Telehealth Treatment of Depression for Homebound Older Adults

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& Meals on Wheels Central Texas
Collaborative Telehealth Treatment Team

Presentation at the
Supporting Older Adults with Depression and Anxiety Conference

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Funding Sources

- National Institute of Mental Health (R34 MH083872; 2009-2012; PI: N. Choi)
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- AARP Foundation (national grant #IS0·2017·07 001; 2017-2019; Overall Pl: M. Bruce; Texas Site Pl: N. Choi)
- St. David's Foundation (SDF; 2011-2013; 2016-2020; PI: N. Choi)

Presentation Order

- Background: Late-life depression and effects
- Depression in low-income homebound OAs
- Two telehealth depression Tx projects and one telehealth social isolation/loneliness intervention program
- Tele-delivery lessons learned
- Reasons for refusal to accept Tx and in-session challenges
- Mitigation strategies

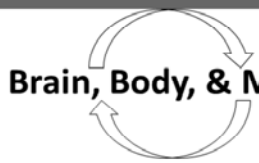
Signs of Late-life Depression

- Loss of interest
- Depressed mood
- Worthlessness; sense of guilt
- Avoidance of people/low social engagement
- Recurrent death ideation and/or suicidal thoughts

- Concentration or memory problems
- Irritability
- Insomnia or hypersomnia
- Neglect of physical and mental "SELF-CARE"
- Psychomotor agitation/ retardation
- Poor appetite or overeating

Etiology of Depression

- Brain chemicals
- Health problems
  (physical, mental, and cognitive)
- Genetics
- Money worries
- Loss and grief
- Relationship issues / lack of support
- Lack of activities / engagement, social isolation, loneliness
- Maladaptive coping strategies



Brain, Body, & Mind Connection

Depression is a TREATABLE Health Problem!

Without Treatment: Negative effect on...

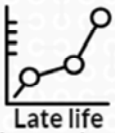
All existing health problems/onset of new health problems (especially CVD)

Hospitalization/ institutionalization, falls, disablity, dementia, suicide and non-suicide mortality

Job performance/ interpersonal relationship

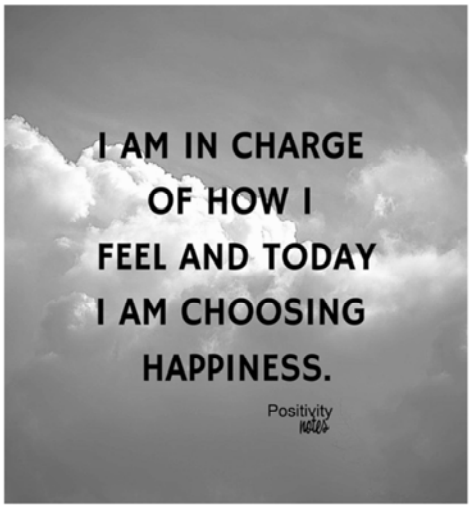
Social activities/ social connection, leading to isolation

Overall quality of life (feeling miserable - living hell)



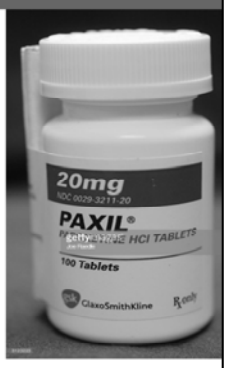
Late life depression: Worsening trajectories

With Treatment



- Improved health (from improved self-care and more active daily living)
- Improved cognitive health
- More energy
- Better at relationships
- Improved quality of life

Treatment: Pharmacotherapy



- Antidepressant medications are needed for severe depression.
- Medications alone have limited effect on late-life depression: It does NOT impart coping skills.
- May need to take them for life.
- Some people experience side effects (e.g., dry mouth, headache, too much sleep…) especially with polypharmacy

Treatment: Evidence-Based Psychotherapy

Structured, short-term (brief)

No digging up past issues (not effective); no psychoanalysis

Focus on "here and now"

- Rational (vs. emotional) problem-solving / stress coping skills training
- More structure in daily life by planning and engaging in activities that are meaningful in your chosen life areas
- Practice, practice, and practice your coping skills!

PST and BA for OAs

- Problem-solving therapy (PST): Teaches patients problem-solving coping skills to help them deal with major negative life events as well as daily problems that are making them depressed
- Behavioral activation (BA):
  - Depressive symptoms are viewed as depressive behaviors; aims to
  - increase and reinforce healthy behavior (e.g., engaging in meaningful life activities aligned with personal values and beliefs); and
  - decrease depressive behavior (e.g., staying in bed all day)
- Both: Engage in at least one pleasant activity everyday!

