

# Meals on Wheels Central Texas: addressing loneliness and isolation through client-volunteer interaction

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## Abstract

**Purpose** – *Meals on Wheel Central Texas (MOWCTX) provides meals to more than 5,000 home-bound older adults in the Austin area every weekday. The purpose of this paper is to examine the impact of client-volunteer interactions to assess the social benefits clients receive and ascertain if and how loneliness and social isolation are addressed.*

**Design/methodology/approach** – *Observations of volunteer-client interactions, interviews with clients and surveys of clients were conducted to gain insight into clients' experiences with MOWCTX services.*

**Findings** – *Qualitative analysis of observation and interview data revealed four non-tangible benefits clients received from MOWCTX: reduced physical risks when mobility issues are present, a daily safety check, opportunities for social contact and increased ability to maintain independence. Survey results supported these conclusions.*

**Originality/value** – *This research examines the impact of volunteer-client relationships on the experience of loneliness and social isolation.*

**Keywords** *Loneliness, Social support, Social isolation, Older adult, Meals on wheels*

**Paper type** *Research paper*

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## Introduction

Meals on Wheels Central Texas (MOWCTX) is one of 5,000 community-based programs associated with Meals on Wheels America (MOW), the primary purpose of which is to provide nutritional support for persons struggling with limited mobility and social isolation ([Meals on Wheels Central Texas, 2019](#)). In the greater Austin area, MOWCTX volunteers deliver to approximately 5,000 home-bound clients each business day. While clients of all ages can and do, receive home-delivered meal services, the majority (73%) of MOWCTX clients are older adults 65 and older ([MOWCTX, 2019](#)).

By encouraging volunteer delivery drivers to engage with the clients they deliver meals to, MOWCTX believes their services, in addition to providing meals, offer social support, which, in turn, addresses both the loneliness and social isolation clients may be experiencing. As more than half of their clients live alone, social support is considered an important aspect of MOWCTX services. The objective of this research was to examine the home-delivered meal services to assess the social benefits clients receive and to ascertain if and how loneliness and social isolation are addressed.

## Background

Loneliness and social isolation are prevalent issues among older adults. This occurs as their economic resources are decreased, mobility becomes impaired and contemporaries pass

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away – all circumstances that diminish preexisting social interactions, as well as the possibilities for new social connections (Steptoe *et al.*, 2013). To fully understand how social isolation and loneliness are experienced and the impacts they have, it is important to distinguish between the two (Johnson and Mullins, 1987).

Loneliness is a subjective experience, which occurs when an individual's network of relationships is felt to be lacking in quality (Peplau and Perlman, 1982). Individuals in all life stages have the potential for loneliness, however, older adults are more likely to experience it. Life changes that are common in older adulthood, like retirement or the death of a spouse, create social life changes and can trigger feelings of loneliness (Burholt and Scharf, 2014). The main factor in experiencing loneliness is the quality, not quantity, of relationships an individual has. An older adult, for instance, could be living in a retirement community where there is ample interaction with others and still feel lonely. This is because loneliness is based on the individual's specific preferences and expectations for relationships (Peplau and Perlman, 1982). If an individual has little to no relationships of substance, in whatever form substance takes for them, it is likely feelings of loneliness will arise (Hawkley and Cacioppo, 2010).

Loneliness is of particular concern for older adults, as persistent loneliness can result in negative health effects (Cacioppo and Hawkley, 2003). Loneliness in older adults has been linked to depression, impaired cognitive function and the onset of Alzheimer's disease (Heikkinen and Kauppinen, 2004; Wilson *et al.*, 2007).

In contrast, social isolation is the objective condition of not having enough contact with others (Routasalo *et al.*, 2006). Social isolation is likely to be experienced when an individual's social network suffers a loss in quantity, leaving them without a support system that provides a sense of community and security (Dykstra, 2009). This may occur when an older individual relocates and becomes disconnected from their community or when their children live too far for frequent visits.

Past research has suggested that age-related health issues increase the need for social support and companionship (Cornwell and Waite, 2009). This means that older adults who are socially isolated are more likely than members of other age groups to experience food insecurity, leading to poor nutritional intake (Vilar-Compte *et al.*, 2017; Cornwell and Waite, 2009). Poor nutrition, in turn, is especially dangerous for older adults as it can lead to an increased risk of developing chronic illnesses and/or exacerbating existing conditions, including but not limited to: heart disease, diabetes, high blood pressure and decreased mental cognition (Strickhouser *et al.*, 2015).

