

The HELLO Project Final Report



Goodboy Picture Company

Report for October 2020 – January 2022
Report Date: March 24, 2022



Nevada Center for Surveys, Evaluation, and Statistics
University of Nevada, Reno

IN PARTNERSHIP WITH



Report prepared for BUILD Health Reno by

Jordan C. Reuter, M.A.
Graduate Research Assistant
Nevada Center for Surveys, Evaluation, and Statistics

Tatyana Kaplan, Ph.D.
Graduate Research Assistant
Nevada Center for Surveys, Evaluation, and Statistics

Veronica Blas Dahir, Ph.D.
Director of Survey Operations
Nevada Center for Surveys, Evaluation, and Statistics

Contents

Acknowledgments.....	1
The HELLO Project Survey Summary	2
Materials	2
Methods	3
Online Survey	3
Paper Survey	4
Results Summary	5
Limitations	8
Participant Demographics.....	9
Age and Gender	9
Race and Ethnicity	9
Income	10
Section 1: Current Living Environment.....	11
Residential ZIP Code	11
Living Environment.....	12
Section 2: Social Support Network.....	13
Sources of Social Support.....	16
Section 3: Community Programs	18
Participation in Community Programs, Events, and Activities	18
Barriers to Participating in Community Programs, Events, and Activities	19
Section 4: Life Events and Mental Health	20
Life Events	20
Mental Health	21
<i>Social Connection</i>	22
<i>Depressive Symptomology</i>	26
<i>Depression Scale Items</i>	27
<i>History with Depression</i>	33
Section 5: Medical History and Physical Health	35
Diabetes	35
Respiratory Conditions	36
Cardiovascular Conditions.....	36
Cognitive Decline	38
Suicidality	38
Emergency Room Visits	38
Section 6: Food Insecurity	40
Deciding Which Bills to Pay versus Food	40
Cutting or Skipping Meals.....	41

Acknowledgments

This study would not have been possible without the community partnerships and team of people involved in both the conceptualization of the study and the data collection process. We would like to like to thank community partners for their assistance in distributing and collecting surveys for the second round of data collection, including the Reno Housing Authority, Senior Center, Food Bank of Northern Nevada, and Meals on Wheels. We also would like to acknowledge those who provided valuable input for and effort into The HELLO Project study. We would like to thank and acknowledge Kindle Craig (Renown), Kelly Glenn (The HELLO Project), Anisha Ledesma (BUILD Health Reno), Jojo Tapia (Renown), Sharon Zadra (Truckee Meadows Healthy Communities), and Erica Mirich (Truckee Meadows Tomorrow) for their contributions to The HELLO Project study.

.

The HELLO Project Survey Summary

The HELLO Project survey aimed to collect data on barriers to health and quality of life from seniors (55 years or older) residing in Washoe County, Nevada, with a particular focus on the 89512 ZIP Code as that was determined to be a lower-income area of Washoe County. The survey was administered online and on paper, depending on a participant's preference. The survey was constructed in both English and Spanish, however, only English responses are included in this final report as no completed Spanish surveys were collected.

This report includes data which were collected across two waves of data collection. The first wave of data collection occurred between October 2020 and March 2021. Due to various challenges observed during this data collection and analysis process, a larger and more concerted wave of data collection was conducted between October 2021 and January 2022. This report includes results from both waves of the survey.

Materials

The survey instruments included measures from the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS)¹ annual survey, the UCLA Loneliness Scale² measure to assess loneliness, the Geriatric Depression Scale³ (wave 1 only) to assess depression, and the Depression Anxiety Stress Scales (DASS)⁴ measure to assess depression (wave 2 only) and other items designed in partnership between the Nevada Center for Surveys, Evaluation, and Statistics (NCSES) and stakeholders from BUILD Health Reno

¹ <https://www.cdc.gov/brfss/index.html>

² Russel, D. W. (1996). UCLA loneliness scale (version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20-40.

³ Heisel, M. J., Duberstein, P. R., Lyness, J. M., & Feldman, M. D. (2010). Screening for suicide ideation among older primary care patients. *The Journal of the American Board of Family Medicine*, 23(2), 260-269.

⁴ Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Sydney, NSW, Australia: The Psychology Foundation of Australia.

(BUILD). Survey items aimed to collect data on barriers to mental and physical health outcomes and quality of life among seniors in Washoe County, including items on loneliness, depression, social connection, mental health, and physical health.

Methods

The survey could be completed online or on a physical paper and pencil survey packet. If completed, respondents were eligible to receive a \$10 gift card as an incentive. This survey used a nonprobability sampling technique in partnership with community organizations, such that those seniors in Washoe County who regularly utilized the services provided by the community organizations were invited to participate in the survey. Over 4000 total survey invitations and physical survey packets across both modes and both waves of the survey were distributed by the HELLO Project through BUILD's community partnerships, including the Reno Housing Authority, Meals on Wheels, the Food Bank of Northern Nevada, and the Senior Center in Reno, NV. Exact numbers on survey distribution are unknown, and therefore an exact response rate is not able to be calculated. Further, follow-up reminder requests were not able to be sent to those who were invited to participate as the survey invitations were not from a set contact list through the community organizations.

Survey invitations included informational flyers, a gift card entry form, and the physical paper and pencil survey packets. Instructions to complete the paper and pencil survey or the online survey were included on the informational flyer.

Online Survey

The online survey, hosted on Qualtrics web-based survey software and programmed by staff at NCSES, was accessed by a TinyURL link included on the informational flyer. For the first wave of data collection, the online survey collected a total of 35 complete and valid

responses (out of a total 56 online responses) that could be used for data analysis. For the second wave of data collection, the online survey collected a total of 9 complete and valid responses (out of a total 9 online responses) that could be used for data analysis. Together, both waves of online data collection produced $n = 44$ complete survey responses.

Paper Survey

The paper and pencil survey, printed and distributed by BUILD, was handed out as a survey packet to potential participants for both waves of data collection. Participants had the choice to complete the survey online by using the TinyURL link included on the informational flyer or to complete the paper and pencil survey and return it to BUILD by using the pre-paid self-addressed envelope provided in the survey packet. Data that were collected on the paper and pencil surveys were entered into a digital data file by staff at NCSES. For the first wave of data collection, the paper and pencil surveys collected a total of 19 complete and valid responses (out of a total 35 paper survey responses) that could be used for data analysis. For the second wave of data collection, the paper and pencil surveys collected a total of 76 complete and valid responses (out of a total 79 paper survey responses) that could be used for data analysis. Together, both waves of paper and pencil survey data collection produced $n = 95$ complete survey responses.

A singular merged data file which combined both the online and paper and pencil survey responses from both the first and second waves of data collection was created by staff at NCSES. This merged data file resulted in $N = 139$ complete and valid⁵ survey responses out of a total 179 responses that are included in this final report.

⁵ Sample sizes for each analysis varies as some participants skipped some questions on the survey.

Results Summary

Of the 136 participants who reported receiving social support, 59 (43.4%) indicated that they strongly agreed with the statement, “There is a special person who is around when I am in need” (Figure 3). Sixty-four (47.1%) also indicated they strongly agreed with the statement, “There is a special person with whom I can share my joys and sorrows” (Figure 4), and 59 (43.4%) indicated they strongly agreed with the statement, “There is a special person in my life who I can count on when things go wrong” (Figure 5).

Participants responded to questions about their current involvement in, or interest in joining, community programs, events, and activities as well as potential barriers to participating in community programs, events, and activities. Of the five programs, events, and activities provided in the survey, 13 (9.4%) participants indicated current involvement or interest in senior bowling, 17 (12.2%) indicated this for beanbag toss, 16 (11.5%) for senior card games, 44 (31.7%) for fitness activities for seniors, and 41 (29.5%) for special senior community events.

Participants responded to questions about recent life events and mental health with a particular focus on depression, loneliness, and isolation. Recent life events included 11 different life events for participants to indicate whether they experienced them, with the option to write-in a life event that was not accounted for. Participants indicated life events they experienced in the past 12 months (Figure 8). The most common life event experienced among this sample was a recent injury or illness ($n = 39, 28.1\%$) while 43 (30.9%) participants indicated that they did not experience any life events. Participants also responded to questions concerning impacts on their mental health. These questions concerned their sense of connection with others, isolation due to the COVID-19 pandemic, and questions describing depressive symptomology.

Of the 138 participants who responded to social connection questions, 61 (44.2%) participants indicated they hardly ever feel a lack of companionship (Figure 9), 69 (50%) indicated they hardly ever feel left out (Figure 10), and 63 (46%) participants indicated they hardly ever feel isolated from others (Figure 11).

Participants⁶ responded to four items concerning depressive symptomology using a binary yes/no response option. The total sample of 54 participants responded to the first of four items, “Do you feel that your life is empty?” Ten (18.5%) participants indicated “yes” to this question. Of the 52 participants who answered, “Do you feel happy most of the time?” 39 (75%) of participants indicated “yes” to this question. Of the 52 participants who answered, “Do you think it is wonderful to be alive?” 46 (88.5%) participants indicated “yes” to this question. Of the 52 participants who answered, “Do you feel that your situation is hopeless?” 5 (9.6%) indicated “yes” to this question. The participants who completed the survey online answered a fifth item, “Do you feel pretty worthless the way you are now?” Of the 35 people who completed the survey online, three (8.6%) indicated “yes” to this question.

Participants who responded to the second wave of data collection answered seven items on a 1 (*does not apply to me at all*) to 4 (*applied to me very much, or most of the time*) Likert-type scale. These questions concerned respondents’ feelings over the past week. Half of respondents ($n = 42$, 50%) indicated that the statement “I felt down hearted and blue” did not apply to them at all over the past week (Figure 13). More than half of respondents ($n = 52$, 61.9%) indicated that the statement, “I felt that I had nothing to look forward to” did not apply to them at all over the past week (Figure 14). Most participants ($n = 60$, 71.4%) indicated that the statement, “I felt that life was meaningless” did not apply to them at all over the past week

⁶ These items were only included in the first wave of the survey (October 2020-March 2021).

(Figure 15). Similarly, most participants ($n = 63$, 75%) indicated that the statement, “I felt I wasn’t worth much as a person” did not apply to them at all over the past week (Figure 16). The final three items asked participants about their activities and enthusiasm. More than half of participants ($n = 47$, 56%) indicated that the statement, “I was unable to become enthusiastic about anything” did not apply to them over the past week (Figure 17). Over half of participants ($n = 53$, 63.1%) indicated that the statement, “I couldn’t seem to experience any positive feeling at all” did not apply to them over the past week (Figure 18). Thirty-six (42.9%) of participants indicated that the statement, “I found it difficult to work up the initiative to do things,” did not apply to them at all over the past week (Figure 19).

Participants also responded to a battery of items from the CDC BRFSS regarding their mental and physical health history (Figure 20). Forty (29%) participants indicated “yes,” a doctor, nurse, or other health professional has told them they had a depressive disorder at some point in their life. Almost one quarter of participants ($n = 33$, 23.7%) indicated they were told they had diabetes at some point, while nearly 20 percent ($n = 26$, 18.7%) participants indicated they were told they had asthma at some point. Almost one quarter ($n = 20$, 23.5%) of participants indicated they were told they had COPD, emphysema, or chronic bronchitis at some point. Twenty (14.4%) participants indicated they were told they had a heart attack at some point, 19 (13.9%) participants indicated they were told they had angina or coronary heart disease, and 12 (8.8%) participants indicated they were told they had a stroke. One quarter of participants ($n = 21$, 25%) indicated that they have experienced confusion or memory loss that is happening more often or getting worse, and nearly five percent ($n = 4$, 4.9%) of participants indicated that they have seriously considered suicide in the past 12 months.

Participants ended the survey responding to items concerning food insecurity (Figure 21), with the majority of participants ($n = 60$, 71.4%) indicating that they never had to cut or skip a meal in the past 12 months.

Limitations

This survey faced many challenges, partly because of the COVID-19 pandemic which delayed the survey distribution and compounded the difficulty of reaching the senior population in Washoe County, NV. The sample used for this report is not a random sample representative of the senior population in Washoe County, NV. Rather, self-selection effects and nonresponse survey errors, which refers to nonrandom patterns in who responded to this survey and nonrandom patterns in who did not respond to the survey, respectively, impacted this survey. This is primarily evident by only English surveys being returned, and no Spanish language surveys being returned to the HELLO Project, and that 73.2% of the sample self-identifying as White/Caucasian.