Depression in Homebound OA

- Higher rates of major depressive disorder (MDD): 8.5% -13.5% among 65+ age group
- Higher rates of clinically significant depressive symptoms among 65+ group: 10% - 25%

- Significantly higher rates of MDD (16%) and depressive symptoms (33%) among homebound adults age 50-60 than among 61+
- 38% of Meals on Wheels Central Texas HDM recipients (n=2,224) aged 50+ reported a depression diagnosis

Depressed low-income homebound OA: Barriers to Treatment Access

Need for Tele-delivery

- Lack of transportation to clinic-based psychotherapy
- Lack of affordable, evidence-based, *in-home* psychotherapy programs
- COVID-19 stay-at-home orders / social distancing

Need for Integration of Treatment in Aging Services

- Other competing life demands/stressors
- Stigma / lack of depression-related knowledge – denial of depression / mistrust of mental health professionals

Our First Telehealth Project

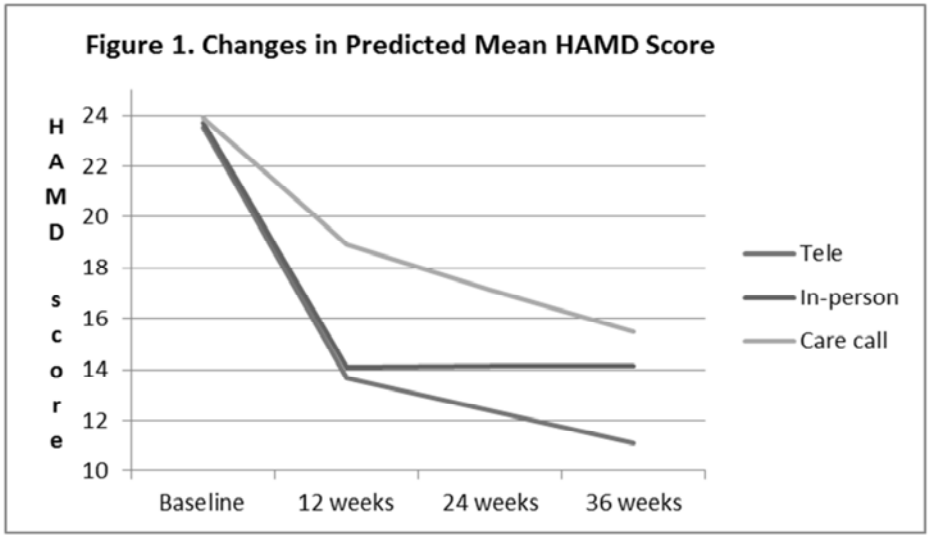
(R34 MH083872; 2009-2013; SDF)

Telehealth Problem-Solving Therapy (Tele-PST) for Low-Income Homebound Older Adults

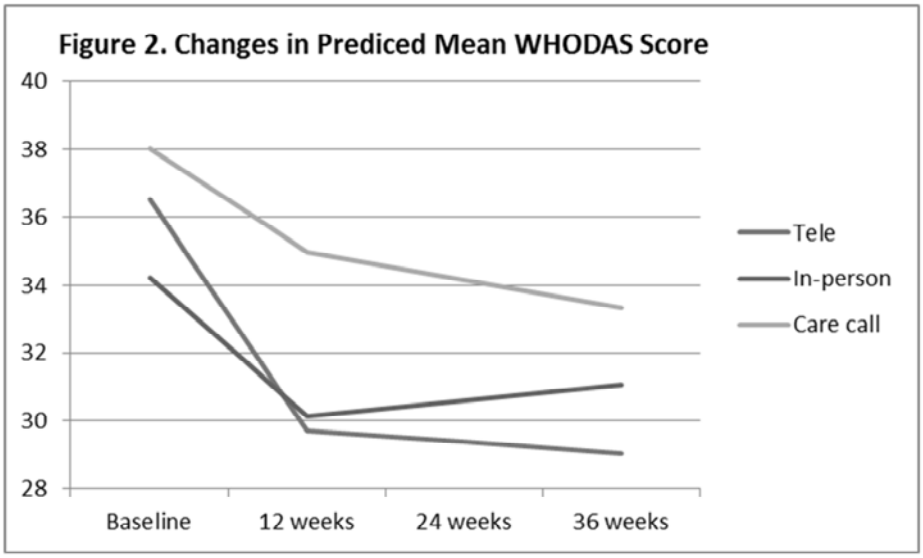
- Tested comparative effectiveness of
  Tele-PST (via Skype)
  compared to
  In-person PST (in-home) and
  Telephone support calls (attention control)

- Both tele-PST and in-person PST delivered by licensed master's level social workers
- Participants: N=214, aged 50+; 158 included in outcome analyses

Telehealth problem-solving therapy: Effect on Depression



Telehealth problem-solving therapy: Effect on Disability



Impact on ED visit

- During 6 months prior to treatment participation: 22.3% reported 1 visit, 12.4% reported 2 visits, and 21.4% reported 3–9 visits.
- During 6 months post-treatment, 16.5% reported 1 visit, 5.8% reported 2 visits, and 7.5% reported 3–8 visits.
- ED visit frequencies at both times were significantly positively associated with depressive symptom scores.

