-107.

Francis, S. L., Martin, P., & Taylor, K. (2011). Revising an Extension education website for limited resource audiences using Social Marketing Theory. *Journal of Extension, 49*(6): v49-6a7.

Francis, S. L., Taylor, M. L, & Haldeman, L.M. (2009). A Social Marketing Theory-Based Diet Education Program for Women Ages 54 to 83 Years Improved Dietary Status. *Journal of the American Dietetic Association, 109*(12): 2052-2056. doi: 10.1016/j.jada.2009.09.002 40

French, J. (2017). The case for social marketing. In J. French, C. Blair-Stevens, D. McVey, & R. Merritt (Eds). *Social marketing and public health: theory and practice.* New York: Oxford University Press. Accessed from: https://go.iastate.edu/MTI3VA

Jeong, D., Presseau, J., ElChamaa, R., Naumann, D. N., Mascaro, C., Luconi, F., Smith, K. M., Kitto, S. (2018). Barriers and faciliatators to self-directed learning in continuing professional development for physicians in Canada: a scoping review. *Academic Medicine, 93*(8): 1245-54. DOI: 10.1097/ACM.0000000000002237

Lefebvre, R. C., & Rochlin, L. (1997). Social Marketing. In K. Glanz, F. M. Lewis & B. K. Rimer (Eds.), *Health behavior and health education* (pp. 384-402). San Francisco, CA: Jossey-Bass Publishers.

Lewin, P. A., Watson, P. & Brown, A. (2017). Surviving the Great Recession: the influence of income inequality in U.S. urban counties. *Regional Studies, 6*: 781-792.

Lloyd, J. L., Wellman, N. S. (2015). Older Americans Act nutrition programs: a community-based nutrition program helping older adults remain at home. *Journal of Nutrition in Gerontology & Geriatrics, 34*(2):90–109. https://doi.org/10.1080/21551197.2015.1031592

Mabli, J., Gearan, E., Cohen, R., Niland, K., Redel, N., Panzarella, E., & Carlson, B. (2017). Evaluation of the effect of the Older Americans Act Title III-C nutrition services program on participants' food security, socialization, and diet quality. *Department of Health and Human Services, Administration for Community Living.* Retrieve from: https://acl.gov/sites/default/files/programs/2017-07/AoA_outcomesevaluation_final.pdf

Meals on Wheels America (MOW). (2022). Older American Act nutrition program fact sheet: United States 2021. *Meals on Wheels America.* Retrieved from https://go.iastate.edu/8BBDXM

Mlambo, M., Selin, C., & McGrath, C. Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature. *BMC Nursing, 20*(62).

Montoya, M. R., Horton, R. S., Vevea, J. L., Citkowicz, M., & Lauber, E. A. (2017). A re-examination of the mere exposure effect: the influence of repeated exposure

on recognition, familiarity, and likely. *Pychological Bulletin, 143*(5): 459-498. https://doi.org/10.1037/bul0000085

National Resource Center on Nutrition and Aging (NRCNA). (2022). *About us.* Retrieved from: https://acl.gov/senior-nutrition/about-us

Ober Allen, J., Solway, E., Kirch, M., Singer, D., Kullgren, J., Malani, P. (2020). Everyday ageism and health. *University of Michigan National Poll on Health Aging.* Available at: http://hdl.handle.net/2027.42/156038

Rossi, P.H., Lipsey, M.W., & Freeman, H.E. (2018). *Evaluation: A systematic approach* (8th ed.). Thousand Oaks, CA: Sage.

