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Group Psychoeducative Cognitive-Behaviour Therapy
for Mixed Anxiety and Depression

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Abstract

Objectives. There is a dearth of older adult literature regarding group treatment for co-morbid anxiety and depression. This research evaluated the effectiveness of a low intensity group psychoeducational approach.

Method. Patients attended six sessions of a manualised cognitive-behavioural group programme. Validated measures of anxiety, depression and psychological well-being were taken at assessment, termination and short-term follow-up and staff rated patients regarding their functioning at the same time points. Patients rated the alliance and their anxiety and depression at each group session. Outcomes were categorised according to whether patients had recovered, improved, deteriorated or been harmed. Effect sizes were compared to extant group interventions for anxiety and depression.

Results. Eight groups were completed with 34 patients, with a drop-out rate of 17%. Staff and patient rated outcome measures showed significant improvements in assessment to termination and assessment to follow-up comparisons. Over one quarter (26.47 %) of patients met the recovery criteria at follow-up and no patients were harmed. Outcomes for anxiety were better than for depression and the alliance was stable over time.

Conclusion. The intervention evaluated shows some clinical and organisational promise. The group approach needs to be further explored and tested in research with greater methodological control.

Keywords: older adult, CBT, group, co-morbid anxiety/depression.

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Depression and anxiety co-occur at high rates in older adult populations; Beekman et al., (2000) found that 47.5% of those with major depressive disorder had co-morbid anxiety disorders and 26.1% of people with anxiety disorders had co-morbid major depressive disorders. Katona, Manela and Livingstone (1997) found high rates of co-morbid generalised anxiety disorder (GAD) in older adults diagnosed with depression and Flint (1999) noted that late-life GAD was typically associated with depression. Co-morbidity in older adults is twice more likely in women than men, with more severely depressed individuals more likely to suffer with severe anxiety and vice versa (Schoevers, Beekman, Deeg, Jonker & van Tilburg, 2003).

Despite this well evidenced overlap between anxiety and depression in older people, there is a relative lack of research regarding one-to-one and group psychotherapy interventions. Whilst group cognitive behaviour therapy (CBT) is recommended by NICE for working age adults with anxiety and depression for example (NICE Guideline 90, 2009), there are no specific guidelines in relation to older adults due to lack of evidence. Only one study has evaluated group CBT treatment of mixed anxiety and depression (Schimmel-Spreeuw, Linssen & Heeren, 2000) with outpatient elderly depressed women. Statistically significant reductions in depression, anxiety and neuroticism were observed from pre to post pre to follow-up comparisons.

A recent review of older adult group CBT specifically for depression concluded that the approach was effective (Krishna et al., 2011) and highlighted six randomised controlled trials (Abraham et al., 1992; Arean et al., 1993; Hautzinger & Welz, 2004; Hautzinger & Welz, 2004; Kunik, et al., 2008; Klausner et al., 1998 and Rokke et al. 2000). Although efficacious compared to passive controls, group CBT was not superior when compared to other active interventions (e.g. reminiscence, educational, or group visual imagery). A further four RCTs not considered by the Krishna et al (2009) review showed again that whilst CBT could out-perform passive controls (Arean et al., 2005;

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Haringsma et al., 2006; Konnert et al., 2009), group CBT was not superior when compared to anti-depressant medication (Wilkinson et al., 2009).

Four pieces of non-randomised practice-based research have been completed concerning the treatment depressed older adults with group CBT. Beutler et al., (1987) found that CBT patients had improved sleep hygiene and were less likely to drop out than those solely receiving anti-depressant medication. Steuer et al., (1984) compared group CBT with psychodynamic group psychotherapy, with treatment comparisons favouring CBT. Cappeliez (2000) tracked the intensity of depression during weekly group CBT, finding a gradual decrease in depressive symptoms. Nance (2012) found mild to moderate improvement for depression and overall improvements in personal growth, changing negative thoughts and relationships with family members.

Three RCTs have been conducted concerning the group CBT treatment of generalised anxiety in older adults. Stanley, Beck and DeWitt Glassco (1996) randomised patients to CBT or non-directive group supportive therapy and whilst both treatments significantly improved anxiety, no significant differences were evident between treatments. Wetherell, Gatz and Craske (2003) randomised patients to either CBT or discussion groups following a waitlist control period and again there were no significant differences between treatments. Stanley et al., (2003) compared group CBT with a minimal phone contact and found a significant improvement in anxiety and quality of life following CBT with the improvements maintained at 12 month follow-up. Wetherell et al., (2005) pooled the data from these studies and found approximately half achieved a significant pre-post reliable change, with better outcomes associated with adherence to homework and higher baseline anxiety. The single non-randomised practice-based study of the group treatment of anxious older adults (Radley, Redston, Bates, Pontefract & Lindsay, 1997) found CBT treatment was associated with a significant reduction in anxiety symptoms in two of their three outcome measures.