Further, the survey was distributed by BUILD's community partnerships, namely the Reno Housing Authority, Meals on Wheels, the Food Bank of Northern Nevada, and the Senior Center in Reno, NV. Although advantageous in reaching a senior population in Washoe County, NV, reliance on community partnerships restricts the sample to those seniors who utilize the services provided by these community organizations, which does not give every senior in Washoe County, NV the opportunity to participate in the survey.

Given these limitations, the conclusions made in this report cannot be extended to the entire senior population in Washoe County, NV. The conclusions are indicative of the experiences of those who responded to the survey and should be extrapolated within that context.

Participant Demographics

A total of $N = 179$ respondents completed the survey either online or on paper between October 2020 and January 2022 across two waves of data collection. Of the 179 respondents, 139 (77.65%) qualified to be included in this final report. To qualify, participants had to: (1) Reside in Washoe County as defined by their self-reported residential ZIP Code, and (2) Complete most of the survey items to be included in this preliminary report. Of the combined total 65 online survey respondents across both waves of data collection, 18 (27.70%) did not complete the survey past 6% completion, and three (4.62%) did not qualify because they do not reside in Washoe County, resulting in a total of $n = 44$ valid and complete online responses. Of the total 114 paper and pencil surveys, 15 (13.27%) did not qualify because they do not reside in Washoe County, and four (3.54%) participants did not return a completed survey packet, resulting in a total of $n = 95$ valid and complete paper and pencil surveys.

Age and Gender

Of the 138 participants who reported their age, ages ranged from 55 to 93 years old, with an average age of 71.17 years ($SD = 8.67$ years). About two-thirds of participants identified as women ($n = 91$, 65.9%), 46 (33.3%) identified as men, and one participant (0.7%) preferred not to answer the question about their gender.

Race and Ethnicity

Of the 138 participants who reported their race and ethnicity, 101 (73.2%) identified as White or Caucasian, 11 (8%) identified as two or more races, 10 (7.2%) as Asian or Asian American, seven (5.1%) identified as Black or African American, three (2.2%) identified as Hispanic or Latino, two (1.4%) identified as Native Hawaiian or Pacific Islander, two (1.4%)

identified as Native American or Alaska Native, and two (1.4%) preferred not to answer the question about their race or ethnicity.

Income

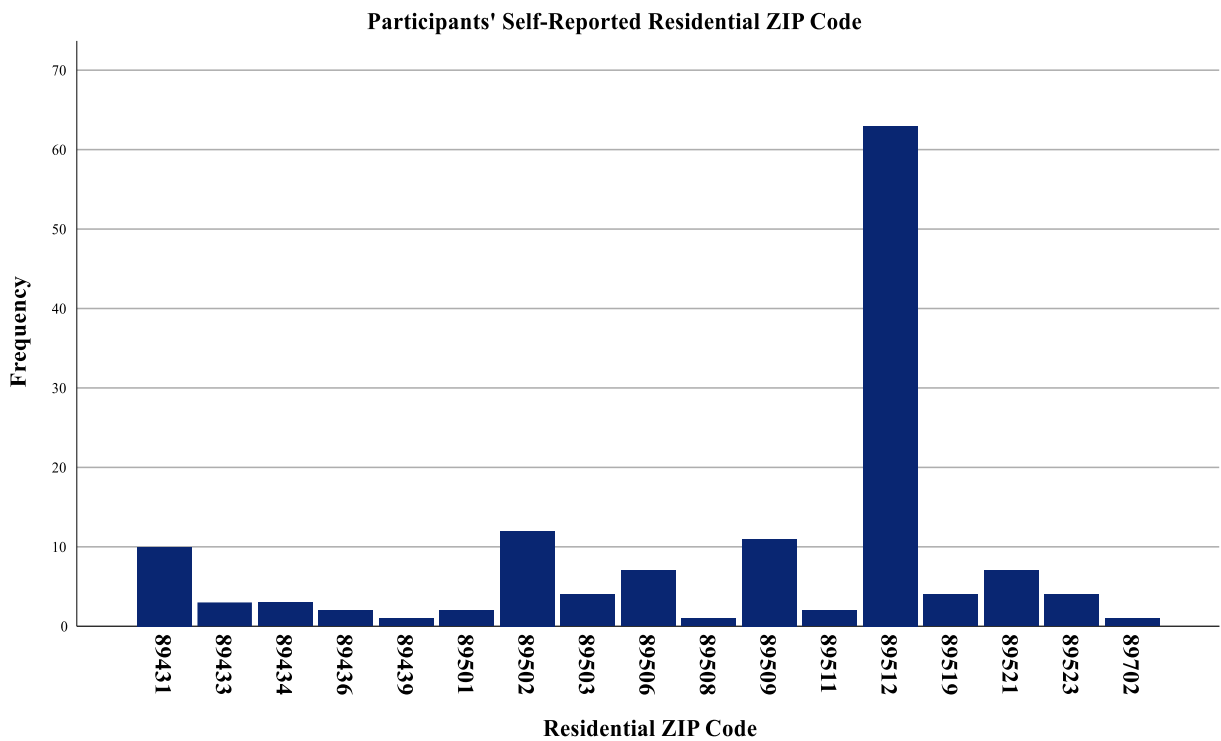
Of the 136 participants who reported their annual household income across 11 different categories, 23 (16.9%) participants reported an annual household income of less than \$10,000, 44 (32.4%) indicated \$10,000-\$19,999, 15 (11%) indicated \$20,000-\$29,999, 8 (5.9%) indicated \$30,000-\$39,999, 1 participant (0.7%) indicated \$40,000-\$49,999, 4 (2.9%) indicated \$50,000-\$59,999, 6 (4.4%) indicated \$60,000-\$69,999, 2 (1.5%) indicated \$70,000-\$79,999, 3 (2.2%) indicated \$80,000-\$89,999, 5 (3.7%) indicated \$90,000-\$99,999, 4 (2.9%) indicated \$100,000-\$149,000, and 7 (5.1%) indicated an annual household income of more than \$150,000. Fourteen participants (10.3%) preferred not to answer this question.

Section 1: Current Living Environment

Residential ZIP Code

Participants identified 16 different residential ZIP codes they currently lived in (Figure 1). Of the 137 participants who reported their ZIP code, 63 (46%) are living in the targeted 89512 ZIP code. Fifty-four participants (39.1%) have lived at their self-reported ZIP code for more than 10 years, 11 (8.0%) participants reported living in their ZIP code for 9-10 years, 8 (5.8%) participants reported living in their ZIP code for 7-8 years, 18 (13%) reported living in their ZIP code for 5-6 years, 17 (12.3%) reported living in their ZIP code for 3-4 years, 15 (10.9%) reported living in their ZIP code for 1-2 years, and 15 (10.9%) reported living in their ZIP Code for less than 1 year.

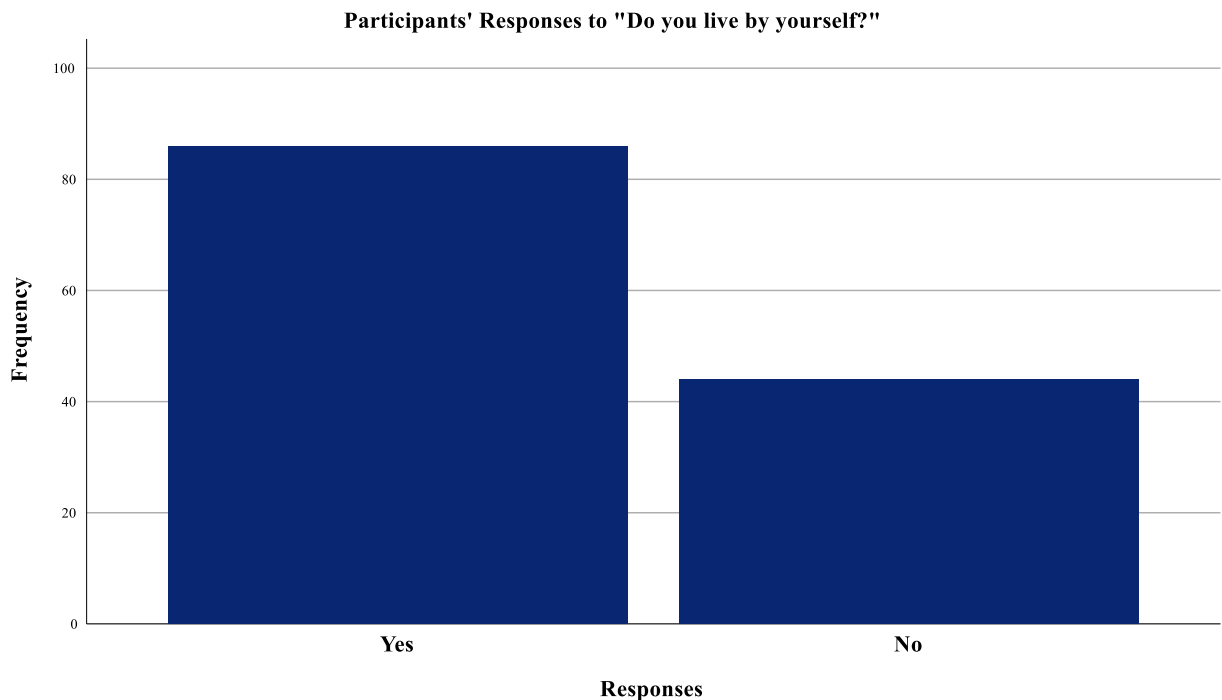
Figure 1



Living Environment

Of the 137 participants who responded to survey items about their living environments, 6 (4.4%) participants reported having a private room in an assisted living or care facility, 1 participant (0.7%) reported sharing a room with at least one other person in an assisted living or care facility, and the remaining 130 (94.9%) participants reported living in a private residence (Figure 2). Of these 130 participants living in a private residence, 86 (66.2%) reported living alone and 45 (34.62%) reported living with at least one other person. Of those 45 participants living with at least one other person, 31 (68.9%) reported living with one other person, 8 (17.8%) reported living with two other people, 1 (2.2%) participant reported living with three other people, 2 (4.4%) participants reported living with four other people, and 3 (6.7%) reported living with five or more other people.

Figure 2

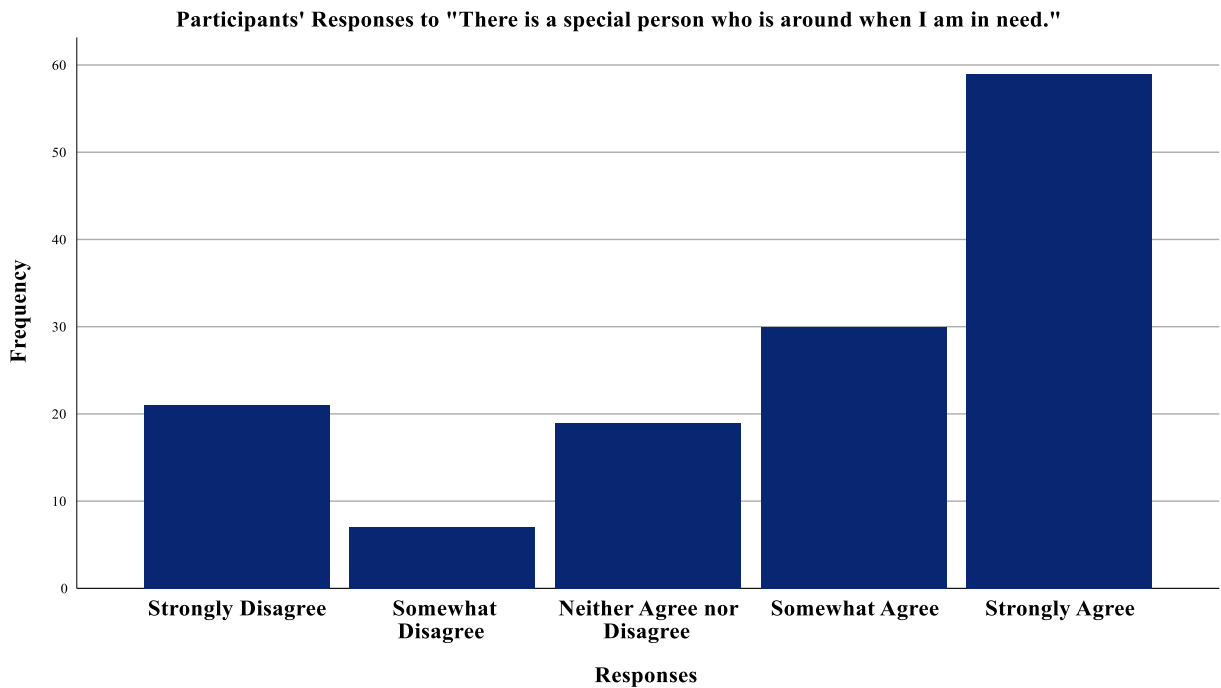


Section 2: Social Support Network

Participants responded to several questions concerning their social support network. Of these social support questions, four were about participants' "special person" in their life and one question was about their sources of social support.

