The Moderating Role of Sexual Identity in Group Teletherapy for Adults Aging with HIV

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Older adults living with HIV/AIDS experience high rates of depression and suicidal ideation but are less likely than their younger counterparts to seek psychological services. HIV continues to disproportionately impact older men who have sex with men (MSM), many of whom were infected in their 20s and 30s. This study examined whether therapy attendance rates and the efficacies of two group-format teletherapies for the treatment of depression (coping effectiveness group training and supportive-expressive group therapy) were comparable for older MSM and older heterosexuals living with HIV. Intervention-outcome analyses found that older MSM and older heterosexuals living with HIV attended comparable numbers of teletherapy sessions. Older heterosexuals living with HIV who received telephone-administered supportive-expressive group therapy reported significantly greater reductions in depressive symptoms than SOC controls. A similar pattern was not found in older MSM. More research is needed to personalize and tailor group teletherapies for older MSM living with HIV.

**Keywords:** aging, depression, HIV, teletherapy

Advances in antiretroviral therapy (ART) and improved clinical care have transformed HIV from a terminal illness into a chronic disease that requires long-term self-management and regular care. The face of HIV/AIDS has changed since its emergence some 30 years ago, with more individuals living into later life and even enjoying life expectancies that are comparable to HIV-seronegative persons. Today, one-third of all persons in the United States living with HIV/AIDS are ≥50 years of age and it is estimated that, by 2015, one-half of all people living with HIV/AIDS will be 50-plus years of age.

Older persons living with HIV (PLHIV) confront many complex psychosocial challenges. Elevated levels of depressive symptoms in older PLHIV are as high as 50%,
20% of older PLHIV report symptoms of anxiety, and one out of four older PLHIV think about taking their own lives. Moreover, older PLHIV are five times more likely to experience depression than their HIV-negative peers.

Depression has many deleterious effects on persons aging with HIV. Depressed older PLHIV are less likely to adhere to their HIV-specific and non-HIV-related medications (such as antidepressants and cholesterol reducing agents), are more frail, are less likely to be engaged and remain in HIV-related care, and have more comorbid health conditions. High rates of psychiatric distress in older PLHIV are particularly troubling given that adults aging with HIV are less likely than their younger counterparts to seek treatment for their psychological disorders. Unfortunately, there are currently very few (if any) age-contextualized mental health interventions for older PLHIV that promote clinically-meaningful and sustained reductions in psychiatric symptoms.

Innovative approaches that can deliver therapeutic services to older PLHIV are urgently needed given the high prevalence rates of psychiatric disorders in this group and the tendency of older PLHIV to isolate themselves from mental health resources due to stigma and confidentiality concerns. Many older PLHIV also live with comorbid health conditions that prevent them from traveling to traditional sources of support (eg, support groups, mental health providers, etc.). Teletherapy, defined as the use of telecommunication devices (eg, traditional land-line and cellular telephones) to deliver psychological services, may enable older PLHIV to access confidential and cost-effective psychological services.

The efficacy of teletherapy has been demonstrated across many clinical populations, including persons with schizophrenia, obsessive compulsive disorder, agoraphobia, and PTSD. Teletherapy has been particularly efficacious in treating depressive disorders. Mohr et al.’s meta-analysis found significant reductions in depressive symptoms across all assessment periods for patients enrolled in telephone-administered psychotherapy compared to standard of care controls (d = .26); even more pronounced symptom reductions were found when analyses were limited to changes from pre- to post-intervention (d = .82).

Telephone-administered interventions have also demonstrated efficacy in the area of HIV/AIDS. Teletherapy has increased adherence to antiretroviral therapy, reduced cigarette smoking, reduced non-injection drug use in persons in HIV primary care, decreased risky sexual behaviors in HIV-infected rural persons, and reduced depressive symptoms in rural persons living with HIV/AIDS.

