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Efficacy of group psychotherapy for geriatric depression: A systematic review

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ABSTRACT

Background: Geriatric depression is a common and debilitating psychopathology, but evidence supports the efficacy of psychotherapy in its treatment. Group therapy provides advantages over individual interventions. However, only three systematic reviews have focused specifically on the efficacy of group therapy for geriatric depression.

Objective: To ascertain the effects of group psychotherapy on geriatric depression in people aged 60 years and older, compared with alternative treatments or no treatment.

Data sources: A systematic review of English, Portuguese, and Spanish studies using the EBSCOhost Research and Science Direct databases (2011–2017). Additional studies were identified through reference lists. Search terms included group therapy, group psychotherapy, older adults, elderly, depressive disorder, geriatric depression, and depression in the elderly.

Review methods: The researcher screened any study designs concerning the effects of any paradigm of group therapy on geriatric depression *versus* alternative interventions or no treatment. Relevant data, including indicators of risk of bias, were extracted.

Data synthesis: Nine studies were reviewed. Reminiscence therapy and cognitive-behavioral therapy are viable group interventions for geriatric depression, and were significantly superior to most controls. Conclusions about the long-term effects were unclear. Significant improvements were obtained for different intervention durations and facilitators, and with participants of different nationalities and age. Most studies recruited participants from the community, which limited generalizability. Group therapy also resulted in improvements in other psychological variables.

Conclusions: Group therapy can significantly improve geriatric depression. Improvements were found across a variety of settings, protocols, participant characteristics, and for several psychological domains.

1. Introduction

1.1. Rationale

1.1.1. Geriatric depression

The increase of human lifespan and the decrease in birthrates has culminated in the aging of modern societies (Laidlaw, Thompson, Dick-Siskin, & Gallagher-Thompson, 2003). Portugal has one of the largest aging rates in Europe (140%), and 18,7%–28,6% of the population is aged 65 years or older (Instituto Nacional de Estatística, 2016).

Late adulthood is associated with a high prevalence of psychopathology, of which geriatric depression (GD) is the most common (Casey, 2012; Fiske, Wetherell, & Gatz, 2009; Laidlaw et al., 2003). Depressed older adults have decreased functionality and well-being, increased risk of morbidity and self-neglect, and deficits at physical, cognitive, and social levels. This results in increased mortality rates (Blazer, 2003; Casey, 2012; Fiske et al., 2009; Funnell, 2010). GD also tends to be more chronic and persistent than depression in younger adults (Blazer, 2003), and often exists associated with medical conditions typical of late adulthood (Blazer, 2003; Casey, 2012). Depressed elderly clients are a common presence in primary health care facilities, which results in increased costs and expenses. Thus, GD is a serious threat to older adults' mental health, but also to society itself (Casey, 2012).

1.1.2. Intervention

With adequate treatment, a high percentage of depressed older adults can fully recover (Casey, 2012). These clients tend to have

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positive attitudes towards psychotherapy and may prefer it instead of pharmacological treatment (Laidlaw, 2006). Several systematic reviews have demonstrated that psychotherapy is an effective evidence-based practice to treat GD (*e.g.*, Apóstolo, Bobrowicz-Campos, Rodrigues, Castro, & Cardoso, 2016; Jonsson et al., 2016), while others have demonstrated the efficacy of group therapy in the treatment of depression in younger adults (*e.g.*, Huntley, Araya, & Salisbury, 2012; Okumura & Ichikura, 2014).

While group and individual modalities share characteristics, such as offering the client a safe haven where to expose their concerns and proportioning a therapeutic alliance, group therapy shows some advantages. In a group, one can socialize with peers who share similar symptoms, and there is opportunity to increase one's altruism and empathy and to feel useful by helping others. As well, group therapy results in a more cost-effective professionals/clients ratio (Agronin, 2009). In particular, group therapy is an opportunity for depressed older adults, who often live isolated and have lost significant relationships, capacities, or occupations, to once again feel connected with and useful to the society, as well as to (re)discover a meaning for their life (Floyd & Scogin, 1998).

Group therapy rationales are similar for depressed young and older adults, though, for the latter, adaptations may be required such as shorter session times, written materials with bigger fonts, or repetition of instructions. However, older adults shouldn't immediately be taken as clients with deficits or with reduced mental capacity, and the group protocols should be adapted only after consideration of the group's idiosyncrasies (Laidlaw et al., 2003; Laidlaw, 2006).

Some systematic reviews have investigated the efficacy of group therapy on GD, but not specifically. Engels and Vermey (1997); Bohlmeijer, Smit, and Cuijpers, (2003), and Franck, Molyneux, and Parkinson, (2016) included both individual and group modalities of treatment. Pinquart and Sörensen (2001) also included individual and group treatments, and some included studies contemplated interventions with non-depressed older adults. Payne and Marcus (2008) did not consider GD as primary outcome. Although it wasn't a main objective of their respective study, Cuijpers, van Straten, and Smit, (2006) and Pinquart, Duberstein, and Lyness, (2007) concluded that individual and group therapies are similarly effective in the treatment of GD.

To our knowledge, only three systematic reviews have focused specifically on the efficacy of group therapy on GD. Gorey and Cryns (1991) analyzed 19 studies conducted between 1967 and 1988. The main paradigms considered were cognitive-behavioral therapy (CBT) and psychodynamic therapy (PT). The mean global effect of group work with depressed older adults was statistically and clinically significant, and was homogeneous across all older age cohorts, group work duration, and clinical paradigms. The main limitation of this review was the low methodological quality of the studies included.

