Treatment of specific phobia in older adults

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Abstract: Phobias are common in later life, yet treatment research in this population remains scant. The efficacy of exposure therapy, in combination with other Cognitive-Behavioral Therapy (CBT) components, in the treatment of specific phobia with a middle and older aged sample was examined. Sixteen adults aged 45–68 with DSM-IV diagnosis of a specific phobia received a manualized intervention over ten weeks, and were compared with a control group. Results indicated significant time effects in the treatment group for the primary outcome variables of phobic severity and avoidance as well as secondary outcome variables including depression and anxiety. Symptom presence and severity also significantly declined in the treatment group. No significant changes in state anxiety were noted across the treatment period. Such results provide support for the efficacy of exposure combined with CBT treatment for specific phobia in middle to older aged adults.

Keywords: anxiety, phobia, older adults, cognitive behavioral therapy

Introduction

Anxiety disorders in older adults have received relatively little empirical attention in the treatment literature. Although most current prevalence estimates suggest that anxiety disorders later in life may be less frequent, high relative prevalence rates for anxiety compared to other mental disorders and the significant negative impact of anxiety on the lives of older people argue for its importance. Anxiety disorders have been found to be twice as frequent as affective disorders, and 4–8 times more frequent than major depressive disorders, in older samples (Beck and Stanley 1997). These disorders have also been reported to be more prevalent than depression or severe cognitive impairment among older adults (Regier et al 1988).

Anxiety symptoms are associated with reduced quality of life, increased mortality, impaired ability to carry out Instrumental Activities of Daily Living (IADLs), poorer health, more chronic illness, and elevated levels of reported pain in older cohorts (reviewed in Scogin et al 2000). Findings that older people with phobic or panic disorders have higher relative risk of ischemic heart disease, stroke, and death by suicide indicate that anxiety disorders may be associated with greater morbidity and mortality, underscoring the importance of addressing anxiety issues in this population (Krasucki et al 1998; Stanley and Beck 2000). Finally, older adults have been found to experience symptoms of anxiety disruptive enough to require intervention, even if insufficient to warrant formal diagnosis (Himmelfarb and Murrell 1984). Indeed, Schaub and Linden (2000) suggest that while the contribution of anxiety to the spectrum of mental disorders seems to decrease with age, anxiety symptoms are an almost daily experience for many older people.

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Specific phobias in older adults

Findings are inconsistent with respect to the relative prevalence of various anxiety disorders in older cohorts. Several studies have reported phobias to be the most common anxiety disorder among older people (eg, Regier et al 1988), whereas others

have not (eg, Bland et al 1988). Earlier studies including GAD among the diagnoses reported phobias as less common than GAD (Uhlenhuth et al 1983; Copeland, Dewey et al 1987; Copeland, Gurland et al 1987). However, more recent research by Ritchie et al. (2004) found phobias to be the most common anxiety disorder in their sample of community dwelling older adults, with lifetime prevalence rates of 21.6% and 11% currently experiencing phobias; in contrast, lifetime prevalence of GAD was estimated to be 10.8%, while current prevalence rates were estimated at 4.6%.

The overall prevalence of specific phobias as well as their prevalence relative to other phobia subtypes in later life is also somewhat unclear. The highest prevalence rates have been found by Lindesay, Briggs and Murphy (1989), who report a 10.0% phobia prevalence rate among people 65 years of age and older, with agoraphobia accounting for 7.8% of this total, while specific phobia and social phobia represent 2.1% and 1.3% respectively. Fear of spiders and insects were the most common form of specific phobia in the age 65+ sample, accounting for 33.3% of the phobic fears. This was followed (in order) by cats/dogs (27.7%); blood/injury (5.6%), and heights (5.6%); with 27.7% of the phobic sample reporting other specific fears. Lindesay (1991) supported these findings, reporting that animals, heights and enclosed spaces were the most common fears, noting that these are similar to those identified in previous research among a general adult population as 'long-lived' phobias.