MOWCTX meal deliveries and volunteer interactions are meant to alleviate the negative mental and physical health effects of both loneliness and social isolation. However, loneliness and social isolation are complex issues that can be difficult to address. The purpose of this study was to identify the social benefits MOWCTX home-bound clients receive from the meal delivery services and to determine if and how loneliness and social isolation are being addressed.

## Methods

### *Recruitment*

This research used mixed methods to assess the social benefits of MOWCTX. Participant observations were conducted first to gain familiarity with the delivery process, as well as directly observe interactions between volunteers and clients. Observations were conducted by accompanying volunteer delivery drivers on their delivery routes. Routes for participant observations were determined by MOWCTX staff based on a combination of which volunteers were willing to be accompanied and diversity on delivery routes in regard to clients' sex and race/ethnicity.

In-person interviews were conducted with MOWCTX clients 65 years of age and older who were currently receiving home-delivered meal services. Clients were recruited for interviews directly during participant observations and indirectly through fliers provided by volunteer delivery drivers on routes where participant observations did not occur.

As a final step in the research process, a phone survey was used to quantify the impact of MOWCTX meal delivery services on homebound clients. The survey population was comprising current MOWCTX clients who received home-delivered meal services. Clients were randomly sampled from the MOWCTX existing client database and entered into a calling list from which clients were contacted.

Research protocols for all observations, interviews and surveys were approved by the Institutional Review Board (IRB). Informed consent was obtained in writing from clients participating in the interviews. Verbal consent was obtained from clients responding to the survey questions through an oral script formally approved by the IRB. In accordance with human subject protections, persons with cognitive impairments were excluded from participation in both the interviews and surveys. The determination of cognitive impairment was made by MOWCTX staff based on existing client data. For the interviews, MOWCTX staff provided the names of clients with reported cognitive impairments before each observation and flyer campaign so these clients could be avoided for interview recruitment. For the surveys, MOWCTX staff removed all clients with reported cognitive impairments from the database before the calling list was generated.

**Table 1** 2018–2019 MOWCTX demographics vs 2020 survey and interview demographics

	<i>MOWCTX client demographics 2018–2019</i>	<i>Survey demographics 2020</i>	<i>Interview demographics 2020</i>
Participant characteristics	(n = 2,765) (%)	(n = 200) (%)	(n = 22) (%)
<i>Sex</i>			
Male	996 (36.0)	54 (27.0)	6 (27.0)
Female	1,767 (64.0)	146 (73.0)	16 (73.0)
Other	2 (0.1)	0 (0.0)	0 (0.0)
<i>Race</i>			
American Indian or native Alaskan	11 (0.4)	0 (0.0)	0 (0.0)
Asian	22 (0.8)	1 (0.5)	0 (0.0)
Black or African American	814 (29.4)	69 (34.5)	2 (9.0)
Native Hawaiian or other Pacific islander	3 (0.1)	0 (0.0)	0 (0.0)
White non-Hispanic	1,436 (51.9)	97 (48.5)	14 (64.0)
White Hispanic	455 (16.5)	33 (16.5)	6 (27.0)
Other	18 (0.7)	0 (0.0)	0 (0.0)
Race not specified	6 (0.2)	0 (0.0)	0 (0.0)
<i>Ethnicity</i>			
Hispanic or Latino	695 (25.1)	44 (22.0)	6 (27.0)
Not Hispanic or Latino	2,070 (74.9)	154 (77.0)	16 (73.0)
Unknown	0 (0.0)	2 (1.0)	0 (0.0)
<i>Age</i>			
0–18	0 (0.0)	0 (0.0)	0 (0.0)
19–39	34 (1.2)	1 (0.5)	0 (0.0)
40–54	200 (7.2)	16 (8.0)	0 (0.0)
55–64	600 (21.7)	37 (18.5)	0 (0.0)
65–74	722 (26.1)	67 (33.5)	6 (27.0)
75–84	676 (24.4)	49 (24.5)	12 (53.0)
85+	533 (19.3)	30 (15.0)	4 (20.0)
<i>Living arrangement</i>			
Alone	1444 (52.2)	96 (48.0)	12 (54.0)
Not alone	1199 (43.4)	102 (52.0)	10 (46.0)
Unknown	122 (4.4)	0 (0.0)	0 (0.0)

### *Data collection*

Participant observations were conducted by accompanying MOWCTX volunteers on their delivery routes. Nine delivery routes from four different distribution centers were observed over the course of 5 weeks. Five delivery routes were observed twice in the same week, staggered with another route (i.e. Monday and Wednesday on route 1 and Tuesday and Thursday on route 2) allowing the researcher to observe interactions clients had with different volunteers on the same route. Field notes were recorded during the observations. Notes included detail on the interactions between volunteers and clients, as well as informal conversations that occurred between the researcher and volunteers. Field notes were subsequently typed and indexed. The notes subsequently informed the development of interview questions.