Evidence regarding group interventions that treat co-morbid anxiety/depression in older adults is therefore sparse in comparison to anxiety or depression, despite the acknowledged prevalence of co-morbidity (Cairney, Corna, Velhuidzen, Herrmann & Streiner, 2008). Evaluations of group therapy is clinically and organisationally important given the indicated numbers of co-morbid patients requiring help and the efficiency and equivalence of group approaches (Kellett, Clarke & Matthews, 2007). The present research therefore presents a feasibility study considering the acceptability and effectiveness of a manualised group CBT intervention with older adults with co-morbid anxiety and depression. To address the gender bias in the Schimmel-Spreuw et al., (2000) study, the groups were open to both genders. The hypotheses for the study were as follows: H1, drop-outs will be more depressed/anxious at assessment than completers; H2, completers will experience a significant improvement to their anxiety, depression and well-being following group treatment; H3, improvements to anxiety, depression and well-being will be maintained at follow-up; H4, staff will observe a significant improvement in patients' health following treatment and at follow-up and finally H5, patients will report an increased therapy alliance across weekly group therapy sessions.

Method

Sample

Patients were recruited from a secondary mental health service in a large northern city in the UK. Study inclusion criteria included, (1) over 65 years of age, (2) in contact with secondary mental health services, (3) presenting with common mental health problems, (4) able to make use of a psychoeducational approach and (5) willing to attend a group therapy for six weeks. Exclusion criteria included, (1) if anxiety/depression not the primary reason for referral, (2) insufficient understanding of

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English and (3) presence of significant cognitive impairment. A total of 41 patients were recruited (all white British), with 34 completing treatment. Original reason for referrals were 18% anxiety with some depressive features (N=6), 20% depression with some anxiety features (N=7) and 62% mixed anxiety and depression (N=21).

Completers were aged 66-95 with a mean age of 74.8 (SD=7.5) made up of 28 females (82%) and 6 males (18%). Marital status of completers was 50% married (N=17), 15% divorced (N=5), 32% widowed (N=11) and 3% single (N=1). Throughout group treatment N=33 (97%) prescribed medication for their anxiety/depression.

Measures; timings and staff and patient completion

Patients completed two validated psychometric assessments (HADS and CORE-OM) at three time points; assessment (prior to group intervention), termination (end of group intervention) and follow-up (6 weeks following the end of the group intervention). Patients also completed a measure of group alliance (GSRS) and rated their anxiety and depression for that week on a 9-point likert scale at each group session. Staff completed the HONOS 65+ at assessment, termination and follow-up. The psychometric measures are described below:

Hospital Anxiety & Depression Scale (HADS; Zigmond & Snaith, 1983). The HADS measures anxiety and depression over 14 items, over the last week. Anxiety and depression scores range from 0 – 21 and a higher score indicates greater severity.

Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM; Barkham et al., 1998). The CORE-OM is a 34 item measure of global psychological distress, with subscales of subjective well-being, functioning, psychological problems and risk. Items are scored on a five point scale from 0 – 4 and a higher score is indicative of greater distress.

Health of the Nation Outcome Score (HoNOS 65+; Burns et al., 1999). The HoNOS 65+ is a clinician rated measure of different health and social domains. Twelve single

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item scales measure various aspects of mental and social health each on a five item scale from 0 - 4. Higher scores indicate poorer health.

Group Session Rating Scale (GSRS; Duncan & Miller, 2007). The GSRS is a four item scale measuring group therapy alliance. Group patients rate the 'relationship' aspect of the group, whether their 'goals and topics' were addressed, the facilitators 'approach and method' and their 'overall' view of the group. The GSRS uses a 0-10 visual analogue scale and responses are summed (higher scores indicative of a more positive group therapy alliance).

Analysis

The acceptability of the groups was tested via drop-out rates and drop-outs are compared to completers in terms of assessment levels of anxiety and depression via t-tests. The rate of psychological change during the groups was tested via a combination of clinical and reliable change using the CORE-OM measure on the pre to follow-up data. Clinical change occurs when a patient shifts from a case to a non-case on an outcome measure and reliable change was calculated via Jacobson's Reliable Change Index (RCI; Jacobson & Truax, 1991). Reliable change occurred when a patient changes sufficiently psychometrically during treatment that such change is unlikely to be due to unreliability in the outcome measure (Jacobson & Traux, 1991). In accordance with recommendations by Evans, Margison, & Barkham (1998) reliable improvement was recorded when an individual participant score on the CORE-OM improved by equal to or more than 1.96 times the SE_{diff} between assessment and group follow-up. The formula used to establish the SE of measurement of a difference was $SE_{diff} = SD_1\sqrt{2}\sqrt{1-r}$. A score >10 on the CORE-OM is considered a case (Evans et al, 1998). Using such outcome categories in combination enabled calculation of rates of recovery (both clinical and reliable change), improvement (positive reliable change), deterioration (negative reliable change) and harm (shifting from a non-case to a case

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults and a reliable deterioration). To calculate change a group level, effect sizes and t-tests were calculated for the outcome measures between the time points and the effect sizes were then benchmarked against the extant group CBT evidence. Uncontrolled effect sizes for studies were calculated by dividing the mean change score achieved over treatment by the assessment standard deviation (Barkham, Gilbert, Connell, Marshall, & Twigg, 2005; Westbrook & Kirk, 2005). ANCOVA was used to test the changes in weekly rated anxiety/depression and group alliance scores.

