Evaluation of a Student-Older Adult Telephone Befriending Program to Reduce Social Isolation During the COVID-19 Pandemic

Manan Ahuja, MD[1], Kaitlin Lewis, MD[1], Sawayra Owais, MSc[2], Jordana Compagnone, MD[3], Laura Fallico, MD[1], Francine Fishbein, MD[4], Isabella Stefanova, MD[1], Kai Man Xu, MD[5], Shannon Gui, MD[6], Tricia Woo, MD[1], Sharon Marr, MD[6], Justin Lee, MD[1]

[1]Department of Medicine, McMaster University, Hamilton, ON; [2]MD/PhD Program, McMaster University, Hamilton, ON; [3]Department of Medicine, Dalhousie University, Halifax, NS; [4]Department of Medicine, University of British Columbia, Vancouver, BC; [5]Department of Family Medicine, Queen's University, Kingston, ON; [6]Department of Medicine, University of Toronto, Toronto, ON

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ABSTRACT

Social isolation and loneliness are associated with many adverse health outcomes. The COVID-19 pandemic increased its prevalence and disproportionately affected older adults. Since telephone befriending was a potentially feasible and safe intervention during the pandemic, the McMaster Phone-a-Friend Program (PFP) was developed using this strategy to try to reduce social isolation and loneliness among older adults. Thus, this study aimed to evaluate the effectiveness and long-term feasibility of PFP. Community-dwelling older adults in Ontario, Canada were matched to trained university student volunteers, who provided social engagement and pandemic-related education through weekly telephone calls. Two main referral sources were used: 1) older adults identified by their primary care provider as at risk for social isolation; and 2) older adults referred for multi-modal frailty rehabilitation, where telephone befriending was a desired component intervention. Older adults completing ≥4 calls were contacted to participate in a telephone survey to provide program feedback. Of the 220 active participants in August 2021, 60 participated in our survey. At the time of survey completion, the mean number of calls completed was 8.3. The mean age of participants was 75.6 years and 71.7% (n=43) identified as female. Furthermore, 58.3% (n=35) of the participants agreed or strongly agreed that they felt less lonely after participating in the program and 68.3% (n=41) stated they would participate in the program after the pandemic resolves. The intergenerational PFP telephone befriending program is a safe and effective method of reducing or possibly preventing social isolation and loneliness among at-risk community-dwelling older adults.

Key words: older adults, loneliness, social isolation, COVID-19

INTRODUCTION

Social isolation and loneliness have been described as the new geriatric giants.[1,2] Not only is social isolation associated with increased rate of mood disorders,[3,4,5] but also with poor cardiovascular health, cognitive impairment, falls,[6] and death.[5] Amongst community-dwelling older adults, the prevalence of social isolation and loneliness is estimated to range from 6-43% and 10-50% respectively.[2]

Older adults are vulnerable to social isolation and its adverse effects if they live alone, and face challenges related to multiple comorbidities, lower socioeconomic status, or reduced access to health care.[7] Physical distancing restrictions during the COVID-19 pandemic led to increased social isolation,[8] and the disproportionately higher proportion of COVID-19 cases among older adults likely resulted in individuals staying at home out of fear, regardless of current public health recommendations.[9]

Examples of social isolation interventions utilized by older adults included social support, physical activity, and technological interventions (e.g., robot companions).[10,11] While these interventions have been shown to be effective at reducing social isolation, they may not be cost-effective, scalable, or accessible for all older adults. Telephone befriending is an intervention of particular interest due to its feasibility, safety, and accessibility.[12] Studies have shown it can decrease loneliness and increased community engagement,[13] but they have largely been short-term without any feedback from participants regarding its efficacy.

In this study, we sought to evaluate the effectiveness of an intergenerational telephone befriending program developed and implemented by health-care students to provide outreach to older adults in Ontario, Canada. Known as the Mac Phone-a-Friend Program (PFP), the program was developed to provide

social comfort and companionship via telephone to older adults in the community to prevent and reduce social isolation and loneliness. To our knowledge, few studies have examined sustainability of telephone-based befriending programs.