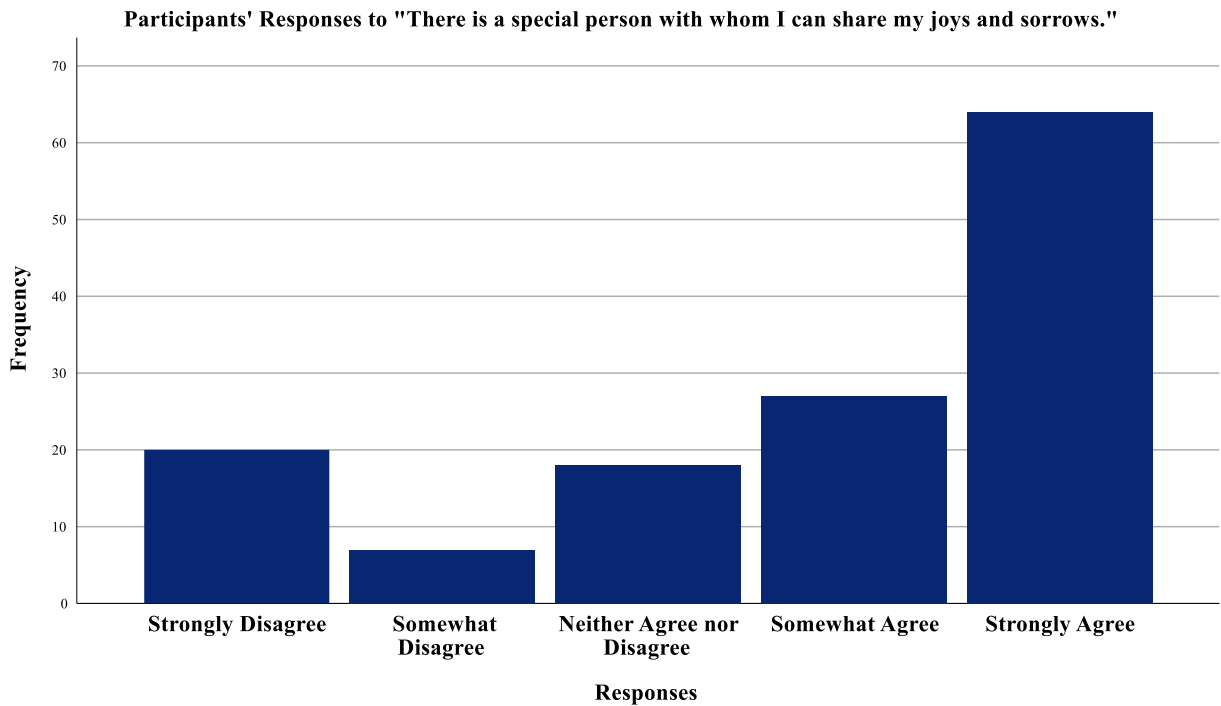
Participants responded on a 1 (*strongly disagree*) to 5 (*strongly agree*) Likert-type scale to the "special person" social support questions. Of the 136 participants who responded to these questions, 59 (43.4%) indicated that they strongly agreed with the statement, "There is a special person who is around when I am in need" (Figure 3). Of the remaining 77 participants, 30 (22.1%) indicated they somewhat agreed with the statement, 19 (14%) indicated they neither agreed nor disagreed, 7 (5.1%) indicated they somewhat disagreed with the statement, and 21 (15.4%) indicated they strongly disagreed with the statement.

Figure 3



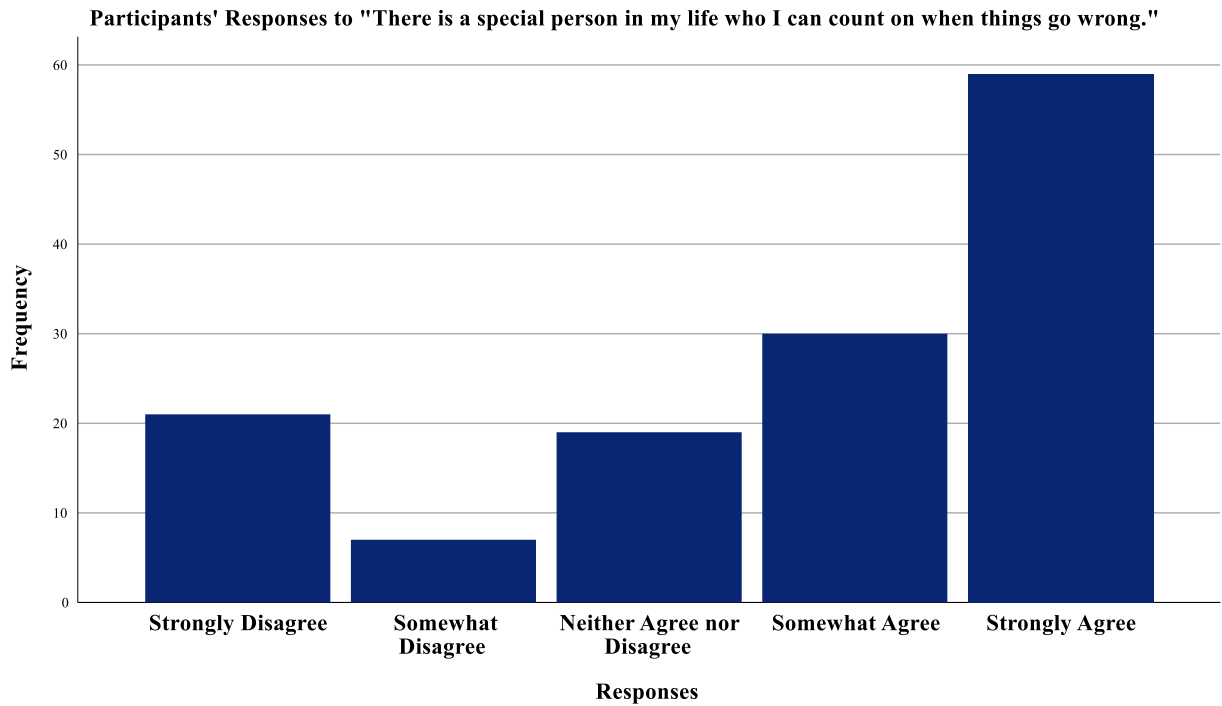
Sixty-four (47.1%) participants also indicated they strongly agreed with the statement, “There is a special person with whom I can share my joys and sorrows” (Figure 4). Of the remaining 72 participants, 27 (19.9%) indicated they somewhat agreed, 18 (13.2%) indicated they neither agreed nor disagreed, 7 (5.1%) indicated they somewhat disagreed, and 20 (14.7%) indicated they strongly disagreed with the statement.

Figure 4



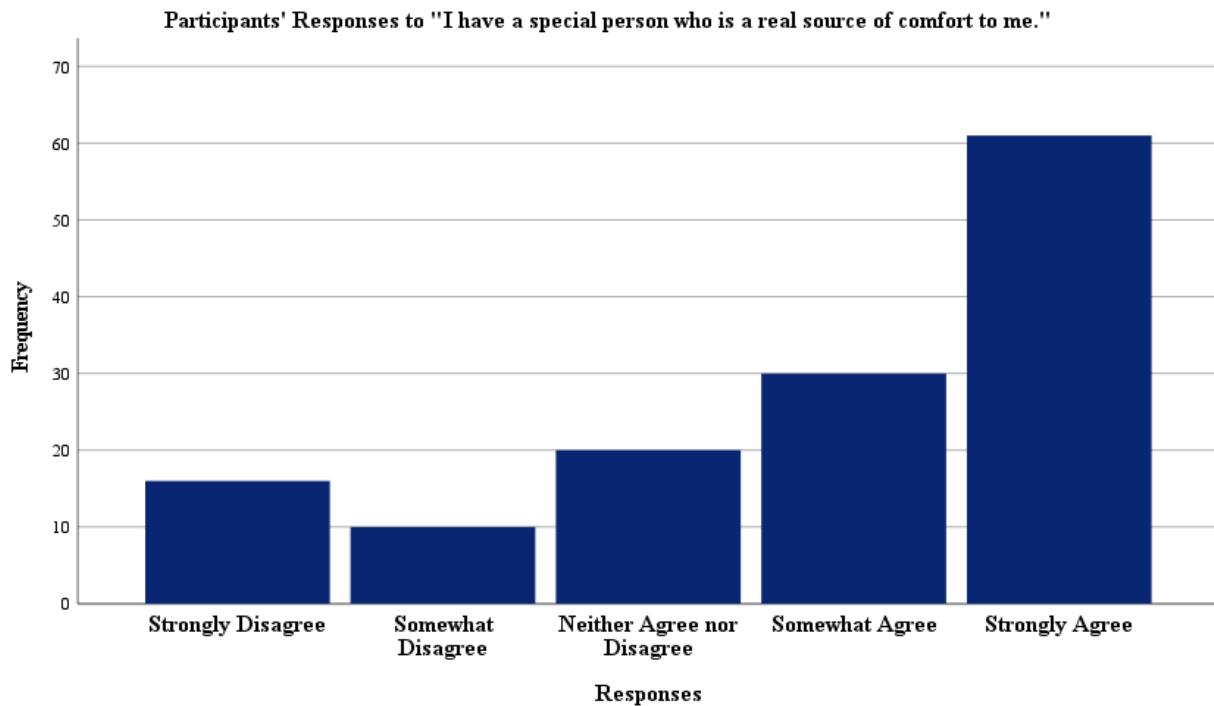
Fifty-nine (43.4%) indicated they strongly agreed with the statement, “There is a special person in my life who I can count on when things go wrong” (Figure 5). Thirty (22.1%) participants indicated they somewhat agreed with this statement, 19 (14%) indicated they neither agreed nor disagreed, 7 (5.1%) indicated they somewhat disagreed, and 21 (15.4%) indicated they strongly disagree with this statement.

Figure 5



For the final social support question, 61 (44.5%) indicated they strongly agreed with the statement, "I have a special person who is a real source of comfort to me" (Figure 6). Of the remaining 76 participants, 30 (21.9%) indicated they somewhat agreed with this statement, 20 (14.6%) indicated they neither agreed nor disagreed, 10 (7.3%) indicated they somewhat disagreed, and 16 (11.7%) indicated they strongly disagreed with this statement.