Research increasingly shows that various therapies can be administered successfully over the telephone to older PLHIV. Lovejoy and colleagues found that four sessions of telephone-administered motivational interviewing (MI) combined with safer sex skills building resulted in significantly fewer unprotected sex acts compared to usual care controls at three- and six-month follow-up. In a secondary data analysis of this same dataset, Lovejoy et al. found that, relative to usual care controls, older PLHIV who received either one or four sessions of MI plus safer sex skills building reported greater reductions in depression, anxiety, and stress at six-month follow-up. Finally, Heckman et al. found that older PLHIV who received 12 sessions of telephone-administered coping skills group training reported fewer psychological symptoms, lower levels of life-stressor burden, increased coping self-efficacy, and fewer maladaptive coping strategies compared to usual care controls.

While these clinical trials suggest that teletherapy can reduce risky sexual behaviors and improve psychosocial well-being in older PLHIV, no research has examined if teletherapy is equally efficacious across various sexual identities in this population. To the best of our knowledge, no RCT has examined the efficacies of various teletherapies for older PLHIV using sexual identity as a moderating variable.

Although high levels of stigma, discrimination, and concerns regarding privacy have been documented repeatedly among many older men who have sex with men (MSM) living with HIV, many heterosexual men and women living with HIV/AIDS also report considerable privacy and confidentiality concerns. Heightened privacy concerns among both MSM and heterosexuals living with HIV/AIDS make it difficult to hypothesize which group might find telephone-administered therapy to be safer and more accommodating. Ultimately, teletherapy enables older people of all sexual self-identities who are living with HIV/AIDS to obtain therapy in the privacy of their home and circumvent the need to obtain psychological services in venues associated with HIV or being a sexual minority.

The current study examined if two group-format teletherapies for the treatment of depression (coping effectiveness group training and supportive-expressive group therapy) were equally efficacious for older MSM and older heterosexuals living with HIV. Specifically, the study examined if telephone-administered psychotherapy was more accommodating to one group in terms of participation in a greater number of teletherapy sessions and more efficacious for one group via greater reductions in depressive symptoms from pre-intervention through eight-month follow-up. As the numbers of older MSM and heterosexuals living with HIV continue to increase, it will be important to develop personalized interventions that are sensitive to differences in the mental health needs of these two groups.

METHODS

Participants and Procedures

Between June 2008 and January 2010, AIDS service organizations (ASOs) in 24 states recruited participants into an
AIDS mental health clinical trial conducted exclusively for older PLHIV. ASOs recruited participants by distributing recruitment brochures to their older clients through face-to-face interactions, regular mail, and by placing brochures in “high-traffic” areas of their facilities (eg, reception areas). Participants were recruited through ASOs in Arkansas, California, Delaware, Florida, Georgia, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Washington, and Wisconsin. Recruiting participants from these 24 states assembled a large sample that better generalized to older PLHIV across the United States. The university’s IRB approved the project’s protocol, written informed consent was obtained from all participants, and no adverse events were reported during the clinical trial.

Potential participants contacted the research office via a toll-free telephone number or a project-specific e-mail address listed in the recruitment brochure. During this initial contact, research staff scheduled a 30-minute appointment to conduct a telephone-based, eligibility screening interview. The primary instrument in the screening interview was the Geriatric Depression Scale (GDS). Each of the 30 GDS items used a “yes–no” response option to assess feelings of depression over the past week (potential range = 0 to 30). Advantages of the GDS over the Beck Depression Inventory included its simple yes/no response format (which translated well over the telephone environment) and the absence of somatically-oriented items. Summed GDS scores are categorized as: No Depression [0–9]; Mild [10–20]; and Moderate-to-Severe.

All participants satisfied the following inclusion criteria: (1) ≥50 years of age; (2) self-reported diagnosis of HIV infection or AIDS; (3) a GDS score ≥10 at eligibility screening; (4) reliable access to a land-based or cellular telephone for the next 12 weeks; and (5) provision of informed consent. A threshold GDS value of ≥10 was used to ensure that participants had a sufficient number of depressive symptoms that could potentially respond to therapy. To assemble a more externally-valid sample, individuals were not excluded from this study on the basis of alcohol or substance use disorders, bipolar disorder, psychotic symptoms, or current receipt of psychotherapy or pharmacotherapy.

