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Comparison of Younger and Older Adults' Acceptability of Treatment for Generalized Anxiety Disorder Co-Occurring with Parkinson's Disease

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Abstract

Acceptability ratings of medication or Behavioral Relaxation Training (BRT), for general anxiety disorder (GAD) co-occurring with Parkinson's Disease (PD) were obtained from younger (n = 79) and older (n = 54) adults. Participants read a case description of an older adult with PD and comorbid GAD followed by a description of BRT or medication presented in counterbalanced fashion and then provided acceptability ratings. A two (younger, older adult) x two (medication, BRT) mixed factorial ANOVA was performed with AARP scores as the dependent variable. Results replicate and extend earlier research indicating that behavioral and cognitive behavioral treatments for older adults are more acceptable than medication. Moreover, the effect of age cohort, demographic characteristics and psychological comorbidity did not affect acceptability ratings.

Keywords

Behavioral Relaxation Training, Generalized Anxiety Disorder, Parkinson's Disease, Treatment Acceptability

Anxiety disorders are prevalent among older adults and ranges from 3.2-14.2%, depending on methodology used (Forsell & Winblad, 1997), with estimates of general anxiety disorder (GAD) ranging from 1.2-7.3% (Beekman, de Beurs, van Balkom et al., 2000). Psychological comorbidity has been associated with a variety of medical disorders (Scott, Korff, Alonso et al., 2008). Parkinson's disease (PD) and comorbid anxiety disorder has been widely reported (Menza, 1993; Pontone, Williams, Anderson et al., 2009; Stein, 1990) with wide ranging estimates (10–43%), again due to assessment procedures and type of anxiety disorder examined. PD and comorbid anxiety also has been reported to worsen motor symptoms and overall quality of life. Evidence-based pharmacological, cognitive behavior therapy (CBT) for anxiety disorders among psychiatric patients have the greatest scientific support (Ayers, Sorrell, Thorp, Wetherell Loebach, 2007; Baldwin & Polkinghorn, 2005; Borkovec, Newman, Pincus, & Lytle, 2002; Ost & Breitholtz, 2000; Pinquart & Duberstein, 2007). Relaxation training, a form of CBT, has been shown to be one of the most effective interventions for GAD (Borkovec, 2002; Ost & Breitholtz, 2000). Behavioral Relaxation Training (BRT; Poppen, 1998) which does not require tense-release muscle activities, has been successfully used with patients with PD and essential tremor (Chung, Poppen, & Lundervold, 1995; Lundervold & Poppen, 2004; Lundervold, Pahwa, & Lyons, 2009, 2012).

Pharmacotherapy is regularly used to treat PD and comorbid anxiety; however, the approach is different for patients with PD due to the negative side effects of benzodiazepines. Lexapro, a selective serotonin reuptake inhibitor, is a commonly prescribed medication used to treat PD and comorbid anxiety. In the United States, the Federal Drug Administration (FDA) has approved Lexapro for treatment of GAD (Richard, Schiffer & Kurlan, 1996). However, no clinical trials have been conducted evaluating the effectiveness of Lexapro or any other anxiolytic for PD and comorbid anxiety (Walsh & Bennett, 2000; Richards, 2005). Behavioral intervention has also been recommended for treatment of PD and comorbid anxiety, most notably, relaxation training (Marsh, 2000). While use of relaxation training has been suggested for PD and comorbid anxiety, it is unclear if it would be accepted by patients and older adults as a treatment for anxiety.