Figure 6



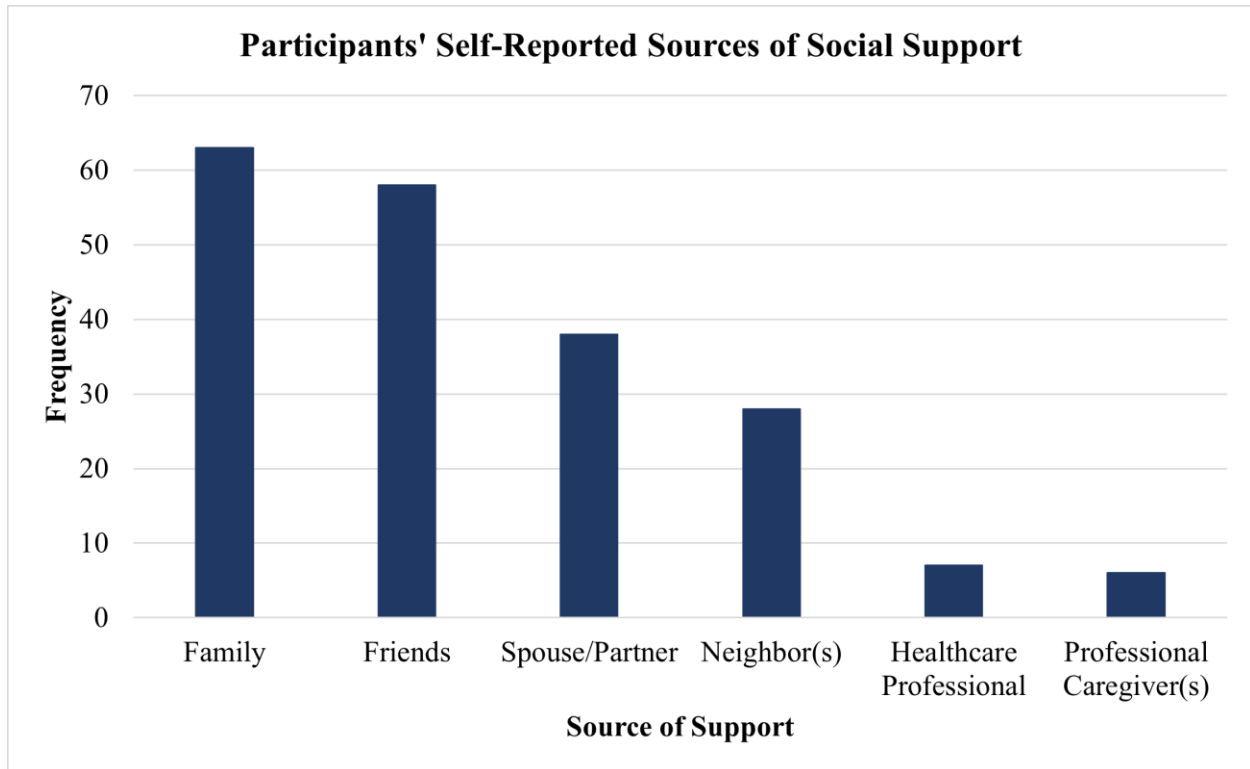
Sources of Social Support

Participants also identified people in their life who they can rely on for emotional support, companionship, financial assistance, or advice and guidance (Figure 7). Participants were able to identify as many sources of social support which applied to their life. Of the 139 participants, 38 (27.3%) participants reported a spouse or partner, 63 (45.32%) reported other family members (e.g., mom, sibling, children), 57 (41%) reported friends or best friends, 28 (20.1%) reported neighbors, 6 (4.31%) reported professional caregivers, 7 (5.04%) reported healthcare professionals other than caregivers, and 21 (15.11%) reported no sources of support, companionship, financial assistance, or advice and guidance (e.g., “myself”).

Participants also had the opportunity to write-in sources of support that might have differed from the sources included in the survey. Seven (5.04%) participants wrote in a response. Of these 7 responses, 3 (42.86%) reported religious leaders (e.g., minister), 2 (28.57%) reported

Jesus Christ, 1 (14.29%) reported state employees, and 1 (14.29%) reported the Reno Housing Authority Office.

Figure 7



Section 3: Community Programs

Participants responded to questions about their current involvement in, or interest in joining, community programs, events, and activities as well as potential barriers to participating in community programs, events, and activities. The community programs, events, and activities listed in the survey included senior bowling, beanbag toss (also known as “corn hole”), senior card games, fitness activities for seniors, special senior community events, and a text-entry box for participants to write-in a program, activity, or event not otherwise included.

Participation in Community Programs, Events, and Activities

Of the five programs, events, and activities provided in the survey, 13 (9.4%) participants indicated current involvement or interest in senior bowling, 17 (12.2%) indicated this for beanbag toss, 16 (11.5%) for senior card games, 44 (31.7%) for fitness activities for seniors, and 41 (29.5%) for special senior community events. Forty-one (29.5%) participants indicated interest or involvement in some other activity, and 50 (36%) indicated no current involvement or interest in community programs, events, and activities.

The 41 participants who indicated other activities they were currently involved in or were interested in joining wrote in these activities. These include games like bingo, bunco, and chess ($n = 3$), physical therapy ($n = 1$), volunteering ($n = 3$), physical activities like walking, hiking, horseback riding, snowshoeing, fishing, and playing tennis or pickleball ($n = 8$), music groups and events, like chorus or instrument classes and concerts ($n = 6$), movie nights ($n = 4$), library or book club events ($n = 4$), volunteering groups for various community organizations ($n = 7$), and other activities like a crochet group ($n = 1$), dance group ($n = 1$), educational classes for seniors ($n = 1$), and “activities to improve emotional intelligence and social and personal awareness” ($n = 1$).

Barriers to Participating in Community Programs, Events, and Activities

Participants ($n = 137$) responded to survey items about their reasons for not participating in community programs, events, and activities. Thirty-two (23.4%) participants indicated, “I participate in as many community events as I would like” and did not respond to follow-up questions about why they do not participate. The remaining 105 participants did respond to follow-up questions about why they do not participate. These 105 participants indicated one of the following, “I participate in community events but not as many as I would like” ($n = 16$, 11.7%); “I don’t participate in community events, but I would like to” ($n = 38$, 27.7%); or “I don’t participate in community events and I can’t or don’t want to” ($n = 41$, 29.9%).

Participants indicated from a list of eight barriers why they do not participate. Nineteen (13.7%) participants indicated that they do not enjoy attending/participating in community events. Twenty-three (16.5%) indicated that they do not have access to, or they have limited access to, transportation. Thirty-seven (26.6%) indicated that they do not know where or when community events are held. Twenty-two (15.8%) indicated that they do not know how to sign up for community events. Thirty-nine (28.1%) indicated that they have physical ailments that prevent participation in certain community events. Seven (5%) indicated that they do not know how to play certain games like bowling, card games, or beanbag toss. Thirty-two (23%) indicated other reasons why they do not participate, including COVID-19 restrictions and personal health concerns ($n = 6$, 4.31%), being too busy with volunteering or work ($n = 5$, 3.65%), prefer to be alone or “reclusive” ($n = 5$, 3.65%), that they are blind or have a spouse with dementia ($n = 2$, 1.46%), that they do not know anyone to help them find something to do ($n = 2$, 1.46%), hold other priorities and interests ($n = 3$, 1.91%), or do not have money to participate ($n = 2$, 1.46%).

Section 4: Life Events and Mental Health

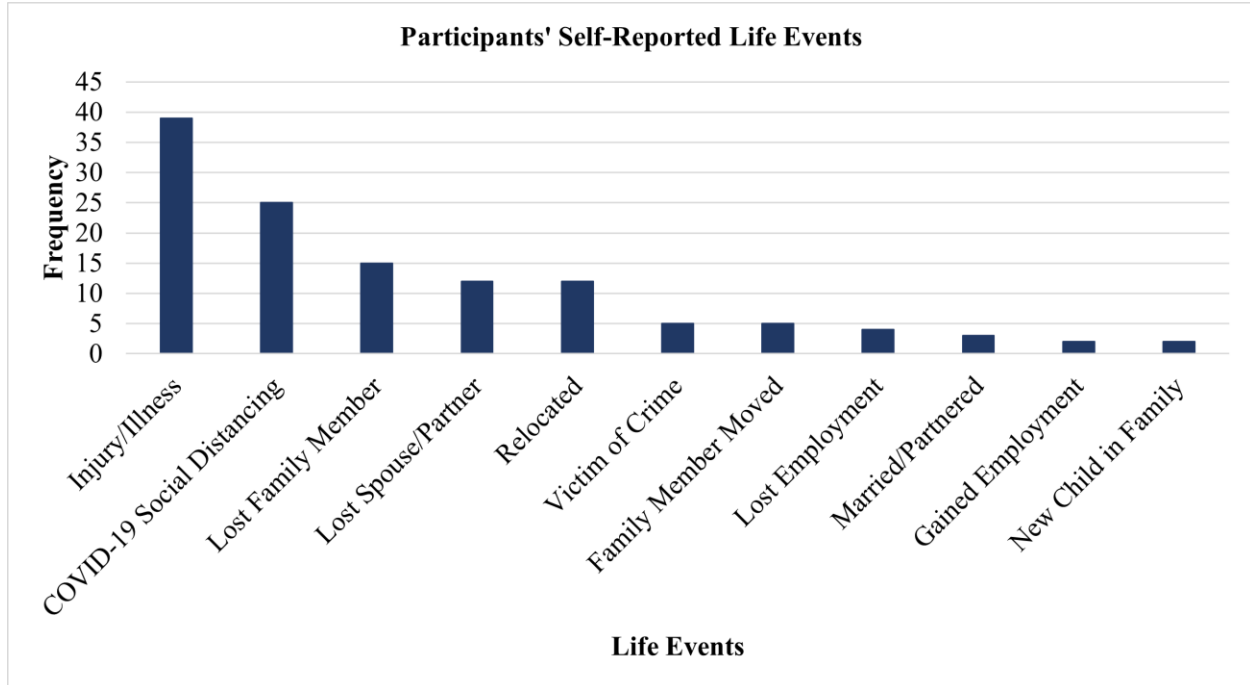
Participants responded to questions about recent life events and mental health with a particular focus on depression, loneliness, and isolation. Recent life events included 11 different life events for participants to indicate whether they experienced them, with the option to write-in a life event that was not accounted for. Depression items changed between the first and second wave of the survey and are presented separately.

Life Events

Participants indicated life events they experienced in the past 12 months (Figure 8). Three (2.2%) participants were recently married or partnered, 12 (8.6%) participants lost a spouse or partner, 15 (10.79%) participants lost a family member other than a spouse, 4 (2.9%) participants lost employment, 2 (1.4%) participants gained employment, 2 (1.4%) participants had a new child born into the family, 5 (3.6%) were the victim of a crime, 39 (28.1%) participants had a recent injury or illness, 5 (3.6%) had a family member move away from them, 12 (8.6%) participants relocated to a new living environment, 25 (18%) indicated that COVID-19 social distancing⁷ impacted their life, and 43 (30.9%) participants indicated that they did not experience any life events.

⁷ This item was included only in the second wave of data collection.

Figure 8



Participants had the opportunity to write-in other life events not accounted for in the survey. 27 (16.67%) participants described life events using the write-in option. Responses varied, with one (0.7%) participant writing that they had two pets die due to fire evacuation orders, one (0.7%) participant lost their volunteer work, one (0.7%) participant retired, one (0.7%) participant had a partner move in with them, six (4.38%) participants indicated a health reason, including recovering from surgery or attending multiple medical appointments, and 1 (0.7%) participant reported losing a friend.

Mental Health

Participants responded to questions concerning impacts on their mental health. These questions concerned their sense of connection with others, isolation due to the COVID-19 pandemic, and questions describing depressive symptomology. The first wave of data collection included four questions asking about depressive symptomology. Following the end of the first

wave of data collection, and with the input of key stakeholders, these items were deleted and replaced with seven items from the Depression Anxiety Stress Scales (DASS)⁸ for the second wave of data collection. Two specific questions about their history with depression, taken from the CDC's BRFSS survey, were included in both versions of the survey.