Semi-structured interviews with clients were conducted in clients' homes and lasted for 30 to 60 min. During interviews, participants were asked questions about their experiences with MOWCTX services and the role it plays in their daily lives. Topics covered included but were not limited to, the services' impact on clients' feelings of isolation and loneliness, their eating habits and their health (interview questions)

#### 1. Experiences with MOWCTX

- Tell me about your experience with Meal on Wheels. Could you walk me through the application/acceptance process? How did you feel about that process?
- What is a typical delivery like? Could you explain to me how that system works?
- What happens when the volunteers first arrive? Can you walk me through that step by step? Typically, how long would you say this process takes?
- Could you describe your interactions with the volunteers who deliver? How do you feel about these interactions? While they are making the delivery, what kinds of things do you talk about?
- How do you feel about your relationships with the volunteers? Are there certain drivers you like more than others? Why?
- Do the volunteers ever do anything extra for you while they are here?
- Did you have any expectations about the meal deliveries before receiving them? If so, how have they met or not met those expectations?
- How do you experience taking part in MOW services compare to your experience prior to receiving their services?

#### 2. Social interactions/isolation

- Could you describe what a typical week is like for you? What kind of activities do you engage in? Could you describe those for me?
- Could you tell me about your social interactions in a typical week? Would you consider yourself close to your neighbors, people from church or others around you? How often do you interact/chat with them?
- How long have you lived in this house/apartment/ neighborhood? Could you describe the community you live in? Or your experience living in this community?
- Are there community/social/church events you are aware of/attend regularly? If so, what kinds exactly?
- Would you say you have many close relationships? What are the relationships that are most important to you and why? How important are these interactions?

- How much time do you spend alone? How do you feel about that?
- Do you have any family living in this area? If so, could you tell me a little about them? How often do you spend time with family members? What about close friendships?

### 3. Food insecurity

- How, if at all, have the meal deliveries impacted your eating habits? Could you describe to me your eating habits before receiving meal deliveries?
- What kind of foods did you eat before receiving meal delivery services? How does that compare to the meals MOW provides you?
  - Do you feel like you had to adjust to the types of foods delivered? If so, can you tell me about that adjustment? Have they ever brought you foods you were not familiar with?
  - In what ways, if at all, do you feel the meal delivery program has affected your diet/nutrition?
- How do you receive other food, food not delivered by MOW? Could you walk me through how you typically prepare meals for yourself?
- Has the scheduled meal deliveries impacted the frequency or number of meals you eat in a day?
- Did you ever miss or skip meals before becoming a part of the Meals on Wheel program?

All interviews were audio-recorded and later transcribed. Results from the interviews were subsequently used to inform survey development.

Phone surveys typically took 10 min and were conducted during MOWCTX operating hours (Monday through Friday, between 10 am and 4 pm). The first set of survey questions (phone survey questions) focused on mobility, independence and interactions with MOWCTX drivers.

### 1. Yes/No questions

- Do you have any difficulties moving around the kitchen?
- Do you have any difficulties standing at the stove to cook food?
- Do you have any difficulties standing at the microwave to heat food?
- Would you have any difficulties lifting and carrying a 10-pound package from your porch to your kitchen?
- Have you experienced a fall in the last 12 months?
- Are you concerned about falling?
- Have your MOW delivery drivers ever helped you with additional tasks like checking your mail or taking out the garbage?

### 2. Scaled questions: (1) completely disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree

- I feel safer knowing a Meals on Wheels volunteer will be coming to my home.
- My family members feel safer knowing a Meals on Wheels volunteer will be coming to my home.

