Practice Concepts

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Acceptance of Home-Based Telehealth Problem-Solving Therapy for Depressed, Low-Income Homebound Older Adults: Qualitative Interviews With the Participants and Aging-Service Case Managers

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Purpose: To report low-income homebound older adults' experience of telehealth problem-solving therapy (tele-PST) and aging-service case managers' (CMs') experience/perception of client-level personal barriers to accessing psychotherapy in general and PST specifically. ***Design and Methods:*** The study sample consisted of 42 homebound older adults who participated in the feasibility and efficacy trial of tele-PST and completed 36-week follow-up assessments and 12 CMs of a large home-delivered meals program who referred their clients to the tele-PST trial. In-depth interviews with the older adults and written feedback and focus group discussions with the CMs provided the data. ***Results:*** Older adults reported a high rate of approval of PST procedures and acknowledged its positive treatment effect. Tele-PST participants were satisfied with videoconferenced sessions because they were convenient and allowed them to see their therapist. However, CMs reported that only about 10%–20% of potentially eligible older adults gave oral consent for PST. Significant treatment engagement barriers were the older adults' lack of motivation, denial of depression, perceived stigma, and other personal attitudinal factors. ***Implications:*** The real-world implementation of tele-PST or other psychotherapies needs to include educating and motivating depressed homebound elders to recognize their depression and accept treatment.

Key Words: Telepsychotherapy, Acceptance, Treatment engagement

It is estimated that in 2009, 23.5% of 40 million older adults (aged ≥65 years) had ambulatory disability, and in 2011, three million older adults received Medicare home health care services (Centers for Medicare and Medicaid Services [CMS], 2012; U.S. Bureau of the Census, 2011). Epidemiologic and community-based studies have documented a high prevalence of depression and suicidal ideation in homebound older adults, who suffer from chronic illnesses, disability, social isolation, and, in the case of low-income individuals, financial worries/hardship (Bruce et al., 2002; Johnson, Sharkey, & Dean, 2011; Raue, Meyers, Rowe, Heo, & Bruce, 2007). A few studies of depressed homebound older adults found that about half of them receive pharmacotherapy, mostly from their primary care physician, but a significantly lower proportion (≤25%) receive psychotherapy (Gum, Iser, & Petkus, 2010; Choi, Kunik, & Wilson, 2013). Despite these homebound older adults' stated preference for psychotherapy over pharmacotherapy, their limited access to psychotherapy was attributed to such practical/system-level barriers as affordability, traveling difficulty, and unavailability of in-home psychotherapy services (Choi, Lee, & Goldstein, 2011; Gum et al., 2006). Previous studies of low use of mental health services among depressed older adults also identified the following personal-level barriers: perceived sense of stigma, strong spiritual/religious beliefs; discomfort in discussing personal problems; mistrust of mental health providers; dissatisfaction with prior treatment; and lack of understanding of etiologies and treatment of depression (Alvidrez, Areán, & Stewart, 2005; Byers, Areán, & Yaffe, 2012; Mackenzie, Pagura, & Sareen, 2010). Previous studies further found that black older adults are less likely than their non-Hispanic white counterparts to seek help from mental health providers attributable to stigma regarding mental illness, preference for religious coping, and mistrust of such providers (Conner et al., 2010; Shellman, Granara, & Rosengarten, 2011).

Of older adults who received psychotherapy or other specialty mental health services, one study, based on the Canadian Community Health Survey-Mental Health and Well-Being (aged ≥55 years), found that 86% of the 311 users of specialty mental health services were satisfied with treatment and 14% were neutral or dissatisfied (Lippens & Mackenzie, 2011). Another study of the perspectives of the participants (aged ≥60 years) in a psychotherapy trial (problem-solving therapy [PST] or supportive therapy) for the treatment of major depression and co-occurring executive dysfunction found that 55% of the 22 interviewed participants felt that treatment had met their expectations and noted improvement in mood as a treatment effect, 32% said that their expectations were not met or were partially met and that they did not endorse an improvement in mood, and 13% did not provide a specific response (Dakin & Areán, 2013). Previous studies (Areán, Gum, Tang, & Unützer, 2007; Gum et al., 2006) show that older adults tend to be satisfied with their depression care (i.e., antidepressant medication, psychotherapy, or combination of medication and psychotherapy). In general, however, literature on older patients' perspectives on psychotherapy, including their reasons for satisfaction/dissatisfaction and perceptions of effectiveness, is scant.

Recently, we completed a randomized controlled trial (RCT) that tested feasibility and efficacy of home-based, telehealth-delivered PST (tele-PST using Skype video call), compared with in-person PST and telephone support/care call (without any treatment component), for depressed, low-income homebound older adults through an academic–aging service agency partnership. (We use the term *PST* to refer to PST-PC [primary care], described later in this article.) In the present study, we report the findings from (a) in-depth qualitative interviews with older adult participants regarding their PST experience and, for tele-PST participants, videoconferencing as a delivery medium and (b) written individual feedback from a focus group with aging-service case managers (CMs) who referred their clients to the RCT. This study was intended to disseminate information on the acceptability of PST in general and tele-PST specifically among low-income homebound older adults and to share the CMs' experience/perception of client-level personal and other barriers to accessing psychotherapy in general and PST in the trial specifically.