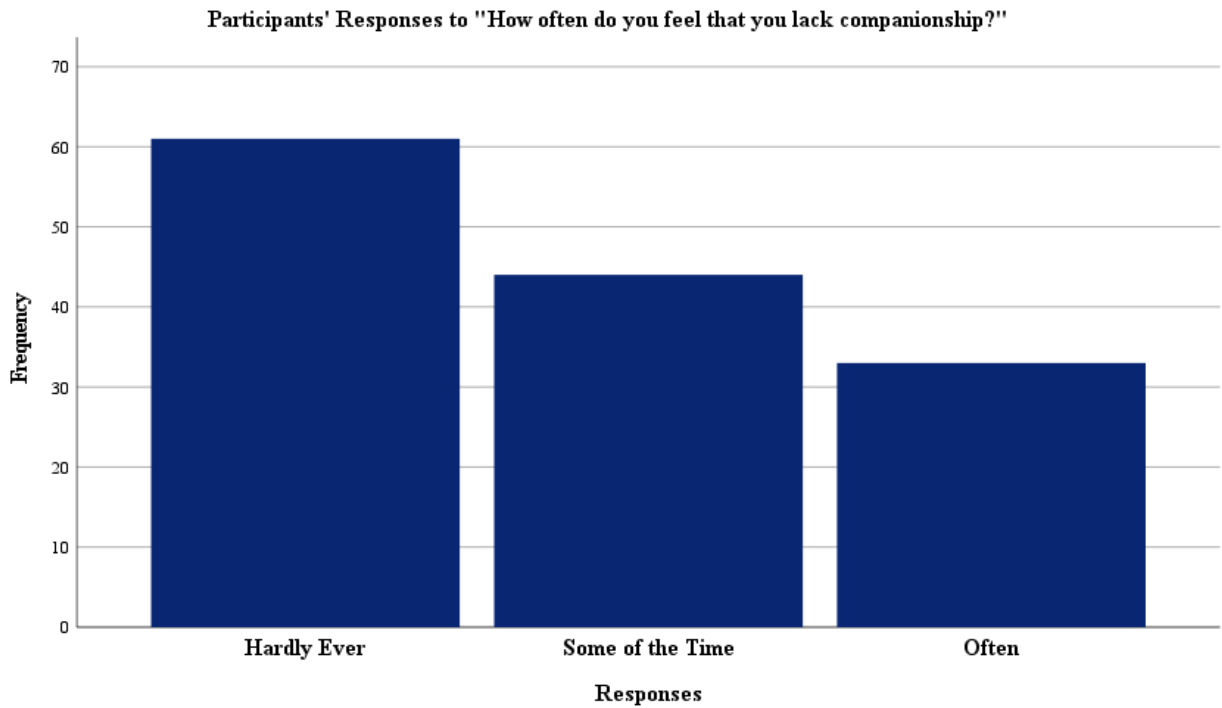
Social Connection

Participants responded to three questions from the UCLA Loneliness Scale⁹ on a 1 (*hardly ever*) to 3 (*often*) Likert-type scale: (1) "How often do you feel that you lack companionship?" (2) "How often do you feel left out?" and (3) "How often do you feel isolated from others?" Of the 138 participants who answered the first question, 61 (44.2%) participants indicated they hardly ever feel a lack of companionship (Figure 9), while 44 (31.9%) indicated they sometimes feel this way, and 33 (23.9%) indicated they often feel this way.

⁸ Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Sydney, NSW, Australia: The Psychology Foundation of Australia.

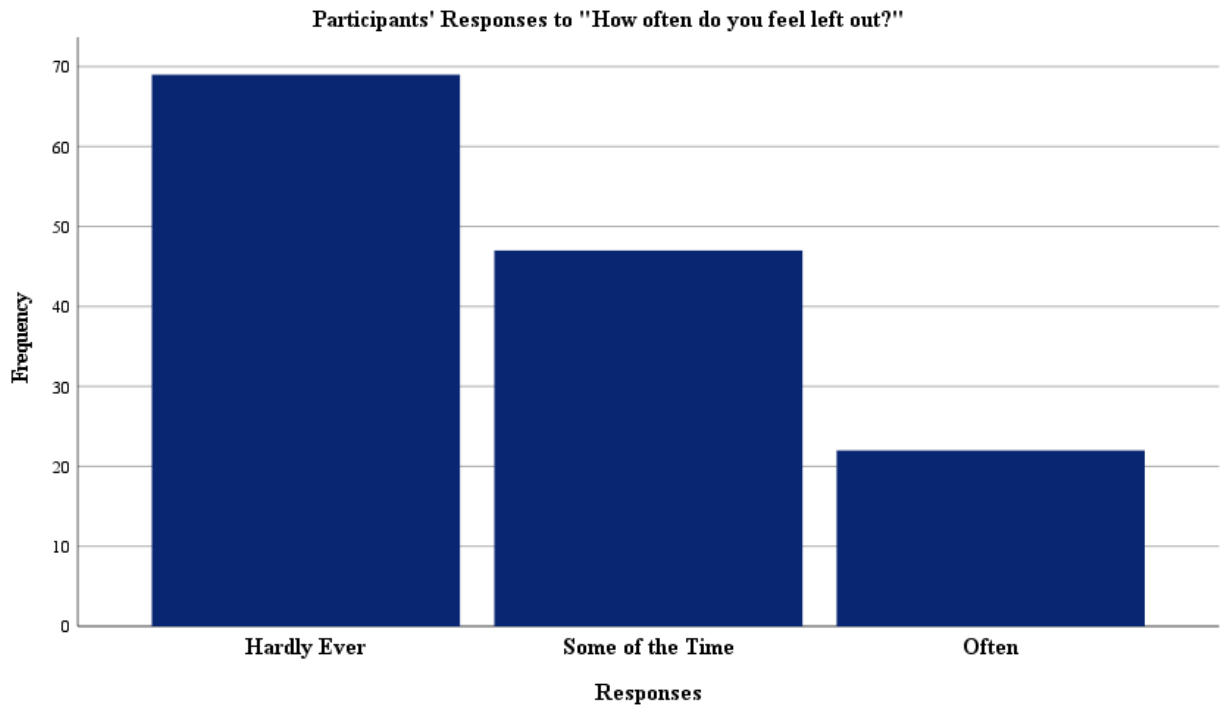
⁹ Russel, D. W. (1996). UCLA loneliness scale (version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20-40.

Figure 9



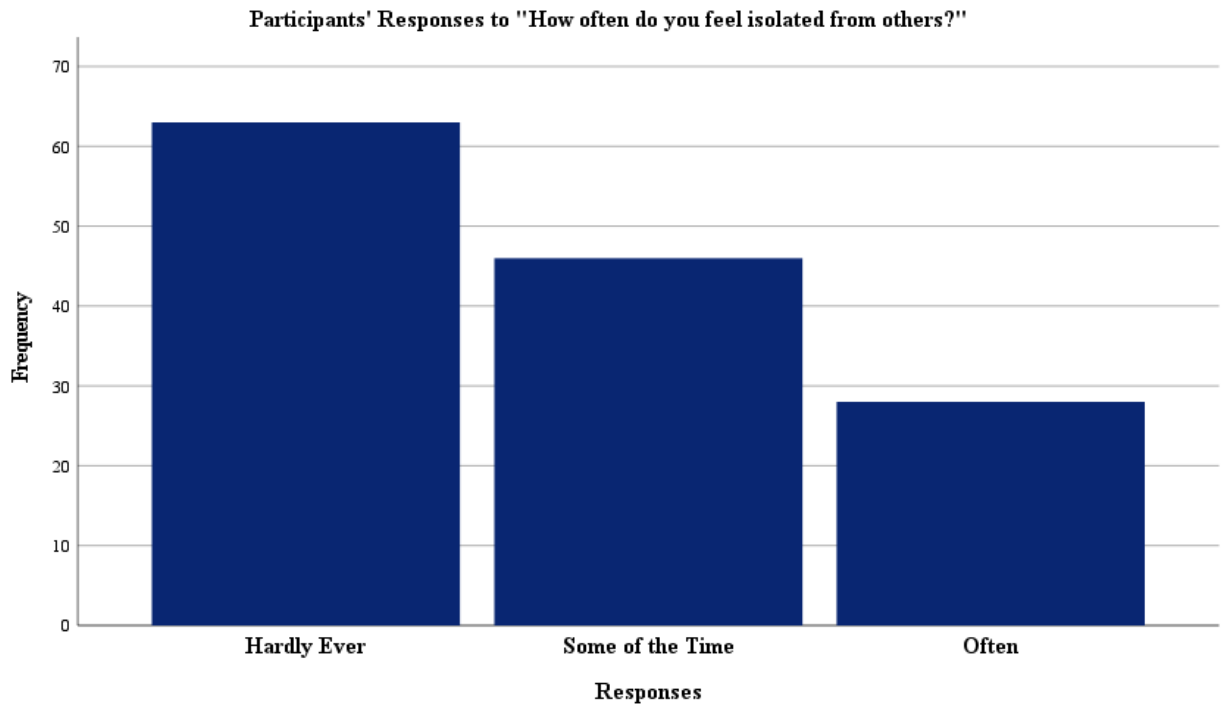
Of the 138 participants who answered the second question, half of the participants ($n = 69$, 50%) indicated they hardly ever feel left out (Figure 10), while 47 (34.1%) indicated they sometimes feel this way, and 22 (15.9%) indicated they often feel this way.

Figure 10



Lastly, of the 137 participants who answered the third question, 63 (46%) participants indicated they hardly ever feel isolated from others (Figure 11), while 46 (33.6%) indicated they sometimes felt this way, and 28 (20.4%) indicated they often felt this way.

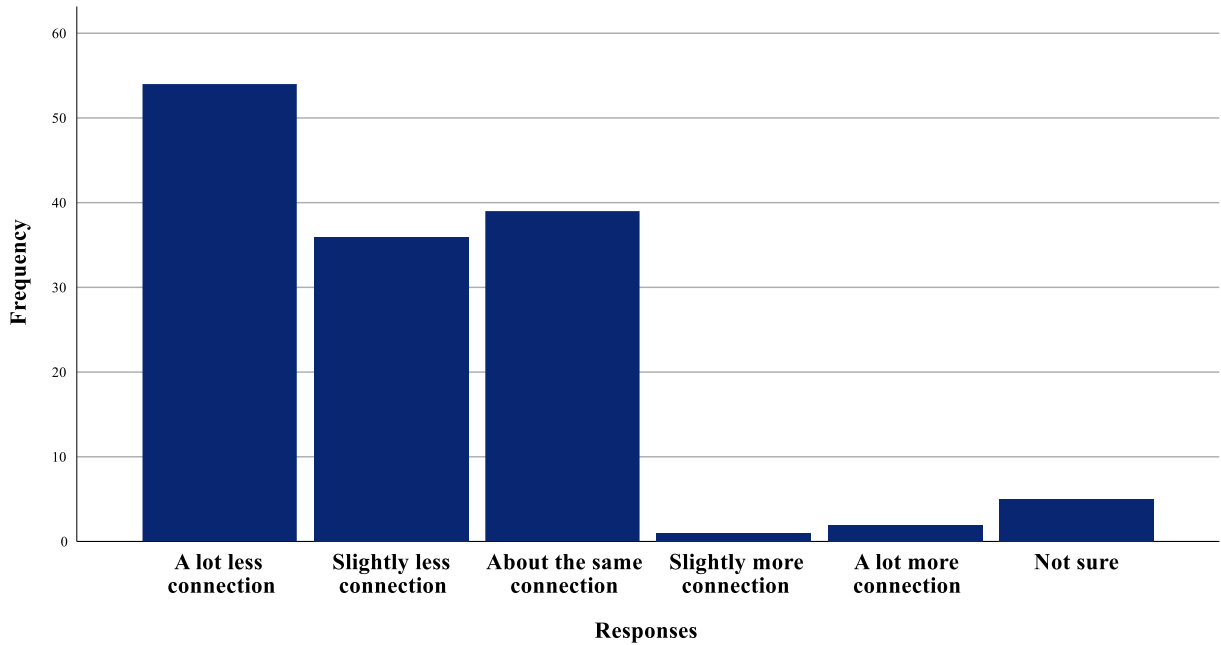
Figure 11



Participants ($n = 137$) also responded to a specific question about feeling connection with others during the COVID-19 pandemic (Figure 12). 54 (39.4%) participants indicated they felt “a lot less connection with other people,” 36 (26.3%) indicated they felt “slightly less connection with other people,” 39 (28.5%) indicated they felt “about the same level of connection with other people,” one (0.7%) participant indicated they felt “slightly more connection with other people,” and 2 (1.5%) participants indicated that they felt “a lot more connection with other people.” Five participants (3.6%) were not sure about how they felt during the COVID-19 pandemic.

Figure 12

Participants' Responses to "Have you felt less, more, or about the same level of connection with other people during the COVID-19 quarantine?"



Depressive Symptomology

Participants from the first wave of data collection ($n = 54$) responded to four items concerning depressive symptomology from the Geriatric Depression Scale¹⁰ using a binary yes/no response option. The four items were: (1) “Do you feel that your life is empty?” (2) “Do you feel happy most of the time?” (3) “Do you think it is wonderful to be alive?” and (4) “Do you feel that your situation is hopeless?” A fifth item was only included in the online survey ($n = 35$ participants who completed the survey online saw this fifth item), “Do you feel pretty worthless the way you are now?”

The total sample of 54 participants responded to the first of four items, “Do you feel that your life is empty?” Ten (18.5%) participants indicated “yes” to this question, while 44 (81.5%)

¹⁰ Heisel, M. J., Duberstein, P. R., Lyness, J. M., & Feldman, M. D. (2010). Screening for suicide ideation among older primary care patients. *The Journal of the American Board of Family Medicine*, 23(2), 260-269.