- Receiving MOW deliveries helps me maintain my independence.
  - My Meals on Wheels delivery drivers genuinely care about me.
  - My interactions with the Meals on Wheels delivery drivers help me feel less lonely.
  - I have a close relationship with one or more of my delivery drivers.
  - I would be interested in a service that drops off frozen meals on my doorstep once a week instead of receiving deliveries from Meals on Wheels.
  - IF 1 or 2: Why would you prefer Meals on Wheels deliveries?
    - IF 3: Why do you feel neutral about these options?
    - IF 4 or 5: Why would you prefer the frozen meal deliveries?
3. University of California, Los Angeles (UCLA) loneliness scale questions: (1) hardly ever, (2) some of the time, (3) often
- How often do you feel that you lack companionship?
  - How often do you feel left out?
  - How often do you feel isolated from others?

The second set of questions addressed social support, experiences with MOWCTX volunteers and opinions regarding alternate meal programs. The third and final set of questions followed the questions from the UCLA Loneliness Scale (Hughes *et al.*, 2004). Demographic information for survey participants was collected from the MOWCTX client data included in the calling list.

### *Analysis*

Observation notes and interview transcripts were analyzed via thematic analysis. The specific process used consisted of:

- reading and rereading interview transcripts to ensure familiarity with the data,;
- breaking the text into meaningful units (codes); and
- coding and recoding the text to refine the codes and identify corresponding groups of codes (themes).

After the interview data were coded, notes from the observations were cross-referenced with the experiences detailed by clients to bring the identified patterns further into focus.

After the surveys were completed, survey data was checked for accuracy and then entered into an Excel database. Stata (version 11.1) was used to calculate descriptive statistics and Chi-Square tests of independence (Tables 2 and 3).

### **Results**

In total, 22 clients participated in interviews, while 200 clients completed the survey. A demographic comparison of interview and survey respondents and all MOWCTX clients is provided in Table 1. While some differences exist, most notably regarding gender – a higher proportion of women who participated in both the interviews and surveys compared to the overall client composition – none of the differences were statistically significant.

**Table 2** Descriptive statistics for yes/no survey questions

<i>Descriptive statistics</i>	<i>(n = 200) (%)</i>	
Yes/no questions	No	Yes
Difficulties moving around kitchen	84 (42.0)	116 (58.0)
Difficulties standing at the stove	59 (29.5)	141 (70.5)
Difficulties standing at the microwave	123 (61.5)	77 (38.5)
Difficulties carrying a package	63 (31.5)	137 (68.6)
Had experienced a recent fall	107 (53.5)	93 (46.5)
Concerned about falling	47 (23.5)	153 (76.5)
MOW driver have helped with small tasks	160 (80.0)	40 (20.0)
Loneliness according to UCLA score	111(55.5)	89 (44.5)

**Table 3** Descriptive statistics for scale (1–5) survey questions

<i>Descriptive statistics</i>	<i>(n = 200) (%)</i>				
<i>Scale (1–5)</i>	1	2	3	4	5
Feeling safer because of MOW	3 (1.5)	3 (1.5)	12 (6.0)	77 (38.5)	105 (52.5)
Family feeling safer because of MOW	4 (2.1)	4 (2.1)	9 (4.8)	84 (44.7)	87 (46.3)
MOW helps maintain independence	0 (0.0)	2 (1.0)	4 (2.0)	87 (43.5)	107 (53.5)
Feeling MOW drivers care	1 (0.5)	0 (0.0)	11 (5.5)	70 (35.0)	118 (59.0)
MOW helps feelings of loneliness	5 (2.5)	9 (4.5)	17 (8.5)	69 (34.5)	100 (50.0)
Have a close relationship with driver	15 (7.5)	32 (16.0)	24 (12.0)	61 (30.5)	68 (34.0)
Prefer a frozen meal delivery option	46 (23.0)	83 (41.5)	20 (10.0)	32 (16.0)	19 (9.5)

Analysis of the research data indicated four particular social benefits MOWCTX clients receive from participation in the meal delivery program:

1. reduced physical risks for individuals experiencing mobility issues;
2. peace of mind from meal deliveries acting as a daily safety check;
3. opportunities for social contact; and
4. an increased ability to maintain independence.