PST and Tele-PST Implementation

Grounded in the cognitive-behavioral theory of mental health, short-term PST/treatment in primary care (PST-PC) was originally developed in England in the 1980s and adapted for delivery

in fast-paced primary care settings (in 4–6 sessions of 30–60 min each) in the United States during the 1990s (Catalan et al., 1991; Hegel, Barrett, & Oxman, 2000; Mynors-Wallis, Gath, Lloyd-Thomas, & Tomlinson, 1995). It posits that people with deficits in problem-solving skills become vulnerable to depression because such deficits lead to ineffective coping attempts under high levels of stress (D'Zurilla & Nezu, 2007). The PST-PC process consists of seven steps of skills training focused on participants' appraisal and evaluation of specific problems, their identification of the best possible solutions, and the practical implementation of those solutions, as well as on addressing anhedonia and psychomotor retardation through behavioral activation and increased exposure to pleasant events. The efficacy of PST-PC has been supported in the IMPACT study, a multistate RCT of late-life depression treatment in primary care, and community-based RCTs (Areán, Hegel, Vannoy, Fan, & Unützer, 2008; Areán et al., 2010; Ciechanowski et al., 2004; Gellis, McGinty, Horowitz, Bruce, & Misener, 2007). The focus of PST-PC on cognitive and behavioral activation of practical, "here-and-now" problem-solving skills is especially well suited for depressed, financially disadvantaged older adults as depression may compromise their coping skills.

Although telepsychiatry/telemental health has been rapidly growing over the past decade, most practices were either office-based videoconferencing or telephone administered (Mohr, Vella, Hart, Heckman, & Simon, 2008; O'Reilly et al., 2007). Our parent study that compared tele-PST (Skype video call) with in-person PST and telephone care call was the first test of in-home, televideo-delivered PST for depressed low-income homebound older adults. Most of the study participants in the tele-PST arm were loaned a laptop computer with a prepaid wireless card for the duration of tele-PST, and the therapy session began with a PST therapist located on a university campus calling the older adult to ask him/her turn on the computer. Two master's-level social workers who were trained in PST-PC by the last author (M.T.H.) provided both in-person and tele-PST while receiving ongoing clinical supervision from him. A detailed description of the study procedures, including the fidelity monitoring procedures, and quantitative outcomes is provided elsewhere (Choi et al., 2013). Tele-PST was as efficacious as in-person PST; however, treatment satisfaction, measured with the 11-item Treatment Evaluation Inventory (Landreville & Guerette, 1998), was significantly higher among tele-PST than in-person PST participants. Tele-PST was also cost efficient owing to travel time and cost savings.

Methods

Older Adult Study Participants

The participants in the RCT were recruited based on referrals from CMs at five aging-service agencies in Central Texas, with a majority (85%) of referrals from 12 CMs at a large Meals on Wheels (MOW) program that provides home-delivered meals and case management for low-income homebound older adults. The CMs' referral process began with the routine administration of the Patient Health Questionnaire (PHQ-9) depression screen (Kroenke & Spitzer, 2002) as part of their clients' intake or recertification assessment. For clients with PHQ-9 greater than or equal to 10 or other signs of depression and meeting other inclusion criteria (e.g., age 50+; non-Hispanic white, black, or Hispanic; English speaking), CMs provided them with the project fliers and oral descriptions and then referred consenting clients to the project team at the University of Texas. Homebound persons between 50 and 59 years of age were included because our earlier study found that they had a significantly higher rate of depression than those in the 60+ group (Choi, Teeters, Perez, Farar, & Thompson, 2010). Following written informed consent, the referred individuals were administered the 24-item Hamilton Rating Scale for Depression (HAMD; Depression Rating Scale Standardization Team, 2003; Moberg et al., 2001) by a master's-level assessor, trained and supervised by a PhD-level geropsychologist; those with HAMD scores greater than or equal to 15 were enrolled in the RCT. Of the 121 RCT participants, 43 were randomized to receive six weekly sessions of tele-PST, 42 to six weekly sessions of in-person PST, and 36 to six weekly telephone support calls. Of those, 34 tele-PST participants, 31 in-person participants, and 27 telephone support call participants completed their 36-week follow-up assessments. At the 36-week follow-up assessment, 24 tele-PST participants and 18 in-person PST participants were randomly chosen for a qualitative interview. We interviewed more tele-PST than in-person PST participants to explore their perspectives on teledelivery. The baseline demographic and clinical characteristics of the 42 participants in the qualitative study are presented in Table 1. There was no statistically

Table 1. Baseline Demographic and Clinical Characteristics of Study Participants ($N = 42$)