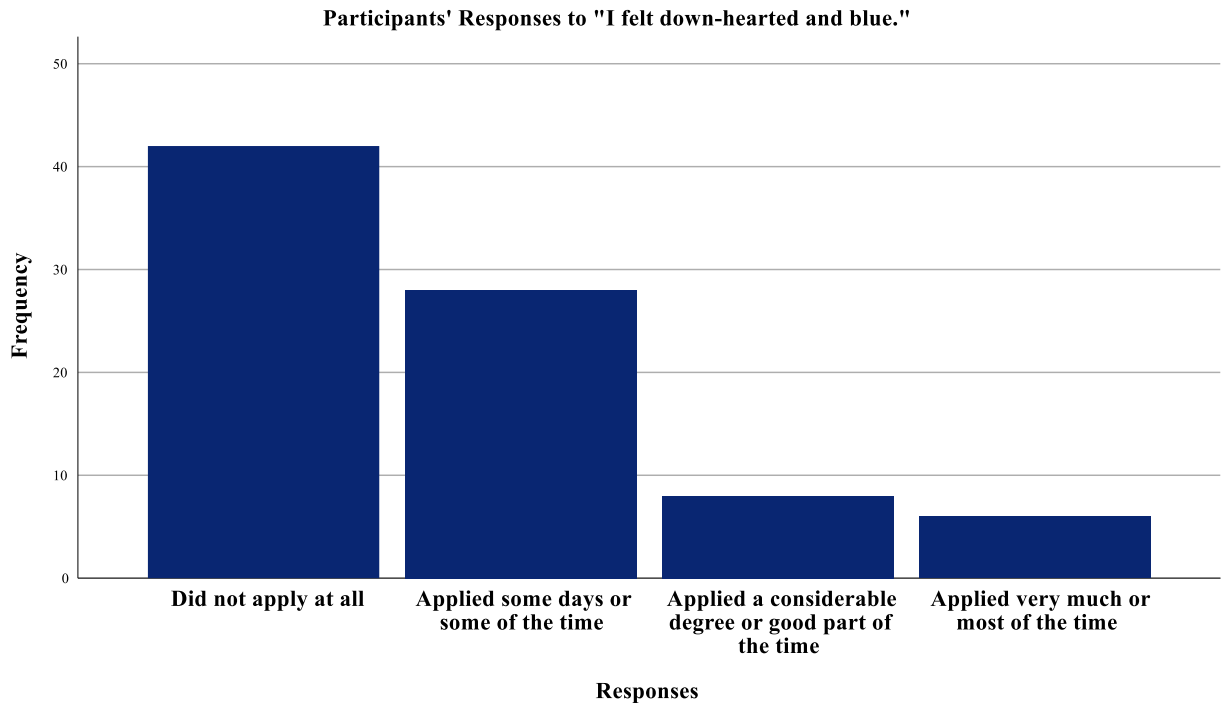
indicated “no.” Two participants skipped the second item, “Do you feel happy most of the time?” resulting in a sample of 52 responses. Thirty-nine (75%) of participants indicated “yes” to this question, and 13 (25%) indicated “no.” Two participants skipped the third item, “Do you think it is wonderful to be alive?” resulting in a sample of 52 responses. Forty-six (88.5%) participants indicated “yes” to this question, and six (11.5%) indicated “no.” Two participants skipped the fourth item, “Do you feel that your situation is hopeless?” resulting in a sample of 52 responses. Five (9.6%) indicated “yes” to this question, and 47 indicated “no.”

Depression Scale Items

Participants who completed the second wave of data collection ($n = 84$) responded to seven items concerning depression from the Depression Anxiety Stress Scales¹¹ on a 1 (*does not apply to me at all*) to 4 (*applied to me very much, or most of the time*) Likert-type scale. These questions concerned respondents’ feelings over the past week. Half of respondents ($n = 42$, 50%) indicated that the statement “I felt down hearted and blue” did not apply to them at all over the past week, while 28 (33.3%) indicated it applied some of the time, eight (9.5%) indicated it applied a good part of the time, and six (7.1%) indicated it applied most of the time (Figure 13).

¹¹ Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Sydney, NSW, Australia: The Psychology Foundation of Australia.

Figure 13



More than half of respondents ($n = 52$, 61.9%) indicated that the statement, “I felt that I had nothing to look forward to” did not apply to them at all over the past week, while 20 (23.8%) indicated it applied some of the time, seven (8.3%) indicated it applied a good part of the time, and five (6%) indicated it applied most of the time (Figure 14).

The majority of participants ($n = 60$, 71.4%) indicated that the statement, “I felt that life was meaningless” did not apply to them at all over the past week, while 17 (20.2%) indicated it applied to them some of the time, five (6%) indicated it applied to them a good part of the time, and two (2.4%) indicated it applied most of the time (Figure 15).

Figure 14

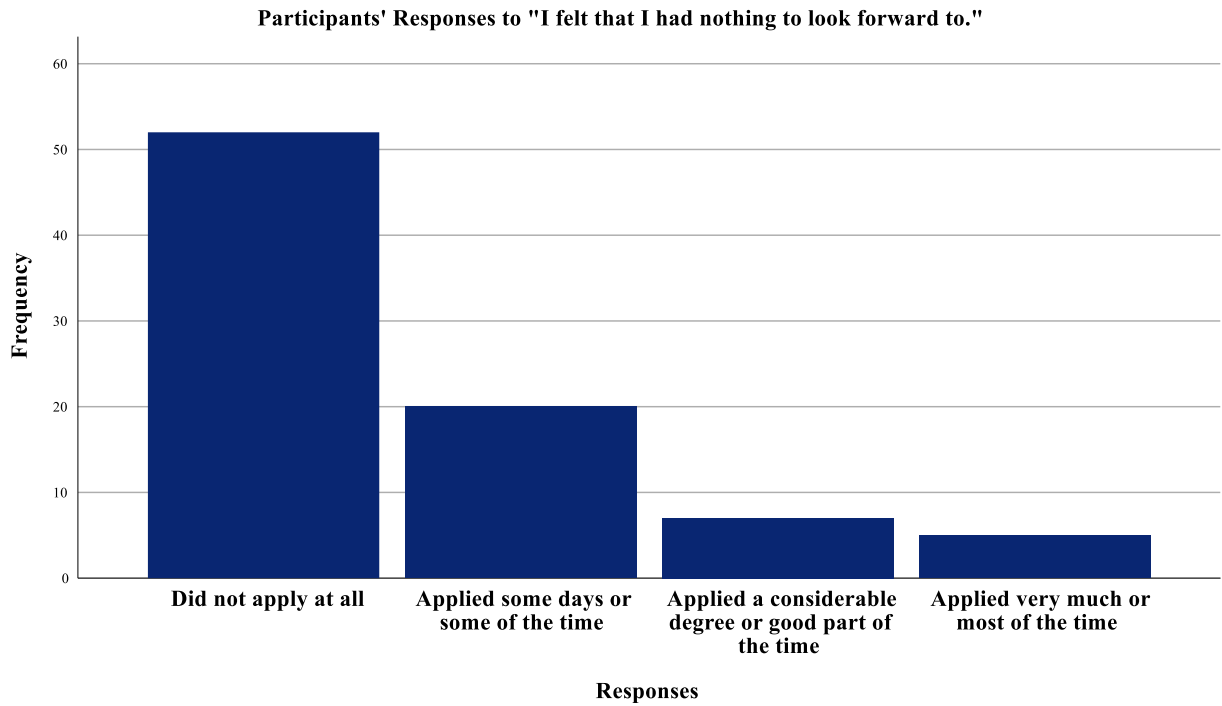
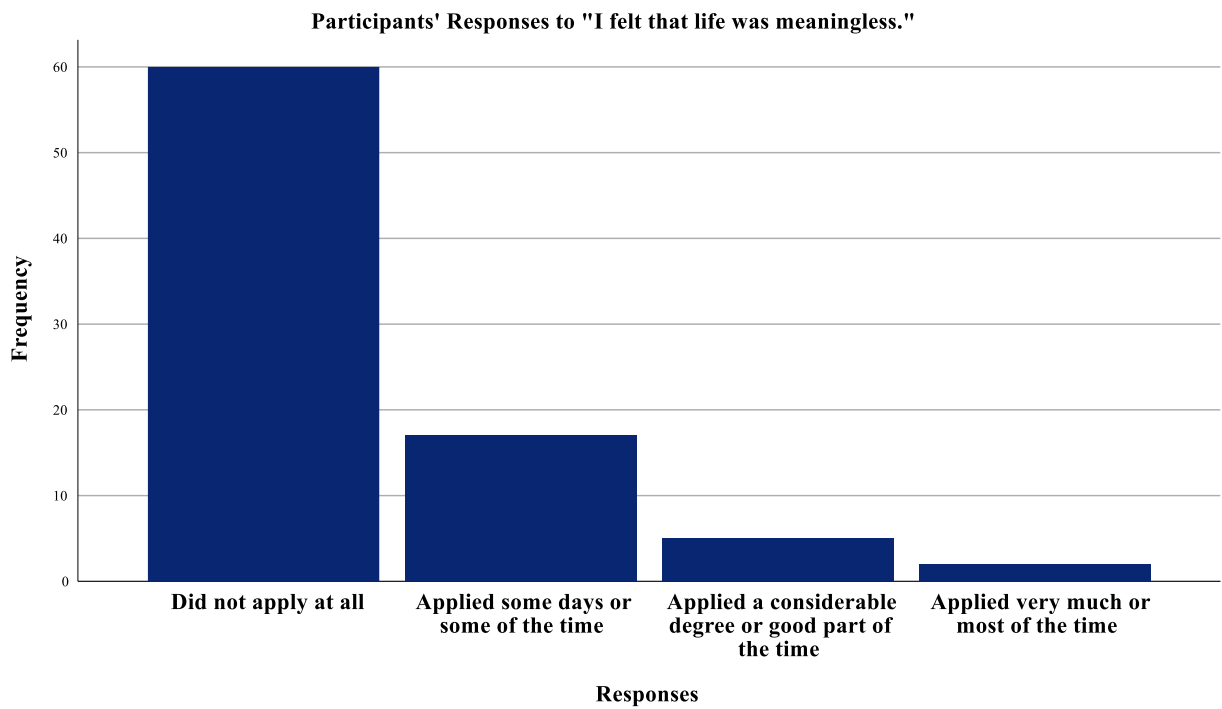
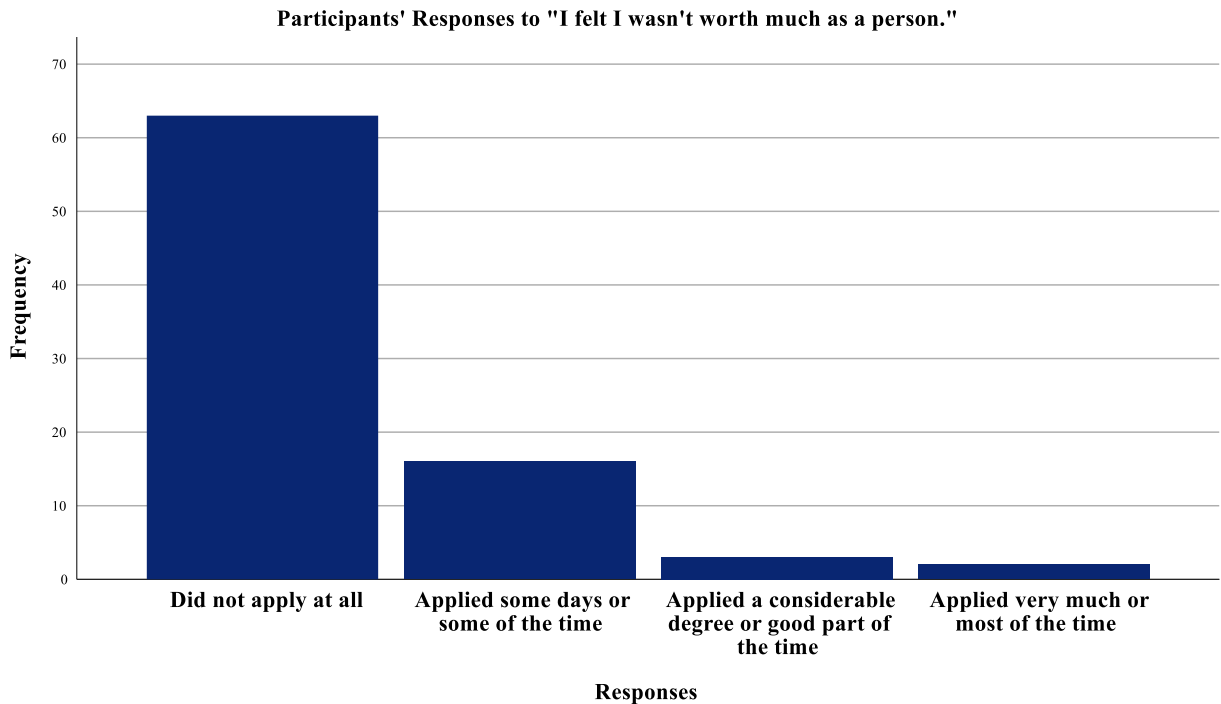