Evidence-based medicine (EBM) is the driving force in all aspects of health care in America. In addition to determining which treatments are most effective, EBM advances the incorporation of patient values into treatment decision making. Thus, according to Sackett, Strauss, Richardson, Rosenberg and Haynes (2000), EBM is the combined influence of best available research evidence, clinical skills and patient values with respect to treatment selection and acceptability. Treatment acceptability refers to the extent to which consumers of services report the treatment being valuable, beneficial and desirable (Speigler & Gurvremont, 2008). An extensive research of literature has demonstrated that behavioral and cognitive behavioral interventions are rated by consumers and patients as highly acceptable treatments (Calvert & Johnston, 1990). This pattern of results has been shown to generalize to older adults with depression and those with neuropsychiatric disorders affecting behavior; for example, Alzheimer's disease and related disruptive and aggressive behavior (Burgio & Sinnet, 1990; Burgio, Cotter, Stevens et al., 1995; Landreville, Landry, Baillargeon, Guerette, 2001; Landreville & LeBlanc, 2010; Lundervold & Bourland, 1989; Lundervold & Lewin, 1990; Lundervold, Young, & Jackson, 1993). The combined results of this research suggests that older adults' acceptance of behavioral interventions is not significantly affected by complex neuropsychiatric conditions. However, the generality of this finding remains unclear as there is no comorbid diagnosis for aggressive or disruptive behavior related to Alzheimer's disease; aggressive behavior may be a symptom of dementia rather than a separate comorbid disorder affecting treatment acceptability. It is also unclear how younger and older adults differ with respect to acceptance of treatments, as this question has never been addressed. Examining this question is important for two reasons. First, younger adults are thought to be "more psychologically minded" than older adults, have fewer health problems, and thus less contact with medical practitioners and exposure to the use of medication as a remedy for health related problems. For older adults it is likely to be the opposite. Thus, an age cohort effect may influence treatment acceptability ratings. Second, older adults often find themselves in a caregiver role which may alter their acceptability of treatments. Similarly, current or contemporary contextual factors may influence acceptance of treatments, include a history of anxiety or PD in the family.

The purpose of the present research was to examine more fully how cohort effects and psychiatric comorbidity may influence treatment acceptability ratings. Specifically, we addressed three questions: (a) do older and younger adults' ratings of treatment acceptability differ, (b) does physical illness and psychiatric comorbidity influence acceptability ratings; and (c) do demographic variables affect acceptance of treatments?

Method

Participants

One hundred-thirty four older (N = 54) and younger (N = 79) adults took part. Face to face presentations were used to recruit participants. Of the younger adult sample, 68% were female, (mean age 21.01, *sd* 2.96 years), 75% were Caucasian, 24% African American, and 1% Hispanic. Mean years of education were 13.57 (*sd* .78 years) and income was $11,645 (*sd* $9,485). The mean age of the older adult sample was 81.88 years (*sd* 7.69 years), and primarily Caucasian (88%) and had a mean income of $47, 538 (*sd* $37,081) and nearly 20 years of education (mean 19.50; *sd* 5.10 years). Table 1 displays demographic characteristics in relation to family history of PD, anxiety, medication use, and counseling for anxiety. The research was approved by the university human subjects committee and conducted in accordance with APA ethical guidelines with informed consent obtained prior to data collection.

Dependent Variable

Acceptability ratings were obtained using the Abbreviated Acceptability Rating Profile (AARP; Tarnowski & Simonian, 1992). The AARP is an eight-item, Likert-scaled instrument with a unitary factor structure of acceptability. Scores can range from

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8-48 with higher scores indicating greater acceptability.

Recruitment

Younger adults were recruited from multiple sections of a freshman level Psychology course at a medium-sized Midwestern university. These students had not been exposed to any course work in psychopathology or psychological treatment. Students may have received a small number of extra credit points or fulfilled a regular class requirement by taking part. Older adults were recruited from retirement communities and community service agencies serving independent living older adults residing in the metropolitan area of a medium-sized southern Midwestern city.

