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Passive Coping Response to Depressive Symptoms among Low-Income Homebound Older Adults: Does It Affect Depression Severity and Treatment Outcome?

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Abstract

Due to their homebound state, lack of financial resources, and/or other life demands, a significant proportion of depressed, low-income homebound older adults experience depression. Because of their limited access to psychotherapy, most of these older adults self-manage their depressive symptoms. The purposes of this study were to examine (1) the relationship between homebound older adults' coping responses to depressed mood and the severity of their depressive symptoms at baseline (n =121), and (2) the moderating effect of passive coping responses on the relationship between participation in problem-solving therapy (PST: in-person or telehealth delivery) and depressive symptoms at 12- and 24-week follow-ups. Controlling for the effects of demographic and disability characteristics, cognitive passive coping was significantly associated with baseline depressive symptoms, while behavioral passive coping was not. The main effect of baseline cognitive passive coping response was also significant in mixed-effects regression analysis, but the interaction between coping pattern and group was not significant. The results point to a possibility that cognitive passive copers may have benefited as much from PST as the rest of the PST participants. Further research needs to examine the moderating effect of coping responses to depressive symptoms on treatment efficacy of PST and other psychosocial interventions for late-life depression.

Keywords

Homebound older adults; Passive coping; Depressive symptoms; Treatment outcome

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Authorship Contributions

N. Choi and M. Bruce designed and implemented the study, and all authors contributed to producing this paper and agree to publication.

Conflict of Interest

No conflicts of interest exist for any of the authors. The funding sources were not involved in the production of this paper in any way.

Introduction

A significant proportion of disabled, homebound older adults experience depression, as chronic medical illness, disability, and social isolation tend to be highly correlated with depression (Bruce et al., 2002; Choi et al., 2010; Ell et al., 2005; Sirey et al., 2010). Financial worries and other life stressors (e.g., family conflict, housing instability) related to limited financial resources are also highly correlated with depression among low-income homebound older adults (Choi et al., 2011). Despite their high vulnerability to and experience of depression, however, low-income homebound older adults tend to underutilize depression treatment services other than antidepressant medication prescribed mostly by their primary care physicians. Their homebound state, lack of financial resources, and/or other life demands create a barrier to accessing psychotherapy that may help them learn coping skills for stressors and depressed mood itself.

Previous research on coping strategies and styles largely examined their moderating effects on the relationship between specific situational demands/stressors and mental health outcomes (Blalock & Joiner, 2000; Lazarus, 1999; Lazarus & Folkman, 1984; Thoits, 1995). However, little research has been conducted regarding the nature of cognitive and behavioral coping responses to their depressive symptoms among older adults in general and homebound older adults in particular. Although coping responses to depressive mood may be an extension of an individual's general coping style, they represent the specific ways in which the individual reacts to depression per se and reveal the kind of help-seeking behaviors, or lack thereof, that he or she employs to self-manage and cope with depressed mood. The purposes of the present study were to examine the type of coping responses to depressed mood and the effect of passive coping responses on depression severity and treatment outcomes among low-income homebound older adults who participated in a pilot randomized controlled trial of problem-solving therapy (PST).

Active versus Passive Coping Responses to Depression and Study Hypothesis

Our literature search did not yield any study that examined depressed older adults' efforts to cope with their depressed mood; however, previous research on response styles among individuals with depression/dysthymia suggests that the ways in which individuals respond to depressed mood influence both the duration and severity of their depression (Nolen-Hoeksema, 1991). Ruminative responses, in which individuals focus intently on their symptoms of depression without taking action to relieve them, were often found to exacerbate and prolong depression (Nolen-Hoeksema, Morrow, & Fredrickson, 1993; Just & Alloy, 1997; Morrow & Nolen-Hoeksema, 1990). Another study found that both pretreatment rumination and distraction--thoughts and behaviors that individuals engage to distract themselves from depressed mood--were associated with more depressive symptoms at the conclusion of treatment (PST, paroxetine, or placebo) among primary care patients aged 18 to 59 (Schmaling, Dimidjian, Katon, & Sullivan, 2002).