Treatment of anxiety in older populations

Although investigation of effective ways to address anxiety in this population is critical, treatment research has remained scant. Most research in this area has primarily focused on older people with anxiety symptoms rather than diagnoses (eg, De Berry et al 1989; Scogin et al 1992); uncontrolled clinical case reports (eg, Thyer 1981; Rowan et al 1984) and treatment studies lacking a no treatment control condition (eg, King and Barrowclough 1991; Stanley, Beck and Glassco 1996). The existing research base has provided some evidence of the utility of CBT for self-report anxiety symptoms in community samples of older people (see McCarthy et al 1991; Hersen and van Hasselt 1992) however well-controlled research investigating the efficacy of established treatments in clinical samples over the age of 50 remains sparse.

Perhaps the most controlled and comprehensive study in the area of late-life anxiety is that conducted by Stanley et al (2003) investigating the efficacy of CBT for late-life GAD. Stanley et al recruited 85 adults aged 60 years and over through media announcements. Results indicated significant improvement in self-report and clinician rated measures of worry, anxiety, depression and quality of life following CBT compared to Minimal Contact Control (MCC), with 45% of those in the CBT condition classified as 'treatment responders.'

Despite evidence that phobic disorders are one of the most common anxiety diagnoses among this population group (Ritchie et al 2004) and are one of the easiest to treat among younger samples (Antony and Barlow 1998), they have remained almost unstudied in older populations, with case studies (eg, Thyer 1981) lending only limited understanding of treatment efficacies in this age group.

The current study aims to extent existing treatment protocols, including exposure therapy components, for specific phobias to a sample of older adults in order to assess the efficacy of such techniques among this population. The impact of age upon outcome is also of interest, and inclusion of a middle aged and older sample will allow comparison of treatment effect on the basis of the age variable.

Method

Participants

Treatment group sample

The treatment group consisted of 16 subjects between 45 and 68 years of age, with a mean age of 55 years. The group consisted of 3 males and 13 females. Although this clearly represents a significant difference across gender, this was expected given that research has suggested that phobias are much more common in women than men (eg, Arnarson et al 1998). Recruitment was through media releases regarding the project, flyers sent to local general practitioners, and recruitment from a community database of older volunteers (N = 150).

All treatment group participants had a Diagnostic and Statistical Manual of Mental Disorders (4th edition, DSM-IV; American Psychological Association [APA], 1994) diagnosis of Specific Phobia, as confirmed by administration of the Structured Clinical Interview for the DSM-IV (SCID-IV; First, Spitzer, Gibbon and Williams 1997). In the treatment group, 4 of 16 participants had current co-morbid diagnoses, including Major Depression, Social Phobia and GAD. In terms of inclusion and exclusion criteria, the current study has aimed to find a more balanced approach in line with recent suggestions in the literature for improved effectiveness and generalizability of results (eg, Guthrie 2000). As such,

subjects were not excluded if they had current co-morbid diagnoses (if such conditions did not require more immediate treatment), were currently taking anxiety medications (as long as dosages remained stable), had a past history of alcohol use, did not complete all sessions within the designated time periods, or had previously been involved in anxiety treatment programs.

Subjects were excluded if they were outside the ages of 45–75 years of age, had other major psychiatric or cognitive problems requiring immediate treatment, psychotic or organic illnesses, major untreated substance abuse, or disease of the heart or lungs. People with flying phobia, injection phobia and blood phobia were also specifically excluded from this study due to the practical difficulties with exposure techniques for these phobic stimuli.

Approximately 44 people completed phone-screening interviews after expressing an interest in the project. Of the 28 deemed eligible for participation, 5 declined further participation and 23 completed the initial interview and were accepted into the program. Of these 23, 4 withdrew prior to treatment commencement and 2 withdrew in weeks 4 and 5, leaving 16 participants having completed treatment.