METHODS

We conducted a mixed methods prospective study of older adults (aged ≥65 years) referred to the PFP by health-care providers or community organizations within southern regions of Ontario, Canada. The PFP was modelled after a similar program developed by University of Toronto medical students.[14] Older adults were matched to trained student volunteers who called their older adult partner once weekly to provide social support. The length of each call was determined by the participant and their volunteer. The intervention did not have a predetermined end date and continued indefinitely unless otherwise agreed upon by the older adult and volunteer.

Our study had two distinct referral sources. Group 1 participants were referred by their primary care providers as being at risk for social isolation based on their clinical judgement. Group 2 participants were referred by a multi-modal community frailty rehabilitation program, where telephone befriending was one of the desired component interventions. Differences between these groups in terms of baseline characteristics and survey results were compared using the two-sided *t*-test and chi-squared test. Participants who completed fewer than four calls were not surveyed and were therefore excluded from outcome analyses. Missing or unreported data were not imputed.

Research volunteers (not involved in making social calls) contacted participants to obtain their consent to acquire survey feedback about their experience in the program. Their participation did not affect their intervention enrolment. After a minimum of four weeks of program participation, a 27-question survey was administrated that identified participants' sociodemographic and elicited their perceived satisfaction and experience with the program. This survey was pilot tested with a small number of participants. Inductive analysis was conducted to identify themes within the qualitative analysis following the recommendations of Thorne.[15] Descriptive statistics were used to summarize the demographic, program, and survey data. We report the survey results in accordance with the CROSS reporting guidelines for survey studies.[16]

This project was approved by the Hamilton Integrated Research Ethics Board as a quality assurance study.

RESULTS

The McMaster Phone-a-Friend Program had 220 active older adult participants between May 2020 and August 2021 connected to over 160 student volunteers. Of the 220 participants, 60 completed the survey (27.3% response rate). At the time of survey completion, the mean number of calls completed was 8.3. Table 1 shows participants' baseline characteristics. Participants had a mean age of 75.6 years and 71.7% (n=43) identified as female. The majority were single (65.0%, n=39), and lived alone (63.3%, n=38). Thirty per cent (n=18) of the participants joined because they were isolated during the pandemic.

As shown in Figure 1, 58.3% (n=35) of the participants felt less lonely after program participation and 54.9% (n=33) stated the program improved their quality of life. Furthermore, 68.3% (n=41) indicated that they would continue to participate outside the context of a pandemic. A common theme was that participants enjoyed the routine companionship from student volunteers. Themes for improvement and reasons why participants may have left included: wanting to try different mediums of communication (e.g., videoconferencing) and adequate social support outside of the program.

Referral source analyses showed that there were 36 participants in Group 1 and 24 participants in Group 2. Group 1 participants were more likely to be living alone ($p<.001$), were single ($p<.001$), reported subjective financial constraints ($p<.05$), and were less likely to help other family members/friends with daily tasks ($p<.05$). They were also more likely to want to participate in the program even outside the context of a pandemic ($p<.05$) and more likely to feel that their loneliness was reduced during program participation in comparison to Group 2 ($p<.001$). All study results are demonstrated in Figure 1.

TABLE 1 (part 1 of 2).
Baseline characteristics of total participants and based on Groups 1[a] and 2[b]

	Total (N=60)	*Group 1 (N=36)*	*Group 2 (N=24)*
Age, mean (SD), yr	75.6 (9.7)	74.5 (11.9)	76.3 (5.7)
Sex, female (%)	43 (71.7%)	28 (77.8%)	15 (62.5%)
Mean Number of Calls (SD)	8.3 (3.9)	8.3 (4.3)	7.5 (3.0)
Ethnicity, No. (%)			
Caucasian	59 (98.3%)	35 (97.2%)	24 (100.0%)
Aboriginal (e.g., First Nations, Métis, Inuit)	1 (1.7%)	1 (2.8%)	0 (0.0%)
Marital Status, No. (%)			
Married or in a relationship	19 (31.7)	4 (11.1%)	15 (62.5%)
Single, widowed/divorced/separated/never married	39 (65.0)	30 (83.3%)	8 (33.3%)
Prefer Not to answer	1 (1.7%)	0 (0%)	1 (4.2 %)

TABLE 1 (part 2 of 2).
Baseline characteristics of total participants and based on Groups 1[a] and 2[b]