Active versus passive coping responses represents the approach versus avoidance dimensions of coping method (Billings & Moos, 1981; Suls & Fletcher, 1985). Active coping refers to cognitive and behavioral attempts to deal directly with problems and their effects, while passive/avoidant coping refers to cognitive attempts to avoid actively confronting problems and/or behaviors to indirectly reduce emotional tension by such behaviors as eating or smoking more (Billings & Moos, 1981, p. 141). Passive coping responses are often used when individuals decide that the basic circumstances cannot be altered and, thus, they need to accept a situation as it is (Blalock & Joiner, 2000).

Previous studies found that individuals under duress typically use multiple tactics to deal with the stressors, especially when they appraise the stressors as severe threats/harm/loss

(Blalock & Joiner, 2000; Folkman & Lazarus, 1980; Thoits, 1995). Furthermore, certain coping strategies have both active and passive components. For example, ruminative and distracting responses to depression, largely passive coping styles as they tend to aggravate depressive symptoms, may also be considered active, as even ruminative individuals focus on their symptoms of depression to try to assess and remedy their depressed state (Morrow & Nolen-Hoeksema, 1990). Nevertheless, a high level of passive coping responses to depressive symptoms, with or without active coping, may amplify a depressed mood among homebound older adults in the following ways: First, given that the cognitive symptoms of the feelings of hopelessness, helplessness, and worthlessness tend to be more sensitive to depression in older than younger adults (Moberg et al., 2001), passive coping may prolong the course of depression by reinforcing these feelings. Second, as late-life depression is also characterized by anhedonia and a depletion syndrome manifested by withdrawal, apathy, and a lack of vigor (Blazer, 2009), passive coping can aggravate these tendencies. Rather than engaging in pleasurable activities and/or seeking help from social support networks to alleviate depressed mood, those with passive coping responses may choose to further withdraw from activities and interactions with others, resulting in increased social isolation and worsening depressed mood. A 10-year prospective study found that baseline avoidant coping among late-middle-aged persons was associated with both more chronic and more acute stressors 4 years later, and these life stressors linked baseline avoidance coping and depressive symptoms 10 years later (Holahan, Moos, Holahan, Brennan, & Schutte, 2005).

Passive coping responses to depressive symptoms can also interfere with treatment outcomes, since the feelings and behaviors associated with learned helplessness can contribute to worsening cognitive distortions about the level of threats from a minor adverse event and negatively affect one's sense of control over life stressors and self-efficacy related to the outcomes of treatment. One previous study that examined PST-PC (primary care) and coping styles (related to the general life stress) among primary care patients (average age of 55.2 ±16.0; 64% employed at least part time) with minor depression found that those who were high in avoidant coping, but not those low in avoidant coping, showed greater improvement with PST-PC than those who received usual care consisting of routine physician practice (Oxman, Hegel, Hull, & Dietrich, 2008). The authors credited PST's compensatory effect on those with avoidant coping style. The compensatory effect of PST-PC may be lower for depressed, low-income homebound older adults with limited personal and social resources than for younger, mostly employed primary care patients.

Both personal and social coping resources are inversely distributed by social status (Thoits, 1995). Personal coping resources, or a sense of control/mastery over life, have been presumed to influence the choice and/or the efficacy of the coping strategies that people use in response to stressors (Folkman, 1984; Rosenbaum, 1990). By the same token, social coping resources that include social support and willingness and comfort with help-seeking from others (Billings & Moos, 1981; Nadler, 1990) are also likely to influence an individual's coping responses. Some low-income homebound older adults with limited personal and social coping resources may adopt passive coping responses to their depressive symptoms, perceiving that they have limited control over life circumstances that led to their depression and over the symptoms of depression.