Krishna et al. (2011) reviewed published and unpublished materials until 2009, and 6 studies met inclusion criteria for meta-analysis. All were randomized controlled trials (RCT) of group CBT. Group CBT was significantly superior when compared to waitlist, with a modest overall effect size (maintained at follow-up), and such benefits, when compared to active controls, did not reach statistical significance. The main limitations of this review were the small number of eligible studies, the small sample sizes, the relatively high attrition rate, and the heterogeneity of the interventions.

Syed Elias, Neville, and Scott, (2015) investigated the efficacy of group reminiscence therapy (RT) on GD, among other primary outcomes, by reviewing any design studies published between 2002 and 2014. Concerning GD, 8 quasi-experimental trials were analyzed. Five of these found that group RT was effective in reducing GD, while three studies yielded non-significant findings. Only integrative reminiscence therapy (IRT) was significantly effective in reducing GD. Limitations of this review included small sample sizes, high attrition rates, insufficient evidence about long-term effects, and use of passive controls only.

Although the review of Syed Elias et al. is the most recent, it was limited to group RT and to long-term care residents. The most recent systematic review with a broad scope was the one conducted by Krishna et al., 2011, new results and conclusions have become available. Therefore, the aim of the present study was to expand on currently available knowledge by systematically reviewing and synthesizing published and unpublished materials. We reviewed any study designs, to ascertain the efficacy of group psychotherapy on depressive disorders or depressive symptoms in people aged 60 years and older, compared with alternative treatments or no treatment.

2. Methods

2.1. Eligibility criteria

2.1.1. Population

Participants must be 60 years or older, and formally diagnosed with a depressive disorder according to the definitions by the American Psychiatric Association or the World Health Organization, or have significant depressive symptoms as measured with a validated scale. We excluded studies including participants with comorbid psychopathologies except anxiety disorders (due to common co-occurrence with depression; Kaufman & Charney, 2000), and studies including participants with any degree of cognitive impairment.

2.1.2. Interventions

Any group intervention based on an explicit psychological rationale. We excluded studies where group therapy was administrated and assessed together with another treatment. There was one exception (Wuthrich, Rapee, Kangas, & Perini, 2016). We included this study because psychotropic medication was a constant to all participants, they should refrain from making changes to their medication status throughout the study, and it was monitored at post-test and follow-up assessments.

2.1.3. Comparator

Any comparator.

2.1.4. Outcome and measures

The primary outcome considered was change in depressive symptoms or remission. Psychological secondary outcomes assessed in the included studies were also examined. Any validated measure was acceptable.

2.1.5. Study design

Any study design, except systematic reviews and meta-analyses.

2.1.6. Setting

Any setting.

2.1.7. Language

Studies in Portuguese, English, or Spanish.

2.1.8. Publication type

Studies published in peer-reviewed journals and unpublished materials.

2.2. Information sources

The search was performed by the researcher between May and August 2017. Studies dating between 2011 and July 2017 were identified by searching the EBSCOhost Research and Science Direct databases, and by scanning the reference lists of relevant systematic reviews. In the EBSCOhost Research databases, we searched American Doctoral Dissertations, PsycINFO, Psychology and Behavioral Sciences Collection, PsycARTICLES, MEDLINE, MedicLatina, Fonte Acadêmica, CINAHL Plus with Full Text, and Academic Search Complete.

Table 1
Summary of studies about group therapy for geriatric depression.