Population Aging and Unmet Mental Health Needs

- Shortage of licensed geriatric MH clinicians (current and projected)
- Service fragmentation
- Success of lay MH providers in other countries

Our Second Telehealth Project

(R01MD009675; 2015-2019; SDF)

Tele-PST and Tele-BA for Low-Income Homebound Older Adults

- Focused on testing real-world comparative effectiveness, sustainability, and scalability for improving access to depression treatment

  Tele-BA by lay counselors
  Vs.
  Tele-PST by licensed MH clinicians
  via HIPAA-compliant video-conferencing

- All interventionists embedded in Meals on Wheels for care coordination

Research Design: 3-arm RCT

- Tele-BA: 5-step BA Manual (Choi et al., 2014, 2020) adapted and validated for homebound OAs
- Tele-PST: 7-Step PST-PC manual (Hegel, 2001, 2016)
- Attention control condition (AC): Telephone support calls; after 36-week follow-up, offered Tele-BA or Tele-PST
- In-home baseline assessment, 5 tele-treatment sessions, 2 monthly booster calls, & 3 follow-up assessments over 6 months

Equipment

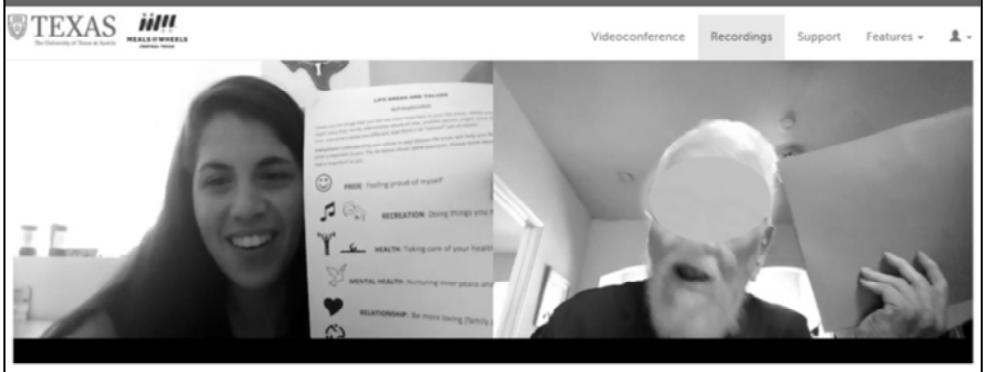
Secure Video platform for tele-sessions (HIPAA compliant)

Laptops, LTE 4G wireless cards, and headphones loaned to clients

Currently, Ipads

More practical than telephone sessions

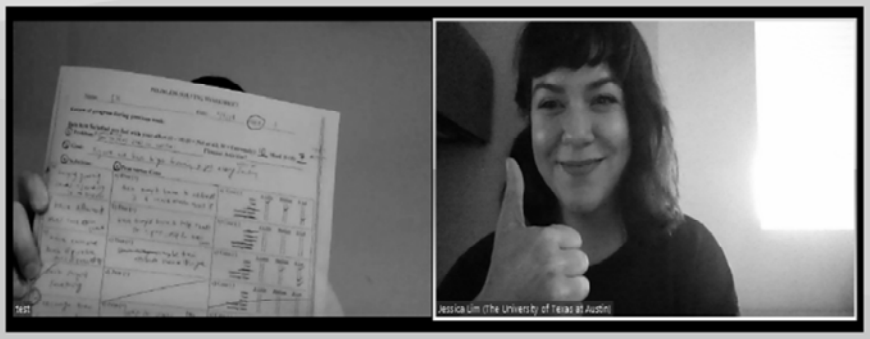
Tele-Session via SecureVideo



TEXAS
Social Work

MEALS on WHEELS
CENTRAL TEXAS

Tele-Sessions via SecureVideo

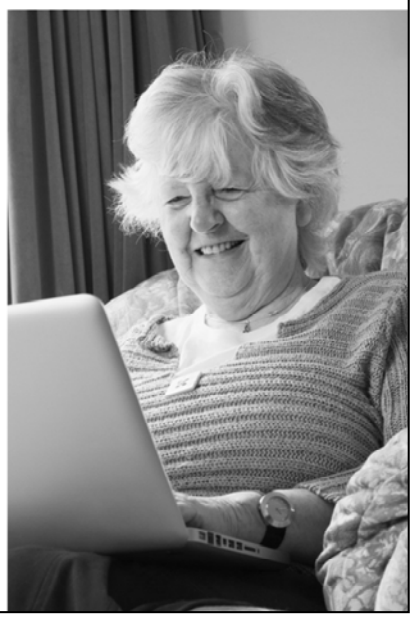


TEXAS
The University of Texas at Austin

MEALS on WHEELS
CENTRAL TEXAS

Enrollment: N=277 (2/2016 – 4/2019)

- BA: 90; PST: 93; AC (attention control): 94
- Few intervention dropouts
- High/equal acceptance rating for both BA & PST
- 12-, 24-, and 36-week follow-ups