Intervention

CBT is efficacious with older people (Laidlaw, Thompson, Dick-Siskin & Gallagher-Thompson, 2003), but Zeiss & Steffen (1996) suggested a number of older age adaptations, including slower pacing, multimodal training and memory aids such as written information. The Anxiety and Depression Management Group Manual was written in accordance with such guidance. The six session group intervention was structured to provide psychoeducation about anxiety and depression and then the application of behavioural and cognitive change methods (e.g. activity scheduling and thought challenging). Patients were encouraged to engage in homework tasks between the sessions in order to practice the skills taught at the group. Each structured group lasted for two hours. The groups used a multimodal approach each week (e.g. visual information and role play). The groups were facilitated by three clinicians to every group; a facilitator, co-facilitator and observer (roles were rotated as clinicians felt appropriate).

Results

Of the 41 patients who consented, 7 (17%) dropped out during group treatment, with reasons being physical illness (N=2) or not stated (N=5). At assessment, N=28 (85%) of the patients met caseness on the CORE-OM. No significant differences were

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apparent between completers (N=34) and drop-outs (N=7) in terms of assessment anxiety ($t(38) = -.360, p = .720$), depression ($t(38) = .583, p = .563$) or well-being ($t(38) = -.338, p = .737$). Similarly there were no differences at assessment of staff ratings of the health of completers and non-completers ($t(37) = -1.185, p = .244$).

There were also no significant differences in terms of anxiety, depression, well-being or health between those patients who completed the full course of treatment and those who attended some of the sessions.

Table 1 displays the means and SDs for measures at assessment, termination and follow-up for the outcome measures with associated comparisons and effect sizes. Generally, the results show patients experiencing a reduction in distress during the group intervention that is maintained at follow-up. Pre-post group comparisons illustrated significant reductions to anxiety and well-being. There was a small effect size regarding health improvements and small to medium effect size for improvements to depression, anxiety and well-being. No continued significant improvements or deteriorations were evidenced in the termination to follow-up comparisons for any of the measures. When assessment scores were compared to follow-up scores there were significant improvements in well-being and health, with associated effect sizes being small to medium across all measures. Category outcome rates N=9 recovered, N=11 reliably improved, N=1 reliably deteriorated, N=2 clinically deteriorated and N=0 were harmed. The recovery rate for the mixed anxiety/depression psychoeducational groups was therefore 26.47%.

Insert table 1 here

Table 2 compares the current effect sizes found with the extant older adult group CBT therapy evidence base (where it was possible to calculate effect sizes). The

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anxiety effect size appears comparable with previous anxiety group research and demonstrates a medium effect size for group interventions. The current depression effect size is however lower than the mean effect size for depression group research, which is large. However, the effect sizes for the current research are similar to extant group therapy for mixed anxiety and depression (Schimmel-Spreeuw et al., 2000).

Insert table 2 here

Table 3 displays the results for the alliance scores and weekly-rated anxiety and depression. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated ($X^2(14) = 86.572, p < .001$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = 0.462$). There was no significant effect of sessions on group alliance. In terms of weekly rated anxiety, Mauchly's Test of Sphericity indicated that the assumption of sphericity had not been violated ($X^2(14) = 21.793, p = .086$) and there was a significant effect of sessions on weekly rated anxiety. In terms of depression, Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated ($X^2(14) = 24.068, p = .047$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = 0.691$). The weekly rated depression results show that there was no significant effect of sessions on depression. No significant differences were found for group alliance scores between those patients who had recovered and those who did not at assessment to termination in terms of anxiety ($U = 15.00, z = -1.257, p = .209$), depression ($U = 65.50, z = -.344, p = .731$) or well-being ($U = 69.00, z = -.685, p = .494$).

Insert table 3 here

Discussion

This study contributes to the sparse evidence considering the group treatment of mixed anxiety and depression with older adults. The main aim was to investigate whether a manualised low intensity psychoeducational group programme was acceptable to and effective with older adults in secondary care. The drop-out rate of 17% from groups appears relatively low considering that a meta-analysis of 123 studies reported a drop-out rate of 46.8% (Wierzbicki & Pekarik, 1993). This suggests that a group psychoeducational approach to treating mixed anxiety/depression is an acceptable approach to older adult patients. Full or partial attendance at all group therapy sessions did not appear to have a significant impact on outcomes. The findings generally indicate that attendance at the group CBT intervention appeared to significantly improve anxiety and well-being, but was not effective in terms of reducing symptoms of depression. In combination, the acceptability and effectiveness data encourages the further evolution and evaluation of this manualised group approach with this patient group.

The differences between the depression versus anxiety outcomes are intriguing and were evidenced across both psychometric and weekly rated outcomes. The manual for the groups naturally approached depression and anxiety in equipoise, but the evidence suggests that patients' clinically made more use of the anxiety input. It may be the case that is more difficult (and takes more time) to shift the depressive aspects of mixed anxiety and depression and this is worthy of future research. The termination to follow-up comparisons evidenced stasis in terms of outcomes, suggesting that patients were usefully holding the gains made in groups, but were also not making further gains without the support of groups over the follow-up period. The role of booster sessions

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following groups is therefore also worthy of investigation in terms of facilitating continuing progress.