Author/ Year/ Country	Study design (follow-up period)	Setting/ Sample size (*n*)/ Mean age	Interventions (*n*)	Nr. of sessions/ Facilitator(s)	Outcome measures	Main results
Chueh and Chang, (2014)/ Taiwan	Quasi-experimental study (3 months + 6 months)	Veterans' nursing home/ 21 participants/ 82 years	RT: 11 Waitlist: 10	4/ Mental health professionals	GDS	Group RT significantly decreased GD ($p < .01$) at post-test, and the effect was maintained at 3 months and 6 months follow-ups. Group therapy was significantly more effective than control.
Drăghic, (2012)/ Romania	Quasi-experimental study (6 months)	Unspecified/ 30 participants	Experiential psychotherapy: 30 No control group.	8/ Unspecified	HDRS HARS GHQ SDS WMS	No statistical analyses were reported.
Duyan, et al. (2017)/ Turkey	Quasi-experimental study	Nursing home/ 30 participants	RT: 16 No-treatment: 14	10/ Social work professionals	MOSES GDS-SF	Group RT did not significantly decrease GD ($F_{3,\ 56} = 0.84$, $p = .48$), but significantly improved withdrawn behavior ($F_{3,56} = 4.52$, $p < .05$).
García-Peña et al. (2015)/ Mexico	Randomized controlled trial	Primary care unit/ 81 participants/ 70.8 years	CBT: 41 TAU: 40	12/ Nurses	PHQ-9 SF-36 SAST	Group CBT resulted in a decrease equal or superior to 5 points on the PHQ-9 for 56% of the participants, and a decrease between 4 to 1 points for 19.5% of the participants
Hanaoka et al. (2011)/ Japan	Quasi-experimental study	Community/ 22 participants/ 76.6 years	RT: 22 No control group.	8/ Mental health professionals + volunteers	GDS-SF TMIG-IC LSI-K	Group RT significantly decreased GD ($p = .04$), but had no significant effect on subjective well-being.
Huang et al. (2015)/ Taiwan	Randomized controlled trial (3 months + 6 months)	Community/ 57 participants/ 76.5 years	CBT: 18 PFE: 19 No-treatment: 20	12/ Nurses	GDS-SF 6-minute walk test SF-36 ISSB	Group CBT significantly decreased GD ($p < .01$) at post-test, but the effect became non-significant at 3 months and 6 months follow-ups. Group therapy was significantly more effective than no-treatment and equivalent to group PFE.
Lobo et al. (2012)/ Brasil	Quasi-experimental study	Unspecified/ 6 participants	CBT: 6 No control group.	7/ Unspecified	MMSE BDI BAI GDS-SF MAC-Q	No statistical analyses were reported.
McLaughlin and McFarland, (2011)/ Australia	Randomized controlled trial (3 months)	Community/ 37 participants	CBT: 18 General care: 19	6/ Mental health professionals	CIDI GDS WPSI	There was a significant main effect of time on GD ($p < .05$), but not of groups. Group therapy was equivalent to control. The same pattern was found for psychosocial functioning ($p < .01$).
Moral et al. (2015)/ Dominican Republic	Quasi-experimental study	Community/ 34 participants/ 73.9	IRT: 17 Waitlist: 17	8/ Mental health professionals	GDS RSES LIS LSI-A RPWBS	Group IRT significantly decreased GD ($F_{1,32} = 19.47$, $p < .001$, $\eta^2 = 0.378$). Group therapy was significantly more effective than control. The same pattern was found for self-esteem, life satisfaction, integrity, and psychological well-being
Wang et al. (2014)/ Taiwan	Quasi-experimental study	Community/ 24 participants	CBT: 12 General care: 12	8/ Mental health professionals	HDRS WHOQOL-BREF	Group CBT significantly decreased GD ($p < .01$). Group therapy was significantly more effective than control. The effect of group CBT on overall quality of life was not significant when adjusted for depression.
Wu et al. (2012)/ Taiwan	Quasi-experimental study	Veterans' nursing home/ 37 participants	Instrumental reminiscence psychotherapy: 17 Unspecified: 20	12/ Unspecified	GDS-SF LSI-A RSES	Group instrumental reminiscence significantly decreased GD ($p < .01$) and increased life satisfaction and self-esteem ($p < .01$ for both).
Wuthrich et al. (2016)/ Australia	Randomized controlled trial (6 months)	Community/ 133 participants/ 67.4 years	CBT: 76 Active control: 53	11/ Graduate students in clinical psychology	ADIS GDS GAI WHOQOL-BREF	There was a significant time × group interaction for the mean severity of mood disorders ($F_{2,241.570} = 3.412$, $p = .035$), with group CBT being superior at post-test ($t_{120} = -3.601$, $p < .001$). There was a significant main effect of time on self-report measures of GD, but no significant time x group interaction.

(*continued on next page*)

Table 1 (*continued*)

Author/ Year/ Country	Study design (follow-up period)	Setting/ Sample size (*n*)/ Mean age	Interventions (*n*)	Nr. of sessions/ Facilitator(s)	Outcome measures	Main results
Zhou et al./ (2012)/ China	Quasi-experimental study	Community/ 125 participants/ 69.4 years	RT: 59 General care: 66	6/ Nurses	GDS RSES ABS	Group RT significantly decreased GD ($p < .001$). Group therapy was significantly more effective than control The same pattern was found for negative feelings, positive feelings, and affect balance.

GDS = Geriatric Depression Scale; HDRS = Hamilton Depression Rating Scale; HARS = Hamilton Anxiety Rating Scale; GHQ = General Health Questionnaire; SDS = Social Dysfunction Subscale; WMS = Wechsler Memory Scale; MOSES = Multidimensional Observation Scale for Elderly Subjects; GDS-SF = Geriatric Depression Scale Short Form; PHQ-9 = Patient Health Questionnaire; SF-36 = Short Form Health; SAST = Short Anxiety Screening Test; TMIG-IC = TMIG Index of Competence; LSI-K = Life Satisfaction Index-K; ISSB = Inventory of Socially Supportive Behaviors Scales; MMSE = Mini Mental State Examination; BDI = Beck Depression Inventory; BAI = Beck Anxiety Inventory; MAC-Q = Memory Complaint Questionnaire; CIDI = Composite International Diagnostic Interview; WPSI = Washington Psychosocial Seizure Inventory; RSES = Rosenberg Self-esteem Scale; LIS = Life Integration Scale; LSI-A = Life Satisfaction Index-A; RPWBS = Ryff Psychological Well-Being Scales; WHOQOL-BREF = World Health Organization Quality of Life Measure-Brief; ADIS = Anxiety Disorders Interview Schedule for DSM-IV; GAI = Geriatric Anxiety Inventory; ABS = Affect Balance Sc.

2.3. Search strategy

The electronic search in the EBSCOhost Research databases used the Boolean operators “group therapy or group psychotherapy” AND “older adults or elderly or geriatric” AND “depression or depressive disorder”. In the Science Direct databases, we used the advanced search option for the Boolean operators “geriatric depression or depression in the elderly” AND “group therapy or group psychotherapy”. We applied the following filters, while selecting Journals Only: Medicine and dentistry, Nursing and health professionals, Psychology, Social sciences.