### ***Deliveries reduce risks associated with mobility issues***

Age-related mobility impairments and limitations were frequently cited by clients as barriers to cooking and healthy eating. In the interviews, clients expressed how they found cooking increasingly difficult as their stamina and range of motion decreased. For some clients, even standing for the time it took to heat food in the microwave was a significant hurdle in the kitchen, like Clair [1], 84-years-old and living with her husband, described: “I can’t cook – I mean I can’t stand long enough to do it.” Clair’s husband, who at 93-years-old and relying on a walker, was similarly unable to complete meal preparations. It was this circumstance that prompted their daughter to contact MOWCTX on their behalf.

An inability to move freely about the kitchen was also viewed as a safety concern. The presence of hot surfaces and their potential inability to put out a fire or move a hot dish before it burned was concerning to some clients. For other clients, the combination of the physical exertion of cooking and heat from an oven or stove was too much. As Jacob, 83 years old and living alone, explained: “I’m 83 years old and I don’t feel like going over and hanging over no stove.” He went on to explain the heat “wipes [him] out,” in other words

that he would become exhausted by the heat and would need to sit down, potentially leaving the stove unattended.

Without a program like MOWCTX and considering the cooking-related difficulties described above, some clients reported resorting to unhealthy eating habits. These included “snacking” throughout the day instead of eating full meals and relying on unhealthy, pre-packaged food items. Long-time MOWCTX client Marie, who at 74-years-old was living alone in a mobile home, admitted developing a tendency to “nibble” instead of facing the task of cooking: “I’d eat, you know, like a piece of lunch meat and roll it up in bread.” Her circumstances changed after she began receiving meals from MOWCTX. Likewise, Linda, 78-years-old and living alone, frequently relied on food that could be delivered, like pizza or heated up in the microwave, like frozen dinners. While she viewed these adjustments as unhealthy, she also considered them necessary because she was unable to cook. The meal deliveries provided by MOWCTX later provided a healthier meal option in her day: “I’m happy with what they give me because its vegetables that I wouldn’t eat normally [because] I don’t cook anymore. Mostly I eat TV dinners if I have to. But normally I’ll just eat those MOW [..]. They keep me going.”

Survey data indicated that mobility impairments and limitations were common among MOWCTX clients. In total, 93 survey participants (47%) reported experiencing a fall within the past 12 months. Of these individuals, 66 (71%) reported having difficulties moving around the kitchen (Pearson Chi = 12.0,  $p = 0.001$ ) and 76 (82%) found it difficult to stand at the stove long enough to cook (Pearson Chi = 10.5,  $p = 0.001$ ).

Being concerned about falling was even more common; 153 clients (77%) reported being concerned about experiencing a fall in the future, including 74 (83%) who had experienced a fall in the past 12 months. Of those concerned about falling 96 (63%) struggled with mobility in the kitchen (Pearson Chi = 6.0,  $p = 0.014$ ) and 116 (75%) found it difficult to stand at the stove (Pearson Chi = 8.8,  $p = 0.003$ ).

The association of falling and the fear of falling with mobility limitations support the interview findings that these limitations are a safety issue for many MOWCTX clients. This suggests that mobility limitations directly impact cooking abilities, limiting meal options and potentially leading to unhealthy eating habits.

### ***Deliveries provide a daily safety check***

In the interviews, many older adult clients told stories of falls and/or expressed worry about falling. Clients living alone, in particular, reported being especially careful in their movements around their homes. Samantha, 91-years-old, had lived alone, as her husband passed away 6 years ago. She was very aware of the dangers of experiencing a fall. During her interview, she expressed concern for her health many times, particularly in the context of falling as it might lead to her becoming bedridden: “That’s why I’m very careful. Especially if I trip a little bit on something I say ‘Oh God!’ I talk to myself, I say ‘you better be careful [..].’ I don’t like to stay in bed. I don’t want to fall.”

Many of these clients, including Samantha, expressed how the reliability of the MOWCTX meal deliveries and the knowledge that a volunteer would be at their door to check on them every day, gave them a sense of security. These sentiments were especially common among those living alone and/or without family in the immediate area, as Daniel, 82-years-old and who had lived alone, as his wife’s passing explained: “Then also there was always someone at the door once a day that was looking for me. That I wasn’t laying on the floor in the other room, you know, unconscious or something.” Recently, Daniel had experienced a health issue that had come on suddenly in the night. In that case, he was able to receive help from a neighbor, however, he – and many other clients in similar situations – feared that they may find themselves in a similar situation in the future. For these individuals, daily meal deliveries meant help would be coming if anything did go wrong.