Control group samples

A 'wait-list control group' was formed consisting of five participants who had sought treatment randomly allocated to a wait-list control group condition. However, time constraints of the project and fears over drop-out rates led to this group's relatively small numbers being supplemented with a "convenience sample" control group consisting of participants recruited from a large postal survey of older adults' attitudes toward mental health treatment. Within the mail-out sample (N = 159), a question had been asked of participants as to whether they whether they had a phobia and if they were interested in treatment. Of the 50 participants that indicated they were willing to participate in follow-up studies, the first 24 subjects able to be contacted by telephone by the researcher were administered the phobia section of the SCID-IV and sent questionnaires identical to those given to the treatment and wait-list groups outlined above. Of this group of 24, 8 participants met criteria for a DSM-IV diagnosis of Specific Phobia determined by use of the SCID-IV as per the treatment group.

Thus the control group consisted of 13 subjects between 52 and 70 years of age, with a mean age of 59 years. The group consisted of 1 male and 12 females. These control group participants were then sent an identical questionnaire after a period of 10 weeks to assess change in variables of interest over this period in an untreated sample.

Initial data screening revealed no significant differences between treatment and control groups at time one in terms of age ($F_{(1, 27)} = 0.28$, $p > 0.05$), phobic avoidance ($F_{(1, 27)} = 1.58$, $p > 0.05$), phobic severity ($F_{(1, 27)} = 2.30$, $p > 0.05$), or anxiety as measured by the GAI ($F_{(1, 26)} = 0.25$, $p > 0.05$).

Measures

The Mini-Mental Status Exam (MMSE) (Folstein et al 1975) was utilized to screen for gross cognitive impairment; participants scoring less that 24 were to be excluded from the study (none met this criteria).

The Structured Clinical Interview for DSM-IV (SCID-IV) (First et al 1997) was used as a 'gold standard' of interview based assessment measures (Scogin et al 2000).

The Fear Questionnaire (FQ) (Marks and Matthews 1979) is a self-report measure designed to monitor change in patients with phobias. A slightly modified version of the FQ was used to measure phobic avoidance, phobic severity and anxiety/depression, with questions pertaining to agoraphobia, blood/injury and social phobia omitted from the adapted version of the FQ.

The Geriatric Depression Scale-15 item (GDS-15) (Brink et al 1982), the State-Trait Anxiety Inventory (STAI) (Spielberger et al 1970) and the Geriatric Anxiety Inventory (Pachana et al 2007) were used to measure depressive and anxious symptoms among participants.

The Symptom Checklist-90-Revised (SCL-90-R) (Derogatis 1994) is a self-report measure of psychological symptom patterns and provide an estimation of current, point-in-time psychological symptom status (Derogatis 1994). This measure has also been used in a number of studies with older adults, and has been found to be sensitive to post-treatment improvements in general functioning among older people (Scogin et al 1992).

Procedure

Screening of subjects was conducted initially via telephone. Telephone screening questions addressed specific, easily identified exclusionary criteria such as phobia type, age, present involvement in psychotherapy and presence of serious contraindicative medical conditions. Following initial phone screening, participants were asked to attend a face-to-face interview. This phase included signing of consent forms, assessment of the onset and history of their phobic symptoms and further assessment of treatment suitability, including the

administration of the MMSE and the SCID-IV screening and diagnostic instruments.

Subjects passing screening processes were then alternately allocated to one of two conditions: treatment (anxiety management training plus exposure therapy) or no-treatment wait-list control based on interview date. A single crossover approach was employed, whereby those subjects in wait-list control groups received treatment subsequent to first round completions.

Participants in the treatment group were administered questionnaires at the conclusion of the initial group session (session one) and following the final individual exposure session (session ten). A mid-treatment questionnaire was also administered at the conclusion of the final group session (session five), which contained the same questionnaires as pre and post sessions but omitted the more laborious SCL-90-R.