Procedure

The project was described to participants and consent obtained. Data collection was done in groups ranging in size from five to 30 individuals. A demographic questionnaire was completed. The participant then read a description of an older adult with PD and comorbid GAD. PD symptoms emphasized tremor, impairment in balance and gait, increased muscle tone (rigidity), and stooped posture. GAD symptoms were described in relation to apprehension, worry, and fear. Because PD may produce altered autonomic activity, increased muscle tension and gastrointestinal distress (Richards, 2005), these symptoms of GAD were not described. Following the case scenario, of one of two treatments, medication or Behavioral Relaxation Training (BRT), was presented in counter balanced order. Medication was described as a single, 10 mg dose of Lexapro, commonly prescribed for treatment of GAD among PD patients. Participants were then instructed to answer the AARP in relation to use of medication to treat GAD. BRT used to manage GAD was then described followed by written instructions to complete the acceptability ratings questionnaire.

Design and analysis

Point biserial correlation was used to analyze relationships between demographic variables and treatment acceptability ratings for medication and BRT. A two (age) × two (treatment) mixed factorial ANOVA was performed with AARP scores as the dependent variable. Age of group was the between subjects factor and medication and BRT served as the repeated factor.

Results

Table 2 displays results of the point by serial correlation between demographic variables and treatment acceptability ratings. Only one demographic variable (history of counseling) was significantly related to acceptability of treatment. A significant main effect for treatment type with BRT rated as more acceptable than medication ($F(1,131) = 14.71$, $p < .001$, $\eta^2 = .101$, observed power = .980). There was no difference between age groups in treatment type ratings ($F(1,13) = .009$, $p = .924$, $\eta^2 = .000$, observed power = .051), nor was there a significant interaction between age group and treatment type ratings ($F(1,131) = .895$, $p = .171$, $\eta^2 = .014$, observed power = .277). See Table 2 for the group summary statistics and Figure 1 for error bar representation of the results.

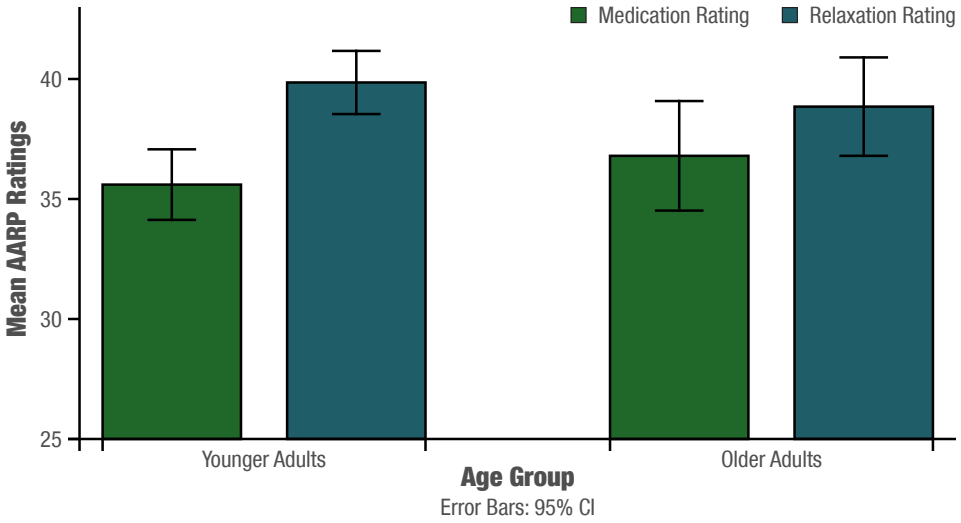

Figure 1. Means of AARP medication and BRT ratings for younger and older adult groups with 95% CI error bars.

Discussion

Research has consistently found that the cognitive behavioral treatments are more acceptable than medication for treatment of challenging behavior of children and older adults with neuropsychiat-

Table 1. Percent of older and younger adults reporting a positive history related to anxiety or Parkinson's disease.

	Younger	Older
Immediate Family with PD	0.0	15.7
Extended Family with PD	6.3	6.0
Immediate Family with Anxiety	27.8	24.1
Extended Family with Anxiety	26.6	8.0
Have you ever had anxiety?	17.7	23.5
Do you now have anxiety?	16.5	30.0
Are you now taking medication for anxiety?	8.9	13.7
Have you ever taken medication for anxiety?	17.7	31.4
Have you ever received counseling for anxiety?	10.1	9.6
Are you currently receiving counseling for anxiety?	1.3	3.8

Table 2. Relationship between demographic variables and treatment acceptability ratings.