In the absence of any empirical study of the association between coping responses to depressive mood and the severity of depressive mood and treatment outcome among low-income homebound older adults, the present study provides the first test of such association. The specific hypotheses were: (H1) Controlling for demographic characteristics and level of disability, passive coping responses would be associated with higher depressive symptoms at baseline and (H2) passive coping responses at baseline would moderate the relationship

between participation in PST (in-person or telehealth delivery) and depressive symptoms at the 12-week and 24-week follow-ups by diminishing the treatment effect.

Methods

Recruitment process and participants

Depressed homebound adults aged 50 years and older who were non-Hispanic White, Black, or Hispanic and spoke English were referred to the project by case managers at a large Meals on Wheels (MOW) program and other agencies serving low-income homebound older adults in central Texas. Referred individuals either scored 10 or higher on the PHQ-9 screener or appeared to have depressive symptoms. Following referral, they were administered the 24-item Hamilton Rating Scale for Depression (HAMD). Those whose HAMD scores were 15 or higher were included in the randomized controlled trial (RCT) testing the feasibility and preliminary evidence of efficacy of 6 weekly sessions of telehealth PST (tele-PST: PST delivered via Skype video call), compared to 6 weekly sessions of in-person PST and attention control.

The exclusion criteria were (1) high suicide risk; (2) dementia (assessed with the Mini-Cog that is a composite 3-item recall and clock drawing test; Borson et al., 2000); (3) bipolar disorder; (4) current (12-month) or lifetime psychotic symptoms or disorder; (5) presence of co-occurring alcohol or other addictive substance abuse; and (6) current involvement in psychotherapy. Those who had been on antidepressant medication for more than two months but still showed significant depressive symptoms were not excluded from the study. Of 186 referrals received during the 24-month recruitment and enrollment period, 124 met the inclusion criteria and 121 who agreed to participation in the study were randomly assigned into three groups—tele-PST (n=43, 35%); in-person PST (n=42, 35%), and telephone support calls (n=36, 30%). Written informed consent, approved by the first author's university institutional review board, from each participant was obtained after the study procedures had been fully explained. Fourteen participants dropped out from the study before completing 6 sessions of in-person PST (n=7), tele-PST (n=5), and telephone care calls (n=2), and 5 (2 tele-PST participant; and 3 telephone care call participants) who completed all 6 sessions of intervention dropped out before 24-week follow-up. Attrition was due mostly to deteriorating health problems that resulted in hospitalization, nursing home placement, and death; however, the baseline demographic and clinical characteristics of the dropouts did not significantly differ from those who continued in the study.

Therapist training, supervision, and fidelity monitoring

The second author (MTH) trained two licensed master's-level social workers (LS & MLM) in PST-PC (Catalan, Gath, Anastasiades, Bond, Day, & Hall, 1991; Mynors-Wallis, Gath, Lloyd-Thomas, & Tomlinson, 1995) and has provided ongoing clinical supervision and fidelity monitoring for them. The latter was done with a review of the audio-recordings of two sessions (first and one random selection between the second and fifth sessions) from 20% of all participants throughout the study. Each therapist provided both tele-PST and in-person PST. The mean global adherence and competence rating score on the PST-PC Therapist Adherence and Competence Scale (Hegel et al., 2004) was 4.4 on a 6- point scale (0 = very poor to 5 = very good), with no significant difference between the two therapists.

Conduct of PST sessions and attention control

In each 60-minute PST session, the therapist and participant used a worksheet to progress through the 7-steps of PST (Hegel & Areán, 2002)—(1) identifying and clarifying a problem area; (2) establishing clear, realistic, and achievable goals for problem resolution; (3) generating multiple solution alternatives or appropriate solution possibilities through

brainstorming; (4) implementing decision-making guidelines through identifying pros and cons of each potential solution (e.g., advantages and disadvantages, feasibility and obstacles, and other benefits and challenges); (5) evaluating and choosing solutions by comparing and contrasting them; (6) developing an action plan detailing steps the client would take to implement the preferred solutions; and (7) evaluating the outcome and reinforcement of success and continued effort.

