Relaxation training

Q 5: Is relaxation training better (more effective than/as safe as) than treatment as usual in adults with depressive episode/disorder?

Background

The number of general health staff skilled in psychological treatment for depression is limited, and learning psychological treatments tends to require considerable training and supervision. Relaxation may be a relatively simple form of psychological treatment. It has been frequently studied in research studies as an active condition and as a control condition.

Population/Intervention(s)/Comparison/Outcome(s) (PICO)

- **Population:** adults with depressive episode/disorder
- **Interventions:** relaxation training
- **Comparison:** treatment as usual
- **Outcomes:**
    - symptom severity post intervention
    - functioning post intervention
    - symptom severity at 6 to 12 months follow-up
    - adverse effects (including tolerability)

List of the systematic reviews identified by the search process

INCLUDED IN GRADE TABLES OR FOOTNOTES

Jorm AF, Morgan AJ, Hetrick SE (2008). Relaxation for depression. *Cochrane Database of Systematic Reviews,* (4):CD007142.

EXCLUDED FROM GRADE TABLES AND FOOTNOTES

Other than a review specifically on Yoga (Pilkington et al, 2005), there was no other recent, relevant review. We checked PubMed, NICE and BMJ Clinical Evidence as well as the references in the selected Cochrane review. The only other related reviews (with an older date) are done by the same first author of the selected Cochrane review, i.e.:

Jorm AF et al (2002) Effectiveness of complementary and self-help treatments for depression. *Medical Journal of Australia,* 176:S84–96.

PICO Table

Serial no.	Intervention/Comparison	Outcomes	Systematic reviews used for GRADE	Explanation
1	**Relaxation/ usual care**	symptom severity post intervention; functioning post intervention; symptom severity at 6 to 12 months follow-up; adverse effects (including tolerability)	Jorm et al (2008)	The Jorm et al (2008) is a recent Cochrane review that includes both peer-reviewed as unpublished studies.

Narrative description of the studies that went into the analysis

The Jorm et al (2008)review covers 15 trials, which they describe as follows: Ten of the trials evaluated progressive muscle relaxation, one evaluated autogenic training one evaluated relaxation imagery and three evaluated various combined methods. Nine trials used relaxation as an active intervention for depression, whereas six used it as a control or "placebo" condition for comparison with some active treatment. The relaxation treatment was manualised for 11 of the trials. The number of sessions of relaxation treatment varied considerably: 5-8 (1 trial), 6 (1 trial), 7 (3 trials), 10 (4 trials), 12 (1 trial), maximum of 20 (1 trial), 21 (1 trial) and 40 (1 trial). The treatment was delivered by therapeutically trained persons except in 3 trials where it was self-administered and one where it was unclear. The trials varied in the interventions to which relaxation was compared and some compared it to more than one other intervention. Six compared

it to wait-list, no treatment, or minimal intervention controls; ten to psychological treatment; four compared it to lifestyle or complementary therapies (exercise, light therapy, massage); and two to antidepressant medication. Participants were selected as depressed using a diagnostic approach in three trials, a cutoff on a depression scale was used in seven trials, both a diagnosis and scale cut-off in four trials and one study did not state a method of selection. The settings of the treatment were with in-patients, six were in educational settings, six were in community or home settings, and one was unclear about setting. All but six of the trials were carried out in the USA: these were from Germany, Canada, Australia and the UK.

In all of the trials, depression was the primary diagnosis rather than secondary to a medical condition. Because of the varied measures of depression used, it was difficult to describe the severity of the participants, apart from noting that six trials required a diagnosis for entry (However, some trials did use a diagnostic method of participant selection and these produced similar effects to trials that selected participants using a symptom scale cutoff). People with a anxiety disorder as primary diagnosis were excluded. Data on comorbidity with anxiety symptoms was not provided.

GRADE Tables

Table 1

Author(s): Van Ommeren. Mark, Barbui, Corrado
Date: 2009-05-26
Question: Should relaxation vs usual care be used for depressive episode/disorder?
Settings:
Bibliography: Jorm AF, Morgan AJ, Hetrick SE (2008). Relaxation for depression. *Cochrane Database of Systematic Reviews,* (4):CD007142.