Effect sizes were small to medium for all outcome measures from assessment to termination and follow-up. The smallest effect sizes were for (staff-rated) health and the largest effect sizes were found for self-reported well-being. Benchmarking across the extant CBT group intervention literature indicates that the depression effect size in the current research were small in comparison to the evidence base. The existing evidence base for depression CBT groups is more extensive than anxiety and has a number of RCTs (Abraham et al., 1992; Arean et al., 1993; Arean et al., 2005; Haringsma et al., 2006; Hautzinger & Welz, 2004; Klausner et al., 1998; Konnert et al., 2009; Kunik et al., 2008; Rokke et al., 2000; Wilkinson et al., 2009), which may have yielded higher effect sizes when compared to practice based evidence. In terms of anxiety, effect sizes were consistent with previous research and were very similar to the Schimmel-Spreuw et al., (2000) study using a similar psychoeducational method with a similar mixed anxiety/depression patient group.

Effect sizes and tests of statistical significance can have limited bearing on how clinically meaningful results are and highlights that any effective clinical intervention needs to simultaneously facilitate clinical and reliable change (Jacobson & Truax, 1991). The recovery rate analysis indicated that over one quarter of patients were recovered by the end of the follow-up period – all of such patients lost a reliable amount of symptoms and went from a case to a non-case. This is a fairly stringent means of categorising outcomes and further group research would benefit from replicating this approach. It is important to note that no patients were psychologically harmed, which would indicate that the groups were a safe approach to treating mixed anxiety and depression. It is useful to consider rates of harm during psychological therapy (Lilienfeld, 2007) as a relatively small minority can deteriorate with estimates ranging

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from three to 10% (Mohr, 1995; Strupp, Hadley, & Gomez-Schwartz, 1977). Further research needs to explore any group factors creating deterioration/harm and document when it happens during groups. The measure of group alliance suggested that whilst the final session of the intervention was rated more positively than all the previous sessions, there was no significant increase (or deterioration) in the alliance over the course of the groups. The lack of a significant trend was surprising, particularly given the understanding that groups tend to form over time (Yalom & Leszcz, 2005).

In terms of study weaknesses, there are numerous methodological compromises when collecting routine practice-based evidence (Barkham & Margison, 2007) and therefore the results should be interpreted within caution. An obvious limitation is the lack of control/comparison group (Corney & Simpson, 2005; Lilienfeld, 2007) and this limits the certainty with which improvements can be attributed to the group intervention. Information about other stressors or any significant life events was not consistently collected and may have affected outcomes. As all patients were already in receipt of mental health services (with the majority prescribed medication), varying degrees of ongoing input from the service occurred before, during and following groups. Systematic recording of concurrent interventions and also the duration of anxiety/depression would have helped ascertain the relationship between outcomes and the intervention more clearly. The length of follow-up was also short and the study was therefore unable therefore to truly ascertain the durability of emotional change. Although the sample size was small, it was comparable to extant group CBT evidence. The HoNOS 65+ tended to be completed by different members of staff across time points, which brings into question the reliability of the data and may explain the relatively small effect sizes. Older adult specific measures of anxiety and depression (e.g. the Geriatric Anxiety Inventory, Pachana, Byrne, Siddle, Koloski, Harley & Arnold, 2007 and the Geriatric Depression Scale, Yesavage et al., 1983) may have been

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better suited to capture the specific needs of the patient group. Also, the absence of a measure of group CBT fidelity measure limits how much can be stated about the competency of interventions delivered.

This study suggests that the group approach shows promise as a clinical intervention with mixed anxiety and depression in older adults. Increasing service demands mean that engaging patients in effective short-term group interventions is potentially both time and cost effective (Simpson, Carlson & Trew, 2001; van der Ven, 2003; Kellett et al, 2007). This perhaps is particularly pertinent when delivering a low-intensity, short psychoeducational intervention to secondary care mental health service users (NICE guideline 113, 2011). Due to the limited literature investigating CBT groups with co-morbid older adults, this research provides impetus and avenues for future research. In particular, the efficacy of a group psychoeducational CBT approach when compared to both passive and active controls, at both a group and individual level across the various psychotherapeutic modalities.

