

Group arts interventions for depression and anxiety among older adults - a systematic review and meta-analysis

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Objetivos:

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Bringing together established research on the benefits of the arts and the power of groups for health 7–10 , this meta-analysis examined the evidence for a promising alternative for addressing depression and anxiety among older adults—that is, group arts interventions.

Depressão (baixo humor, tristeza, mudanças de peso, fadiga, desvalorização pessoal, desatenção e intenção suicida) e ansiedade (sentimento de medo e tensão desproporcional e/ou irracional) são experienciadas por 7% e 3,8% dos idosos em todo o mundo, respectivamente. A principal linha de tratamento aceita na psiquiatria é a farmacológica, com administração de antidepressivos e/ou terapias de diálogo, contudo, o risco de efeitos colaterais desse medicamentos e barreiras comunicacionais com terapeutas é alto.

Metodologia:

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We adhered to the PRISMA 2020 guidelines for systematic reviews 125 . Data were modeled and visualized using Comprehensive Meta-Analysis (CMA) version 3 (ref. 126) . The study protocol was

preregistered on PROSPERO (https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=176701; ID CRD42020176701). Because this review only involved the use of secondary anonymized data from other research studies, it did not require ethical approval.

Dentro dos protocolos de revisão sistemática:

1. Primeira pesquisa foi realizada entre 8-15 de maio de 2020.
2. Bases de dados utilizadas foram Ochrane Library, PsycARTICLES, PsycINFO, EMBASE, Web of Science, PubMed e Google Scholar
3. Idade da população amostral foi de ≥ 55 anos
4. A intervenção realizada pode ser ativa ou passiva, relativo a arte (este de tipos variados, porém exclusivos)
5. Foram núcleos de intervenções analisadas - música, dança, artes visuais, dramatização e escrita criativa.
6. As intervenções foram classificadas em "arte terapia" e "atividade artística", de acordo com o British Association of Music Therapy (resumidamente, a primeira necessita de um profissional acompanhando o praticante).
7. Apenas intervenções com grupo controle foram incluídas.
8. Fora estudadas as medidas de depressão e ansiedade pré e pós intervenções.
9. O design dos estudos escolhido deveriam ser ensaios randomizados ou não randomizados com amplitude em intervenções e estratégias.
10. Todos os estudos deveriam ser em inglês para serem incluídos.
11. Risco de viés foi calculado com a ferramenta Cochrane risk-of-bias tool RoB 2 (ensaios randomizados) e ROBINS-I (ensaios não randomizados).
12. CMA version 3 foi utilizado para extração de dados.
13. A análise estatística usou a regra de Cohen para cálculo de efeito comparado entre as amostragens e seus desvios padrão, sendo o valor considerado alto como benéfico no tratamento das patologias.
14. Foi verificado existência de "outliers" e viés de publicação ([Eggers's test](#), disputado na literatura, muitas correções).
15. Heterogeneidade foi testado através do teste estatístico Q e I^2

Resultados:

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This meta-analysis synthesized the available evidence to determine whether group arts interventions were effective at reducing depression and anxiety among older adults. We focused on group arts interventions given the noted benefits of group-based delivery as well as their cost-effectiveness and potential for scalability.

Dados estão aprofundados nas caixas abaixo (ignore se não for necessário a sua interpretação)

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Participant characteristics. Of the 50 included studies, all but three presented the average age of their participants, which ranged from 64.75 to 84.04 yr. The average participant age fell into a young-old category (that is, 65–74 years old) in more than half the studies ($n = 28$) and into a middle-old category (that is, 75–84 years old) in the remaining studies ($n = 22$). As expected given the longer lifespan of women, the participants were predominantly female in the majority of studies: 75–100% female participants in $n = 28$ studies and 50–74% female participants in $n = 15$ studies. A minority of studies had <50% female participants ($n = 4$). Three studies did not provide gender details for the participants. Most studies did not present information about participant ethnicity or race ($n = 36$). Of the nine studies that did include data on participant race, six had over 90% white participants. Three studies mentioned a mix of racial categories: the first study included 11.1% Black, 4.4% Hispanic, 9.9% Asian and 75.6% white participants; the second included 26% non-Hispanic Black, 20% Asian, 18.5% Hispanic and 35% non-Hispanic white participants and the third included 4% Native American, 24% African American, 48% white, 8% mixed ancestry and 16% not reported.