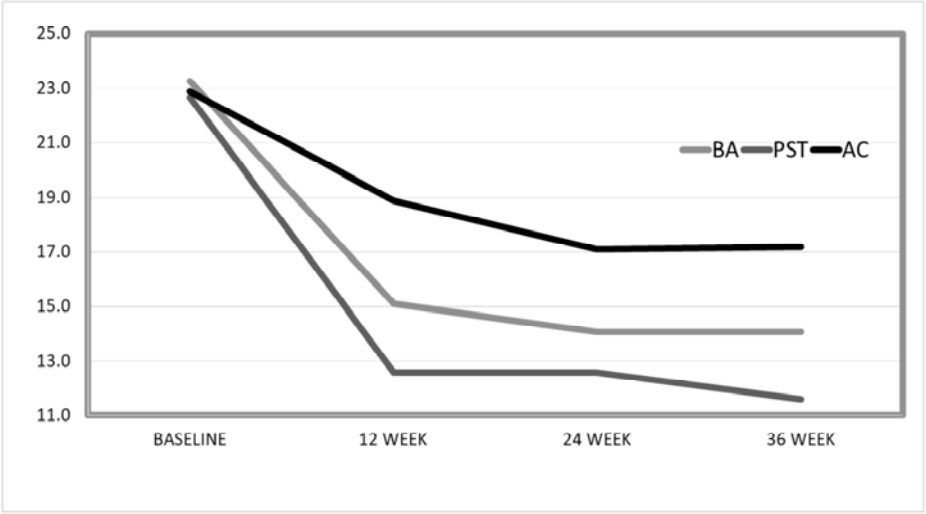


Participant Characteristics at Baseline

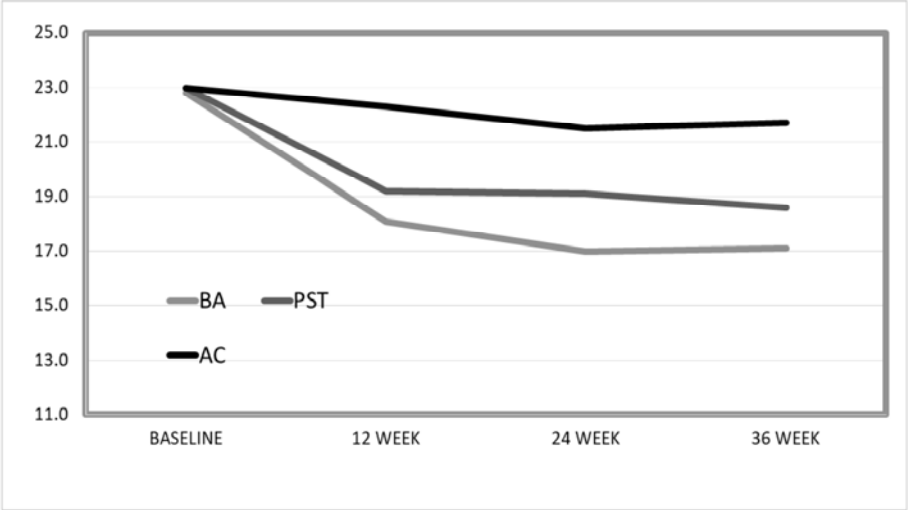
Age (yrs): 67.5 (SD=8.9)	
Gender	
Female	69.7
Male	30.3
Race/ethnicity	
Non-Hispanic White	40.8
Non-Hispanic Black	30.0
Hispanic	29.2
Living alone	49.8
Education	
<High school	26.4
High school diploma	16.2
Some college	33.3
BA degree	24.2
chronic illnesses: 3.8 (SD=1.6)	

Household income	
Up to $15,000	54.2
$15,001-$25,000	26.4
$25,001-$35,000	11.6
$35,001 or higher	7.9
Prescription medication intake	
Antidepressant	51.3
Antianxiety/sleep	38.6
Analgesic	63.2
Anitpsychotic	3.6
SCID-5 diagnosis	
MDD, single ep.	15.2
MDD, recurrent ep.	20.6
Persistent DD	62.1
Unspecified, missing	2.2