References

- Abraham, I.L., Neundorfer, M.M., & Currie, L.J. (1992). Effects of group interventions on cognition and depression in nursing home residents. *Nursing Research, 41*, 196-202. doi:10.1097/00006199-199207000-00002
- Agronin, M. (2009). Group therapy in older adults. *Current Psychiatry Reports, 11*, 27-32. doi:10.1007/s11920-009-0005-1
- Areán, P.A., Perri, M.G., Nezu, A.M., Schein, R.L., Christopher, F., & Joseph, T.X. (1993). Comparative effectiveness of social problem solving therapy and reminiscence therapy as a treatment for depression in older adults. *Journal of Consulting and Clinical Psychology, 61*, 1003-1010. doi:10.1037/0022-006X.61.6.1003
- Areán, P.A., Gum, A., McCulloch, C.E., Bostrom, A., Gallagher-Thompson, D., & Thompson, L. (2005). Treatment of depression in low-income older-adults. *Psychology and Aging, 20*, 601-609. doi:10.1037/0882-7974.20.4.601
- Barkham, M., Evans, C., Margison, F., McGrath, G., Mellor-Clark, J., Milne, D., & Connell, J. (1998). The rationale for developing and implementing core outcome batteries in service settings and psychotherapy outcome research. *Journal of Mental Health, 7*, 35-47. doi:10.1080/09638239818328
- Barkham, M., Culverwell, A., Spindler, K., & Twigg, E. (2005). The CORE-OM in an older adult population: Psychometric status, acceptability, and feasibility. *Aging & Mental Health, 9*, 235-245. doi:10.1080/13607860500090052
- Barkham, M., Gilbert, N., Connell, J., Marshall, C., & Twigg, E. (2005). Suitability and utility of the CORE-OM and CORE-A for assessing severity of presenting problems in psychological therapy services based in primary and secondary care settings. *British Journal of Psychiatry, 186*, 239-246. doi:10.1192/bjp.186.3.239

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Barkham, M., & Margison, F. (2007). Practice-based evidence as a complement to evidence based practice: From dichotomy to chiasmus. In C. Freeman & M. Powers (Eds.), *Handbook of Evidence-Based Psychotherapies: A Guide for Research and Practice*. (pp. 443-476). Chichester: Wiley.

Barkham, M., Stiles, W.B., Lambert, M.J. & Mellor-Clark, J. (2010). Building a rigorous and relevant knowledge-base for the psychological therapies. In M. Barkham, G.E. Hardy, & J. Mellor-Clark (Eds.), *Developing and delivering practice-based evidence: A guide for the psychological therapies*. (pp. 21-61). Chichester: Wiley.

Barkham, M., Stiles, W.B., Connell, J., & Mellor-Clark, J. (2011). Psychological treatment outcomes in routine NHS services: What do we mean by treatment effectiveness? *Psychology and Psychotherapy: Theory, Research and Practice*, 85, 1-16. doi:10.1111/j.2044-8341.2011.02019.x

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: Penguin Books.

Beck, A.T., Steer, R.A., Brown, G.K. (1995). *BDI-II Manual*. The Psychological Corporation: Harcourt Brace & Company.

Beekman, A.T., de Beurs, E., van Balkom, A.J., Deeg, D.J., van Dyck, R., & van Tilburg, W. (2000). Anxiety and depression in later life: Co-occurrence and communality of risk factors. *American Journal of Psychiatry*, 157, 89-95. Retrieved from <http://ajp.psychiatryonline.org/>

Beutler, L.E., Scogin, F., Kirkish, P., Schretlem, D., Corbishley, A., Hamblin, D.,... & Levenson, A.I. (1987). Group cognitive therapy and alprazolam in the treatment of depression in older-adults. *Journal of Consulting and Clinical Psychology*, 55, 550-556. doi:10.1037/0022-006X.55.4.550

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Bjelland, I., Dahl, A.A., Haug, T.T., & Neckelmann, D. (2002). The validity of the hospital anxiety and depression scale, an updated review. *Journal of Psychosomatic Research*, 52, 69-77. doi:10.1016/S0022-3999(01)00296-3

Burns, A., Beevor, A., Lelliott, P., Wing, J., Blakey, A., Orrell, ... & Hadden, S. (1999). Health of the nation outcome scales for elderly people (HoNOS65+). *The British Journal of Psychiatry*, 174, 424-427. doi:10.1192/bjp.174.5.424

Cairney, J., Corna, L.M., Veldhuizen, S., Herrmann, N., & Streiner, D.L. (2008). Comorbid depression and anxiety in later life: patterns of association, subjective well-being, and impairment. *American Journal of Geriatric Psychiatry*, 16, 201-208. doi:10.1097/JGP.0b013e3181602a4a

Cappeliez, P. (2000). Presentation of depression and response to group cognitive therapy with older patients. *Journal of Clinical Geropsychology*, 6, 165-174. doi:10.1023/A:1009584915034

Cohen, J. (1977). *Statistical power analysis for the behavioral sciences (Rev. Ed)*. New York: Academic Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Hillsdale NJ: Lawrence Erlbaum.