Assessment

Eligible participants were mailed a self-administered, pre-intervention assessment and a self-addressed postage-paid envelope to return the survey. Participants completed the survey in approximately one hour in their place of residence. The incentive payment schedule for each assessment was pre-intervention = $40, post-intervention = $50, 4-month follow-up (FU) = $50, and 8-month FU = $60. The study’s post-intervention assessment was administered immediately after the final intervention session, the four-month follow-up was administered four months after the post-intervention assessment, and the eight-month follow-up was administered eight months after the post-intervention assessment. Measures used in intervention-outcome analyses are described below.

Geriatric Depression Scale (GDS)

The Geriatric Depression Scale (GDS) was the study’s primary outcome measure. The GDS demonstrated good internal consistency and test–retest reliability (rtt) in the study (α = .87 based on all participants; rt = .75, p < .001 based on pre- and post-intervention GDS values from standard of care controls).

Mental Health and Substance Use Services Utilization Scale

This retrospective recall scale collected information on whether the participant had received treatment for: (1) substance use problems in the past four months (eg, individual therapy, group therapy, 12-step programs); or (2) psychological difficulties in the past four months (eg, individual therapy, group therapy).

Intervention Conditions

After completing pre-intervention measures, participants were randomly assigned to a study arm using a 1:1:1 assignment ratio. Participants were recruited in waves of 24 (eg, 24 MSM, 24 heterosexual men, and 24 women) and assigned randomly to one of three study arms (ie, 8 participants per study arm) using a computerized random numbers algorithm. None of the women who enrolled into the project self-identified as lesbian, bisexual, or transgendered; all self-identified as heterosexual. Teletherapists were not blinded to the study arm to which the participant had been assigned but were blinded to data participants provided in pre-intervention assessments. Participants were not blinded to their experimental study arm. The study’s research office received 796 telephone contacts from individuals inquiring into the study, 607 of whom returned signed informed consent forms. Of these 607 individuals, we conducted full eligibility interviews (eg, levels of depressive symptoms) with 533 potential participants. The remaining individuals (ie, n = 74) did not complete eligibility screenings because: (1) we were unable to reach them because they did not return our voicemail messages; (2) the contact information they provided was incorrect or had changed; or (3) they decided not to complete eligibility screenings. Ultimately, 361 individuals satisfied inclusion criteria and enrolled into the RCT.

A priori power analyses, informed by data obtained in previous research with older PLHIV indicated that 80 participants per condition (N = 240) were needed to achieve...
power of .80 or greater to detect meaningful changes in GDS values between the three intervention conditions in outcome analyses that used generalized estimating equations (GEE).

**Standard of Care (SOC) Comparison Condition**

Standard of Care (SOC; n = 121) participants received no active treatment but had access to community-based support services commonly available to older PLHIV, such as AIDS-related support groups, Twelve-Step programs, and individual therapy.

**Telephone Coping Effectiveness Training**

The manualized Telephone Coping Effectiveness Training (tele-CET; n = 118) + SOC intervention offered participants twelve 90-minute sessions of telephone-administered coping effectiveness group training. Groups of six to eight individuals participated in the intervention exclusively through teleconference technology. All tele-CET groups were facilitated by two co-therapists with Masters- or Ph.D.-level credentials. This condition used separate therapy groups for MSM, heterosexual men, and women. The therapy was based on Lazarus and Folkman’s28 Transactional Model of Stress and Coping and used cognitive-behavioral principles to appraise stressor severity; develop problem- and emotion-focused coping skills; determine the match between coping strategies and stressor controllability; and optimize coping through use of social supports. This therapy was selected for use with older PLHIV given its established efficacy in previous face-to-face trials of AIDS mental health interventions29–32 and because a pilot test of this therapy produced significant reductions in psychiatric symptoms in older PLHIV.24