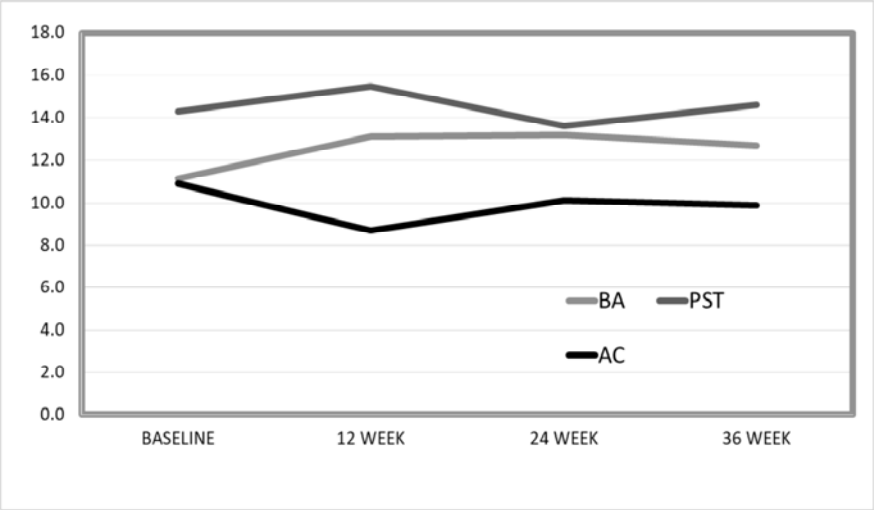
Depressive Symptom (HAMD) Score Change



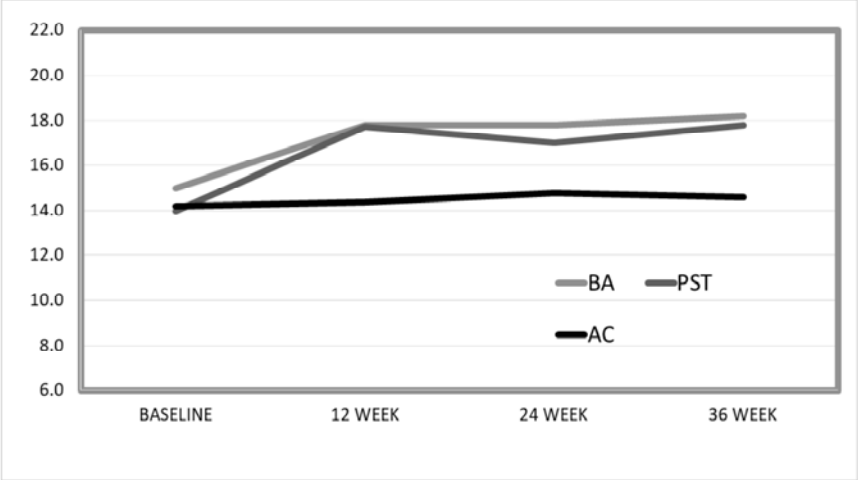
Disability (WHODAS 2.0) Score Change



Social Engagement and Activity Score Change



Satisfaction with Participation in Social Roles Change



Cost-Effectiveness Analysis Results

Tele-BA and Tele-PST were more cost-effective than Attention Control (saved ED visits and hospitalization costs)

(Paper under review for publication; More details will be available when the paper is published.)

Client Story

- Austin PBS aired this story:

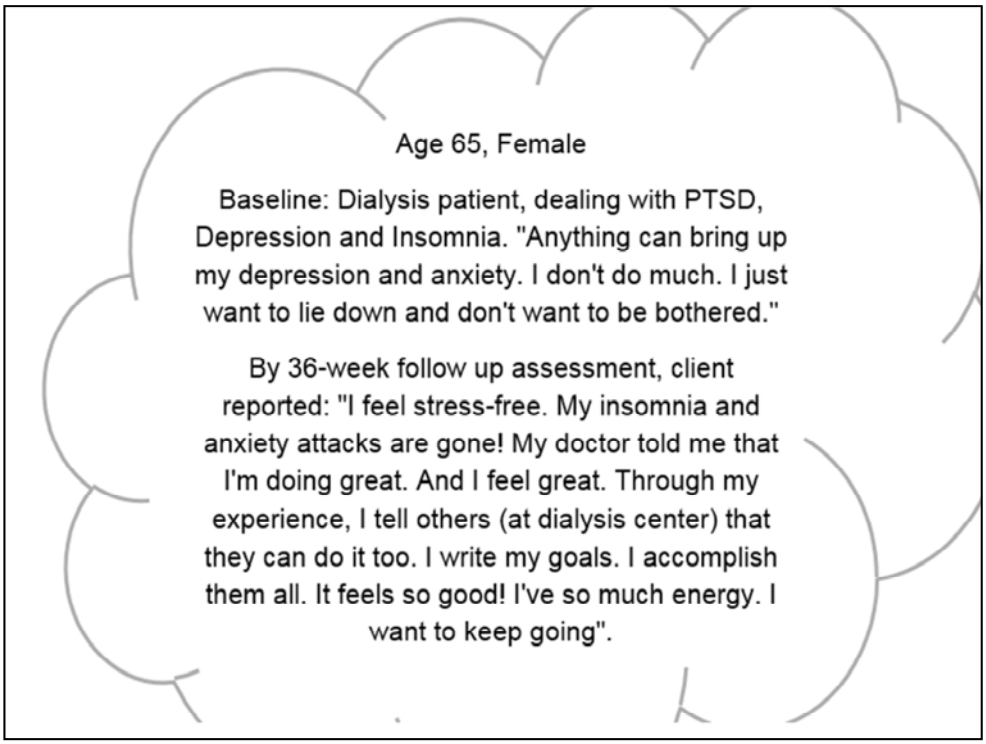
https://www.youtube.com/watch?v=wDMo-EOT5iM&feature=youtu.be

Published Articles

- **Article 1: Effect of Telehealth Treatment by Lay Counselors vs by Clinicians on Depressive Symptoms Among Older Adults Who Are Homebound**
- https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770049?guestAccessKey=69f66541-b937-4490-b3bd-08f06bb3e998&utm_source=jps&utm_medium=email&utm_campaign=author_alert-jamanetwork&utm_content=author-author_engagement&utm_term=1m
- **Invited commentary by Dr. Louise Aronson**
- https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2770042?utm_campaign=articlePDF&utm_medium=articlePDFlink&utm_source=articlePDF&utm_content=jamanetworkopen.2020.15648
- **Article 2: Acceptability and effects of tele-delivered behavioral activation for depression in low-income homebound older adults: in their own words**
- https://pubmed.ncbi.nlm.nih.gov/32693614/