Those assigned to tele-PST were loaned a laptop computer with Skype and engaged in PST sessions with a therapist via videoconferencing, and those assigned to in-person PST engaged in face-to-face PST sessions with a therapist in their own residence. The participants in the attention control group received six weekly, 30-minute telephone support calls from two research associates. The purpose of the calls was to provide support and empathy and to monitor the participants' depressive symptoms to ensure their safety. The detailed intervention procedures were described elsewhere (Choi et al., 2011; Choi et al., in press).

Measures

Depressive symptoms—The 24-item HAMD consists of the GRID-HAMD-21 structured interview guide augmented with 3 additional items assessing feelings of hopelessness, helplessness, and worthlessness with specific probes and follow-up questions developed by Moberg et al. (2001). The scoring format of the 3 additional questions was slightly modified so that both frequency and intensity of these feelings can be factored in their ratings as in the case with other comparable items (e.g., depressed mood, anxiety) in the GRID-HAMD-21. The HAMD was administered at baseline and at 12- and 24-week follow-ups.

Coping responses to depressive symptoms—In the absence of a validated scale measuring coping responses to depressed mood among homebound older adults, a 22-item checklist of coping responses to depression was compiled based on the findings of a previous study of depressed, low-income older adults' help-seeking behaviors (Choi & McDougall, 2007; see also Biegel, Farkas, & Song, 1997). The items were: just waited and hoped the problem goes away; brooded and continued worrying; withdrew from others; slept a lot; ate more than usual; drank beer, wine, or liquor more than usual; talked to spouse/family member; talked to a close friend; talked to a clergyman; consulted a regular family physician; talked to a psychiatrist/psychologist; talked to a social worker; visited a faith healer; called the crisis line; bought over-the-counter drugs to sooth the nerves; prayed frequently; watched religious program on TV; listened to music or watched entertainment programs on TV; exercised/took a walk/did housework; had crying spells; and other (specify). At baseline assessment, each individual was asked to check (yes =1; no = 0) the coping responses that he or she had used in the preceding three months to help him or her get out of the depressed, sad, or down-in-the dumps mood.

Cognitive passive coping was defined as the endorsement of all three of the following statements: just waiting and hoping the problem goes away, brooding and continuing worrying, and withdrawing from others. The data showed that 91.7% of the sample endorsed at least one of the three cognitive passive coping responses, 77.7% endorsed at least two of them, and 33.9% endorsed all three items. Given the high prevalence of at least one or two passive coping responses, we focused on endorsement of all three items to represent a high level of cognitive passive coping. For behavioral passive coping, 45.5% of the sample endorsed "sleeping a lot," 41.3% endorsed "eating more than usual," and 7.4% (n = 9) endorsed "drank beer, wine, or liquor more than usual" as their coping responses, and 67.8% endorsed at least one of these three. Again to represent a high level of behavioral passive

coping, we defined it as the endorsement of both sleeping and eating and/or drinking. This showed that 28.1% of the sample who had engaged in behavioral passive coping.

We used separate codings for cognitive and behavioral passive coping to explore if these two types of passive coping may be different in their associations with depressive symptoms and in their moderating effect on the relationship between participation in PST and depressive symptoms. We suspected that, compared to cognitive passive coping, behavioral passive coping including sleeping and eating patterns among some chronically ill, disabled older adults might have been affected by the medications that they were taking and, thus, may be less likely to represent their true coping style.

Controls: Demographic and Disability—Demographic characteristics included age, gender, race/ethnicity, and family income. Disability status at baseline was assessed using the short form (12-item, 5-point scale) World Health Organization Disability Assessment Schedule (WHODAS-II; WHO, 2000). The WHODAS-II assesses disabilities without asking respondents to identify whether the problem was caused by medical or mental health conditions. In consideration of the homebound state of the participants, the last item "Your day to day work" was reworded to "Your day to day work in and around the house." The number of diagnosed medical conditions (arthritis; high blood pressure; stroke; diabetes; emphysema; heart disease; cancer; kidney disease; and liver disease) that still caused problems was also counted.