Treatment approach and rationale

The treatment program involved a total of 10 sessions, including 5 group-training sessions initially, followed by 5 sessions of individual therapy. Each session (both group and individual) was approximately 1.5 hours duration. Group sessions were conducted in small groups of 2–7 members. Each group session was facilitated by two registered psychologists enrolled in postgraduate studies at the University of Queensland. The first author (Woodward) facilitated one group with another postgraduate psychologist, while the other three groups were run with two postgraduate psychologists. Individual sessions were then conducted one-on-one by group therapists, so that each subject had previously had contact with their individual therapist during group sessions.

A manualized treatment approach was utilized, based on the treatment protocols of several authors, including Borkovec and Costello (1993); Antony, Craske, and Barlow (1995); Craske, Antony and Barlow (1997); Antony and Barlow (1998). Each session followed a standard structure, commencing with agenda setting, moving to a review of key information from the previous session, the past week's achievements and progress with completion of 'take-home tasks' (homework activities). This was followed by primary session content, including either presentation of psychoeducational material or introduction and practice of a new skill. Take-home tasks were then allocated and explained. The manuals used in this study are available from the first author (Pachana).

Several researchers have suggested minor alterations in treatment process that may enhance outcome when working with older adults (Koder et al 1996; Hinrichsen and Dick-Siskin 2000; Garner 2003). Specifically, it has been suggested that older people may need longer socialization into therapy with a greater emphasis on treatment rationale, a slower pace of therapy, and greater reliance on the utilization of memory aids and reinforcement strategies, such as summaries, handouts, and verbal repetition of themes and issues throughout therapy. It has also been suggested that older people can be comforted by knowing that there is a plan of action that will guide weekly meetings and through selection of realistic and concrete goals.

The current treatment approach was designed with the above recommendations in mind. The initial group session was devoted primarily to socialization to therapy and 'getting to know' group members, to allow participants some time to become accustomed to the treatment process. Early sessions were devoted to psychoeducation and a thorough introduction to the program, with active session content not introduced until session three. During the early sessions, time was allowed for group members to discuss how they might have acquired their phobia, and discussion of weekly encounters with phobic stimulus was maintained throughout all sessions to allow a chance for shared experiences and encouragement between group members to occur. Throughout the sessions, a clear treatment rationale was offered for all techniques. Information sheets covering session content were also given for most sessions, and each began with a review of the previous week's content and what had been achieved.

In terms of treatment components, it was determined that session content should incorporate both in-vivo exposure techniques, which have consistently been found to be the cornerstone of phobia treatment, and other treatment components, such as psychoeducation, anxiety management and cognitive and relaxation procedures. Although evidence for the utility of exposure therapy in older adults is currently limited to several single-subject case studies (eg, Thyer 1981), consistent evidence of strong treatment effects for this technique among younger people argues for its inclusion in the current treatment approach. Similarly, although the efficacy of including cognitive and relaxation components in phobia treatment protocols has not been firmly established, there were salient reasons for their inclusion in the current study. Relaxation training, for example, has been found to significantly reduce stress-related disorders, psychosomatic symptoms, self-reported tension levels and state anxiety in older people (De Berry 1982; De Berry et al 1989; Scogin et al 1992). Finally, studies utilizing cognitive techniques for both anxiety (King and Barrowclough 1991) and depression (Koder et al 1996) have been found to be effective in older populations.

Results

Attrition

Of the 19 clinical participants that commenced the treatment program, 16 completed the total of 10 sessions. Of these, 12 completed within a two-week window of the 10 weeks allocated, while 4 took longer to complete due to cancellations or personal circumstances. It should be noted, however that all 16 clinical participants completed the same number of sessions, of the same approximate duration. All 13 wait-list controls completed initial and follow-up questionnaires.