During participant observations, volunteers also reported feeling a level of responsibility for their clients, including the need to pay attention to their physical environments and health. Volunteers could illustrate a general knowledge of each client's living situation (e.g. whether they lived with someone and their relation to that person/people) and the client's health (e.g. if they were sick or had recently been to the doctor). MOWCTX volunteers are in a position where they are able to recognize significant changes in their clients' lives and report them to MOWCTX staff when they feel intervention is necessary. This sense of responsibility contributes to the sense of security clients described in the interviews.

The benefits of a sense of security also extended to the friends and families of clients, especially their children, who often worried about their aging parent's health and welfare. In the interviews, clients often explained that a daughter or son had started the meal delivery application process. Linda, previously mentioned, had two daughters, neither of whom lived in the immediate area and were unable to frequently check on their mother in person. When asked how she became a recipient of MOWCTX services Linda explained: "Oh, my daughter. She called [MOWCTX] and set it up for me. She lives way south and she was worried about me having food. So, she set it up. That's how I got it." Linda also explained that both of her daughters were reassured by the meal delivery services, that not only would their mother be receiving "at least one meal a day" she would also be checked on through the delivery process.

In the survey data, 193 clients (91%) reported feeling safer in their homes because of MOWCTX deliveries. This included 142 (93%) of persons who reported having concerns about falling and 40 (85%) of clients who were not concerned about falls. These results suggest that a sense of security is a notable benefit of the MOWCTX meal delivery program.

### ***Deliveries provide important social support***

Through both observations of deliveries and interviews with clients it was found that due to time constraints and feelings of obligation to deliver meals to clients in a timely manner, volunteers were often unable to spend more than 4 to 5 min with each client. This meant that close relationships between volunteers and clients were not commonly observed in this research. When asked to describe the kind of things they talked about with the volunteers, clients reported that topics were generally limited to the clients' well-being and the weather. Jacob, for instance, described his interactions with MOWCTX volunteers, thus: "We just chat with them. I tell them, 'it's a good day', 'get out of the sun' or something like that. They give me my meal and they go. Yeah. They don't spend long here."

Despite these often-short interactions, clients spoke highly of their volunteers, expressing that the volunteers' concerns for their well-being felt genuine. In total, 80-year-old client Cindy, living with her husband, felt all the volunteers were good people for taking time out of their day to deliver meals, as she explained: "They ask how we're doing. Like, they're very concerned about us and I like that. They're very nice and polite and concerned about us too." To her, this indicated the volunteers were invested and cared for.

In addition, clients who lived alone had no family in the area and/or little to no connection with the community or neighbors commonly expressed that the interactions they had with MOWCTX volunteers were enjoyable, even when they were simple and short. Samantha, at 91-years-old, described how she preferred to live alone, finding a company to be exhausting. For her, a short visit from a volunteer was often all she needed socially for the day: "It's gloomy sometimes, especially in winter, so just hearing their voices and seeing them [it] makes me feel good." While the interactions are often brief, many clients appreciated the exchange of pleasantries, as well as the time and energy the volunteers put into their deliveries.

In informal conversations during the observations, volunteers similarly reported that it was common to only have brief interactions with their clients. However, they still felt an

attachment to those they delivered meals to. During observations, it was noted that many volunteers were aware when a client was missing from their list of deliveries for that day and expressed concern, especially if it had been multiple deliveries, as they had last seen that client. As previously mentioned, volunteers expressed feeling responsible for their clients, watching out for changes in clients' living conditions and behavior. Therefore, even in the absence of a strong social connection, the volunteers provide an important service as the eyes and ears of MOWCTX.

In the surveys, 129 (64%) clients reported feeling close to their delivery drivers. Of these clients, 118 (92%) specifically felt the interactions with volunteers made them feel less lonely (Pearson Chi = 17.4,  $p = 0.002$ ). These results speak to the importance of the volunteer/client interactions. Interview data suggested not all clients feel strong connections with their volunteers. However, survey data indicates the presence of the volunteers provides an opportunity for social support to the clients that may combat feelings of loneliness.

### ***Deliveries help clients maintain independence***

In the interviews, clients often explained that signing up for MOWCTX services was a way of taking care of themselves. Victoria, 86-years-old living alone, had a daughter living close enough to occasionally take her to church or the grocery store. However, most of Victoria's time was spent alone. Concerned about losing her independence, Victoria felt a need to do something: "Because I wanted to help myself, you know and not having to depend on somebody else to be here [...] I decided to apply for Meals on Wheels so they [her family] wouldn't watch me, take care of me and all of that."