Data analysis

All analyses were performed using SPSS v.19 (IBM Corp, Armonk, NY), and all tests of significance were two tailed with α set at 0.05. Between-group one-way ANOVA (with Bonferroni-corrected post-hoc tests), χ^2 tests, and *t*-tests were used to assess group differences in baseline participant characteristics. To test H1 (association between passive coping and depressive symptoms at baseline), independent samples *t*-tests of the HAMD scores between those who employed passive coping (passive coper) and those who did not (nonpassive coper) were followed by ordinary least squares (OLS) regression analysis. To test H2 (moderating effect of passive coping on the relationship between PST and depressive symptoms at follow-ups), we employed an intent-to-treat approach using piecewise mixed-effects regression with random intercept model (Raudenbush & Byrk, 2001). Treatment group (tele-PST or in-person PST vs. telephone care call), cognitive passive coping (vs. no cognitive passive coping), time, and the interaction term between treatment group and coping pattern and that between treatment group and time were included in the model, with group and coping pattern as between-subject effects and time as a two-piece (piece 1 [time 1] = baseline to 12 weeks; piece 2 [time 2] = 12 weeks to 24 weeks) continuous within-subject variable. Tele-PST and in-person PST groups were combined as one group based on the lack of significant difference in baseline and follow-up HAMD scores between two PST delivery modalities (for further details, Choi et al., in press). Only cognitive coping pattern was included as a covariate in the model because there was no relationship between behavioral coping pattern and HAMD scores at baseline and follow-ups. Variance explained in the residual was estimated using a formula from Raudenbush & Byrk.

Results

Sample characteristics at baseline

Table 1 shows that the sample was diverse in age (31% 50–59 years; 40% 60–69 years; and 29% 70+ years) and racial/ethnic distributions (with 59% either Black or Hispanic), and a majority of them had family income at or less than $25,000. As expected, the sample had a high level of disability. Further analysis showed that the participants on average had 3.19

±1.54 chronic medical conditions. No difference was found in baseline depressive symptom severity by age, gender, race/ethnicity, income, and by intervention group assignment, but depressive symptom severity was positively but weakly associated with disability score (r = 0.27, p = 0.003). As stated, 33.9% and 28.1% of the sample reported that they had engaged in cognitive passive coping and behavioral passive coping, respectively, in response to their depressed mood, while 50.4% were neither cognitive nor behavioral passive copers. Further analysis found no difference in coping pattern by age, gender, race/ethnicity, income, disability score, and by intervention group assignment. The most frequently resorted coping responses among these low-income, depressed homebound older adults were listening to music or watching entertainment programs on TV (91.7%) and frequent praying (81.8%). For formal help seeking, 70.2% reported that they had consulted their family doctor; 25.6% had talked to a social worker (mostly their case manager); 15.7% had talked to a clergyman; 13.2% had consulted a psychiatrist or psychologist; and 3.3% each had visited a faith/folk healer and called a crisis hotline. In these coping responses, however, passive copers, either cognitive or behavioral, did not significantly differ from nonpassive copers, showing that passive copers also resorted to active coping responses.

Association between passive coping and baseline depression severity

Despite the finding that both passive and nonpassive copers did not differ with respect to the rest of the coping responses, Table 2 shows that cognitive passive copers had significantly higher baseline HAMD scores than the rest (26.66±6.88 vs. 23.46±6.26, t = 2.57, df = 119, p = 0.011). However, behavioral passive copers were not significantly different from the rest in their HAMD scores (23.65±6.69 vs. 24.90±6.60, t = 0.93, df = 119, p = 0.353). Data also show that those who engaged in cognitive passive coping only (i.e., without behavioral passive coping) had significantly higher baseline HAMD scores than those who engaged in behavioral passive coping only (i.e., without cognitive passive coping) (HAMD = 27.08±6.42 vs. 21.84±5.19, p = 0.042). Further analysis found that those who reported at least two cognitive passive coping responses also had higher HAMD scores than the rest (25.70±6.73 vs. 20.52±4.34, t = 3.78, df = 119, p < 0.001), and the same was true for those who reported at least one cognitive passive coping response (25.05±6.58 vs. 19.0±4.40, t = 2.84, df = 119, p = 0.005). On the other hand, the number of behavioral coping responses was not associated with HAMD scores.