**Telephone Supportive-Expressive Group Therapy + SOC**

Similar to the tele-CET study arm, the manualized Telephone Supportive-Expressive Group Therapy (tele-SEGT; n = 122) + SOC intervention consisted of twelve 90-minute sessions, assembled six to eight participants per group. The intervention solely utilized teleconference technology, and was led by two co-therapists with Masters- or Ph.D.-level credentials. Separate groups were conducted for MSM, heterosexual men, and women. Using principles derived from humanistic psychology, including fostering empathy and positive regard, therapist transparency, and maintaining a present-moment focus, the adapted therapy asked participants to explore their feelings about (1) the difficulties associated with normal aging, (2) being HIV-positive, and (3) living with HIV/AIDS as an older adult. This therapy was selected for use in the RCT because of its demonstrated efficacy33 and its widespread use in clinical settings. Throughout the 12 sessions, group co-therapists sought to facilitate mutual support among group members, improve social and family support, encourage greater openness and emotional expressiveness both within and outside the group, integrate a changed self and body image into the person’s view of self, improve doctor–patient relationships, detoxify feelings around death and dying, develop a life project, and define and enhance group members’ life quality.

**General Procedures across the Two Group Teletherapy Study Arms**

Both group teletherapies used “reserved conference calls” that began with each participant calling in to a toll free telephone number at a prearranged time. Participants were then connected with the group’s co-therapists and other group members. To increase session attendance, participants received telephone reminder calls the day before their session.

Prior to starting a new teletherapy group, research staff contacted participants and reviewed program objectives, outlined services that participants could expect to receive, and discussed possible benefits and risks associated with the program. An important part of this preliminary call was to discuss the setting in which the individual participated in group teletherapy. Research staff emphasized that the setting should be private, call waiting should not be utilized during phone sessions (except in a possible emergency), therapy sessions should be scheduled when few outside telephone calls or interruptions were anticipated, the speakerphone feature of the telephone should not be used, and participants should not partake in teletherapy through cell phones when driving.

**Therapist Training and Supervision**

Unlike many clinical trials, no centralized or formal training of group teletherapists was conducted. Similar to study participants, group teletherapists were located in various geographic regions of the United States. The research office mailed the appropriate intervention manual to each therapist (therapists administered only one therapy to reduce the threat of intervention drift) and asked him or her to review the manual prior to conducting teletherapy. We purposely employed this approach because, in many instances, this is how many manualized teletherapies are (and will be) disseminated to community-based agencies for use in community settings. This approach also increased the external validity of the teletherapies tested in this clinical trial.

At the completion of each teletherapy session, therapists completed a “Therapy Content Checklist” to ensure that teletherapy content was covered. All teletherapists also participated in monthly telephone-based supervision with a licensed clinical psychologist on the study team. The intent of tele-supervision was to provide therapists with an
opportunity to discuss their administration of their therapy, enable therapists to discuss any clinical concerns they had, and permit the supervisor to ensure that therapists administered the manualized treatment with fidelity.

Data Analysis Plan

Chi-squared tests of association and one-way ANOVA compared demographic, clinical, and pre-intervention GDS values across study arms. One-way ANOVA compared the number of teletherapy sessions completed by tele-SEGT and tele-CET participants. Longitudinal changes in depressive symptoms were modeled using generalized estimating equations (GEEs). GEEs account for correlated data due to multiple assessments of individual participants in longitudinal study designs and utilize all available data. All GEEs specified model-based variance estimators and unstructured correlational matrices for repeated measures. GEE models estimated the effects of (1) “Time” (not reported), (2) “Study Arm” (not reported), and (3) the “Time × Study Arm” interaction. Cohen’s “d” measured the effect size of mean differences in GDS values between treatment arms. For missing data, a last-observation-carried-forward data imputation strategy was used. All inferential analyses employed 2-tailed tests of significance and alpha = .05.

RESULTS

Participant Characteristics and Intervention Session Attendance

As shown in Table 1, most participants were African American (59%), had progressed to AIDS (56%), and been prescribed ART (83%), and reported annual incomes of $10000 or less (59%). In the current study, 149 participants self-identified as MSM. Of the heterosexual participants (n = 212), 71 were male and 141 were female. On average, participants were 59.0 years of age (SD = 5.1 years, range = 50–85) and had GDS pre-intervention values of 15.0 (SD = 7.4), suggesting mild to moderate depressive symptomatology. In terms of intervention session attendance, MSM attended 8.11 sessions of tele-SEGT while heterosexual participants attended 6.95 tele-SEGT sessions (p > .05). MSM attended 7.25 sessions of tele-CET while heterosexual participants attended 5.79 tele-CET sessions (p > .05).