Summary of Findings

- Both Tele-BA and Tele-PST were highly acceptable for low-income homebound OAs
- 5 treatment sessions: Positive outcomes at 12 weeks sustained through 36 weeks:
  - Depression, disability, social engagement and activities, satisfaction with participation in social roles, and perceived social support
- Tele-BA by lay counselors were as clinically effective as and more cost-effective than Tele-PST by licensed clinicians – Lay counselor model will be more scalable and sustainable!
- Integration of Tele-BA in aging service agencies will meet the needs of growing homebound older population better than the existing system of mental healthcare by clinicians


Age 65, Female
Baseline: Dialysis patient, dealing with PTSD, Depression and Insomnia. "Anything can bring up my depression and anxiety. I don't do much. I just want to lie down and don't want to be bothered."
By 36-week follow up assessment, client reported: "I feel stress-free. My insomnia and anxiety attacks are gone! My doctor told me that I'm doing great. And I feel great. Through my experience, I tell others (at dialysis center) that they can do it too. I write my goals. I accomplish them all. It feels so good! I've so much energy. I want to keep going".

Our Third Telehealth Project

(AARP ISO-2017-07-001; 8/2017-3/2020)

Tele-BA for Improving Social Connectedness in Homebound Seniors in NH and TX

- Comparative effectiveness of Tele-BA vs. Tele-FV (friendly visit) for socially isolated, lonely OAs in rural New Hampshire and metropolitan Texas
- Tele-BA was significant in reducing social isolation, loneliness, depression, and increasing social connectedness in 12-week and the effects were sustained at 12-month follow-up.

- **Article 1**: Improving Social Connectedness for Homebound Older Adults: Randomized Controlled Trial of Tele-Delivered Behavioral Activation Versus Tele-Delivered Friendly Visits: https://pubmed.ncbi.nlm.nih.gov/32238297/
- **Article 2**: Modifying Behavioral Activation to Reduce Social Isolation and Loneliness Among Older Adults: https://pubmed.ncbi.nlm.nih.gov/32980253/
- **Article 3**: One Year Impact on Social Connectedness for Homebound Older Adults: Randomized Controlled Trial of Tele-delivered Behavioral Activation versus Tele-delivered Friendly Visits (In press)

Technology and Treatment Engagement Challenges among Older Adults with Depression

AGING & MENTAL HEALTH
https://doi.org/10.1080/13607863.2021.1910789

Routledge
Taylor & Francis Group

Check for updates

Reasons for refusing referrals and challenges to effectual engagement in tele-treatment for depression among low-income homebound older adults

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Steve Hicks School of Social Work, University of Texas at Austin, Austin, TX, USA

ABSTRACT

Objectives: To describe reasons for refusal to be referred to or enroll in a depression treatment study and post-enrollment challenges to treatment engagement and technology-related problems among low-income homebound individuals aged 50+ years with depression.

Methods: Data came from a 3-arm randomized clinical trial that evaluated real-world effectiveness of lay counselor-delivered behavioral activation (BA) versus clinician-delivered problem-solving therapy (PST). Interventionists were embedded in a large home-delivered meals program and treatment sessions were videoconferenced; hence Tele-BA and Tele-PST. We described refusal reasons of those who refused initial case manager referrals ($n = 279$), telephone screening ($n = 64$), enrollment ($n = 47$), or post-enrollment baseline assessments ($n = 18$). We used inductive thematic analysis to explore challenges to effectual treatment engagement and tele-delivery-related problems among Tele-PST or Tele-BA participants ($n = 183$) from the interventionists' tele-session process recordings.

Results: More than a third of potentially eligible older adults refused their case managers' referral, and a quarter of those who accepted referral refused further screening or enrollment. Three quarters of those who refused reported no interest or need or declined to talk about depression. Others refused given their busy schedule with medical appointments and caregiving. Nearly 80% of Tele-BA or Tele-PST participants had some challenges to effectual engagement in treatment sessions due to envi-

ARTICLE HISTORY
Received 13 August 2020
Accepted 25 March 2021

KEYWORDS
Homebound older adults; depression; referral; tele-delivery; treatment engagement

Systemic Challenges in Tele-delivery for Low-income Homebound OAs

- High Internet subscription fee and other digital divide (e.g., computer and tablet ownership) in low-income and rural area residents
- Potential solution: The Older Americans Act funding for mental health services
- In-home tele-behavioral health treatments coverage and reimbursement: Need extension beyond the COVID-19 public health emergency period
- Prospect: NASW advocacy to extend the CMS rules

Individual-level Challenges in Tele-delivery for OAs

1. Environmental barriers to audio/video transmission (video freezing, discordance between audio and video; lost connection)
   - Thick concrete walls of apartment complex
   - Certain rural areas/spots
   - Time of the day: Had more problems during 2-4 PM