In the interviews, many clients similarly expressed a desire to not burden their families with caring for them. Samantha, previously mentioned, explained how she no longer felt safe driving and how she could no longer complete yard work. Aware of the time and effort her family takes to care for these needs, she worried about becoming a further burden. Under these circumstances, Samantha explained how the MOWCTX deliveries provided enough additional support to relieve her family members of some responsibility for her care, as she explained: "I know I can depend on Meals on Wheels. If I can't cook, I can call them and get the whole week. It feels good that I can depend on something like that. That way my family doesn't have to come from out of town to bring me this and that. Because they have their jobs too."

During their training volunteers are encouraged to perform minor tasks (e.g. taking out the garbage or checking the mail) to facilitate clients' abilities to live at home and maintain their independence. However, it was found through observations and informal interviews with volunteer drivers that it was rare for a client to request additional help outside of the meal deliveries. Clients similarly reported that they did not ask or were unaware they could ask, volunteers for extra help. The few clients interviewed that did have experiences with volunteers performing a task for them were surprised at the trouble the volunteer was willing to go through. In one instance, Janelle, an 86-year-old client living alone, asked her volunteer to take a table to her neighbor's house down the street: "I had an antique table that I wanted to give my neighbor. Then, it was a little bit heavy for me. I asked [the volunteer] if he could do it for me and he said, 'yes I will do it'. He said he didn't mind. So, he did it." Until then Janelle had not asked a volunteer for extra help and expressed surprise that he had been willing to perform such a task. Janelle's volunteer had been observed during his deliveries and recounted the same story. He explained that it was uncommon to be asked for anything extra, especially a larger task such as this, but that he had been happy to help.

In this research, stories like Janelle's were rare. Even with smaller tasks, most clients were unaware they could ask volunteers for assistance. This might suggest a discrepancy in

communication exists, as the volunteers consistently expressed a willingness to provide additional assistance if asked.

### ***UCLA loneliness scale results***

To better understand loneliness among MOWCTX clients, the three-item UCLA Loneliness Scale was included in the survey (Hughes *et al.*, 2004). This test consisted of three questions:

- Q1. How often do you lack companionship?
- Q2. How often do you feel left out?
- Q3. How often do you feel isolated from others?

Responses range from: hardly ever; sometimes and always (phone survey questions). For each participant, the sum of all their responses to the UCLA questions created a final score. Those whose scores ranged from 3–5 were considered not lonely, while those whose scores ranged from 6–9 were considered lonely.

Out of 200 clients surveyed, 89 (45%) were lonely per the UCLA Scale (Table 2). Factors such as age, gender, the number of days receiving deliveries and months enrolled in MOWCTX services had no significant influence on participants' overall loneliness per the UCLA Scale. However, survey results showed clients who lived alone (96% or 48% of the total sample) were more likely to be lonely according to the UCLA scale compared to those who lived with others (Pearson Chi = 8.5,  $p = 0.003$ ). Among the clients who were categorized as lonely per the UCLA Score, 65 (73%) reported feeling close to their drivers. These results were also statistically significant (Pearson Chi = 6.0,  $p = 0.050$ ).

These findings speak to the importance of MOW deliveries in aiding with social contact and combatting feelings of loneliness. As suggested from the interview findings, interactions between clients and MOWCTX volunteers are typically brief, but they also appear to provide opportunities for frequent social interaction with MOWCTX volunteers. Consistent and positive contact through MOWCTX deliveries may particularly benefit clients living alone and more prone to experiencing loneliness.

### **Discussion**

This research sought to answer if and how MOWCTX alleviated clients' loneliness and social isolation. During interviews, clients consistently reported not feeling "close" with their volunteers. They likewise reported typically experiencing only brief, casual interactions when their meals were delivered. These results were verified in the direct observations, where 3–5 min was the typical length of time clients and volunteers spent with each other. In the surveys, however, most clients (64%) reported feeling close to their volunteers. The discrepancy here requires additional consideration.