Age (years)	62.43 ± 7.21
Age group (*n*, %)	
50–59	14 (33.3)
60–69	21 (50.0)
70+	7 (16.7)
Gender (*n*, %)	
Female	34 (81.0)
Male	8 (19.0)
Race/ethnicity (*n*, %)	
Non-Hispanic white	20 (47.5)
Black	11 (26.2)
Hispanic	11 (26.2)
Marital status (*n*, %)	
Married	8 (19.0)
Widowed	6 (14.3)
Divorced/separated	21 (50.0)
Never married	7 (16.7)
Education (*n*, %)	
≥High school	11 (26.2)
Some college	16 (38.1)
2- or 4-year college degree	9 (21.4)
Graduate school	6 (14.3)
Income	
≥$25,000	38 (90.6)
$25,001+	3 (7.2)
Refused	1 (2.4)
Number of chronic medical conditions	3.34 + 1.56
HAMD score	23.67 ± 6.58
SCID diagnosis (*n*, %)	
Major depressive disorder	30 (71.4)
Depressive disorder-NOS	10 (23.8)
Dysthymia	2 (4.8)

Notes: HAMD = Hamilton Rating Scale for Depression; NOS = not otherwise specified; SCID = Structured Clinical Interview for DSM disorders.

significant difference between all parent study participants and those who participated in the qualitative interview in any of the characteristics.

CM Participants

All 12 MOW CMs (8 bachelor's-level and 3 master's-level social workers and 1 registered nurse; 10 women and 2 men) who referred their clients for 1–2 years participated in the 2-hr focus group discussion in November 2012. During the project implementation, the Principal Investigator (N.G.C.) met with CMs quarterly to encourage their referrals and provide training in recruitment skills. The CMs also received weekly electronic updates about enrollment statistics. At first, a few CMs were reluctant to refer their clients to the research project; however, all became enthusiastic referral sources because they witnessed/heard about PST's and even telephone care call's positive impact on their clients (many of whom thanked their CMs for the referral).

Data Collection and Analysis

Two trained master's-level assessors conducted in-person interviews in the older adults' residences using a semistructured interview guide. Specific questions included these: "Would you please discuss your overall experience of the PST that you have received?" "Which treatment components (e.g., PST's seven steps, homework, pleasant event scheduling) worked and which did not work?" "What did you think of the length of treatment?" and (for tele-PST participants): "Would you please discuss specific aspects of videoconferencing that you found helpful and not so helpful?"

The first author facilitated a focus group of CMs, using these major questions: "What were the difficulties that you have had in broaching the subject of depression treatment with your clients?" "What is the estimated proportion of your clients who agreed to be contacted by the research team?" and "What were the reasons (stated or guessed) for lack of interest in participation and/or refusal to be contacted?" Two weeks before the focus group, the CMs were provided a list of similar questions and asked to prepare their individual responses in writing. This was done to obtain input from as many CMs as possible, given that a single session of the focus group might not allow enough time to capture all they wanted to discuss.

All interviews and the focus group session were audiotaped and transcribed verbatim for analysis. Analysis of the transcripts of individual interviews with older adults proceeded as follows: (a) the three authors' (N.G.C., M.L.M., and L.S.) independent reading and manual coding to develop a preliminary list of thematic categories closely reflecting the interview questions and themes in each category based on the first 10 transcripts using an iterative process; (b) comparison and discussion of all the themes to reach consensus (initial interrater reliabilities = .99); and (c) application of the coding scheme, based on the identified themes, to subsequent transcripts and revision employing a constant comparative approach. Content analysis of the CMs' written feedback and the focus group transcript also proceeded using the same steps and focused on identifying salient themes (interrater reliability = .96). To ensure reliability and validity of the findings, we had E-mail/telephone

communications with four CMs and received their confirmations. These themes emerged from older adult participants: positive experience; value of pleasant event scheduling; effectiveness; PST's limits; the right session length; and acceptance of videoconferencing. These themes emerged from CMs: comfort with depression screening; low treatment engagement rate; reasons for refusal; and broad inclusion.

Results

Older Adult Participants' Overall Experiences of PST

Positive Experience.—Thirty-eight (90.5%) of 42 interviewees stated that PST (in-person or teledelivered) was an overall positive experience. They stated that PST made them aware of what the problem (depression) was—"It is not all physical, which was the way I tended to think about depression." One participant summed it up: "The main thing was focusing on a specific way to deal with a problem. It gave you a structure to use and focus instead of just having all the thoughts, anxiety, and frustration rolling around in your head." The participants reported that by engaging in seven PST steps, they learned or received reinforcement in breaking their problems down into small parts for evaluation and solution. One participant stated:

> To me, it is just that some people like me run up against stumbling blocks in daily life, and some would accept defeat . . . but with PST, you can look at that big stumbling block and break it down into smaller steps and then it's easier to deal with. And if you try it and it doesn't work, you can try your B and C plans and before you know it you already solved the problem. You won't stress, you won't worry, and you won't get anxious. You need to get this on the net or write a book or audio tape and get this program out.