Changes in Depressive Symptoms by Sexual Orientation and Condition

Consistent with intent-to-treat principles, all randomized participants were included in the intervention-outcome analysis. Generalized linear models showed that, across all assessment periods, MSM reported more depressive symptoms than heterosexual men and women; however, the only statistically significant difference occurred at post-intervention, Wald (1) = 6.87, p = .009, d = 0.26 (see Tables 2a and 2b).

Among older MSM (see Tables 2a and 3a), tele-SEGT participants reported fewer depressive symptoms at post-intervention compared to SOC, B = –2.39, p = .03, d = 0.44. Tele-SEGT participants also reported marginally fewer depressive symptoms at post-intervention compared to tele-CET participants, B = –1.95, p = .07.

Among older heterosexual participants (see Tables 3a and 3b), tele-SEGT participants reported fewer depressive symptoms at post-intervention than SOC controls, B = –2.25, p = .01, d = 0.45 and tele-CET participants,

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall (N = 361)</th>
<th>MSM (n = 149)</th>
<th>Heterosexual (n = 212)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>59.0 ± 5.1 (50–85)</td>
<td>59.6 ± 6.0 (50–85)</td>
<td>58.6 ± 4.3 (52–71)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Caucasian</td>
<td>23% (83)</td>
<td>40% (59)</td>
<td>11% (24)</td>
</tr>
<tr>
<td>African American</td>
<td>59% (214)</td>
<td>41% (61)</td>
<td>72% (133)</td>
</tr>
<tr>
<td>Latino/Latina</td>
<td>11% (39)</td>
<td>9% (13)</td>
<td>12% (26)</td>
</tr>
<tr>
<td>Other/Multi-racial</td>
<td>7% (25)</td>
<td>11% (16)</td>
<td>4% (9)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
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<tr>
<td>≤ $10000</td>
<td>59% (214)</td>
<td>42% (63)</td>
<td>72% (151)</td>
</tr>
<tr>
<td>$10001–$20000</td>
<td>30% (107)</td>
<td>42% (63)</td>
<td>21% (44)</td>
</tr>
<tr>
<td>$20001–$30000</td>
<td>11% (39)</td>
<td>15% (23)</td>
<td>8% (16)</td>
</tr>
<tr>
<td>Years of education</td>
<td>12.7 ± 2.2</td>
<td>13.6 ± 2.2</td>
<td>12.1 ± 2.0</td>
</tr>
<tr>
<td>Years with HIV</td>
<td>18.0 ± 5.8</td>
<td>18.7 ± 5.8</td>
<td>17.5 ± 5.7</td>
</tr>
<tr>
<td>Progressed to AIDS</td>
<td>56% (201)</td>
<td>68% (101)</td>
<td>47% (100)</td>
</tr>
<tr>
<td>Taking HAART</td>
<td>83% (299)</td>
<td>90% (133)</td>
<td>78% (166)</td>
</tr>
<tr>
<td>Substance abuse Tx in the past months</td>
<td>80% (283)</td>
<td>86% (126)</td>
<td>77% (157)</td>
</tr>
<tr>
<td>Psychological Tx in the past months</td>
<td>56% (195)</td>
<td>57% (83)</td>
<td>55% (112)</td>
</tr>
<tr>
<td>GDS score at pre-intervention</td>
<td>15.0 ± 7.4</td>
<td>15.7 ± 7.5</td>
<td>14.4 ± 7.4</td>
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</table>
B = –2.62, p = .01, d = 0.52. Tele-SEGT participants also reported fewer depressive symptoms than SOC participants at four-month follow-up, B = –2.23, p = .01, d = 0.46, and eight-month follow-up, B = –2.06, p = .04, d = 0.35. At eight-month follow-up, tele-SEGT participants reported marginally fewer depressive symptoms that tele-CET participants, B = –1.63, p = .10.