Changes over time within the treatment group

Analysis indicated a significant effect of time on avoidance of phobic stimuli ($\chi^2 = 20.348$, df = 2, $p < 0.0001$) as measured by the avoidance scale of the FQ. Posthoc analysis revealed significantly lower avoidance levels at time three than at time one (z = –3.194, N-Ties = 13, p = 0.001, two-tailed) and at time three than at time two (z = –3.082, N-Ties = 13, p = 0.002, two-tailed). There was not, however, a significant difference between mean avoidance at time one compared with time two (z = 1.983, N-Ties = 7, p = 0.057, two-tailed). Mean scores on all outcome measures are included in Table 1.

Analysis also indicated a significant effect of time on severity of phobic symptoms ($\chi^2 = 19.172$, df = 2, $p < 0.001$) as measured by the severity scale of the FQ. Similar to phobic avoidance described above, posthoc analysis revealed significantly lower phobia severity at time three compared with time one (z = –3.527, N-Ties = 16, p = 0.000, two-tailed) and at time three compared with time two (z = –2.810, N-Ties = 14, p = 0.005, two-tailed). Once again, there was no significant difference between phobic severities at time two compared to time one (z = –1.339, N-Ties = 12, p = 0.181).

Results from the Anxiety-Depression scale of FQ also revealed a significant effect of time ($\chi^2 = 13.508$, df = 2, $p < 0.005$). Posthoc analysis revealed significant differences between all time points. More specifically, anxiety-depression was significantly lower at time two than at time one (z = –2.390, N-Ties = 15, p = 0.017, two-tailed), significantly lower at time three than at time one (z = –3.154, N-Ties = 15, p = 0.002, two-tailed) and significantly lower at three compared to time two (z = –2.736, N-Ties = 15, p = 0.006, two-tailed).

Results from the GAI also indicated a significant effect of time on anxiety levels ($\chi^2 = 14.452$, df = 2, $p < 0.005$). Posthoc analysis revealed a slightly different pattern of results, however, with significant reductions in anxiety found between time one and time two (z = –3.301, N-Ties = 14, p = 0.001, two-tailed) and between time one and time three (z = –3.157, N-Ties = 16, p = 0.002, two-tailed), but no significant reduction in anxiety between time two and time three (z = –1.581, N-Ties = 16, p = 0.114, two-tailed).

While results did not reflect a significant effect of time on state anxiety ($\chi^2 = 0.603$, df = 2, $p > 0.05$), trait anxiety levels did exhibit significant changes over time ($\chi^2 = 12.000$, df = 2, $p < 0.05$). Posthoc analysis revealed that, similar to anxiety measured via the GAI, there were significant reduction in trait anxiety between time one and time two (z = –3.134, N-Ties = 16, p = 0.002, two-tailed) and between time one and time three (z = –3.136, N-Ties = 16, p = 0.002, two-tailed), however; there was no significant reduction in trait anxiety levels between time two and time three (z = –0.566, N-Ties = 14, p = 0.572, two-tailed).

Analysis revealed a significant effect of time upon depression levels, as measured by the GDS-15 ($\chi^2 = 12.792$, df = 2, $p < 0.005$). Posthoc analysis revealed significant reductions in depression between time one and time three (z = –2.956, N-Ties = 9, p = 0.003, two-tailed), and between time one and time two (z = –2.071, N-Ties = 9, p = 0.038, two-tailed) but no significant reduction in depression between time two and time three (z = –1.082, N-Ties = 12, p = 0.279, two-tailed).

Analysis revealed significant reductions in symptoms on the three global indexes of the SCL-90-R between time one and time three, including the global symptom index ($\chi^2 = 4.571$, df = 1, $p < 0.05$), the positive symptom distress index ($\chi^2 = 6.231$, df = 1, $p < 0.05$) and the positive symptom total ($\chi^2 = 4.571$, df = 1, $p < 0.05$). The SCL-90-R was not administered at time two, and thus comparisons between mid-point time periods are not possible.