Corney, R., & Simpson, S. (2005). Thirty-six month outcome data from a trial of counselling with chronically depressed patients in a general practice setting. *Psychology and Psychotherapy: Theory, Research and Practice*, 78, 127-138. doi:10.1348/147608304X21365

Duncan, B.L., Miller, S.D., Sparks, J., Reynolds, J., Claud, D., Brown, J., & Johnson, L. (2003). The session rating scale: psychometric properties of a “working” alliance scale. *Journal of Brief Therapy*, 3, 3-12. Retrieved from <http://scottdmiller.com/?q=node/4>

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Duncan, B.L. & Miller, S.D. (2007). *Group session rating scale (GSRS)*, Retrieved November 4, 2010, from www.scottdmiller.com

Evans, C., Mellor-Clark, J., Margison, F., Barkham, M., McGrath, G., Connell, J. & Audin, K. (2000). Clinical outcomes in routine evaluation: The CORE-OM. *Journal of Mental Health, 9*, 247-255. doi:10.1080/713680250

Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A. (2007). G*Power3: A flexible statistical power analysis program for the social, behavioral and biomedical sciences. *Behavior Research Methods, 39*, 175-191. doi:10.3758/BF03193146

Field, A. (2009) *Discovering statistics using SPSS* (3rd Ed.). London: Sage.

Flint, A. J. (1999) Anxiety disorders in late life. *Canadian Family Physician, 11*, 2672-2679.

Gould, R.A., Otto, M.W., Pollack, M.H., & Yap, L. (1997). Cognitive behavioural and pharmacological treatment of generalized anxiety disorder: A preliminary meta-analysis. *Behavior Therapy, 28*, 285-305. doi:10.1016/S0005-7894(97)80048-2

Haringsma, R., Engels, G.I., Cuijpers, P., & Spinhoven, P. (2006). Effectiveness of the coping with depression (CWD) course for older-adults provided by the community-based mental health care system in the Netherlands: a randomised controlled field trial. *International Psychogeriatrics, 18*, 307-325. doi:10.1017/S104161020500253X

Hautzinger, M., & Welz, S. (2004). Cognitive behavioural therapy for depressed older outpatients-A controlled, randomized trial. *Zeitschrift fur Gerontologie und Geriatrie, 37*, 427-435. doi: 10.1007/s00391-004-0262-x

Hotopf, M. (2002). The pragmatic randomised controlled trial. *Advances in Psychiatric Treatment, 8*, 326-333. doi:10.1192/apt.8.5.326

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

- Jacobson, N. S., & Truax, P. (1991). Clinical significance; a statistical approach to defining change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12-19. doi:10.1037/0022-006X.59.1.12
- Katona, C., Manela, M.V. & Livingston, G. (1997). Co-morbidity with depression in older people: The Islington Study. *Aging & Mental Health, 1*, 57-61. doi:10.1080/13607869757380
- Klausner, E.J., Clarkin, J.F., Spielman, L., Pupo, C., Abrams, R., & Alexopoulos, G.S. (1998). Late life depression and functional disability: The role of goal-focused group psychotherapy. *International Journal of Geriatric Psychiatry, 13*, 707-716. doi:10.1002/(SICI)1099-1166(199810)13:10<707::AID-GPS856>3.3.CO;2-H
- Konnert, C., Dobson, K., & Stelmach, L. (2009). The prevention of depression in nursing home residents: a randomised clinical trial of cognitive behavioral therapy. *Aging and Mental Health, 13*, 288-299. doi:10.1080/13607860802380672
- Kellett, S. Clarke, S & Matthews, L. (2007). Delivering group psychoeducational CBT in Primary Care: Comparing outcomes with individual CBT and individual psychodynamic-interpersonal psychotherapy. *British Journal of Clinical Psychology, 46*, 211-222.
- Krishna, M., Jauhari, A., Lepping, P., Turner, J., Crossley, D. & Krishnamoorthy, A. (2010). Is group psychotherapy effective in older adults with depression? A systematic review. *International Journal of Geriatric Psychiatry, 26*, 331-340. doi: 10.1002/gps.2546
- Kunik, M.E., Veazey, C., Cully, J.A., Soucek, J., Graham, D.P., Hopko, D., ...& Stanley, M.A. (2008). COPD education and cognitive behavioral therapy group treatment for clinically significant symptoms of depression and anxiety in

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

COPD patients: A randomized controlled trial. *Psychological Medicine*, 38, 385-396. doi: <http://dx.doi.org/10.1017/S0033291707001687>

Laidlaw, K., Thompson, L.W., Dick-Siskin, L., & Gallagher-Thompson, D. (2003). *Cognitive behaviour therapy with older people*. Chichester, West Sussex: Wiley.

Lilienfeld, S.O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science*, 2, 53-70. doi:10.1111/j.1745-6916.2007.00029.x

Miller, S.D. & Duncan, B.L. (*in press*). The Group Session Rating Scale: Preliminary psychometrics in substance abuse group interventions.

Mohr, D. C. (1995). Negative outcome in psychotherapy: A critical review. *Clinical Psychology: Science and Practice*, 2, 1–27. doi:10.1111/j.1468-2850.1995.tb00022.x

Nance, D.C. (2012). Pains, joys, and secrets: Nurse led therapy group for older adults with depression. *Issues in Mental Health Nursing*, 33, 89-95. doi:10.3109/01612840.2011.624258

National Institute for Health and Clinical Excellence (2004a, October). *Depression: management of depression in primary and secondary care- NICE guidance*. Retrieved April 17, 2010, from <http://www.nice.org.uk/cg023>.