2.4. Study selection

The researcher screened the titles and abstracts for eligibility. All materials of potential relevance, according to the inclusion criteria, were retrieved in full text. The reference lists of relevant systematic reviews and meta-analyses were screened for additional materials.

2.5. Data collection process

Data were extracted from each included study and inserted into a table, created by the researcher according to *Preferred Reporting Items for Systematic reviews and Meta-Analyses* (PRISMA; Liberati et al., 2009).

2.6. Data items

A summary of the information extracted and of the study characteristics is presented in Table 1.

2.7. Risk of bias in individual studies

The risk of bias was assessed according to the standardized critical appraisal instrument from the *Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument* (JBI-MAStARI; The Joanna Briggs Institute, 2014).

3. Results

3.1. Study selection

The search in the EBSCOhost Research and in the Science Direct databases provided, respectively, 273 and 383 results, making a total of 656 results. After review of the titles and abstracts, while screening for duplicates, 476 results were discarded. The full text of 180 results was examined, including 5 identified from reference lists. After full text assessment, while applying the selection criteria, 167 results were excluded, leaving a final total of 13 published studies (no unpublished materials were considered eligible). Fig. 1 provides an overview of the PRISMA strategy used to identify studies that met the selection criteria (Liberati et al., 2009).

3.2. Risk of bias within studies

Assessment of risk of bias is presented in Table 2. None of the selected 13 studies fulfilled all the JBI-MAStARI criteria. We included only the studies which fulfilled at least five out of ten criteria, excluding 4 studies (Drăghici, 2012; Hanaoka, Muraki, Yamane, Shimizu, & Okamura, 2011; Lobo et al., 2012; Wu, Chuo, & Wu, 2012). A total of 9 studies were analyzed.

3.3. Study characteristics

Five studies had a quasi-experimental design (Chueh & Chang, 2014; Duyan, Şahin-Kara, Duyan, Özdemir, & Megahead, 2017; Moral, Terrero, Galán, & Rodríguez, 2015; Wang, Tzeng, & Chung, 2014; Zhou et al., 2012) and four were RCTs (García-Peña et al., 2015; Huang, Liu,

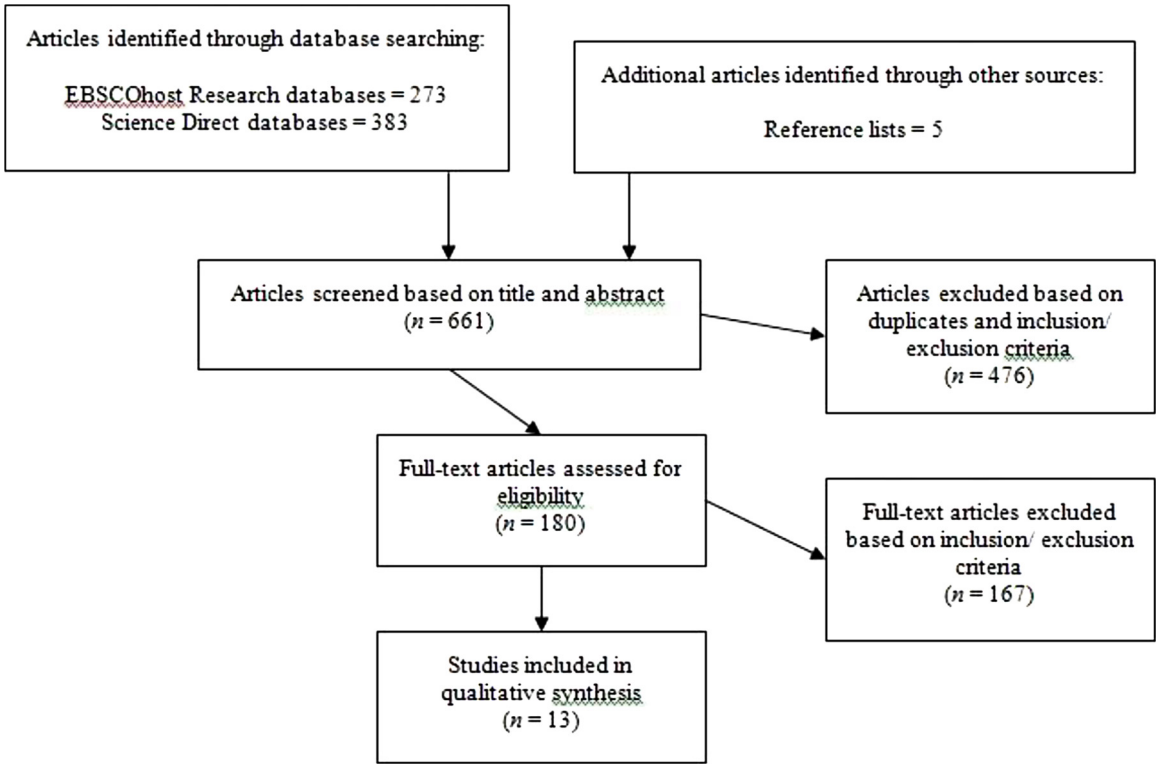

Fig. 1. Modified PRISMA flow diagram of study screening and selection.