Of the five studies that included information on the ethnicity of the participants, one had 100% African American participants, one had 100% Korean American participants, one had 100% Indonesian, one had 100% European American and one had 100% Chinese participants.

Contextual characteristics. The majority of arts intervention studies were conducted in the community ($n = 32$) and care homes ($n = 15$). One study comprised participants from a mix of community and care homes 55 and a small number of US-based studies were conducted in senior retirement communities, which the authors felt should be

categorized separately to care homes due to the differences in on-site amenities, activities and independence ($n = 2$) . The studies were conducted across 21 countries, highlighting the international interest in the impact of group arts interventions on mental health in later life. Most studies were conducted in the United States ($n = 12$), followed by China ($n = 9$); Taiwan and Canada ($n = 3$ each); Brazil, Iran, Singapore, Tanzania, Turkey and the United Kingdom ($n = 2$ each); and the Czech Republic, Greece, Indonesia, Ireland, Malaysia, the Philippines, Portugal, South Korea, Thailand, France and Denmark ($n = 1$ each). In terms of income, nine of these countries can be characterized as LMICs and 12 as HICs¹⁰² .

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Intervention characteristics. The majority of interventions were structured around one art type. The three most common art types reported were dance ($n = 17$), music ($n = 12$) and visual arts ($n = 11$). The remaining single art-type interventions used creative writing ($n = 3$) or drama ($n = 1$). One intervention compared two separate arts interventions (visual arts versus music interventions) with a control group. Five of the interventions combined multiple art types including music and movement; music, imagery and movement; visual arts and drama; visual arts and storytelling; and drama (performing magic) and visual arts ($n = 1$ each). There were over three times the number of arts activity interventions ($n = 39$) relative to arts therapy interventions ($n = 11$).

All studies reported the intervention duration and all but two studies reported the number of sessions in the intervention. The duration of the interventions ranged from four to 96 weeks, with the majority of interventions lasting 4–12 weeks ($n = 27$). The total number of sessions ranged from six to 96, with half of the interventions including 6–12 sessions ($n = 25$).

Study design characteristics. The vast majority of the 50 included studies randomly assigned participants into intervention and control groups ($n = 42$). The remaining studies did not use randomization to determine intervention and control group assignment ($n = 8$). The majority of studies compared arts interventions with usual activity control groups ($n = 25$), whereas the other studies used a waiting-list ($n = 7$) or an active ($n = 12$) control group. Two studies indicated that they used controls but did not report the type of

control group used. Two studies compared an arts intervention with two control groups: one active and one usual activities. Two studies did not provide any control group information.

Depression The initial analysis was based on 37 studies evaluating the effect of group arts interventions on depression scores in older adults ($n = 3,379$). As noted earlier, one outlier was identified following the initial calculation and examination of the forest plot⁶⁵. This reduced the number of studies to 36 and the number of participants ($n = 3,360$ total; $n = 1,769$ intervention and $n = 1,591$ control). Results indicated a significant moderate effect ($d = 0.70$, 95% confidence interval (CI) = 0.52–0.87; $P < 0.001$, heterogeneity statistic $I^2 = 0.81\%$; forest plot in Fig. 2, sensitivity analysis in Table 1 and discussion of heterogeneity in Methods).

Publication and reporting bias. There was evidence of publication bias (Egger's test, $P = 0.010$; funnel plot in Fig. 3). A Duval and Tweedie's trim-and-fill procedure adjusted for this bias by imputing 'missing' studies from the funnel plot and producing an effect size that accounts for funnel plot asymmetry^{103,104}. After this adjustment, the effect size fell from moderate to small ($d = 0.42$, 95% CI = 0.35–0.50, $P < 0.001$; funnel plot with the imputed studies in Supplementary Information, Appendix C).

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Subgroup analyses. Subgroup analyses were run on study setting, country, art type, intervention type and control group type. There were insufficient multimodal interventions to explore differences in single and multimodal arts interventions for either depression or anxiety. All 36 depression outcomes were included for intervention type (arts activity and arts therapy) and country (LMIC and HIC) analyses. As there were not enough of the supported living studies ($n = 2$) to be included^{72,76}, the study setting analyses compared participants living in the community and care homes only. The art-type analyses compared visual arts, music and dance only as there were insufficient studies investigating writing or drama for inclusion^{72,76,90}. The two interventions that used more than one art type were also excluded from this analysis^{91,96}. Two studies were removed from the control group analyses as not enough information was presented to define the control group type^{74,86}.