National Institute for Health and Clinical Excellence (2004b, December). *Clinical guidelines for the management of anxiety: Management of anxiety (panic disorder, with or without agoraphobia and generalised anxiety disorder) in adults in primary, secondary and community care*. Retrieved April 17, 2010, <http://www.nice.org.uk/CG022>

National Institute for Health and Clinical Excellence (2009). *Depression in adults: The treatment and management of depression in adults*. Retrieved May 04 2012, <http://publications.nice.org.uk/depression-in-adults-cg90>

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

National Institute for Health and Clinical Excellence (2011). *Generalised anxiety*

disorder in adults: The NICE guideline on management in primary, secondary and community care. Retrieved May 04 2012,

<http://www.ncbi.nlm.nih.gov/books/NBK83459/pdf/TOC.pdf>

Pachana, N.A., Byrne, G.J., Siddle, H., Koloski, N., Harley, E., & Arnold, E. (2007).

Development and validation of the geriatric anxiety inventory. *International*

Psychogeriatrics, *19*, 103-114. <http://dx.doi.org/10.1017/S1041610206003504>

Payne, K.T., & Marcus, D.K. (2008). The efficacy of group psychotherapy for older-

adult clients: a meta-analysis. *Group Dynamics: Theory, Research, and*

Practice, *12*, 268-278. doi:10.1037/a0013519

Radley, M., Redston, C., Bates, F., & Pontefract, M. (1997). Effectiveness of group

anxiety management with elderly clients of a community psychogeriatric team.

International Journal of Geriatric Psychiatry, *12*, 79-84.

doi:10.1002/(SICI)1099-1166(199701)12:1<79::AID-GPS467>3.0.CO;2-#

Rokke, P.D., Timhave, J.A., & Zeljko, J. (2000). Self-management therapy and

educational group therapy for depressed elders. *Cognitive Therapy and*

Research, *24*, 99-119. doi: 10.1023/A:1005407125992.

Schimmel-Spreuw, A., Linszen, C.G., & Heeren, T. J. (2000). Coping with depression

and anxiety: Preliminary results of a standardized course for elderly depressed

women. *International Psychogeriatrics*, *12*, 77-86.

doi:10.1017/S1041610200006219

Schoevers, R.A., Beekman, A.T., Deeg, D.J., Jonker, C., & van Tilburg, W. (2003).

Comorbidity and risk-patterns of depression, generalized anxiety disorder and

mixed anxiety-depression in later life: Results from the AMSTEL study.

International Journal of Geriatric Psychiatry, *18*, 994-1001. doi:

10.1002/gps.1001

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Shergill, S.S., Shankar, K.K., Seneviratna, K., & Orrell, M.W. (1999). The validity and reliability of the Health of the Nation Outcome Scales (HoNOS) in the elderly.

Journal of Mental Health, 8, 511-521. Retrieved from

www.informahealthcare.com

Simpson, J.S.A., Carlson, L.E., & Trew, M.E. (2001). Effect of group therapy for breast cancer on healthcare utilization. *Cancer Practice, 9*, 19-26.

doi:10.1046/j.1523-5394.2001.91005.x

Spear, J., Chawla, S., O'Reilly, M. & Rock, D. (2002). Does the HoNOS 65+ meet the criteria for a clinical outcome indicator for mental health services for older people? *International Journal of Geriatric Psychiatry, 17*, 226-230.

doi:10.1002/gps.592

Spinhoven, P., Ormel, J., Sloekers, P., P., Kempen, G.I., & Van Hemert, A.M. (1997).

A validation study of the Hospital Anxiety and Depression Scale (HADS) in different groups of Dutch subjects. *Psychological Medicine, 27*, 363-370.

doi:10.1017/S0033291796004382

Stanley, M.A., Beck, J.G., & DeWitt Glassco, J. (1996). Treatment of generalised anxiety in older-adults: a preliminary comparison of cognitive-behavioral and supportive approaches. *Behavior Therapy, 27*, 565-581.

Stanley, M.A., Beck, J.G., Novy, D.M., Averill, P.M., Swann, A.C, Diefenbach, G.J., ...& Hopko, D.R. (2003). Cognitive-behavioral treatment of late-life generalised anxiety disorder. *Journal of Consulting and Clinical Psychology, 71*, 309-319.

Steuer, J.L., Mintz, J., Hammen, C.L., Hill, M.A., Jarvik, L.F., McCarley, T., ...& Rosen, R. (1984). Cognitive- behavioural and psychodynamic group psychotherapy in treatment of geriatric depression. *Journal of Consulting and Clinical Psychology, 52*, 180-189. doi:10.1037//0022-006X.52.2.180

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Strupp, H. H., Hadley, S. W., & Gomez-Schwartz, B. (1977). *Psychotherapy for better or worse; the problem of negative effects*. New York: Wiley.

van der Ven, N. (2003). Psychosocial group interventions in diabetes care. *Diabetes Spectrum, 16*, 88-95. doi:10.2337/diaspect.16.2.88

Westbrook, D., & Kirk, J. (2005). The clinical effectiveness of cognitive behaviour therapy: Outcome for a large sample of adults treated in routine practice. *Behaviour, Research and Therapy, 43*, 1243-1261.