Tsai, Chin, & Wong, 2015; McLaughlin & McFarland, 2011; Wuthrich et al., 2016). Four studies included follow-up assessment (Chueh & Chang, 2014; Huang et al., 2015; McLaughlin & McFarland, 2011; Wuthrich et al., 2016), which varied between 3 and 6 months. Three studies were conducted in Taiwan (Chueh & Chang, 2014; Huang et al., 2015; Wang et al., 2014), two in Australia (McLaughlin & McFarland, 2011; Wuthrich et al., 2016), one in Turkey (Duyan et al., 2017), one in Mexico (García-Peña et al., 2015), one in Dominican Republic (Moral et al., 2015), and one in China (Zhou et al., 2012).

Participants of all studies were aged 60 years or older and were diagnosed with GD or had significant depressive symptoms as measured with a validated scale. Six studies included community dwellers (Huang et al., 2015; McLaughlin & McFarland, 2011; Moral et al., 2015; Wang et al., 2014; Wuthrich et al., 2016; Zhou et al., 2012), one included participants from a primary care unit (García-Peña et al., 2015), one included nursing home residents (Duyan et al., 2017), and one included a veteran's nursing home residents (Chueh & Chang, 2014).

The group intervention rationale was CBT in five studies (García-Peña et al., 2015; Huang et al., 2015; McLaughlin & McFarland, 2011; Wang et al., 2014; Wuthrich et al., 2016), RT in three studies (Chueh & Chang, 2014; Duyan et al., 2017; Zhou et al., 2012), and IRT in one study (Moral et al., 2015). The duration of the interventions varied between 4 and 12 weeks. The group sessions were led by mental health professionals in four studies (Chueh & Chang, 2014; McLaughlin & McFarland, 2011; Moral et al., 2015; Wang et al., 2014), by nurses in three studies (García-Peña et al., 2015; Huang et al., 2015; Zhou et al., 2012), by social work professionals in one study (Duyan et al., 2017), and by graduate students in clinical psychology in one study (Wuthrich et al., 2016).

Comparators included general care in three studies (McLaughlin & McFarland, 2011; Wang et al., 2014; Zhou et al., 2012), no-treatment in two studies (Duyan et al., 2017; Huang et al., 2015), waitlist in two studies (Chueh & Chang, 2014; Moral et al., 2015), and treatment as usual (TAU) in one study (García-Peña et al., 2015). Wuthrich et al. (2016) had an active control, which consisted of a non-directive discussion group. Huang et al. (2015) also included group physical fitness exercise (PFE). The number of sessions, frequency, and duration of each session of these comparators' protocols varied across studies.

GDS or GDS-SF were used in seven studies (Chueh & Chang, 2014; Duyan et al., 2017; Huang et al., 2015; McLaughlin & McFarland, 2011; Moral et al., 2015; Wuthrich et al., 2016; Zhou et al., 2012). Other scales used to assess GD included the HDRS (Wang et al., 2014) and the PHQ-9 (García-Peña et al., 2015). As for interviews, McLaughlin and McFarland (2011) utilized the CIDI, and Wuthrich et al. (2016) utilized the ADIS.

Psychological secondary outcomes included quality of life (García-Peña et al., 2015; Huang et al., 2015; Wang et al., 2014; Wuthrich et al., 2016), anxiety (García-Peña et al., 2015; Wuthrich et al., 2016), psychosocial functioning level and well-being (Duyan et al., 2017; Moral et al., 2015), self-esteem (Moral et al., 2015; Zhou et al., 2012), social support (Huang et al., 2015), integrity (Moral et al., 2015), life satisfaction (Moral et al., 2015), and affect balance (Zhou et al., 2012).

3.4. Results of individual studies

Chueh and Chang (2014) explored the effects of group RT, compared to waitlist, on institutionalized male veterans. There was a significant decrease in GDS scores in the intervention group but not in the control group, maintained at 6 months follow-up. At pre-test, 81.81% of participants in the intervention group had a diagnosis of GD; at post-test, this rate dropped to 9.09% (42.86% at follow-up). In the control group, the rate of GD was maintained around 80% (83.33% at follow-up).

Duyan et al. (2017) explored the effects of group RT, compared to no-treatment, on participants from a nursing home. There were no statistically significant differences in GDS-SF scores in the intervention group. However, behavioral changes were observed. These participants also showed a significant reduction in withdrawn behavior. The participants in the control group had higher GDS-SF scores at post-test assessment than they did at pre-test.

Table 2
Assessment of methodological quality of group therapy studies using JBI MAtSARI.

Criteria	Chueh and Chang (2014)	Drăghici (2012)	Duyan et al. (2017)	García-Peña et al. (2015)	Hanaoka et al. (2011)	Huang et al. (2015)	Lobo et al. (2012)	McLaughlin and McFarland (2011)	Moral et al. (2015)	Wang et al. (2014)	Wu et al. (2012)	Wuthrich et al. (2016)	Zhou et al. (2012)
1. Was the assignment to treatment groups truly random?	Y	NA	U	Y	NA	Y	NA	Y	N	N	U	Y	Y
2. Were participants blinded to treatment allocation?	U	NA	U	N	NA	U	NA	U	U	N	U	U	U
3. Was allocation to treatment groups concealed from the allocator?	U	NA	U	Y	NA	U	NA	U	U	N	U	Y	U
4. Were the outcomes of people who withdrew described and included in the analysis?	Y	N	NA	Y	N	NA	NA	U	NA	Y	U	Y	U
5. Were those assessing outcomes blind to the treatment allocation?	U	U	U	Y	U	Y	U	U	U	U	U	Y	U
6. Were the control and treatment groups comparable at entry?	Y	NA	Y	Y	NA	Y	NA	Y	Y	Y	U	Y	Y
7. Were groups treated identically other than for the named interventions?	Y	NA	Y	Y	NA	Y	NA	Y	Y	Y	U	Y	Y
8. Were outcomes measured in the same way for all groups?	Y	NA	Y	Y	NA	Y	NA	Y	Y	Y	Y	Y	Y
9. Were outcomes measured in a reliable way?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10. Was appropriate statistical analysis used?	Y	NA	Y	Y	Y	Y	U	Y	Y	Y	Y	Y	Y