	Total (N=60)	*Group 1 (N=36)*	*Group 2 (N=24)*
Assisted by for Daily Activities, No. (%)			
Children	15 (25.0%)	8 (22.2%)	7 (29.2%)
Siblings	5 (8.3%)	3 (8.3%)	2 (8.3%)
Spouse	12 (20.0%)	2 (5.6%)	10 (41.7%)
Caregiver	8 (13.3%)	8 (22.2%)	0 (0.0%)
Friends	5 (8.3%)	4 (11.1%)	1 (4.2%)
Other	9 (15.0%)	8 (22.2%)	1 (4.2%)
No One	21 (35.0%)	12 (33.3%)	9 (37.5%)
Assisting in Daily Activities, No (%)			
Children	8 (13.3%)	3 (8.3%)	5 (20.8%)
Siblings	2 (3.3%)	1 (2.8%)	1 (4.2%)
Spouse	10 (16.7%)	2 (5.6%)	8 (33.3%)
Friends	8 (13.3%)	2 (5.6%)	6 (25.0%)
Other	6 (10.0%)	5 (13.9%)	1 (4.2%)
No One	34 (56.7%)	25 (69.4%)	9 (37.5%)
Living Situation, No (%)			
Community	50 (83.3%)	28 (77.8%)	22 (91.7%)
Retirement Home	5 (8.3%)	3 (8.3%)	2 (8.3%)
Other	4 (6.7%)	4 (11.1%)	0 (0%)
Household Members, No (%)			
Alone	38 (63.3%)	29 (80.5%)	9 (37.5%)
Spouse/Partner	19 (31.7%)	4 (11.1%)	15 (11.1%)
Adult Children	2 (3.3%)	1 (2.8%)	1 (2.8%)
Other	2 (3.3%)	2 (5.6%)	0 (0%)
Employment Status, No. (%)			
Retired	51 (85.0%)	30 (83.3%)	21 (87.5%)
Paid Employment	3 (5.0%)	1 (2.8%)	2 (8.3%)
Not Working or Other	4 (6.7%)	4 (6.7%)	0 (0%)
Prefer Not to Answer	1 (1.7%)	0 (0%)	1 (4.2%)
Education Level, No. (%)			
University degree or certificate at Bachelor level	15 (25.0%)	6 (16.7%)	9 (37.5%)
University certificate below Bachelor level	4 (6.67%)	2 (5.6%)	2 (8.3%)
CEGEP or other non-university certificate of diploma	6 (10.0%)	4 (11.1%)	2 (8.3%)
Secondary (high) school diploma or equivalency certificate	19 (31.7%)	13 (36.1%)	6 (25.0%)
No Certificate, diploma or degree	10 (16.7%)	9 (25.0%)	1 (4.2%)
Apprenticeship or trades certificate of diploma	3 (5.0%)	1 (2.8%)	2 (8.3%)
Prefer Not to Answer	2 (3.3%)	0 (0%)	2 (8.3%)
Mode of Transportation, No. (%)			
Personally Drive	35 (58.3%)	14 (38.9%)	21 (87.5%)
Driven by a family member/friend	10 (16.7%)	7 (19.4%)	3 (12.5%)
Transit	5 (8.3%)	5 (13.9%)	0 (0%)
Walk	5 (8.3%)	2 (5.6%)	3 (12.5%)
DARTs or other transportation services	16 (26.7%)	15 (41.7)	1 (4.2%)
Other	8 (13.3%)	8 (22.2%)	0 (0%)
Difficulty Making Ends Meet? No. (%)			
Yes	10 (16.7%)	9 (25.0%)	23 (95.8%)
No	50 (83.3%)	27 (75.0%)	1 (4.2%)
Reason for Joining Program, No. (%)			
Make New Friends	6 (10.0%)	5 (13.9%)	1 (4.2%)
Recommended Care Team Member	35 (58.3%)	23 (63.9%)	12 (50.0%)
Isolated During Pandemic	18 (30.0%)	14 (38.9%)	4 (16.7%)
Enjoy Talking on the Phone	12 (20.0%)	11 (30.6%)	1 (4.2%)
Other	22 (36.7%)	10 (27.8%)	12 (50.0%)

[a]Group 1: Community referrals from primary care providers for older adults at risk for social isolation.
[b]Group 2: Referrals from multi-modal community frailty rehabilitation program.