Comparisons between treatment and control groups

Group differences were analyzed using a time (2) x group (2) mixed between and within participants Analyses of Variance (ANOVA). Although violations of the assumptions of parametric statistical procedures suggested that non-parametric analysis would, in this instance, be a more appropriate indicator of treatment outcome, a lack of non-parametric alternatives to the ANOVA meant that parametric options were necessary. It should be noted, however, that such procedures are at best exploratory and the reliability of the results significantly limited by such violations.

Results indicated significant interactions between time (2) and group (2) for phobic avoidance ($F_{(1,27)} = 24.50$, $p < 0.05$),

phobic severity ($F_{(1, 27)} = 66.15$, $p < 0.05$), and anxiety as measured by the GAI ($F_{(1, 26)} = 24.91$, $p < 0.05$). This suggests that the impact of time on outcome variables differed between treatment groups.

Post-hoc pair-wise comparisons between time one and time three scores for the control group were conducted using the non-parametric Wilcoxin Signed Ranks Test due to the normality assumption violations mentioned above. This revealed no significant differences between time one and time three for phobia avoidance ($z = –0.073$, N-Ties = 5, $p = 0.942$, two-tailed), or phobia severity ($z = –1.725$, N-Ties = 5, $p = 0.084$, two-tailed). Significant differences in anxiety, as measured by the GAI, were found between time one to time three ($z = –2.194$, N-Ties = 3, $p = 0.028$, two-tailed), however means revealed that unlike the reductions in anxiety noted for the treatment group sample, anxiety was higher at time three ($X = 23.15$) than at time one ($X = 19.67$) in the control group.

These results confirm that unlike the significant reductions in the treatment group in phobic avoidance, phobic severity and anxiety as measured by the GAI across time (as noted above), there were no significant changes on phobic avoidance or severity across time, and a significant increase in general anxiety from time one to time three, for the control group sample.

Discussion

The current study has demonstrated the potential beneficial effects of a CBT-based program for the treatment of specific phobias in a small sample of mid to older aged adults. Although past research has supported the extension of established treatment protocols for other anxiety symptoms and disorders to older people, none have examined the treatment of specific phobias among older populations. Among the treatment group of the current sample, improvements were noted post-treatment on almost all outcome variables, including phobia avoidance, phobia severity, anxiety (as measured by the anxiety-depression scale of the FQ, the GAI and STAI-Trait), depression and overall symptom presence and severity. Interestingly, state anxiety did not exhibit significant reductions across the treatment period.

Past research has demonstrated the positive therapeutic effects of exposure therapy in individual older adults with specific phobias and obsessive compulsive disorder (Thyer 1981; Rowan et al 1984; Calamari et al 1994), the benefits of relaxation and cognitive techniques among older people with general anxiety complaints (De Berry et al 1989; Scogin et al 1992), and the efficacy of CBT techniques with older people diagnosed with GAD (King and Barrowclough 1991; Stanley, Beck and Zebb 1996; Stanley et al 2003). The current research is, however, the first study to demonstrate efficacy of established treatment protocols for mid-age and older adults with diagnosed specific phobias.

Findings regarding reductions in phobic avoidance and severity are in line with past treatment research among younger samples, which have consistently reported strong treatment effects for exposure-based treatment of specific phobias (Antony and Barlow 1998). Past research has also supported the differences found between treatment and control conditions in the current study (Antony and Barlow 1998), although as noted such conclusions must be drawn with caution due to problems with control group conditions.

Such results suggest that exposure therapy is an effective treatment among mid-aged to older adults, and can be extended to older cohorts with minimal changes to the treatment approach. Exposure sessions were not of longer duration, nor of greater frequency, than those reported among younger samples, and were similar to treatment duration previously reported for exposure treatment among single-subject studies of older people (Thyer 1981; Rowan et al 1984). Despite claims that exposure therapy may not be appropriate among older people (McCarthy et al 1991), this study supports past suggestions from single case studies that anxiety was well tolerated and does not interfere with the course of therapy (Thyer 1981) and requires only minor modifications for older subjects (Calamari et al 1994).