Figure 15



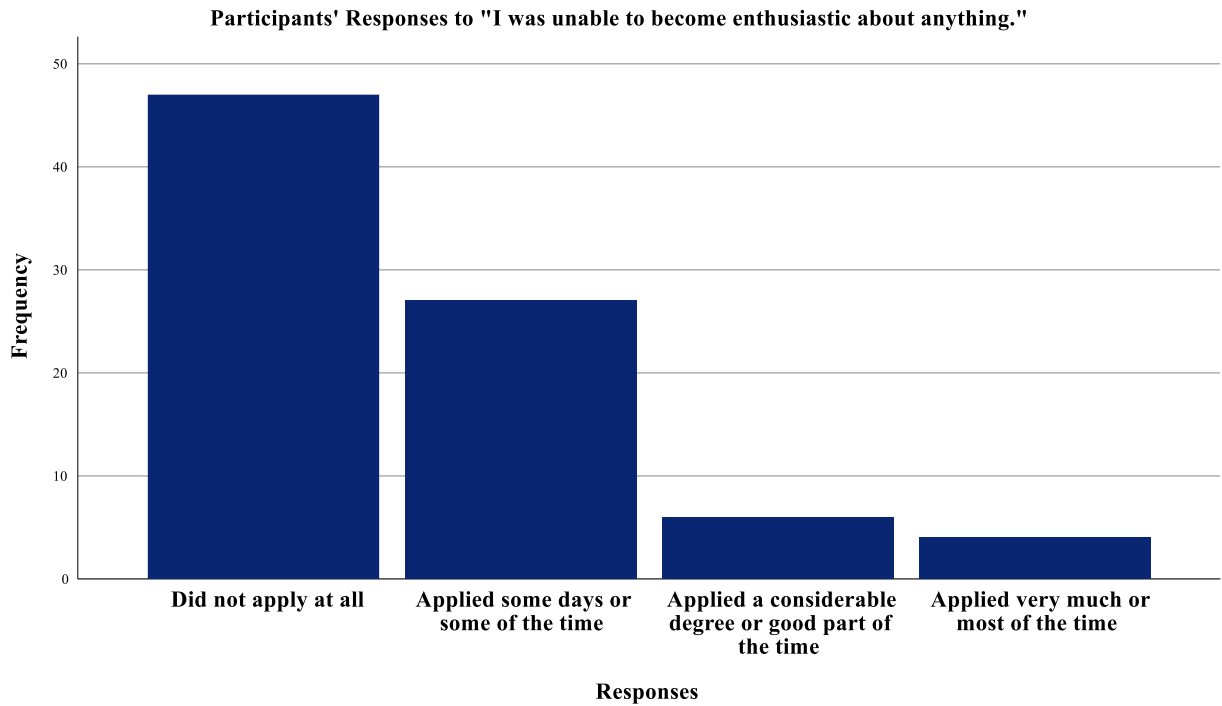
Similarly, the majority of participants ($n = 63$, 75%) indicated that the statement, “I felt I wasn’t worth much as a person” did not apply to them at all over the past week, while 16 (19%) indicated it applied to them some of the time, three (3.6%) indicated it applied a good part of the time, and two (2.4%) indicated that it applied most of the time (Figure 16).

Figure 16



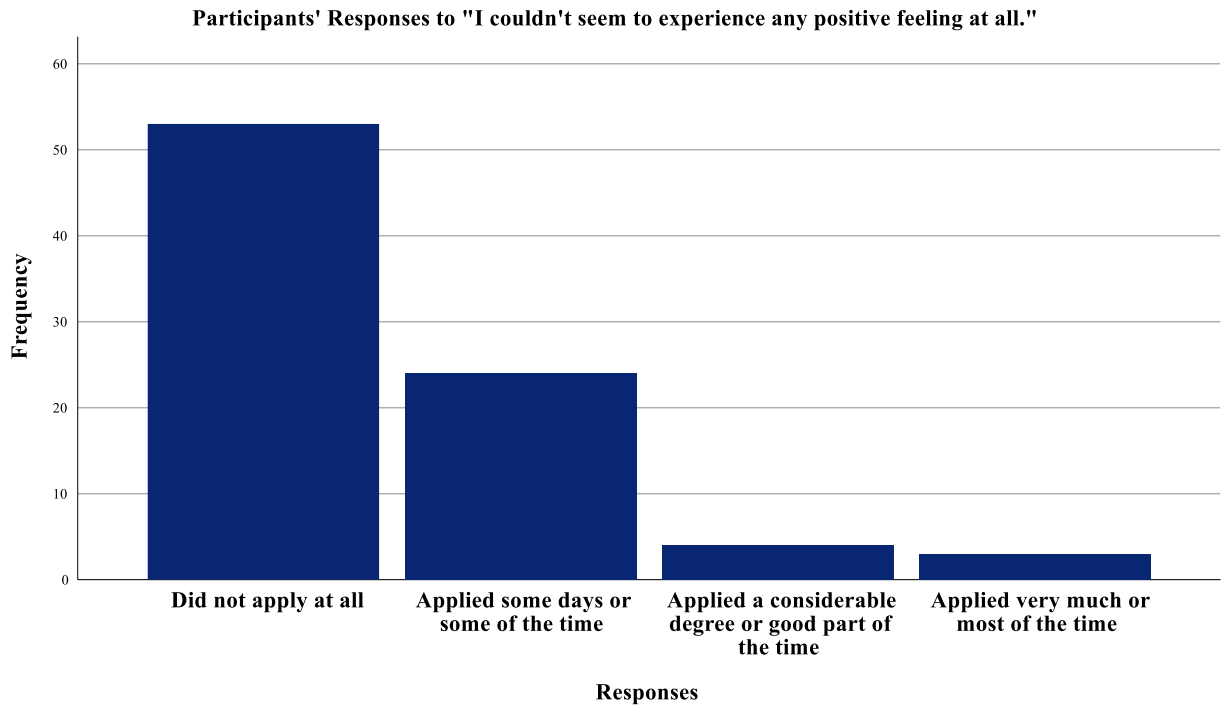
The final three items asked participants about their activities and enthusiasm. More than half of participants ($n = 47$, 56%) indicated that the statement, “I was unable to become enthusiastic about anything” did not apply to them over the past week, while 27 (32.1%) indicated it applied to them some of the time, six (7.1%) indicated it applied a good part of the time, and four (4.8%) indicated it applied most of the time (Figure 17).

Figure 17



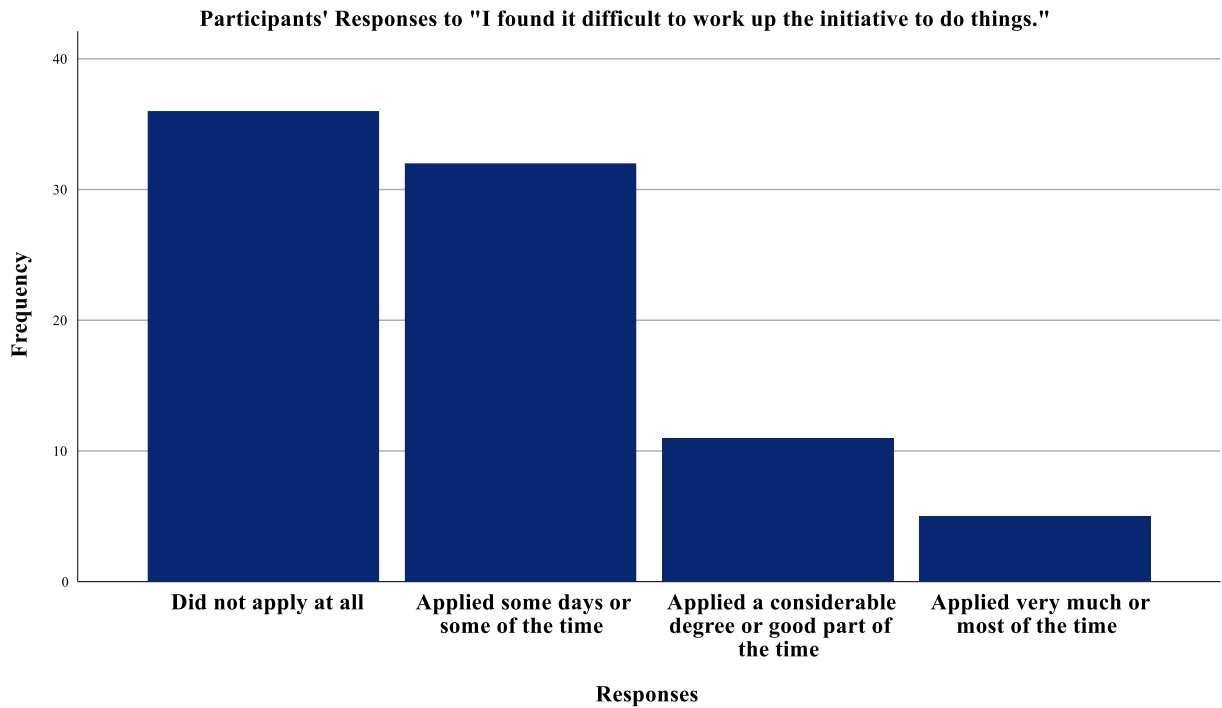
Over half of participants ($n = 53$, 63.1%) also indicated that the statement, “I couldn’t seem to experience any positive feeling at all” did not apply to them over the past week, while 24 (28.6%) participants indicated it applied some of the time, four (4.8%) indicated it applied a good part of the time, and three (3.6%) indicated it applied most of the time (Figure 18).

Figure 18



The final question asked participants to respond to the statement, “I found it difficult to work up the initiative to do things.” A slim majority of participants ($n = 36, 42.9\%$) indicated that this statement did not apply to them at all over the past week, while 32 (38.1%) participants indicated it applied some of the time, 11 (13.1%) indicated it applied a good part of the time, and five (6%) indicated it applied most of the time (Figure 19).

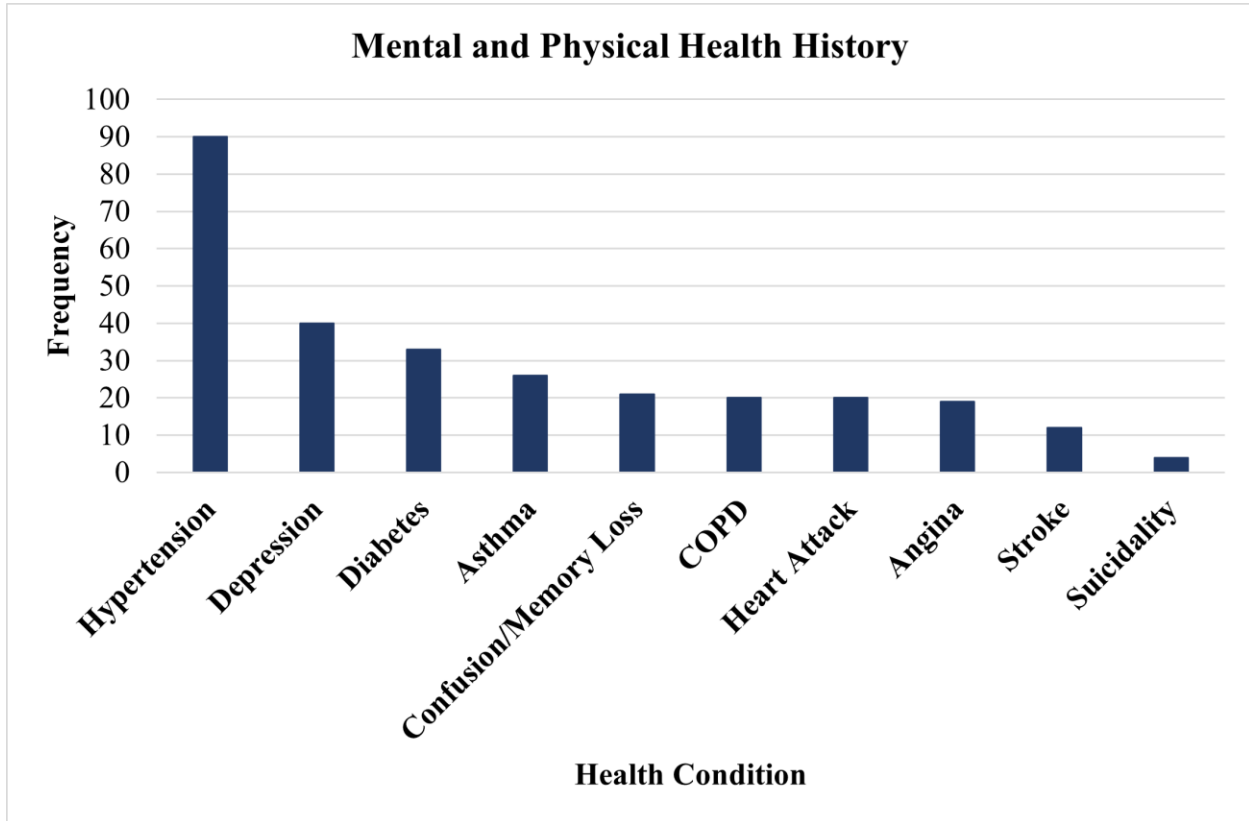
Figure 19



History with Depression

Participants ($n = 138$) responded to two questions concerning their lifetime history with depression and their depressive feelings over the past two weeks. The first question asked, “Has a doctor, nurse, or other health professional ever told you that you had a depressive disorder (including depression, major depression, dysthymia, or minor depression)?” (Figure 20).