Study setting. A significant between-group effect ($P = 0.005$) was found between community ($d = 0.51$, 95% CI = 0.32–0.70, $P < 0.001$) and carehome ($d = 1.07$, 95% CI = 0.72–1.42; $P < 0.001$) settings, with a stronger effect found for participants in care homes.

There were no differences between subgroups for art type, intervention type, country or control group type (Supplementary Information, Appendix D).

In addition to the planned analyses, exploratory subgroup analyses on average baseline depression scores found a marginal between-group effect ($P = 0.063$) between participants who experienced any depression ($d = 0.81$, 95% CI = 0.56–1.06, $P < 0.001$) and participants who experienced no depression ($d = 0.49$, 95% CI = 0.27–0.71, $P < 0.001$), which suggests a stronger effect of group arts interventions for participants who experienced any depression (Supplementary Information, Appendix D).

Meta-regression. We explored the association between the depression effect sizes and various continuous moderators—that is, the average participant age, intervention duration (weeks), session length (min), total number of sessions and intervention intensity (time (min) per week). No significant associations were found ($P > 0.05$ for all comparisons; Supplementary Information, Appendix E).

Anxiety This analysis was based on ten studies evaluating the effect of group arts interventions on anxiety scores in older adults ($n = 949$). The results indicated a moderate effect: anxiety symptoms were significantly improved in older adults who engaged in a group arts intervention ($n = 487$) compared with those who did not ($n = 462$, $d = 0.76$, 95% CI = 0.37–1.52, $P < 0.001$, $I^2 = 0.85\%$; forest plot in Fig. 4, sensitivity analyses in Table 2 and discussion of heterogeneity in Methods).

Publication and reporting bias. There was no evidence of publication bias (Egger's test, $P = 0.125$; funnel plot in Fig. 5).

Subgroup analyses. As there were only ten studies, only intervention type (arts activity and arts therapy) and country (LMIC and HIC) could be explored. All ten studies were included in both these analyses and no significant results were found ($P > 0.05$ for all comparisons; Supplementary Information, Appendix F).

Meta-regression. We explored the association between the anxiety effect sizes and continuous moderators—that is, average participant age, intervention duration (weeks), session length (min), total

number of sessions and intervention intensity (time (min) per week). No significant associations were found ($P > 0.05$ for all comparisons; Supplementary Information, Appendix G).

Síntese de discussão e conclusões:

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this meta-analysis found that engaging in group arts interventions significantly reduced depression and anxiety symptoms relative to engaging in other non-artsbased activities, one's usual activities only or remaining on a waiting list for arts interventions.

Os dados encontrados foram compatíveis com outras metanálises e revisões sistemáticas. De maneira geral, os estudo apontaram para um maior efeito no tratamento das patologias em pacientes em arteterapia e atividades artísticas, afirmativa sustentada pelo coeficiente de cohen médio dos estudo encontrados para ansiedade foi de $d = 0.76$.

Os benefícios da arteterapia são gerais para todos os contextos, habitualmente.

Dramaturgia, escrita criativa e outras atividades foram menos representadas que artes visuais, dança e música.

De maneira geral, os resultados em casos de depressão eram de artigos com viés, ou seja, provavelmente resultados negativos podem ter sido ocultados. O artigo garante que os resultados dispostos nele passaram pelos procedimentos descritos na metodologia.

Outro problema é a heterogenia de estudos, devido a natureza diferente das intervenções. Além disso, o artigo apenas compara atividades em conjunto, não contrastando com o benefício das atividades isoladas.

↳ Conclusão

Together, our findings suggest a universal benefit of group arts interventions across different characteristics, including art type (that is, visual arts, music and dance), for addressing depression and anxiety. This has practical implications for the mental health of older adults. Research has shown that receipt of a preferred psychosocial intervention is associated with lower dropout in mental health services 121 . Moreover, the National Institute for Health and Care Excellence guidelines for treating depression suggest that,

where possible, patients should be involved in choosing which recommended treatment(s) they prefer³

Informações adicionais

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