Although the current study included additional treatment components of psychoeducation, relaxation and cognitive therapy components, it is uncertain if such components were necessary for treatment outcome. Future research into the relative efficacy of exposure treatments both with and without additional components would be of great value.

It is a somewhat curious finding that while significant reductions in trait anxiety were found, state anxiety did not differ significantly across the treatment period in the treatment group. Such findings are in contrast to past findings in the anxiety treatment literature among older populations. De Berry et al. (1989), for example, found that 'relaxation-meditation' treatment significantly decreased levels of state anxiety, but was not effective in reducing trait anxiety. Similarly, Scogin et al. (1992) found a reduction in state anxiety and self-reported personal adjustment, but not trait anxiety, post-treatment for both progressive and imaginal relaxation conditions.

Such results are perhaps not unexpected, however, given that both of the above investigations focused more specifically on relaxation techniques in the context of general anxiety complaints. Logically, a treatment protocol involving exposure therapy would have less impact on current anxiety levels than one that promotes relaxation. Indeed, Scogin et al (1992) found that despite pre to post-treatment reductions in state anxiety, such improvements were not maintained at follow-up, suggesting that decreases in state anxiety might have resulted from relaxation procedures immediately proceeding administration of assessment measures, rather than more pervasive effects.

Significant mid- and post-treatment reductions in depression are also in line with past research investigating the treatment of anxiety among older people, with many studies finding significant improvements in depression following anxiety treatment programs. Stanley, Beck and Glassco (1996), for example, found significant reductions in depression among a group of older subjects with diagnosed GAD following a 14-week group CBT program. Similarly, Stanley et al (2003) found significant improvements in both depression and quality of life following CBT treatment of late-life GAD. Reductions in all three global measures of the SCL-90-R are also encouraging, and suggest that both general symptom presence and severity decreased following treatment.

The finding that treatment improvements extend beyond phobic symptomatology and general anxiety levels to other psychological variables, such as depression and general symptom presence and severity, is particularly encouraging. It argues for broader treatment effects for a disorder both common in this age group and often left untreated. Indeed, the fact that general symptom improvements are in line with findings from more 'pervasive' disorders such as Generalized Anxiety Disorder (GAD), suggest that treatment of phobias may have positive benefits beyond the obvious and argues strongly for the importance of addressing specific phobias among this age group.

The significant differences between the treatment and control group again highlights the efficacy of this treatment among our small sample; however, it should be noted that this small sample size severely limits generalization, and further studies with more robust sample sizes should be attempted.

Although difficulties with the control group characteristics limit conclusions, the control group data does suggest that among a sample of older people, phobic severity and avoidance does not significantly change over a period of 10 weeks if untreated. This suggests that, despite the limitations of this control group data, it is perhaps unlikely that the treatment improvements are due to random factors alone. Such a conclusion, however, warrants further empirical validation before it can be claimed with confidence.

Overall, the results of the current study suggest that exposure-based treatment of specific phobias has potential clinical utility in an older sample of people than those previously utilized in phobia research. Mid-aged and older aged adults with specific phobias may experience improvements in both their phobic symptoms as well as associated symptomatology, including general anxiety and depression, following treatment. Although the recruitment difficulties that plague research attempts with older populations significantly impacted on both the strength and breadth of conclusions in the current instance, if current findings are extended by further research they have the potential to significantly impact on the treatment approach for older phobics. Exposure has consistently exhibited the strongest treatment effects of any psychological treatment approach. Findings in support of its utility with older people may serve to reduce the reluctance on the behalf of some practitioners to utilize exposure with older clients and increase the availability of this quick and consistently effective technique to all age groups.

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