Figure 20



Forty (29%) participants indicated “yes,” a doctor, nurse, or other health professional has told them they had a depressive disorder, while 88 (63.8%) indicated “no,” they were never told this, four (2.9%) indicated they did not know or were not sure, and six (4.3%) preferred not to respond to the question.

A second question asked participants ($n = 135$), “Over the last two weeks, how often have you been bothered by feeling down, depressed, or hopeless?” About half of participants ($n = 69$, 51.1%) indicated they “never” felt this, 31 (23%) indicated they felt this “for some days,” 10 (7.4%) indicated they felt this “for more than half the days,” and seven (5.2%) indicated they felt this “nearly every day.” Nine (6.7%) participants indicated that they did not know, and nine (6.7) participants preferred not to answer this question.

Section 5: Medical History and Physical Health

Participants responded to 10 questions concerning their medical history and physical health from the CDC's BRFSS survey¹². Nine questions focused on three major physical medical concerns, including diabetes, respiratory conditions, and cardiovascular conditions. One question concerned emergency room visits. Two additional questions were included for the second wave of data collection only. These questions focused on cognitive decline and memory impairment, and suicidality. All questions had four response options, including "yes," "no," "I don't know/I'm not sure," and "I prefer not to answer."

Diabetes

Participants responded to three questions concerning diabetes or other conditions involving the pancreas: (1) "Has a doctor, nurse, or other health professional ever told you that you had diabetes?" (2) "Do you currently have diabetes (either Type 1 or Type 2)?" and (3) "Are you now taking insulin?"¹³

Almost one quarter of participants ($n = 33$, 23.7%) indicated they were told they had diabetes at some point (Figure 20), 104 (74.8%) participants indicated they were never told they had diabetes, and 2 (1.4%) participants indicated they did not know or were not sure if they were told they had diabetes. Twenty-nine (20.9%) participants indicated that they currently have diabetes, 105 (75.5%) indicated they do not currently have diabetes, and 5 (9.3%) indicated they were not sure if they did or did not currently have diabetes. Two (3.7%) participants indicated that they currently take insulin, 51 (94.4%) indicated they do not currently take insulin, and one (1.9%) preferred not to answer this question.

¹² <https://www.cdc.gov/brfss/index.html>

¹³ This third question about insulin use was only included on the first survey wave.

Respiratory Conditions

Participants responded to two questions concerning asthma: (1) “Has a doctor, nurse, or other health professional ever told you that you had asthma?” and (2) “Do you still have asthma?” Nearly 20 percent ($n = 26$, 18.7%) participants indicated they were told they had asthma at some point (Figure 20), while 111 (79.9%) indicated they were never told they had asthma, and two (1.4%) participants indicated they did not know or were not sure if they were told they had asthma. Of the 26 participants who indicated they were told at some point they had asthma, five (21.7%) indicated that they still have asthma and two (8.7%) did not know or were not sure.

Participants ($n = 85$) responded to one question concerning Chronic Obstructive Pulmonary Disease (COPD), emphysema, and chronic bronchitis:¹⁴ “Has a doctor, nurse, or other health professional ever told you that you had COPD (Chronic Obstructive Pulmonary Disease), emphysema, or chronic bronchitis?” Almost one quarter ($n = 20$, 23.5%) of participants indicated they were told they had COPD, emphysema, or chronic bronchitis at some point (Figure 20), while 61 (71.8%) indicated they were never told they had these conditions. Four participants (4.7%) did not know or were not sure if they had been told they had COPD, emphysema, or chronic bronchitis in the past.

Cardiovascular Conditions

Participants responded to four questions concerning cardiovascular conditions: (1) “Has a doctor, nurse, or other health professional ever told you that you had a heart attack also known as a myocardial infarction?” (2) “Has a doctor, nurse, or other health professional ever told you that

¹⁴ This question on COPD was only included in the second wave of the survey.

you had angina or coronary heart disease?”¹⁵ (3) “Has a doctor, nurse, or other health professional ever told you that you had a stroke?” and (4) “Has a doctor, nurse, or other health professional ever told you that you have high blood pressure?”

Twenty (14.4%) participants indicated they were told they had a heart attack at some point (Figure 20), 114 (82%) indicated they were never told they had a heart attack, and five (3.7%) indicated they did not know or were not sure if they were told they had a heart attack.

Of the 137 participants who answered the question regarding angina or coronary heart disease, 19 (13.9%) participants indicated they were told they had angina or coronary heart disease (Figure 20), 109 (79.6%) indicated they were never told they had angina or coronary heart disease, and nine (6.6%) indicated they did not know or were not sure if they were told they had angina or coronary heart disease.

Of the 137 participants who answered the question regarding a stroke, 12 (8.8%) participants indicated they were told they had a stroke (Figure 20), 121 (88.3%) participants indicated they were never told they had a stroke, and four (2.9%) indicated they did not know or were not sure if they were told they had a stroke.

Over half of participants ($n = 90$, 64.7%) indicated that they were told they had high blood pressure (i.e., hypertension, Figure 20), 44 (31.7%) indicated they were never told they had high blood pressure, and five (3.6%) indicated that they did not know or were not sure if they were told they had high blood pressure.

¹⁵ One participant did not answer the second question, resulting in a sample of $n = 53$ for only the second question in this series.

Cognitive Decline

Participants¹⁶ ($n = 84$) responded to one question about cognitive decline: “During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?” One quarter of participants ($n = 21$, 25%) indicated yes, they have experienced confusion or memory loss that is happening more often or getting worse. Almost two-thirds of participants ($n = 55$, 65.5%) indicated they have not experienced this, while 6 (7.1%) indicated that they did not know or were not sure, and two (2.4%) preferred not to answer the question.

Suicidality

Participants¹⁷ ($n = 82$) responded to one question regarding suicidality: “During the past 12 months, have you ever seriously considered attempting suicide?” Nearly five percent ($n = 4$, 4.9%) of participants indicated that they have seriously considered suicide in the past 12 months. The majority of participants ($n = 75$, 91.5%) have not considered suicide in the past 12 months, two participants (2.4%) did not know or were unsure if they have considered suicide in the past 12 months, and one participant (1.2%) preferred not to answer the question.

Emergency Room Visits

Of the 135 participants who indicated how many times they visited an emergency room or urgent care because they were feeling ill or needed medical care since January 2020 or “during the past 12 months.”¹⁸ The average among participants was 0.79 visits since January 2020 or during the past 12 months ($SD = 1.36$). Eighty-seven (64.4%) participants indicated that they did not visit an emergency room since January 2020 or during the past 12 months, 22 (16.3)

¹⁶ An item on cognitive decline was only included in the second wave of data collection.

¹⁷ An item on suicidality was only included in the second wave of data collection.

¹⁸ The language changed from the former phrasing to the latter phrasing between the first and second survey waves, respectively.

visited the emergency room one time, eight (5.9%) visited twice, nine (6.7%) visited three times, seven (5.2%) visited four times, one (0.7%) visited six times, and one (0.7%) visited the emergency room seven times.

Section 6: Food Insecurity

Participants¹⁹ ($n = 85$) responded to two questions asking about food insecurity. The first question asked, “In the past 12 months, have you ever had to choose between paying for food and paying for...” by marking “yes,” “no,” or “does not apply” to nine response options: (1) Housing costs (rent/mortgage, etc.), (2) Utilities (heating bill, water bill, etc.), (3) Medical bills, (4) Prescription costs, (5) Phone bills, (6) Childcare, (7) Adult care (caregiver, day programs, respite care, nursing home, etc.), (8) Transportation (gas, car payment, Uber, bus fare, etc.), and (9) School expenses (tuition, books, supplies, etc.). Participants also had the opportunity to write in their own response in a provided text box. The second question asked participants, “How often in the past 12 months did you or anyone in your household cut the size of your meals or skip meals because there was not enough money for food?”

Deciding Which Bills to Pay versus Food

Of the 80 participants who responded to the food item, 11 participants (13.8%) indicated that they did have to choose between paying for housing costs or food, while 64 (80%) indicated they did not have to make this choice. Five (6.3%) indicated that this did not apply to them. Similarly, of the 79 participants who responded to the utilities item, 11 (13.9%) indicated that they did have to choose between paying for utilities or food, while 61 (77.2%) indicated they did not have to make this choice. Seven (8.9%) indicated that this did not apply to them. Of the 79 participants who responded to the medical bills item, 13 (16.5%) indicated that they did have to choose between paying for medical bills or food, while 57 (72.2%) indicated that they did not have to make this choice. Nine (11.4%) indicated that this did not apply to them. Related to medical care, 9 (11.4%) participants of the 79 who responded to this item indicated that they had

¹⁹ Food insecurity questions were only included in the second survey.

to choose between paying for prescription costs or food, while 59 (74.7%) indicated they did not have to make this choice. Eleven (13.9%) indicated that this did not apply to them.

Less than a tenth ($n = 7$, 9%) of the 78 participants who answered the phone bill item indicated that they did have to choose between paying phone bills or food, while 62 (79.5%) of participants indicated that they did not have to make this choice. Nine participants (11.5%) indicated that this did not apply to them. No participants of the 77 who responded to the childcare question indicated that they had to choose between paying for childcare or food, rather, 41 (53.2%) indicated that they did not have to make this choice, and 36 (46.8%) indicated that this did not apply to them. Only one participant of the 77 (1.3%) who responded to the adult care item indicated that they had to choose between paying for adult care or food, while 40 participants indicated that they did not have to make this choice and 36 (46.8%) indicated that this did not apply to them.

Almost a third of the 78 participants who responded to the transportation item ($n = 26$, 32.1%) indicated that they had to choose between paying for transportation costs or food, while 44 (54.3%) indicated that they did not have to make this choice. Eleven indicated that this did not apply to them. Of the 73 participants who responded to the final item about school expenses, 2 participants (2.6%) had to choose between paying for school expenses or food, while 35 (44.9%) participants indicated that they did not have to make this choice. Forty-one (52.6%) participants indicated that this did not apply to them.

Cutting or Skipping Meals

Participants ($n = 84$) indicated on a Likert-type scale ranging from (1) *never* to (4) *almost every month* how often they had to cut or skip meals because there was not enough money for food in the past 12 months. Most participants ($n = 60$, 71.4%) indicated that they never had to cut

or skip a meal in the past 12 months (Figure 21). Six (7.1%) participants indicated they only had to do this once or twice, 7 (8.3%) participants indicated they had to do this some months, but not every month, and 9 (10.7%) participants indicated they had to skip or cut meals almost every month because there was not enough money for food. Two participants (2.4%) preferred not to answer the question.

Figure 21

Participants' Responses to "How often in the past 12 months did you or anyone in your household cut the size of your meals skip meals because there was not enough money for food?"