Potential solutions:
- Videoconferencing platform bandwidth (higher is not better)
- Find a spot in the house (near window) and turn off ceiling fans
- Use Ethernet connection, if possible
- If possible, avoid scheduling 2-4 pm sessions

2. Tech use training: Most OAs are quick learners but some need more reminders

Potential solutions:
- Easy video-conferencing platform access set up (e.g., w/o log-in process)
- If possible, enlist a family member as a helper
- Provide an easy-to-follow, graphic, step-by-step guide

Technology-related problems, n (% of all 183 Tele-PST or Tele-BA participants)

Internet connectivity/network problems	**93 (50.8%)**
Participant's lack of technical skills and/or device issues	34 (18.6%)
Software problems	19 (10.4%)
Unspecified technical difficulty	18 (9.8%)
Any of the above problem	122 (66.7%)
Switch to telephone or in-person for one or more sessions due to technology-related problems	41 (22.4%)

Treatment Refusal

Mental health help-seeking barriers among OAs:

- Stigma
- Lack of trust in mental health professionals among racial/ethnic minorities
- Not recognizing the need for help
- Doubts about treatment efficacy/benefits, often stemming from the lack of knowledge about depression and its treatment (especially psychosocial treatment)
- Self-sufficiency or other beliefs that they should not need help
- Not wanting to discuss private matters with a stranger
- Family members' discouragement and lack of support

Retention barriers:

- Not finding therapy helpful and cost of treatment
- Thinking that the therapist did not understand their issues

Reasons for Refusing Case Manager Referrals (N=279)

(additional 129 individuals accepted referral but did not answer phone, refused Tx, or did not enroll for other reasons)

No interest or no need for treatment[a]	185 (66.3)
Refusal to talk about depression without giving a specific reason	24 (8.6)
Other formal support[b]	19 (6.8)
Being too busy with medical appointments, dialysis, PT/OT visits, home healthcare	17 (6.1)
Support from family or church friends	8 (2.9)
Doubts about treatment efficacy[c]	7 (2.5)
Dislike/apprehension of tele-delivery[d]	6 (2.2)
Negative past therapy experience	5 (1.8)
Being too busy with caregiving for spouse or other family member, or other family crisis	4 (1.3)
Dislike of opening up to others	3 (1.1)
Discouragement from family members	1 (0.3)

Challenges to Effectual Engagement during TX Sessions

Type of challenges

ENVIRONMENTAL CHALLENGES, 80 (43.7%)	
Lack of privacy (presence of co-residing family members, home health aide)	27 (14.8)
Disruptions by visitors during tele-sessions (family, HDM drivers)	27 (14.8)
Noises from dog barking, neighbors' lawn mowing, TV	18 (9.8)
Incoming telephone calls	12 (6.6)
Disorganized/cluttered environment	6 (3.3)
Missing/misplaced folder containing session worksheets due to disorganized/cluttered room	4 (2.2)

PHYSICAL HEALTH CONDITIONS, 74 (40.4%)	
Sleep-related issues/tiredness/fatigue	27 (14.8)
Chronic/severe pain	25 (13.7)
Cancellation due to prolonged sickness/terminal illness	15 (8.2)
Sensory problems (hearing, vision, sensitivity to light or sound)	11 (6.0)
Post-hospitalization exhaustion	3 (1.6)
Negative side effects of medication	3 (1.6)

WORRY, ANXIETY, PREOCCUPATION, 52 (28.4%)	
Financial and related distress (medical care/medication costs, unpaid bills, pending eviction, no food, lack of transportation to medical appointments; doubled-up living arrangement)	20 (10.9)
Relationship strain/family crisis	19 (10.4)
Chronic anxiety, PTSD	9 (4.9)
Loss and grief	7 (3.8)
Irritability	4 (2.2)

RESISTANCE TO OR DOUBTS ABOUT TX, 24 (13.1%)	
Resistance to PST/BA procedures or components	14 (7.7)
Dislike of the PHQ-9 questions	3 (1.6)
Resistance to asking for/accepting help	1 (0.5)
Doubts about treatment efficacy ("nothing will work")	5 (2.7)
Lack of trust in mental health providers/treatment	1 (0.5)
Feeling guilty about receiving treatment for religious reasons	1 (0.5)
TENDENCY FOR EXPANSIVE STORY TELLING; DIFFICULTY STAYING FOCUSED	14 (7.7)
LIMITED FUNTIONAL LITERACY; INABILITY TO READ HANDOUTS/ACTIVITY SHEETS	4 (2.2)

Mitigation Strategies

Recruitment Flier

Telehealth
Treatment Services
at
Meals on Wheels Central Texas

"It changed my life completely. 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 turn things around. By the time she was through, I was laughing and kicking my heels."

Work with one of our top-notch and caring providers.

- No cost treatment to learn new skills
- Treatment in the comfort of your own home
- No prior computer skills required
- Notice feeling more energized!

Do you often feel tired, stressed out or have low energy?

Have you lost interest in activities and interests you previously enjoyed?

Are you having trouble sleeping, eating or keeping up with daily activities?

Do you feel this way often?

If you answered YES, you might be suffering from depressive symptoms.

This is NOT a normal part of aging unlike most people think.