Given that slightly more than one-half of participants self-reported receiving psychological treatments over the past four months, a post-hoc analysis was conducted to determine if the recent receipt of psychological treatment (s) may have moderated teletherapy efficacy. At pre-intervention, older PLHIV who were not receiving psychological services outside of the clinical trial’s protocol reported similar GDS values (M = 15.4, SD = 7.0) to older PLHIV who had received psychological services during the past four months (M = 14.6, SD = 7.9), F(1, 340) = 0.97, p = .35. A subsequent 2 (No Psychological Treatment vs Received Psychological Treatment) × 3 (Control, Supportive Expressive Group Therapy, Coping Effectiveness Group Training) × 4 (Pre-Intervention, Post-Intervention, Four-Month Follow-Up, Eight-Month Follow-Up) RM ANOVA found that the two treatment conditions were equally efficacious across the four assessment periods for persons who had, or had not, received psychological services, F(6, 810) = 0.64, p = .70, mitigating the possibility that current psychological treatment moderated therapy efficacy.

DISCUSSION

The current study investigated if two group teletherapies were equally efficacious for older MSM and older

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**TABLE 2a**

<table>
<thead>
<tr>
<th>Group</th>
<th>Post-intervention</th>
<th>Four-month Follow-up</th>
<th>Eight-month Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping</td>
<td>15.34 (0.71)</td>
<td>14.35 (0.70)</td>
<td>14.86 (0.63)</td>
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<tr>
<td>Supportive-expressive</td>
<td>13.39 (0.79)</td>
<td>13.15 (0.77)</td>
<td>13.83 (0.70)</td>
</tr>
<tr>
<td>Standard of care</td>
<td>15.78 (0.73)</td>
<td>14.74 (0.71)</td>
<td>15.28 (0.64)</td>
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**TABLE 2b**

<table>
<thead>
<tr>
<th>Group</th>
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</thead>
<tbody>
<tr>
<td>Coping</td>
<td>13.63 (0.61)</td>
<td>13.13 (0.60)</td>
<td>13.50 (0.71)</td>
</tr>
<tr>
<td>Supportive-expressive</td>
<td>11.01 (0.58)</td>
<td>11.94 (0.56)</td>
<td>11.87 (0.67)</td>
</tr>
<tr>
<td>Standard of care</td>
<td>13.26 (0.61)</td>
<td>14.17 (0.59)</td>
<td>13.93 (0.71)</td>
</tr>
</tbody>
</table>

**TABLE 3a**

<table>
<thead>
<tr>
<th></th>
<th>Post-intervention</th>
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<tr>
<td></td>
<td>B</td>
<td>P</td>
<td>d</td>
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<tr>
<td>Tele-CET vs SOC</td>
<td>–0.44</td>
<td>.67</td>
<td>.44</td>
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<td>–2.39</td>
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<td>.01</td>
<td>.52</td>
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</table>
heterosexuals living with HIV/AIDS. While some research has shown that telephone-administered interventions are efficacious for MSM, this research has typically used samples of younger MSM and has rarely, if ever, directly compared the efficacy of teletherapy between MSM and heterosexuals.

Analyses examining therapy session attendance found that older MSM attended slightly more tele-SEGT and tele-CET sessions than older heterosexuals, although these differences did not reach traditional levels of statistical significance. Orellana and colleagues observed that MSM who opted to enroll into a one-on-one, telephone-administered intervention were more open about their self-identity, suggesting that MSM with significant confidentiality concerns may be uncomfortable with the seemingly safe teletherapy environment. Perhaps older MSM and heterosexuals who enrolled into this clinical trial were comparable in terms of their openness with their sexual identity and this explains, at least in part, similar rates of teletherapy session attendance. Moreover, and contrary to conventional wisdom, many older heterosexuals living with HIV/AIDS report considerable privacy and confidentiality concerns, providing perhaps another explanation of similar therapy session attendance. Taken together, findings from this study and previous research suggest that the privacy and anonymity ostensibly afforded by the telephone environment are appreciated equally by older heterosexuals and MSM living with HIV/AIDS.