Y = Yes, N = No, U = unclear, NA = not applicable.

García-Peña et al. (2015) explored the effects of group CBT, compared to TAU, on participants from a primary care unit. The main outcome was the clinically relevant modification in the PHQ-9 scores, and intervention effectiveness was defined as a decrease of at least 5 points in these scores. This was reported for 56.1% of the participants in the intervention group, and for 30% in the control group. A decrease between 4 to 1 points was reported for 19.5% of the participants in the intervention group, and for 22.5% in the control group. No change or increase of up to 5 points were reported for 24.3% of the participants in the intervention group, and for 47.5% in the control group. The SF-36 and the SAST were also used, but no data was provided.

Huang et al. (2015) compared the effects of group CBT, group PFE, and no-treatment, on community dwellers. The GDS-SF scores significantly decreased in the CBT and PFE groups, and, at post-test, there were more participants without a diagnosis of GD in both intervention groups than in the control group. The difference in the decrease of GDS-SF scores between both intervention groups was non-significant. Unlike the group PFE effect, the group CBT effect became non-significant at 3-month and 6-month follow-ups. The authors also discussed results obtained for group CBT and group PFE for 6-minute walk distance, quality of life, and social support.

McLaughlin and McFarland (2011) had the main objective of examining the effects of group CBT, compared with relaxation techniques, on the seizure frequency of community dwellers with epilepsy. Since the CIDI and the GDS were used to assess depression as well as dysthymia, we considered both as measures of GD. The effect of group CBT on GD did not statistically differ from the effect of the control group intervention. The same pattern of results was reported for psychosocial functioning. A significant Time x Group interaction on seizure frequency was also reported.

Moral et al. (2015) explored the effects of group IRT, compared to waitlist, on community dwellers. There were no significant differences in GDS scores in the control group, but a significant decrease was reported in the IRT group. The scores of self-esteem, life satisfaction, integrity, and psychological well-being significantly increased in the IRT group, unlike in the control group. The Time x Group interactions for all variables were significant.

Wang et al. (2014) explored the effects of group CBT, compared to general care, on community dwellers. Group CBT resulted in a significant decrease in HDRS scores. A significant difference from pre-test to post-test assessment was reported for the psychological and social domains of quality of life, but not for the physical and environmental domains. In the control group, GD did not improve and overall quality of life decreased.

Wuthrich et al. (2016) explored the effects of group CBT, compared to an active control, on community dwellers. Considering the diagnosis of a primary (either depressive or anxiety) disorder, there was a significant effect of time and a significant Time × Group interaction, which indicated a significant improvement for group CBT participants compared to the non-directive discussion group. This superiority became non-significant at the 6 months follow-up. The same pattern of results was reported for the mean severity of all disorders. For the mean severity of mood disorders only, there was a significant effect of time and a significant Time × Group interaction, with group CBT being superior at post-test assessment. The same pattern of results was reported for the mean severity of anxiety disorders only. A significant main effect of time on self-report measures of GD, anxiety, and overall quality of life was also reported, but there were no significant Time x Group interactions on any of these scores.

Finally, Zhou et al. (2012) explored the effects of group RT, compared to general care, on community dwellers. GDS scores of the participants in the RT group significantly decreased. In the control group, GDS scores also decreased, but this result was significantly lower than that of the RT group. Negative feelings scores also decreased significantly more in the RT group, while the positive feelings and affect balance scores significantly increased in the RT group and had no significant change in the control group. Self-esteem scores showed no significant difference after the interventions.

3.5. Syntheses of results

Group therapy resulted in significant improvements in GD symptoms in eight out of nine studies, the exception being Duyan et al. (2017). Two studies reported no significant superiority of the group intervention compared to control, respectively: group CBT *versus* PFE, and group CBT *versus* relaxation techniques. One study also reported no superiority of group CBT *versus* a non-directive discussion group in self-reported GD symptoms. Six studies reported that group therapy resulted in improvements on GD which were significantly superior to those obtained with control intervention, respectively: group RT *versus* general care, group RT *versus* waitlist, group IRT *versus* waitlist, group CBT *versus* TAU, and group CBT *versus* general care. One study also reported superiority of group CBT *versus* a non-directive discussion group in GD symptoms assessed by a professional.

Significant effects on GD were obtained for group therapy protocols of different durations (ranging from 4 to 12 sessions) and led by different facilitators (mental health professionals, nurses, and graduate students in clinical psychology). The study with no significant improvements (Duyan et al., 2017) had 10 sessions, led by social work professionals.