The OLS regression results in Table 3 confirm significant association between cognitive passive coping (endorsement of all three cognitive passive coping responses) and depression severity and no such association between behavioral passive coping and depression severity at baseline, controlling for demographic and disability variables. Cognitive passive copers had, on average, a 3.0-point higher HAMD score than nonpassive copers. Sensitivity analysis found that endorsement of any two or one of the three cognitive coping responses were also significantly associated with higher HAMD scores (B = 5.04, SE = 1.32, t = 3.80, p < 0.001 for endorsement of two responses and B = 5.05, SE = 2.07, t = 2.44, p = 0.016 for endorsement of one response).

Moderating effect of cognitive passive coping on treatment outcome

Table 3 shows the results of the mixed-effects regression analysis. The main effect of cognitive passive coping, as compared to non-cognitive passive coping, was significant (t = 3.26, df = 111; p = 0.001), as was the effect of PST, as compared to telephone support call (t = −2.36, df = 208; p = 0.019). The main effect of time 1 (baseline to 12 weeks) was also significant (t = −4.63, df = 206; p < 0.001), but the main effect of time 2 (12 weeks to 24 weeks) was not significant (t = −1.42, df = 207; p = 0.158). Intervention group by time 1 interaction effect was also significant (t = −2.91, df = 207; p = 0.004), but intervention group by time 2 interaction effect was nonsignificant (t = 1.13, df = 206; p = 0.260). Intervention

group by cognitive passive coping interaction effect was not significant, either ($t = -1.50$, $df = 113$; p = 0.127). The model pseudo-R^2, calculated from comparing the full model's residual estimate to that of the intercept only model, was 0.68.

Discussion

This study examined low-income homebound older adults' self-reported coping responses to their depressive symptoms, association between passive coping responses and depressive symptom severity, and the moderating effect of passive coping on PST. The findings show that most of these older adults resorted to both active and passive coping responses to their depressive symptoms. However, the findings show that those who resorted to any cognitive passive coping response, compared to those who did not, had significantly higher depressive symptoms, while those who resorted to any behavioral passive coping did not differ in their depressive symptom severity from those who did not. Those who had resorted to behavioral passive coping without engaging in cognitive passive coping had significantly lower HAMD scores than those who resorted to cognitive passive coping without engaging in behavioral passive coping.

In support of H1, multivariate linear regression analysis confirmed that controlling for individual demographic characteristics and disability scores, cognitive passive coping was significantly associated with baseline depressive symptom severity, while behavioral passive coding was not. Given the cross-sectional data, it was not clear if cognitive passive coping responses to depression resulted from severe depression or vice versa.

The baseline cognitive passive coping response also had a significant main effect on depressive symptoms at 12- and 24-week follow-ups. However, contrary to H2 that predicted that passive coping would diminish the PST's treatment effect, the results point to a null moderating effect. Given the significant main effect of PST on reducing depressive symptoms, the good news is that everyone, regardless of his or her coping pattern benefited from the psychotherapy, although cognitive passive copers who had higher depressive symptoms at baseline still had higher depressive symptoms at follow-ups. PST is based on the social problem-solving theory of depression which posits that depression is mediated by the availability of problem solving skills and attitudes for coping with daily hassles and major life problems (D'Zurilla, 1986; Nezu *et al.*, 1989). Since PST not only teaches participants systematic problem solving skills but it also encourages them to carry out daily pleasurable activities, it promotes both cognitive and behavioral activation. Problem solving and activity may have had significant impact on both passive and nonpassive copers to become more active and proactive copers. This is in line with the claim by Oxman et al. (2008) of PST's compensatory function.