While claiming to not be close to their volunteers, clients still spoke very highly of their volunteers in the interviews and reported enjoying exchanging pleasantries with them. A lack of strong social connection was not a source of the complaint. While much of the literature on aging focuses on understanding the impact of loneliness and social isolation on the health and quality of life of aging individuals, other research suggests people tend to overestimate levels of loneliness in the older adults' lives than older adults experience themselves (Canjuga *et al.*, 2018; Dykstra, 2009). In a similar vein, the data from this research suggest that the benefit of MOWCTX deliveries is in relieving feelings of social isolation – not having enough contact with others – instead of loneliness – a lack of quality in relationships.

This is not meant to suggest that some MOWCTX clients are not suffering from persistent feelings of loneliness. The survey results suggest that a fairly large proportion (45%) of

MOWCTX clients are and that experiencing loneliness is more likely among clients living alone. This corresponds to the existing literature on loneliness which indicates that one of the main predictors of loneliness is living alone (Routasalo *et al.*, 2006).

Loneliness is a difficult concept to address. As discussed in the introduction, studies on the subject define loneliness as a subjective experience, unique to the individual's wants and needs (Peplau and Perlman, 1982). Loneliness results from an individual's perception of a discrepancy between the quality of the social relationships they want/need and the actual relationships they have (Perlman and Peplau, 1984). This means that a person could be a member of a social circle or group and still experience feelings of loneliness if their own personal expectations or requirements for quality relationships are not being met (Coyle and Dugan, 2012). It is possible, therefore, that loneliness is too much of a nuanced emotional experience to be completely addressed through interactions with volunteers. However, for clients who are lonely, even brief interactions may offer enough of an improvement in the quality of their typical interactions to make a difference.

In comparison, social isolation is more objective and easier to address. Social isolation often arises from living alone and/or having few opportunities to interact with others (Routasalo *et al.*, 2006). The experience of social isolation is dependent on the number and frequency of social contacts, not the quality of the connections (Routasalo *et al.*, 2006). When an individual's social network dwindles in size, a state of social isolation is likely to occur as contact with others becomes less frequent. Using this understanding of the concept, it is appropriate to suggest that MOWCTX services do impact social isolation. This research found that in some cases, interactions with MOWCTX volunteers are the only social interactions that clients experience that day. The consistent presence of volunteers at clients' doors, thus, provides a continuous social connection and this connection, in turn, breaks down the objective isolation home-bound clients may be experiencing.

Beyond addressing loneliness and social isolation, this research found that MOWCTX meal delivery services provided additional social benefits. Age-related mobility impairments often create hurdles for older adults (Ibrahim and Davies, 2012). Tasks such as cooking and/or standing for long periods of time become increasingly difficult as stamina and range of motion decrease. Previous research suggests older adults, especially those living alone, develop strategies to overcome the loss of physical function (e.g. decline in strength and balance) (Remillard *et al.*, 2019). In regards to food preparation activities, such adjustments often lead to changes in eating habits, particularly increased reliance on less nutritional food options including highly processed and ready-to-eat items (Lein *et al.*, 2015). For clients in this situation, MOWCTX meal deliveries reduce the need for these unhealthy adjustments. The home-delivered meals provide clients nutritious meals while also eliminating the need for them to cook.

Mobility impairments also pose a safety issue. During interviews, clients frequently told personal stories of falls and/or expressed being concerned about falling. Falls can severely impact older adult individuals' health, especially when they have preexisting health conditions (Siracuse *et al.*, 2012). As Martin and Grabiner (1999) found, falling and fear of falling may also lead to decreased mobility, which may lead to further functional decline (Martin and Grabiner, 1999). Daily physical activity is vital to maintaining mobility and delaying functional dependency on others (Dipietro *et al.*, 2019). This suggests that it is especially important for older adults to feel comfortable and safe moving around their own homes as any physical activity is beneficial to their health. This research found that MOWCTX clients felt a sense of security knowing that a volunteer would be at their door every delivery day. As a result, clients felt more comfortable engaging in physical activity at home.

## Conclusion

This research suggests that the client/volunteer interactions, in whatever form they come, are vital to a model like that of MOWCTX that seeks to aid older adults in remaining at home and maintaining a healthy lifestyle. The impact of the volunteer presence on the lives of the clients was found to be significant. Both interview and survey data indicated that contact with MOWCTX volunteers relieved clients' social isolation and provided important opportunities for social connection and support for clients who were experiencing feelings of loneliness. In addition, the meal services themselves and the safety check provided by regular contact with volunteers increased clients' independence and their general health (e.g. nutrition and mobility).

## Note

1. All client names appearing in this article are pseudonyms.

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