Intervention-outcomes analyses also showed that older heterosexuals living with HIV who received tele-SEGT reported significantly greater reductions in depressive symptoms than SOC controls at post-intervention and four- and eight-month follow-up. A similar pattern of findings in older MSM who received tele-SEGT was not found. The only evidence for the efficacy of teletherapy for older MSM was that older MSM assigned to tele-SEGT reported fewer depressive symptoms than SOC controls at post-intervention, but these improvements dissipated by four-month follow-up.

Some research suggests that HIV-positive MSM benefit less from group-level interventions, benefiting more from interventions that use a one-on-one format. Group-level interventions may provide fewer opportunities to personalize and tailor interventions sufficiently well enough to address the numerous and complex syndemic issues that confront many MSM, such as loss of partners, friends and acquaintances, stigma and discrimination related to sexual orientation, family alienation, and dealing with discriminatory laws and policies. Conversely, group-level interventions (particularly tele-SEGT) may be more helpful for older heterosexuals living with HIV because there are very few supportive resources available to, and specific for, older heterosexuals living with HIV/AIDS. Supportive group interventions have the advantage of providing opportunities for individuals to interact with others who have gone through, or are going through, similar experiences. Whereas older MSM may be part of more closely-knit gay communities, there may be fewer communities or networks that older HIV-infected heterosexuals can connect with that are specifically identified with HIV, aging, and self-identifying as heterosexual.

It is possible that gender dissimilarities between the MSM and heterosexual groups explain differences in depression outcomes. A review of the psychotherapy outcome literature by Bohart and Wade found that women were more likely to seek and utilize mental health treatments; however, their review also concluded that gender is not consistently related to psychotherapy outcomes, whether delivered in one-on-one or group formats. Accordingly, while the heterosexual group contained many more women than the MSM group, gender is unlikely to explain treatment outcome differences observed between older MSM and heterosexuals in this study.

**CONCLUSIONS**

This study had several limitations. All participants were recruited through AIDS-related organizations and, as such, had access to at least some HIV-related services. Future research should include larger numbers of older PLHIV who are less well connected with social service organizations and may have even more serious psychosocial needs. Approximately one-half of participants were receiving concurrent mental health treatments independent of the study’s protocol, such as participation in individual therapy, group therapy, and/or 12-step programs. Some gains reported by participants may be attributable to these outside services and not the study’s interventions, although additional post-hoc intervention-outcome analyses seemed to nullify this possibility.

It is also possible that the two teletherapies would have been more efficacious if the sample consisted solely of older PLHIV diagnosed with Major Depressive Disorder. It should also be noted that teletherapists received relatively little structured training in the teletherapy they administered and relied largely on the manual for the administration of their teletherapy. While this increases the study’s external validity, it may have reduced both teletherapies’ efficacy. The supportive-expressive and coping effectiveness group therapies were administered exclusively via telephone; the efficacies of these therapies for older PLHIV may differ if administered in face-to-face settings or using an individual format. One final limitation is that there were considerably more heterosexuals in the RCT (n = 212) than MSM (n = 149). Intervention-outcome analyses for older heterosexuals may have benefited from greater statistical power, although the effect sizes associated with intervention effects for older heterosexuals were greater than those for older MSM, potentially discounting this concern.
Despite these limitations, this study also had several strengths. These included relatively high rates of assessment follow-up at post-intervention and four- and eight-month follow-up (~90% at eight-month follow-up across all participants) and considerable geographic diversity among participants. An additional strength is that participants experiencing comorbid alcohol, substance use, or psychiatric disorders were enrolled into the study, increasing its external validity and provide a “real-world” test of the teletherapies. As the population of older PLHV continues to increase in the United States and worldwide, there is an urgent need to develop mental health interventions that are age-appropriate and sensitive to sexual self-identity. The current study suggests that while teletherapies may be efficacious in reducing depression in older heterosexuals living with HIV/AIDS, more research is needed that can yield teletherapies better capable of reducing psychological symptoms in the growing population of older MSM living with HIV/AIDS.

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