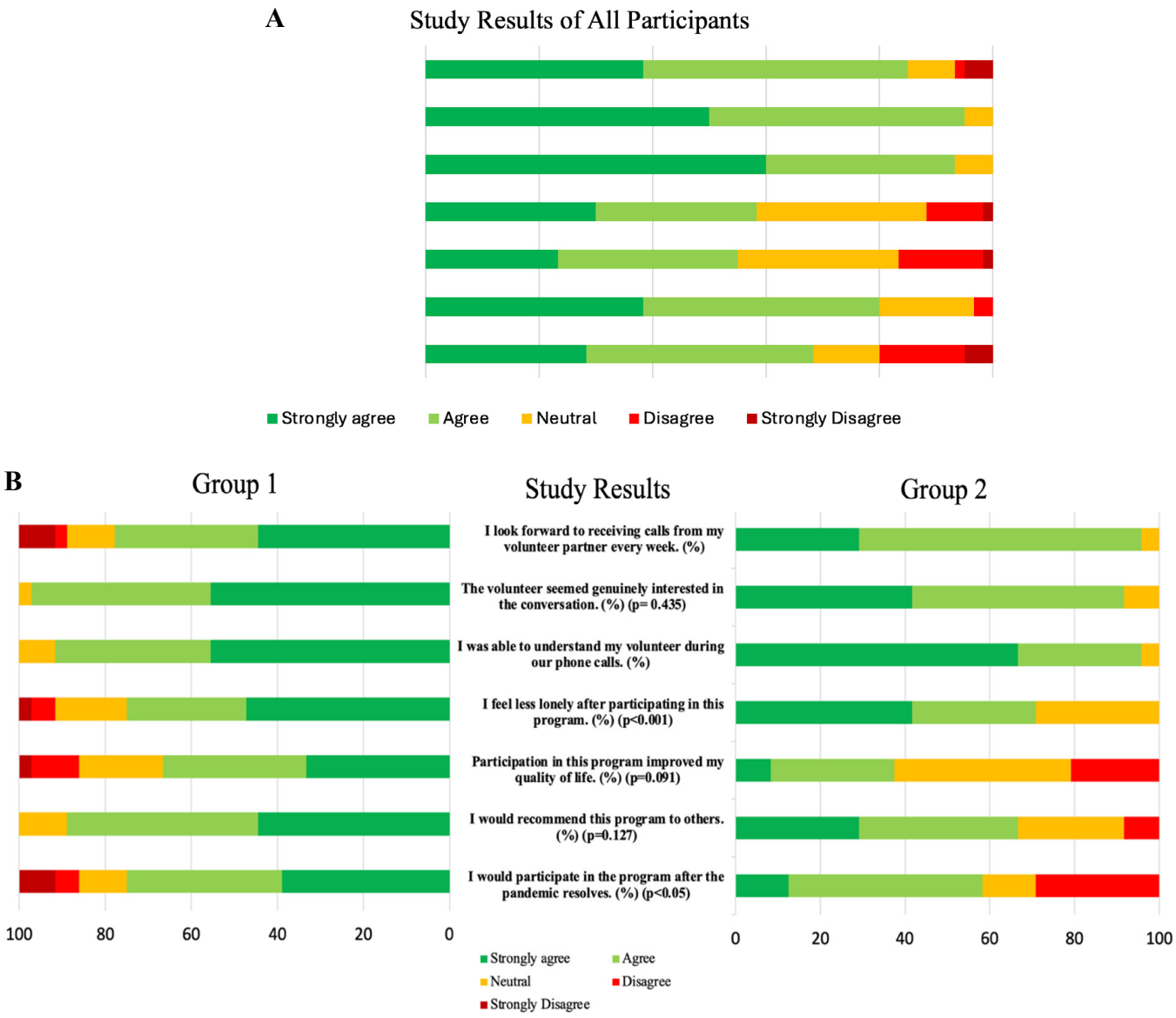

FIGURE 1. Survey results from all participants (A) and comparing participants (B) in Group 1 (community referrals from primary care providers for older adults at risk for social isolation) vs. Group 2 (referrals from multi-modal community frailty rehabilitation program)

The complete participant survey is provided in Appendix A, with quotations from open-ended responses included in Appendix B.