Be proactive and work with a professional who can help. Without treatment it may only get worse. It's better to act now than later.

Please call the Telehealth Treatment Team at **512-628-8708** or **512-232-0604**
You can also call your Meals on Wheels case manager for more information.

MEALS ON WHEELS CENTRAL TEXAS

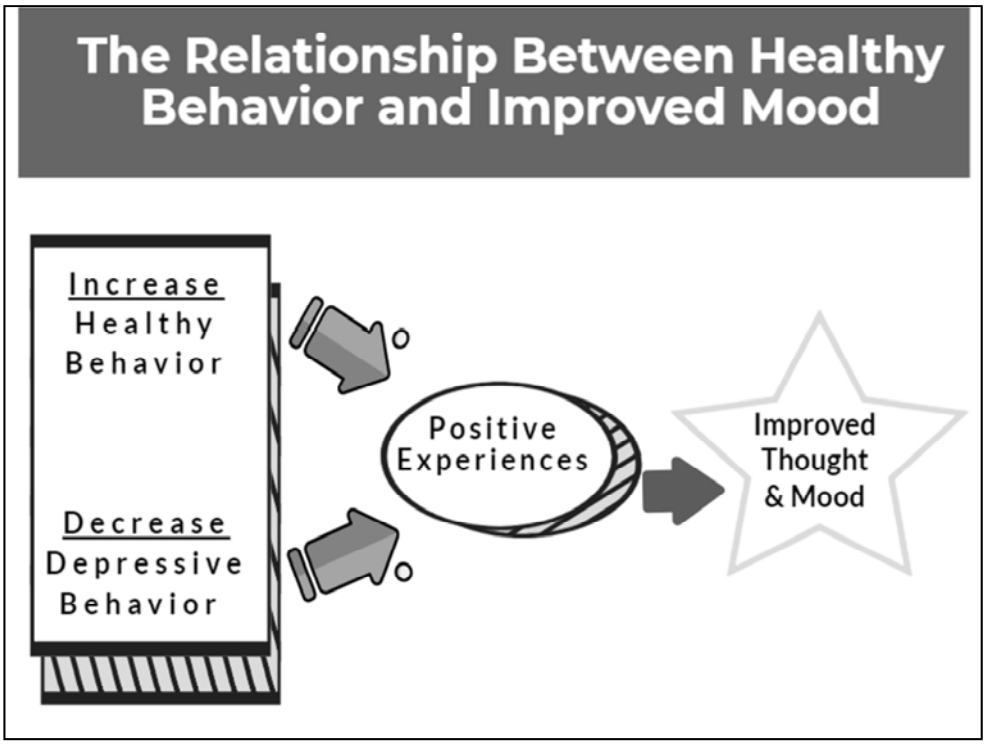
TEXAS

Motivational Talking Points for Treatment Acceptance

- Encourage treatment acceptance (give it a try; nothing to lose)
- "I can do it by myself."—Working with a professional is always a better option.
- "Want to be left alone for now": Do not wait till your mood improves; do something, then your mood will improve.
- It is just one hour a week for five weeks: You can do it and deserve a healthier, more peaceful, and happier life.
- Education about how treatment can change brain and help better manage chronic conditions
- Socialization about treatment process (focus on "Here and Now," no digging up the past)
- Assist to better understand treatment rationale or why each treatment component and structure is needed

Establish Guidelines Upfront for More Conducive Session Environment

- Preserving privacy of the sessions (tell family members not to interfere)
- Use of headphones or earbuds
- Reducing distractions (e.g. TV off, session folders ready, dog in a separate room)
- Finishing up a session within the prescribed time frame by focusing on the session tasks
- Finishing up all sessions within the prescribed time frame, if at all possible


The Relationship Between Healthy Behavior and Improved Mood
Increase Healthy Behavior
Decrease Depressive Behavior
Positive Experiences
Improved Thought & Mood

Life Areas and Values

LIFE AREAS AND VALUES

Self-Exploration

Instructions: Understanding your values in your chosen life areas will help you better focus on what's important to you. The list below show some examples. Please think about any value that is important to you.

PRIDE: Feeling proud of myself

RECREATION: Doing things you enjoy

HEALTH: Taking care of your health needs

MENTAL HEALTH: Nurturing inner peace and spirituality

RELATIONSHIP: Be more loving (family and friends)

HELPING OTHERS: Sharing and volunteering

?

OTHER LIFE AREAS AND VALUES

Example of Weekly Activity Sheet

Life Area and Value	Goal; Desired outcome	Identified activity	Rank difficulty	Barriers	Activity selected for implementation	Time and duration of planned activity
AREA: Self-care of chronic medical conditions and disability	To help control my blood sugar levels	Get up by 10 AM and have healthy breakfast	1	It is difficult to pull myself up in the morning: lack of motivation.	Selected	10 AM daily; For an hour
VALUE: Taking more active roles to better manage my health problems	To reduce bodily pain	Do some stretch exercise while watching TV	0	I have a rubber ball to use and have done it before.	Selected	3 PM daily; For 15 minutes

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Q & A

Thank you!