In summary, the findings show that cognitive and behavioral passive coping responses to depressive symptoms, although both of them may represent avoidant coping styles, have different effects on baseline and post-treatment depression severity. Cognitive passive coping responses to depressive symptoms, but not behavioral passive coping response, are significantly correlated with symptom severity both at baseline and post-treatment. However, even cognitive passive coping does not interfere with PST's treatment outcomes among low-income homebound older adults. Regardless of individual coping patterns, short-term PST, both in-person and via videoconferencing delivery, had positive effect on low-income homebound older adults' depressive symptoms. Although only 24-week follow-up effect was evaluated in the present study, other studies have shown long-term (12 to 24 months) treatment effect of PST (Areán, Raue, Mackin, Kanellopoulos, McCulloch, & Alexopoulos, 2010; Areán, Hegel, Vannoy, Fan, & Unützer, 2008). More importantly, the results of the study suggest that PST, due to its focus on teaching systematic problem-

solving skills and engaging in pleasant activities, may be beneficial for homebound older adults who have been resorting to cognitive passive coping responses to their depressive symptoms. Hence, clinical implications for the findings are that (1) low-income, depressed homebound older adults, regardless of their coping responses to their symptoms of depression, benefit from a short-term, structured, evidence-based psychotherapy, and (2) for enhanced treatment effect, their coping responses to depressive symptoms need to be examined prior to treatment and specific attention may need to be paid to cognitive passive coping responses during treatment process.

The study had a few limitations. First, due to the small sample size, caution is required to interpret the exploratory findings of this study. Second, the validity and reliability of the self-reported coping responses are not confirmed by any other means of triangulation and the psychometrics of the checklist remain unknown. Third, without data on the frequency and extent of active coping, we had no way of knowing if the extent of active coping reported by passive copers was more or less than that of their passive coping. Thus the question of whether the passive copers were fundamentally similar or dissimilar to nonpassive copers could not be answered and calls for further research. Despite these limitations, the study contributes to the knowledge base regarding psychosocial interventions for late-life depression, especially among low-income homebound older adults who have been underexposed in research on depression, coping, and treatment.

The National Institute of Mental Health's strategic research priorities emphasize the development of new and better interventions that incorporate the diverse needs and circumstances of people with mental illness and the expansion and deepening of the focus to personalize intervention research (NIMH, 2011). Understanding predictors and potential moderators of treatment outcomes is an important step forward to developing more effective, personalized intervention research. Some previous studies have examined the effect of such moderators as baseline depression severity, demographic characteristics, age at depression onset, total number of previous depressive episodes, cognitive impairment, disability, and personality characteristics on PST's treatment outcomes (Areán et al., 2010; Kiosses, Leon, & Areán, 2011). The present study suggests that coping responses to depressive symptoms also need to be further examined as a moderator in the future research of treatment efficacy of PST and other psychosocial interventions for late-life depression.

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Highlights

- We examine coping responses to depressive symptoms among homebound older adults.
- Cognitive passive copers have higher depressive symptoms at baseline.
- Coping responses did not have moderating effect on psychotherapy treatment outcomes.

Table 1

Sample Characteristics at Baseline (N = 121)