Rudolph, C. S., & Francis, S. L. (2020). Making home-delivered meal programs relevant for today's aging adult. *Journal of Public Health, 30*: 141-150. https://doi.org/10.1007/s10389-020-01286-z

Saffel-Shrier, S., Johnson, M., & Francis, S. L. (2019). Position paper of the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior: food and nutrition programs for community-residing older adults. Journal of the Academy of Nutrition and Dietetics, 119(7): 1188-1204. https://doi.org/10.1016/j.jand.2019.03.011

Sarkisian, C. A., Hays, R. D., Berry, S., & Mangione, C. M. (2002). Development, reliability, and validity of the expectations regarding aging (ERA-38) survey. *The Gerontologist, 42*(4), 534–542. https://doi.org/10.1093/geront/42.4.534

Sarkisian, C. A., Steers, W. N., Hays, R. D., & Mangione, C. M. (2005). Development of the 12-item Expectations Regarding Aging Survey. *The Gerontologist, 45*(2), 240–248. https://doi.org/10.1093/geront/45.2.240

Storey, J. D., Saffitz, G. B., & Rimón, J. G. (2008). Social marketing. In K. Glanz, B. K. Rimer, K. Viswanath (Eds.). *Health Behavior and Health Education* (4th ed., pp. 436-464). San Francisco, CA: Jossey Bass Publishers.

Schultz, S., Francis, S. L., Russell, C., Getty, T., Bauman, A., & Shelley, M. (2021)a. Encore café: an innovative and effective congregate nutrition program. *Journal of Nutrition in Gerontology and Geriatrics,40*(4):261-279. https://doi.org/10.1080/21551197.2021.1986455

Schultz, S., Francis, S. L., Russell, C., Getty, T., Bauman, A. (2021)b. Innovating the Iowa congregate nutrition program: a needs and preference assessment. *Journal of Nutrition in Gerontology and Geriatrics, 40*(4):232-248, https://doi.org/10.1080/21551197.2021.1963905

Swenson, K. (2022, January 6th). Omicron's threat to D.C. hunger relief: volunteer shortages. *The Washington Post.* Retrieved from: https://www.washingtonpost.com/dc-md-va/2022/01/06/omicrons-threat-dc-hunger-relief-volunteer-shortages/

Trochim, W. M. K. (n.d)b. *Research methods knowledge base.* Retrieved from https://conjointly.com/kb.

U.S. Chamber of Commerce. (2022). *Understanding America's labor shortage.* Retrieved from https://www.uschamber.com/workforce/understanding-americas-labor-shortage

U.S. Department on Agriculture (USDA). (2022, April 25th). Summary findings: food price outlook, 2022. *USDA Economic Research Service.* Retrieved from: https://www.ers.usda.gov/data-products/food-price-outlook/summary-findings/

U.S. Department of Health and Human Services [HHS]. (n.d.). *General Health Status.* Retrieved from: https://go.iastate.edu/5ZDY6Q

U.S. Department of Housing and Urban Development. (2017). *The 2017 American Housing Survey neighborhood description study.* Retrieved from: https://www.huduser.gov/portal/AHS-neighborhood-description-study-2017.html#overview-tab.

U.S. Government Accountability Office (GAO). (2015). *Older Americans Act: updated information on unmet need for services* (memo). Retrieved from https://www.gao.gov/assets/gao-15-601r.pdf

U.S. Government Accountability Office (GAO). (2021). *Selected states modified meal provision and other Older Americans Act services to prioritize safety.* Retrieved from: https://www.gao.gov/assets/gao-22-104425.pdf

Van der Elst, E., Deschodt, M., Welsch, M. et al. (2014). Internal consistency and construct validity assessment of a revised Facts on Aging Quiz for Flemish nursing students: an exploratory study. *BMC Geriatrics 14*(128). https://doi.org/10.1186/1471-2318-14-128

World Health Organization. (2019). WHO | Ageism. In WHO. http://www.who.int/ageing/ageism/en/

Yarrish, C., Groshon, L., Mitchell, J. D., Appelbaum, A., Klock, S., Winternitz, T., & Friedman-Wheller, D. G. (2019). Finding the signal in the noise: minimizing responses from bots and inattentive humans in online research. *The Behavior Therapist, 42*(7): 235-242.

Zhang, S., Shi, Q., & Lin, E. (2019). Professional development needs, support, and barriers: TALIS IS new and veteran teache's' perspectives. Professional Development in Education, 46(3). https://doi.org:/10.1080/19415257.2019.1614967