DISCUSSION

This study demonstrates that the intergenerational PFP telephone befriending program was a safe, feasible, and effective program to reduce social isolation and loneliness among community-dwelling older adults during the COVID-19 pandemic. Our findings are consistent with a recent randomized controlled trial that demonstrated improvement in loneliness in older adults after receiving regular phone calls for four weeks compared to the control group.[17] While studies on telephone befriending are limited, a number of other community engagement interventions have been employed to target social isolation among community-dwelling older adults. The various methodologies and evaluation measures used make it difficult to form comparisons.[18] However, many of these programs have shown similar benefits as PFP in different populations around the world.[18,19,20,21]

A key facet of PFP is connecting younger adults with older adults. This may have contributed to the positive outcomes, as previous intergenerational programs have shown improvement in physical and mental health.[22,23] The University of Michigan National Poll on Healthy Aging found increased feelings of lack of companionship, isolation from others, and more infrequent social contact during the pandemic compared to pre-pandemic results, highlighting a growing need for an effective intervention.[24] Our results demonstrate

that telephone befriending initiatives may be one potential solution to worsening mental health for older adults.

Intervention effectiveness may be dependent on risk levels for social isolation. Due to two different referral mechanisms, our program consisted of two groups of older adults with different baseline sociodemographics. Participants referred as "at risk" by their primary care providers (Group 1) were more likely to live alone, be single, experience more financial constraints, and be less likely to help others with daily tasks. These are all risk factors for social isolation,[7,25] and it is possible that those at higher risk may derive greater benefit from program participation. Group 1 participants were more likely to have felt less lonely and more willing to participate in the program after pandemic resolution. This suggests that it is important to identify the most vulnerable older adults, as they can benefit from targeted intervention.

Identified areas for improvement included improved targeting of older adults and option for alternate means of communication apart from telephone calls. Since PFP is a student-run program, it relied on primary care providers to refer those they deemed at risk of social isolation; the program did not internally screen older adults for loneliness or social isolation prior to enrolment. Implementation of a screening tool (e.g., Three-Item Loneliness scale) could provide a quick and reliable means of identifying at-risk older adults over the telephone so as to provide a more targeted intervention.[26] Furthermore, as the digital literacy of older adults continues to improve over time, participation does not need to be limited to telephone calls.[27] Offering alternate methods of communication may help enhance program reach and effectiveness, but this needs further exploration. Studies suggest that instant communication using mobile applications can also reduce loneliness in older adults.[28] However, video chatting, which was also brought as a potential alternate method of communication, has an uncertain level of evidence in reducing loneliness among older adults.[29]

This study has several limitations. First, its generalizability is restricted by the small sample size, the single geographic setting in Ontario, and the lack of ethnic diversity (as all 60 participants were Caucasian). Second, the absence of a control group limits our ability to account for potential confounders influencing participants' responses. Third, the study was conducted across multiple waves of the COVID-19 pandemic, during which public health restrictions varied; these fluctuations may have amplified or diminished the program's impact on social isolation. Fourth, we did not objectively measure social isolation and loneliness. The available measures relied on subjective self-report or clinician impression, which reflected either the presence or perceived risk of social isolation or loneliness. Finally, response bias cannot be excluded, as individuals who were more satisfied with the program may have been more likely to complete the survey. Future research should incorporate larger and more diverse samples, include control groups, and employ validated objective measures to enhance the robustness and generalizability of findings.

CONCLUSION

The intergenerational PFP telephone befriending program is a safe and effective way to reduce or help prevent social isolation and loneliness in at-risk older adults, with potential benefits extending beyond the COVID-19 pandemic to other situations that contribute to isolation in this population.

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CONFLICT OF INTEREST DISCLOSURES

We have read and understood the *Canadian Geriatrics Journal*'s policy on conflicts of interest disclosure and declare we have none.