Another stated:

> It did reinforce something that I am frequently impatient about—I used to do a quick assessment—pros/cons—and would miss some things. PST was good about reinforcing the idea of taking it slower, really thinking about all the ways you can break it apart, pros/cons—not just the most obvious. If you follow the procedures, it tends to be easier to solve each subproblem versus going quickly through it.

Value of Pleasant Event Scheduling.—Thirty-four participants (81%) also liked PST's pleasant event scheduling component. One participant stated that "The pleasant event scheduling got me to try to look forward to something every day to accomplish so that I would feel like I had done something when I went to bed at night." Another stated that the pleasant daily activities made her go out more and led her to increase her social contacts. Of the remaining eight participants, four said that they were not sure of the effect of pleasant event scheduling; two said that it was not helpful; and two said that they were too depressed to follow through on pleasurable activities.

Effectiveness.—All of those who had positive experience also said that PST was helpful in reducing their depressive symptoms, and many stated that it had changed their lives ("changed me completely"). One stated: "I don't know what I would have done if I did not have this support. I was really depressed and [the therapist] helped me to turn things around." Another stated: "I was in bad shape when [the therapist] first started coming. By the time she was through with me, I was laughing and kicking my heels." Another one said: "It helped me get a greater understanding of my depression and how to work on it." Many reported that they continued to use PST steps, often using their PST worksheets, and hoped that many more people needing help with their depression would be able to benefit from PST: "I think it will be real beneficial for a lot of people who feel the same way I did. They can really get some help that they need."

PST's Limits.—Four participants stated that PST was not a suitable intervention modality for them. One participant found it to be limiting, given her need to find cheaper, more stable housing (she was waitlisted for a subsidized apartment) and other problems related to her limited finances: "Some parts— the pros and cons were very helpful, but I don't think there was always a way to identify a realistic action plan for some of my problems, so I didn't find that as helpful." Another participant did not believe that PST was a suitable treatment modality while she was grieving over her husband's recent death because the structure did not accommodate her need to process her loss and grief. A third participant stated that PST was helpful but that its seven-step structured approach was too cumbersome for her given that her primary problem was social isolation. Interestingly, though, she also stated: "I think that

PST was more cognitive and acceptable to me and worked better for me than a touchy-feely therapy. It might have been more scary if it had been more open." Several others also noted that PST's focus on "here-and-now" issues was highly acceptable to them because they did not want to "dig up things from the past." A fourth participant said that she could not remember much about the sessions and refused to elaborate.

Right Session Length.—Of 42 participants, 26 said that six sessions were "good," "the right amount," or "fine"; 16 said that they would have liked more than six sessions; and 1 said that "four sessions would have been enough." Of the 16 who favored more sessions, 14 admitted that they had learned PST well enough within six sessions but would have liked longer sessions because they enjoyed having the sessions with their therapist, whereas 2 did not provide any specific reason. The participants' endorsement of six sessions aligns well with both PST therapists' view that most participants were able to master PST in four sessions with two additional sessions functioning as reinforcement.

Acceptance of Videoconferencing.—Of 24 tele-PST participants, 20 (83.3%) reported that they were highly satisfied with the videoconferencing sessions, 2 reported that they enjoyed and looked forward to telesessions but would still have preferred in-person sessions, and 2 (8.3%) stated that they did not feel the videoconferencing sessions were helpful while they were "not put off" by them ("Computers don't jazz up my life." "I do not trust technology, don't trust anything with a camera."). All 22 tele-PST participants who were satisfied with or enjoyed teledelivery pointed out convenience as an asset, and 17 (77%) pointed out the ability to see their therapist as their primary reason for satisfaction. Several stated specifically that videoconferencing was better than a telephone call because seeing the therapist made it much more like an in-person session and made them feel closer to the therapist compared with talking on the phone. One participant said, "I didn't even think about it being any different [from in-person sessions]." Another said, "I got as much out of it because it was like she [therapist] was here in person." Another said, "I really liked it. We could see and talk with each other. I didn't have to go anywhere, and she [therapist] didn't have to go anywhere. I could sit in my nightgown and not have to clean the house up before our session and not feel guilty about not cleaning it." Two participants also stated that they liked the fact that they were not really imposing on their therapists—"When you take her away from her building, work…that was a consideration." Many stated that given their homebound state and lack of transportation, in-home therapy, either in-person or videoconferenced, was the only way they could receive psychotherapy. Several tele-PST and in-person PST participants also said that in-home, in-person, or videoconferencing sessions were much more efficient at protecting their privacy than going to see a therapist at a clinic.

Interestingly, some participants (n = 8, mostly those who had never previously used computers) also said that they liked tele-PST because it was different and exciting: "It was great. I have never done that before. It was fun and different." "It was kind of cool to see the [technological] advances." "I liked it. It was like space-age. No problem whatsoever." They were very proud of their participation in videoconferenced psychotherapy. Of all 121 parent study participants, 25.6% had computer and Internet connection at baseline. Following their PST participation, several participants became computer owners as their children, impressed by their parents' participation in teletherapy, bought them computers.