Significant effects on GD were obtained with participants from different settings (community dwellers, primary care unit, and veteran's nursing home) and of different nationalities (Taiwan, Australia, Mexico, Dominican Republic, and China). Based on Funnell (2010)'s terminology, significant effects were reported for "young-old" and for "old-old" participants. The study with no significant improvements recruited participants from a nursing home in Turkey and did not provide their mean age.

All studies where group therapy resulted in significant improvements assessed GD with self-report instruments, except for one, using an instrument rated by a professional. Two studies also utilized interviews.

Group therapy resulted, furthermore, in significant improvements for anxiety, psychosocial functioning level and well-being, social support, integrity, life satisfaction, affect balance, and withdrawn behavior. Quality of life revealed mixed results: one study reported significant general improvements, one study reported significant improvements only in the psychological and social domains, and one study reported no significant improvements. Mixed results were also found for self-esteem: one study found significant improvements, and one study did not.

4. Discussion

4.1. Summary of evidence

4.1.1. Quality of the studies

Of the nine studies analyzed, four were RCTs, which is considered the best source of experimental evidence (The Joanna Briggs Institute, 2014). Cuijpers (2016) calculated that, to detect a medium effect size (Cohen's $d = .6$), at least 90 trial participants are required, and that, to detect a minimally relevant effect size (Cohen's $d = .24$), this number is at least 548 trial participants. In our review, only two studies involved a sample size with more than 100 participants. Therefore, more than the small number of RCTs, what warrants caution about our results is the overall lack of power of the included studies.

None of the studies fulfilled all the JBI-MAStARI criteria and, in all of them, participant blinding to treatment allocation was unclear or not addressed. However, given the nature of psychotherapeutic interventions, we acknowledged the practical difficulties of this procedure (Barkham, Moller, & Pybis, 2017). Some studies which might have provided viable results were excluded due to risk of bias. Nonetheless, this improved the confidence with which conclusions can be drawn

from our review.

4.1.2. Efficacy of group therapy for geriatric depression

We expanded the knowledge established by previous reviews by analyzing the most recent literature, by considering different components of the studies, and by including different study designs and paradigms of group therapy. Of the nine studies analyzed, eight reported statistically significant improvements in GD after group therapy. Therefore, this modality of psychological intervention emerged as a viable therapeutic option for older adults suffering from depressive disorders or depressive symptoms. In accordance to previous reviews, there was support for the efficacy of group RT and group CBT.

Syed Elias et al. (2015) reported mixed results for group RT, which is in accordance with our results. The authors also reported that IRT was the only specific type of RT significantly effective in improving GD, which was supported by our study through the work of Moral et al. (2015). This may be because IRT promotes the review of positive and negative past events, to meaningfully connect past and current memories (Hallford, Mellor, & Cummins, 2012, *cit. in* Syed Elias et al., 2015). The cognitive restructuring inherent to IRT may explain why it was more effective than other types of group RT.

Group CBT, as the individual modality, proposes that the depressive humor derives from maladaptive thought patterns (Beck, Rush, Shaw, & Emery, 1979). Thus, its primary goal is to identify and change dysfunctional beliefs, thoughts, and behaviors (Casey, 2012; Floyd & Scogin, 1998), while considering the meanings that clients attribute to their life experiences (Beck et al., 1979; Laidlaw, 2006). Typically, group CBT protocols include three modules: cognitions, behaviors, and social interactions, and their respective impact on depressive humor.

Gorey and Cryns (1991) concluded that group CBT and group PT were statistically and clinically effective interventions for GD and that improvements were homogeneous across all older age cohorts studied and group work duration. Our results obtained for group CBT were in accordance, although no group PT studies were eligible. Krishna et al. (2011) also concluded that group CBT was an effective intervention for GD. However, the effect size obtained was non-significant when compared to active controls. Floyd and Scogin (1998) discussed the "common factors" shared by different paradigms of group therapy, which may be the reason for the positive results obtained with older adults, as opposed to specific factors from any paradigm. In our review, the study of Wuthrich et al. (2016) compared the efficacy of group CBT with a non-directive discussion group which served as control for generic psychotherapy skills and typical group processes. Both interventions resulted in significant improvements in self-reported GD symptoms, among other outcomes, and this evidenced the relevance of general group therapeutic processes. However, group CBT resulted in significantly greater improvements in GD symptoms assessed by a professional, among other outcomes, demonstrating some benefits beyond general, non-specific aspects of group therapy.

Our review demonstrated that group therapy resulted in improvements in GD which were significantly superior to those obtained with no-treatment, waitlist, general care, and TAU. Huang et al. (2015) ascertained that group CBT and PFE were equivalent in ameliorating GD at post-test assessment, and that the effects of group CBT became non-significant at follow-up. The authors suggested explanations such as both interventions having a group format, participants not maintaining the CBT practice, and the subsequent decrease in social interaction after the CBT group was ended. McLaughlin and McFarland (2011) also reported that group CBT and relaxation techniques were equivalent in ameliorating GD. Although the authors did not explore this possibility, we alert that relaxation techniques are often a component of CBT protocols. Therefore, this control group limited the conclusions obtained.