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Correspondence to: Justin Lee, MD, GERAS Centre for Aging Research, 88 Maplewood Avenue, Rm. 160, Hamilton, ON Canada L8M 1W9
E-mail: lee343@mcmaster.ca

APPENDIX A (part 1 of 2). All survey questions

Age (years)

Sex
- Male
- Female
- Prefer Not to Answer

Number of Calls to Date

What is your Ethnicity?
- Caucasian
- South Asian (e.g. East Indian, Pakistani, Sri Lanka, Chinese)
- Black/African-Canadian
- Filipino
- Latin American
- Middle Eastern or Arab South East Asian (e.g. Vietnamese or Cambodian)
- West Asian (e.g. Iranian, Afghan)
- Korean
- Japanese
- Aboriginal (e.g., First Nations, Metis, Inuit)
- Other
- Prefer Not to Answer

Marital Status
- Married or in a relationship
- Single, widowed
- Single, divorced/separated
- Single, never married
- Other
- Prefer Not to answer

Does anyone help you with your daily activities (cooking, shopping, etc.) or provide you emotional support?
- Children
- Siblings
- Spouse
- Caregiver
- Friends
- Other
- No One
- Prefer Not to Answer

Do you help anyone with their daily activities (cooking, shopping, etc.) or provide emotional support to?
- Children
- Siblings
- Spouse
- Caregiver
- Friends
- Other
- No One
- Prefer Not to Answer

Living Arrangements
- Community (Personal Home, Apartment)
- Retirement Home
- Long-term Care Home
- Other
- Prefer Not to Answer

Living With…
- Alone
- Spouse/Partner
- Adult Children
- Roommate
- Friend
- Caregiver
- Other
- Prefer Not to Answer

Employment Status
- Retired
- Paid Employment
- Volunteer
- Not Working
- Other
- Prefer Not to Answer

What is the highest level of education you have completed?
- University degree or certificate above Bachelor's degree
- University degree or certificate at Bachelor level
- University certificate below Bachelor level
- CEGEP or other non-university certificate of diploma
- Secondary (high) school diploma or equivalency certificate
- No Certificate, diploma or degree
- Apprenticeship or trades certificate of diploma
- Prefer Not to Answer

What mode of transportation do you use to get around?
- Personally Drive
- Driven by a family member/friend
- Transit
- Walk
- DARTs or other transportation services
- Other
- Prefer Not to Answer

What type of location do you live in?
- Rural Area: <1,000 people
- Small and medium population centre: 1,000–99,999
- Large urban population centre: >100,000
- Prefer Not to Answer

Do you feel comfortable conversing in English?
- Yes
- No
- Prefer Not to Answer

Do you ever have difficulty making ends meet at the end of the month?
- Yes
- No
- Prefer Not to Answer

Why did you join the program?
- I wanted to make new friends
- A member of my care team recommended it to me
- I was isolated during the pandemic
- I enjoy talking on the phone
- Other

APPENDIX A (part 2 of 2). All survey questions

I look forward to receiving calls from my volunteer partner every week…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

The volunteer seemed genuinely interested in the conversion…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I was able to understand my volunteer during our phone calls…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I feel less lonely after participating in this program…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Participation in this program improved my quality of life…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I would recommend this program to others
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I would participate in the program after the pandemic resolves…
- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Did you have technical difficulties during your experience with the program?

What did you like most about the program?

What would you change about the program?

Do you have any other comments or suggestions about the program?

If you left the program, what was the reason?

APPENDIX B. Open-ended survey questions and quotations (sample responses)

What did you like most about the program?

1. "I had an hour each week to talk to somebody. I would have just been sitting here alone."
2. "I like the personality of my caller. She is a very friendly and caring personality, she's genuinely interested in me and what I do and that's important to me. That has to be emphasized because she's genuinely interested in my life and who she's talking to. She's concerned when things aren't the way they're supposed to be. That's wonderful. I can have half an hour to just talk and be myself and be heard. The program is just fantastic. A lot of people my age need that, I'm isolated. The service is great."
3. "I feel connected during the pandemic where I stay home a lot. It is something I look forward to."

What would you change about the program?

1. "Better screening of eligible [participants]. Assessing their level of social support
2. "More for people who are really needing it more, make it more targeted to those that are house-bound"
3. "Well I think the calling program is more for an elderly shut-in. I'm still somewhat active."
4. "…If it is simply to contact people who are in isolation and require that social interaction then I wouldn't change much. If it is to design and establish a new kind of friendship then you should be using other means of communication (e.g. zoom). Interactive media or social media or email."