However, some also mentioned their frustrations from technical glitches. One participant stated:

> I did not have to worry about my house, the condition of my house. But it was really hard because Skype was not working well. We laughed about it being Greta Garbled. It would just freeze like your digital TV does and it always happened on the most important parts. I still liked doing it by computer. It was nice.

CMs' Experience/Perception

Comfort With Depression Screening.—All CMs reported that they felt very comfortable screening and discussing depression with their clients. (The agency had incorporated the PHQ-9 as part of its routine in-home assessment in 2007.) However, the presence of informal or formal caregivers and the resulting lack of privacy was a barrier to discussing depression as the CMs often could not find space and time to be alone with their clients.

Low Engagement Rate and Reasons for Refusal.—Ten of 12 CMs reported that only about

10%–20% of their clients who met the referral criteria provided oral consent for referral to the PST team, and 2 CMs did not specify. CMs noted that for the most part, those who ended up agreeing to the referral were interested from the beginning, with most stating that they had wanted to search for a resource for their depression, whereas those who were resistant to therapy said no from the outset and continued to decline after they described the PST project. Many in the latter group tended to be wary about screening and discussion of depression in part because "the term 'depression' [without adequate psychoeducation] is thrown around too often by too many healthcare and social service providers that they come into contact with." Some CMs reported that women were more open than men and others reported that African American and Hispanic clients were more likely than non-Hispanic white clients to refuse referral, denying their depression, and/or citing their religious coping. Table 2 provides a summary of the reasons for refusal that CMs experienced or perceived.

Broad Inclusion.—Given the paucity of home-based psychotherapy programs in the community, the CMs welcomed the opportunity to refer their clients to the PST trial and recognized PST's beneficial effect on them. However, they also pointed out that inclusion criteria for the efficacy trial were too restrictive for them to refer more

Table 2. Case Manager (CM) Experienced/Perceived Reasons for Clients' Refusal to Access PST/Psychotherapy

Reason	Description/quote (from CM or from client)
1. Lack of motivation from	
Feeling/thinking that they would not benefit from talking about their problems	"Some clients are not simply motivated because they do not think treatment will help."
Long-term experience of depression as a way of life	"Some of my clients have probably been carrying around depression for years and while they want to seek help for it, it is a very large step for them."
Considering depression as a normal part of aging and deteriorating health	Clients said: "I don't need therapy." "I can manage on my own." "Everyone gets depressed sometimes. It's not a big deal."
2. Denial of depression	Clients said: "I am not a depressed person."
3. Religious coping	Clients said: "The Lord will get me through it." "My troubles will be best dealt with praying."
4. Stigma about mental illness and "therapy"	"Some clients seemed embarrassed by their depression and quickly changed the subject when it was brought up." "Some clients had a particular [avoidant] reaction to the word 'therapy' because of stigma."
5. Discomfort/hesitancy with the idea of discussing mental/emotional issues and opening up their thoughts and feelings with strangers	"Some clients have multiple providers coming in to ask them a million questions about their physical/mental health, and it is difficult to decide who to trust and open up to."
6. Fear of seeking treatment for the first time not knowing what it entails	Especially fear of opening up about past abuse and other traumas they might not want to disclose: "They have been victims of all sorts of maltreatment and witnessed horrible crimes. Some of these issues are only revealed to me after years of working with them."
7. Lack of time for therapy due to other appointments	"Many of our clients are bombarded with appointments and drop-ins by nurses/aids/other healthcare professionals. Not only are they required to manage their own health and well-being with a very limited income, but they also have to manage all of their appointments."
8. Lack of energy or feeling too overwhelmed to take up depression treatment	Due to the burden of managing multiple chronic diseases, pain, medications, and other things going on in their life
9. Lack of trust in mental health professionals	Especially those who are not from their own racial/ethnic group: "Some clients feel the shame that is brought on by seeking assistance from professionals of certain racial/ethnic groups."
10. Feeling tired of trying different and ineffective treatments	"Many of my clients say that they've tried everything for their depression, including ECTs [electro-convulsive therapies], and often they are tired of trying and are convinced nothing new will help."

Note: PST = problem-solving therapy.

clients. One CM stated the following and was seconded by all her colleagues: "I feel that I could have referred a lot more had the eligibility been more open. I think the scope was too narrow. Many of my clients had depression along with another diagnosed mental illness. Many of those clients still need and seek assistance." They also pointed out that Spanish-only-speaking clients have even more limited resources for dealing with their depression.

Discussion

An absolute majority of older adult participants reported a high rate of approval and acceptance of PST as a depression treatment. High acceptance of PST appears to be rooted in its teaching and practicing of problem-solving skills that they were able to apply in daily life and in its focus on "here-and-now" problems as some did not want to talk about traumatic and painful past events. Most tele-PST participants were also satisfied with teledelivery primarily because it was convenient and allowed them to see their therapist. Participants liked in-home sessions, either in-person or teledelivered, also because of privacy-related reasons, showing their high degree of stigma about depression and "therapy." However, a few also pointed out PST's limitations with regard to solving problems associated with limited financial resources and social-structural issues like the lack of subsidized housing units and dealing with complex emotional needs associated with loss and grief. For low-income older adults whose depression is significantly affected by their financial problems, psychotherapy alone without financial assistance is likely to be ineffective. For those with grief and loss issues, grief counseling may need to precede PST.