As for the long-term effects of group therapy on GD, our conclusions were unclear. Most included studies did not conduct a follow-up assessment, and those which did yielded mixed results, *i.e.*, the significant effect was still superior at follow-up, or it was still significant but no longer superior to controls, or it was no longer significant. The longest follow-up period considered was 6 months, and some studies reported drop-out of participants by that point. It's possible that lack of assessment of attrition rates and reduced statistical power can explain the non-significant results. Another possibility, as suggested by Huang et al. (2015), is that, often, participants aren't explicitly instructed nor taught how to maintain the positive changes after the group intervention is finished. Group therapy protocols should start addressing this issue, while future research should continue to invest in follow-up assessments, include longer follow-up periods, and address the issue of attrition rates.

Given the variety identified in the duration of the interventions, we concluded that group therapy for GD is a malleable modality. Pinquart et al. (2007) proposed that 7–12 sessions might provide optimal efficacy, and we identified positive results with interventions ranging from 4 to 12 sessions. This suggests that the protocols can be adapted to both the professionals' and the clients' needs, without such modifications affecting the intervention's efficacy. The same applies to the group sessions' facilitators, since we found significant improvements after group therapy led by professionals from different areas.

The extent to which our results can be generalized is somewhat limited, because most of the included studies recruited participants from the community. These authors alerted for the healthier and wealthier condition of these persons, compared to the general elderly population. However, the study of Chueh and Chang (2014) is worthy of attention. Their participants were recruited from a war veterans' nursing home, with idiosyncratic life experiences and affected by several stress factors, which can culminate in severe depressive symptoms. Nevertheless, group therapy improved GD in this study, with effects significantly superior to waitlist at post-test and 6 months follow up.

Group therapy also yielded significant improvements for older adults of different nationalities. While the aging of societies is a worldwide phenomenon, a majority of the published literature consists of samples from the United States or Europe (Neto, 2002), and minority groups in such countries tend to be underserved when reaching out to mental health care facilities (Barkham et al., 2017). Our review showed that different protocols and paradigms of group therapy can be used for GD with good results in culturally diverse clients, although it was not possible to identify any features specific to any given country or culture. Future research should focus on trying to identify such potential specificities, on promoting group therapy protocols which are mindful of culturally diverse clients, and on examining their efficacy.

Group therapy helped improve GD even for the "old-old" participants. Due to the increase in human lifespan, societies started acknowledging a fourth age, starting after 75–80 years of age. Whilst it is possible to remain physically and mentally healthy at such prolonged age, it is also undeniable that functional incapacities, chronic diseases, and overall stress factors may result in impoverished quality of life and higher risk for psychopathology (Baltes & Smith, 2003). Our results demonstrated that, despite the inevitable consequences at several levels of reaching such an old age, group therapy can still be of use for these persons.

Group therapy significantly improved GD symptoms as perceived by the participants (self-report scales) and as perceived by professionals (scales rated by the professional and interviews). While there is increased risk of bias when the same professional assesses outcomes and conducts the intervention (The Joanna Briggs Institute, 2014), depressive symptoms are also associated with negative attitudes and expectations about the self and the future (Beck et al., 1979). Group therapy providing significant improvements in GD, when the symptoms were assessed by different methods, is further evidence of the utility of this modality of treatment.

Finally, group therapy also resulted in improvements in several variables associated with mental health and well-being, which adds to its value. The discrepancy observed in quality of life may be explained

by the fact that the authors assessed it with different measures. Both studies providing contradictory results in self-esteem assessed it with the RSES. Both also recruited participants from the community, and followed the RT paradigm. However, Moral et al. (2015) utilized group IRT, which was already discussed as the type of RT providing superior effect.

4.2. Limitations

Our systematic review has several limitations. This study was a dissertation to obtain the Master's degree in Clinical and Health Psychology, which forced it to be conducted by only one researcher and imposed time limitations.

A relatively small number of studies was included, none of which had ideal methodological quality and most of which lacked adequate statistical power. Only published studies, written in English, Portuguese, or Spanish, were ultimately selected. We excluded studies recruiting participants with comorbid psychopathologies (except anxiety disorders) and with any degree of cognitive impairment. However, it is rare that a person suffers from a well-defined disorder without overlapping symptoms (Barkham et al., 2017). Besides, symptoms of GD are often associated with, or even mistaken for, those of dementia (Kolb & Wishaw, 2015).

We only assessed the efficacy of group CBT and group RT, lacking data about other paradigms. Finally, our review included only quantitative studies. Qualitative and mixed designs could be useful to understand what interventions work for depressed older adults in actual practice, why they work (or not), and the attitudes of these clients towards said interventions (Barkham et al., 2017).

4.3. Conclusions

Group therapy is a viable option to improve the symptoms of GD and to ameliorate the mental health and well-being of older adults. Group CBT constitutes a valid and reliable paradigm, while group RT seems to also be recommendable despite less consistent results. Group therapy provides improvements across a variety of settings, protocols, and participant characteristics, and benefits several psychological domains. Given the variable risk of bias present in the reviewed studies, our conclusions warrant some caution and should not be taken as absolute. Nevertheless, even when statistically significant improvements are not obtained, the clinical benefits may justify the use of group therapy, because any small improvements that help decrease the suffering of depressed elderly (or even that halt further worsening of the symptoms) are relevant and desirable. Besides to further validate our conclusions, to clarify aspects not yet addressed (*e.g.*, comparison with other treatment modalities), and to address our limitations, future research should contemplate understudied factors such as researcher allegiance or therapist effects (Barkham et al., 2017).

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None.

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