<http://dx.doi.org/10.1016/j.brat.2004.09.006>

Wetherell, J.L., Gatz, M., & Craske, M.G. (2003). Treatment of generalised anxiety disorder in older-adults. *Journal of Consulting and Clinical Psychology, 71*, 31-40. doi:10.1037//0022-006X.71.1.31

Wetherell, J.L., Hopko, D.R., Diefenbach, G.J., Averill, P.M., Beck, J.G., Craske, M.G.,...& Stanley, M.A. (2005). Cognitive-behavioural therapy for late-life generalized anxiety disorder: Who gets better? *Behavior Therapy, 36*, 147-156. doi:10.1016/S0005-7894(05)80063-2

Wilkinson, P., Alder, N., Juszczak, E., Matthews, H., Merritt, C., Montgomery, H., ...& Jacoby, R. (2009). A pilot randomised controlled trial of a brief cognitive behavioural group intervention to reduce recurrence rates in late life depression. *International Journal of Geriatric Psychiatry, 24*, 68-75. doi:10.1002/gps.2076

Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M.B., & Leirer, V.O. (1983). Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research, 17*, 37-49. doi: doi:10.1016/0022-3956(82)90033-4

Zeiss, A.M., & Stefan, A. (1996). Treatment issues with elderly clients. *Cognitive and Behavioral Practice, 3*, 371-389. doi:10.1016/S1077-7229(96)80024-1

RUNNING HEAD: Group CBT for mixed anxiety and depression in older adults

Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale.

Acta Psychiatrica Scandinavica, 67, 361–370. doi:10.1111/j.1600-

0447.1983.tb09716.x

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Table 1; *group mean score and associated comparisons*

Measure	Assessment Mean (SD)	Termination Mean (SD)	Follow-up Mean (SD)	Assessment to termination		Assessment to follow-up		Termination to follow-up	
				t	d	t	d	t	d
HADS-anxiety	10.85 (5.30)	9.35 (4.61)	9.06 (5.40)	2.08*	0.3	2.03	0.4	0.37	0.1
HADS-depression	9.10 (4.57)	7.24 (3.80)	7.26 (4.31)	2.01	0.4	1.71	0.4	-0.02	-0.01
CORE-OM	14.30 (6.00)	12.00 (7.10)	11.30 (7.67)	2.73**	0.4	3.45**	0.5	0.54	0.1
HoNOS 65+	9.23 (4.81)	8.40 (4.60)	7.74 (4.40)	1.43	0.2	2.53*	0.3	0.69	0.1

*p < 0.05 ** p < 0.01

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Table 2; comparison of effect sizes with the evidence base

Study	N	Intervention		
		Depression	Anxiety	Mixed
		Mean = 1.1	Mean = 0.6	
Arean et al., (1993) ¹	39	1.53		
Arean et al., (2005) ³	67	0.27		
Beutler et al., (1987) ¹	56	0.74		
Cappeliez (2000) ¹	21	1.8		
Haringsma et al., (2006) ⁴	119	0.6		
Hautzinger & Welz (2004) ²	55	0.9		
Klausner et al., (1998) ¹	24	0.75		
Konnert et al., (2009) ²	64	1.17		
Kunik et al., (2008) ¹	123	0.74		
Rokke et al., (2000) ¹	34	1.92		
Steur et al., (1984) ¹	20	1.3		
Radley et al., (1997) ⁵	6		0.33	
Stanley et al., (1996) ⁷	48		0.62	
Stanley et al., (2003) ⁷	85		1	
Wetherell et al., (2003) ⁶	75		0.35	
Schimmel-Spreeuw et al., (2000) ^{2 8}	51			0.5-depression 0.34-anxiety
Current Study ⁴	34			0.3-depression 0.4-anxiety

Measures used to calculate effect sizes:

¹ Beck Depression Inventory-II

² Geriatric Depression Scale

³ Hamilton Depression Rating Scale

⁴ Hospital Anxiety and Depression Scale

⁵ Hospital Anxiety and Depression Scale (Anxiety Subscale)

⁶ Beck Anxiety Inventory

⁷ State Trait Anxiety Inventory

⁸ Symptom Checklist-90

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Table 3: ANOVA of weekly rated alliance, anxiety and depression

	Session 1 Mean (SD)	Session 2 Mean (SD)	Session 3 Mean (SD)	Session 4 Mean (SD)	Session 5 Mean (SD)	Session 6 Mean (SD)	F
N = 19#							
GSRS Total	36.20 (2.4)	36.32 (3.14)	32.74 (7.50)	34.16 (7.86)	35.84 (3.80)	37.11 (2.50)	2.856
Anxiety	5.42 (3.90)	6.42 (3.60)	5.89 (3.20)	5.74 (3.60)	7.84 (2.34)	7.32 (3.33)	2.598*
Depression	5.37 (3.63)	5.74 (3.70)	6.32 (3.61)	6.00 (3.40)	7.16 (3.13)	7.47 (3.10)	1.841

* $p < 0.05$, two tailed test

#N is lower as patients needed to complete all six sessions to be include in analysis