Notwithstanding the high satisfaction with and positive effect of psychotherapy for depressed older adults, a significant problem appears to be treatment engagement. Treatment initiation/engagement barriers, as reported by CMs, stem from the older adults' lack of motivation, denial of depression, perceived stigma, and other personal attitudinal factors. Lack of motivation to seek treatment may be partly rooted in the older adults' view of depression as being not a serious problem and just a normal part of aging. Their lack of motivation, however, may also be neurobiologically based, falling under the umbrella of anhedonia (Der-Avakian & Markou, 2012). Barriers unique to low-income homebound older adults were (a) the burden of managing chronic medical conditions and associated pain, including multiple medical appointments and having many helpers/providers frequent their homes and (b) multiple stressors attributable to their own and family members' limited financial means. These problems compete for their energy and attention, relegating depression treatment to a low priority among these low-income older adults (Proctor, Hasche, Morrow-Howell, Shumway, & Snell, 2008).

The study had a few limitations. First, the data were provided by those who were highly motivated to seek treatment and able to complete the 36-week follow-up assessment, although the interviewees' baseline demographic and clinical characteristics were not significantly different from all other parent study participants and dropouts. Second, CMs did not systematically document reasons for clients' refusal and therefore their discussion was based not on hard data but on their recollections, which may have been influenced by their subjective bias. Third, a low treatment engagement rate may not indicate older adults' aversion to psychotherapy per se but to a research project run by a large university or to teledelivery. Unfortunately, we did not directly ask them about their reasons for refusal.

Despite these limitations, the findings provide valuable practice and policy implications for providing tele-PST to the most vulnerable group of older adults. First, high acceptance of teledelivery provides strong support for scaling it up for a large number of depressed homebound older adults. Teledelivery has the advantages in enabling the older adults to engage in therapy without leaving their home and to feel the most benefits of in-person sessions. Tele-PST would also be more feasible and cost saving than in-person psychotherapy as it does not require transporting homebound older adults to clinics or providers to older adults' homes, although in-person, in-home sessions have advantages in allowing the therapists to see their clients' home environment. In the face of the continuing shortage of geriatric mental health workforce, fewer therapists can service more clients with teledelivery than in-person delivery. As older adults are the fastest-growing group of Internet users (Zickuhr & Madden, 2012), telepsychotherapy is likely to continue to become more acceptable and feasible.

Second, real-world adoption and sustainability of tele-PST for a maximum number of depressed, low-income homebound older adults are not likely happen without collaboration from aging-service

network agencies that already provide these older adults case management and screen depression (or can easily do so). Recent publications by the Institute of Medicine (2012) and a collaborative work by the Administration on Aging and SAMHSA (2012) have underscored the importance of strengthening aging and behavioral health partnerships and integrating technology into evidence-based care delivery to improve older adults' access to treatment and make efficient use of specialists. Aging-service partnered or integrated tele-PST (with colocated therapists) in which the therapists coordinate mental health care with CMs is likely to be the most efficient delivery model. We need to test the clinical and cost effectiveness of aging-service partnered or integrated tele-PST, which in turn can be used to make cases for Medicare reimbursement of telepsychotherapy. Currently, telepsychotherapy sessions in designated rural-area residents only are reimbursable under Medicare (CMS, 2003).

Third, the present study shows that availability and accessibility of evidence-based depression treatment is not likely to be sufficient to motivate low-income homebound older adults to take part in it. Although previous studies have shown that older adults prefer psychotherapy to pharmacotherapy (Gum et al., 2006; Hanson & Scogin, 2008), this study shows that low-income homebound older adults face multiple personal attitudinal barriers to engaging in psychotherapy, including lack of motivation, insistence on religious coping, stigma, and mistrust of mental health providers. In addition, these older adults have unique engagement barriers stemming from their multiple chronic illnesses, mobility impairment, and financial difficulties. There has been little research focused on these particular challenges among low-income, largely racial/ethnic minority, homebound older adults. Future research on real-world scaling-up of tele-PST for low-income homebound older adults needs to focus on improving treatment initiation/engagement by educating them about depression, increasing their motivation to seek treatment, reducing stigma, and finding ways to help them with other barriers attributable to their difficult life circumstances.

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References

Administration on Aging and SAMHSA. (2012). Older Americans behavioral health issue brief: Series overview. Older Americans Behavioral Health Technical Assistance Center. Washington, DC. Retrieved from http://www.aoa.gov/AoARoot/AoA_Programs/HPW/Behavioral/docs/OA_Issue_BriefSeriesOverview.pdf

Alvidrez, J., Areán, P. A., & Stewart, A. L. (2005). Psychoeducation to increase psychotherapy entry for older African Americans. *American Journal of Geriatric Psychiatry*, *13*, 554–561.