	AARP-Med		AARP-BRT	
	r	*p*	*r*	*p*
Immediate family with PD	-.19	.03	.05	.60
Extended family with PD	.01	.88	-.06	.52
Immediate family with anxiety	-.21	.03	.03	.75
Extended family with anxiety	-.16	.18	-.16	.07
Have you ever had anxiety	-.01	.90	-.12	.17
Currently have anxiety	-.02	.85	-.07	.41
Currently taking medication for anxiety	.08	.39	.15	.09
History of medication for anxiety	-.19	.06	.13	.14
History of receiving counseling for anxiety	-.11	.37	.01	.88
Currently receiving counseling for anxiety	.09	.33	.25	.01

Table 3. Means, standard errors, n's, and 95% CI of AARP ratings for younger and older adult groups by treatment type.

Condition		Mean	Std. Err.	*n*	95% CI
Medication	Younger Adult	35.557	0.754	79	34.057–37.057
	Older Adult	36.778	1.141	54	34.488–39.067
BRT	Younger Adult	39.835	0.680	79	38.481–41.189
	Older Adult	38.796	1.046	54	36.696–40.896

ric disorders. A similar finding has been obtained when examining acceptance of CBT for depression among older adults. The current results replicate and extend the findings of previous treatment acceptability research.

The results of the present study are important for several reasons and extends the research on treatment acceptability in five ways: (a) by placing treatment acceptability research squarely in the context of EBM; (b) through examination cohort effects; (c) analysis of the effect of demographic variables on treatment acceptability ratings; (d) inclusion of medical and psychiatric comorbidity in research on treatment acceptability, especially with older adults; and (e) broadening the analysis of treatment acceptability beyond Alzheimer's disease and related challenging behavior.

Of particular interest is the finding that older and younger adults do not differ with respect to the acceptability of treatment for PD with comorbid GAD. Both younger and older adults reported the behavioral treatment, BRT, as more acceptable than medication. This result suggests that a longer history of medication use does not bias older adults against nonpharmacologic interventions for managing anxiety disorders in the context of a pre-existing medical disorder such as PD. Similarly, the findings suggest that older adults are just as "psychologically minded" when given a choice of treatments and opt for the non-drug treatment just as younger adults, despite a very small percentage reporting a positive history for seeking psychological services for anxiety.

Not surprisingly, a greater percentage of older adults reported having an immediate family member with PD than younger adults, though both groups reported a very similar percentage for immediate family members with anxiety. A higher percentage of older adults reported a current anxiety and current and past use of medication. That demographic variables were unrelated to acceptability ratings is an important finding. The results show that a history of mediation use for anxiety does not bias older adults to pharmacologic treatment.

The practical significance of these findings is clear. Older adults find relaxation training more acceptable for managing GAD which occurs with PD which does not reflect the current treatment approach provided within medicine. The argument that there is no evidence to support relaxation training is specious, as the same assertion can be made for Lexapro. The lack of use of relaxation training for PD with comorbid GAD may be due to expediency, lack of relevantly trained behavioral health professionals on staff, physician lack of education regarding effective cognitive behavioral interventions, and the assumption that relaxation procedures cannot be used due to the motor impair of patients with PD. (The use of Behavioral Relaxation Training as a treatment explicitly addressed this issue). It is essential that primary care physicians and neurologists are educated as to patient preferences and treatment choices available and that such information be used in the practice of EBM.

Caveats to the current findings include acceptability ratings based on case scenarios rather than in situ ratings from real patients. Treatment acceptability research would be significantly advanced with such an approach. No specific information regarding the risks and effectiveness of medication or relaxation was provided. Past research has found that when such information is provided behavioral treatments are found to be even more effective (Lundervold et al., 1993). Further research in this area is needed.

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