Age, mean (SD) (range: 50–89)	65.21 (±9.22)
Gender (n, %)	
Male	27 (22.3)
Female	94 (77.7)
Race/ethnicity (n, %)	
Non-Hispanic White	50 (41.3)
Black	41 (33.9)
Hispanic	30 (24.8)
Family income (n, %)	
<= 15,000	77 (63.6)
15,001–25,000	25 (20.7)
25,001–50,000	12 (9.9)
Don't know/refused	7 (5.8)
SCID diagnosis (n, %)	
Major Depressive disorder	81 (67.0)
Depressive disorder, NOS	35 (28.9)
Dystymia	5 (4.1)
Disability (WHODAS-II) score,[1] mean (SD) (range:13–54)	36.11 (±8.91)
Depression severity (HAMD score), mean (SD) (range:15–42)	24.55 (±6.62)
Coping pattern (n, %)	
Cognitive passive coping[2] (with or without behavioral passive coping)	41 (33.9)
Behavioral passive coping[3] (with or without cognitive passive coping	34 (28.1)
Cognitive passive coping only	26 (21.5)
Behavioral passive coping only	19 (15.7)
Both cognitive and behavioral passive coping	15 (12.4)
Neither type of passive coping	61 (50.4)
RCT group (n, %)	
Tele-PST	43 (35.5)
In-person PST	42 (34.7)
Telephone support call	36 (29.8)

[1] The possible ranges of the score are 12–60.

[2] Just waited and hoped the problem goes away, brooded and continued worrying, and withdrew from others

[3] Slept a lot and ate more than usual and/or drank beer/wine/liquor more than usual

Table 2

Baseline HAMD Scores by Coping Pattern

Coping pattern	**HAMD Score**			
		t	***df***	**p**
		−2.57	119	0.011
Cognitive passive coping with/without behavioral passive coping vs. No cognitive passive coping	26.66 (±6.88) 23.46 (±6.26)			
		0.93	119	0.353
Behavioral passive coping with/without cognitive passive coping vs. No behavioral passive coping	23.65 (±6.69) 24.90 (±6.60)			
		F	*df*	p
		2.82	117	0.042
Cognitive passive coping only	27.08 (±6.42)[a]			
Behavioral passive coping only	21.84 (±5.19)[b]			
Both cognitive and behavioral passive coping	25.93 (±7.80)			
Neither cognitive or behavioral passive coping	23.97 (±6.51)			

(): Standard deviation

[a,b]Denote a significantly different pair based on Bonferronni-corrected post-hoc tests.

Table 3

Association between Passive Coping and HAMD score at Baseline ($N = 121$)

	B (SE)	*t*	p
Intercept	25.36 (5.80)	4.38	< 0.001
Age	−0.10 (0.07)	−1.40	0.164
Female	−0.94 (1.43)	−0.66	0.513
Black	0.45 (1.36)	0.33	0.743
Hispanic	2.50 (1.48)	1.69	0.094
Disability score	0.14 (0.07)	1.95	0.054
Cognitive passive coping	3.02 (1.26)	2.40	0.018
Behavioral passive coping	−1.94 (1.29)	−1.51	0.135
R^2	0.17		
Adjusted R^2	0.12		
SE	6.23		

Table 4

Treatment Effects by Group, Time, and Coping Pattern: Mixed-Effects Regression Results

Variable	B	SE	95% CI	*t*	*df*	p
Intercept	17.04	1.37	(14.34, 19.75)	12.41	208.84	< 0.001
Coping pattern						
Cognitive passive coping (Not cognitive passive coping)	6.68	2.05	(2.62, 10.75)	3.26	110.54	0.001
Treatment group						
PST (Telephone support call)	−3.90	1.66	(−7.17, −0.64)	−2.36	207.96	0.019
Time 1: Baseline to12 weeks	−2.90	0.63	(−4.14, −1.67)	−4.63	205.66	< 0.001
Time 2: 12 weeks to 24 weeks	−0.16	0.11	(−0.38, 0.06)	−1.42	207.11	0.158
Group by coping pattern						
PST x cognitive passive coping (All others)	−3.65	2.44	(−8.49, 1.18)	−1.50	112.80	0.137
Group by time						
PST x Time 1 (Telephone support x Time 1)	−2.19	0.75	(−3.68, −0.71)	−2.91	207.41	0.004
PST x Time 2 (Telephone support x Time 2)	0.15	0.13	(−0.11, 0.41)	1.13	206.04	0.260