Areán, P. A., Gum, A. M., Tang, L., & Unützer, J. (2007). Service use and outcomes among elderly persons with low incomes being treated for depression. *Psychiatric Services*, *58*, 1057–1064. doi:10.1176/appi.ps.58.8.1057

Areán, P. A., Hegel, M. T., Vannoy, S., Fan, M.-Y., & Unützer, J. (2008). Effectiveness of problem-solving therapy for older, primary care patients with depression: Results from the IMPACT study. *The Gerontologist*, *48*, 311–324. doi:10.1093/geront/48.3.311

Areán, P. A., Raue, P., Mackin, R. S., Kanellopoulos, D., McCulloch, C., & Alexopoulos, G. S. (2010). Problem-solving therapy and supportive therapy in older adults with major depression and executive dysfunction. *American Journal of Psychiatry*, *167*, 1391–1398. doi:10.1001/archgenpsychiatry.2010.177

Bruce, M. L., McVay, G. J., Raue, P. J., Brown, E. L., Meyers, B. S., Keohane, D. J., et al. (2002). Major depression in elderly home health care patients. *American Journal of Psychiatry*, *159*, 1367–1374. doi:10.1176/appi.ajp.159.8.1367

Byers, A. L., Areán, P. A., & Yaffe, K. (2012). Low use of mental health services among older Americans with mood and anxiety disorders. *Psychiatric Services*, *63*, 66–72. doi:10.1176/appi.ps.201100121

Catalan, J., Gath, D. H., Anastasiades, P., Bond, S. A. K., Day, A., & Hall, L. (1991). Evaluation of a brief psychological treatment of emotional disorders in primary care. *Psychological Medicine*, *21*, 1013–1018.

Centers for Medicare and Medicaid Services (CMS). (2003, May 16). Medicare carriers manual part 3 – Claims process: Section 15516: Medicare payment for telehealth services. Washington, DC. Retrieved from http://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads//R1798B3.pdf

Centers for Medicare and Medicaid Services. (2012). Medicare and Medicaid supplemental statistics. Table 7.2. Persons served, visits, total charges, visit charges, and program payments for Medicare home health agency services: Calendar year 2011. Washington, DC. Retrieved from http://cms.hhs.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareMedicaidStatSupp/2012.html

Choi, N. G., Hegel, M. T., Marti, C. M., Marinucci, M. L., Sirrianni, L., & Bruce, M. L. (2013). Telehealth problem-solving therapy for depressed low-income homebound older adults: Acceptance and preliminary efficacy. *American Journal of Geriatric Psychiatry*. doi:10.1016/j.jagp.2013.01.037

Choi, N. G., Kunik, M. E., & Wilson, N. (2013). Mental health service use among depressed, low-income homebound older adults. *Journal of Aging and Health*. doi:10.1177/0898264313484059

Choi, N. G., Lee, A., & Goldstein, M. (2011). Meals on Wheels: Exploring potential for and barriers to integrating depression intervention for homebound older adults. *Home Health Care Services Quarterly*, *30*, 214–230. doi:10.1080/01621424.2011.622251

Choi, N. G., Teeters, M., Perez, L., Farar, B., & Thompson, D. (2010). Severity and correlates of depressive symptoms among recipients of Meals in Wheels: Age, gender, and racial/ethnic difference. *Aging & Mental Health*, *14*, 145–154. doi:10.1080/13607860903421078

Ciechanowski, P., Wagner, E., Schmaling, K., Schwartz, S., Williams, B., Diehr, P., et al. (2004). Community-integrated home-based depression treatment in older adults. *Journal of the American Medical Association*, *29*, 1569–1577. doi:10.1001/jama.291.13.1569

Conner, K. O., Copeland, V. C., Grote, N. K., Rosen, D., Albert, S., McMurray, M. L., et al. (2010). Barriers to treatment and culturally endorsed coping strategies among depressed African American older adult. *Aging & Mental Health*, *14*, 971–983. doi:10.1080/13607863.2010.501061

Dakin, E. K., & Areán P. A. (2013). Patient perspectives on the benefits of psychotherapy for late-life depression. *American Journal of Geriatric Psychiatry*, *21*, 155–63. doi:10.1016/j.jagp.2012.10.016

Depression Rating Scale Standardization Team. (2003). *GRID-HAMD-17, GRID-HAMD-21: Structured interview guide*. San Diego, CA: International Society for CNS Drug Development.

Der-Avakian, A., & Markou, A. (2012). The neurobiology of anhedonia and other reward-related deficits. *Trends in Neurosciences*, *35*, 68–77. doi:10.1016/j.tins.2011.11.005

D'Zurilla, T. J., & Nezu, A. M. (2007). *Problem-solving therapy: A positive approach to clinical intervention*. New York: Springer.
Gellis, Z., McGinty, J., Horowitz, A., Bruce, M. L., & Misener, E. (2007). Problem-solving therapy for late-life depression in home care: A randomized field trial. *American Journal of Geriatric Psychiatry*, *15*, 968–978.
Gum, A. M., Areán, P. A., Hunkeler, E., Tang, L., Katon, W., Hitchcock, P., et al. (2006). Depression treatment preferences in older primary care patients. *The Gerontologist*, *46*, 14–22.
Gum, A. M., Iser, L., & Petkus, A. (2010). Behavioral health service utilization and preferences of older adults receiving home-based aging services. *American Journal of Geriatric Psychiatry*, *18*, 491–501. doi:10.1097/JGP.0b013e3181c29495
Hanson, A. E., & Scogin, F. (2008). Older adults' acceptance of psychological, pharmacological, and combination treatments for geriatric depression. *Journal of Gerontology: Psychological Sciences*, *63*, P245–P248. doi:10.1093/geronb/63.4.P245
Hegel, M. T., Barrett, J. E., & Oxman, T. E. (2000). Training therapists in problem-solving treatment of depressive disorders in primary care: Lessons learned from the "Treatment Effectiveness Project." *Family System and Health*, *18*, 423–435.
Institute of Medicine. (2012). *The mental health and substance use workforce for older adults: In whose hands?* Washington, DC: The National Academic Press.
Johnson, C. M., Sharkey, J. R., & Dean, W. R. (2011). Indicators of material hardship and depressive symptoms among homebound older adults living in North Carolina. *Journal of Nutrition in Grontology and Geriatrics*, *30*, 154–168. doi:10.1080/21551197.2011.566527
Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A new depression diagnostic and severity measure. *Psychiatric Annals*, *32*, 509–515.
Landreville, P., & Guerette, A. (1998). Psychometric properties of a modified version of the Treatment Evaluation Inventory for assessing the acceptability of treatments for geriatric depression. *Canadian Journal of Aging*, *17*, 414–424.
Lippens, T., & Mackenzie, C. S. (2011). Treatment satisfaction, perceived treatment effectiveness, and dropout among older users of mental health services. *Journal of Clinical Psychology*, *67*, 1197–1209. doi:10.1002/jclp.20842
Mackenzie, C. S., Pagura, J., & Sareen, J. (2010). Correlates of perceived need for and use of mental health services by older adults in the Collaborative Psychiatric Epidemiology Surveys. *American Journal of Geriatric Psychiatry*, *18*, 1103–1115. doi:10.1097/JGP.0b013e3181dd1c06
Moberg, P.J., Lazarus, L. W., Mesholam, R. I., Bilker, W., Chuy, I. L., Neyman, I., et al. (2001). Comparison of the standard and structured interview guide for the Hamilton Depression Rating Scale in depressed geriatric inpatients. *American Journal of Geriatric Psychiatry*, *9*, 35–40.
Mohr, D. C., Vella, L., Hart, S., Heckman, T., & Simon, G. (2008). The effect of telephone-administered psychotherapy on symptoms of depression and attrition. A meta-analysis. *Clinical Psychology-Science Practice*, *15*, 243–253. doi:10.1111/j.1468-2850.2008.00134.x
Mynors-Wallis, L. M., Gath, D. H., Lloyd-Thomas, A. R., & Tomlinson, D. (1995). Randomized controlled trial comparing problem-solving treatment with amitriptyline and placebo for major depression in in primary care. *BMJ*, *310*, 441–445.
O'Reilly, R., Bishop, J., Maddox, K., Hutchinson, L., Fisman, M., & Takhar, J. (2007). Is telepsychiatry equivalent to face-to-face psychiatry? Results from a randomized controlled equivalence trial. *Psychiatric Services*, *58*, 836–843.
Proctor, E. K., Hasche, L., & Morrow-Howell, N., Shumway, M., & Snell, G. (2008). Perceptions about competing psychosocial problems and treatment priorities among older adults with depression. *Psychiatric Services*, *59*, 670–675. doi:10.1176/appi.ps.59.6.670
Raue, P. J., Meyers, B. S., Rowe, J. L., Heo, M., & Bruce, M. L. (2007). Suicidal ideation among elderly homecare patients. *International Journal of Geriatric Psychiatry*, *22*, 32–37. doi:10.1002/gps.1649
Shellman, J., Granara, C., & Rosengarten, G. (2011). Barriers to depression care for black older adults. *Journal of Gerontological Nursing*, *37*, 13–17. doi:10.3928/00989134-20110503-05
U.S. Bureau of the Census. (2011). Table 35. Persons 65 years and over—Living arrangements and disability status, 2009. Statistical table based on data from the 2009 American Community Survey. Washington, DC. Retrieved from http://www.census.gov/compendia/statab/2012/tables/12s0035.pdf
Zickuhr, K., & Madden, M. (2012, June 6). Older adults and internet use. Washington, DC: Pew Research Center's Internet & American Life Project. Retrieved from http://www.pewinternet.org/~/media//Files/Reports/2012/PIP_Older_adults_and_internet_use.pdf