Quality assessment							Summary of findings					
							No of patients		Effect		Quality	Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	relaxation	usual care	Relative (95% CI)	Absolute		
depression symptom level (post intervention) (Better indicated by lower values)												
5	randomized trials	no serious limitations[1]	serious[2]	no serious indirectness	serious	none	69[3]	67[3]	-	SMD 0.59 lower (0.94 to 0.24 lower)[3,4,5]	LOW	CRITICAL
non-response (post intervention)												

Relaxation training

2	randomized trials	no serious limitations	no serious inconsistency	no serious indirectness	very serious[6]	none	6/25 (24%)[7]	25/27 (92.6%)[7]	RR 0.28 (0.14 to 0.54)[7]	667 fewer per 1000 (from 426 fewer to 796 fewer)	LOW	CRITICAL
functioning post intervention (Better indicated by lower values)												
0	No evidence available					none	0	0	-	MD 0 higher (0 to 0 higher)		IMPORTANT
depression symptom level (+ 6 months follow-up (follow-up 6 months; Better indicated by lower values)												
1	randomized trials	no serious limitations	no serious inconsistency	Serious[8]	very serious[6,9]	none	11[10]	11[10]	-	SMD 0.39 lower (1.24 lower to 0.45 higher)[10]	VERY LOW	IMPORTANT
non-response / remission (+ 6 months follow-up												
1	randomized trials	no serious limitations	no serious inconsistency	very serious[8,11]	very serious[6]	none	6/17 (35.3%)[12]	13/16 (81.3%)[12]	RR 0.43 (0.22 to 0.86)[12]	463 fewer per 1000 (from 114 fewer to 634 fewer)	VERY LOW	IMPORTANT
Drop outs												
4[13]	randomized trials	no serious limitations	serious[14]	no serious indirectness[15]	very serious[16,17]	none	4/61 (6.6%)[13]	6/61 (9.8%)[13]	RR 0.72 (0.08 to 6.73)[13]	28 fewer per 1000 (from 90 fewer to 564 more)	VERY LOW	IMPORTANT

[1] There are few drop outs. Data are available in 4 of 5 studies with a total of 6 drop-outs of 60 participants (handcalculated based on data provided in analysis 1.1 (p.54) and the description of the individual studies in the appendix).

[2] I squared is 49%. Formally this would not require downgrade. However, inspection of forest plot also suggests some degree of heterogeneity - so we downgraded with 1 point.

[3] see analysis 1.1, Jorm et al (2008) p.54.

[4] This is SMD for self-reported data. This Cochrane review suggested a much higher SMD (-1.35) for very heterogenous (83%) clinician-rated data (pooled data from 2 studies) (see analysis 1.4, Jorm et al (2008) p.55).

[5] Even though these data suggest moderate effectiveness for relaxation, this review found even larger effect sizes for (other) psychological treatment (See for example Analysis 2.1, N=9; n = 286; MSD = 0.38 [95% CI 0.14, 0.62]) . The review also compared medication plus relaxation with medication alone and found a significant effects (see for example Analysis 5.1, N =2 , n =40: MSD = -0.90 (95% CI -1.56. -0.24).

[6] Very small data set (less than 100 people).

[7] see analysis 1.6 Jorm et al (2008), p. 57.

[8] Only 1 study, so no data in generalizability.

[9] Number of participants for the analyses is below 50 (see analysis tables 1.3, 1.7,), Jorm et al (2008)).

[10] see analysis 1.3, Jorm et al (2008) p.55.

[11] no 6 month follow up data available. The only study was Kahn (see analysis 1.7, Jorm et al (2008)). Follow up was only 1 month (see sentence on Kahn 1990 in first sentence of page 9 by Jorm et al (2008)).

[12] see analysis 1.7. Jorm et al (2008), p.57.

[13] See analysis 1.9, Jorm et al (2008), p.58.

[14] I-squared is 53% in analysis tables 1.9, Jorm et al (2008), p.58.
[15] Drop-outs are used as a proxy indicator for the outcome, which is counted as direct evidence of the outcome.
[16] Confidence interval includes both no effect and appreciable benefit and harm.
[17] Small data set (less than 200 people).

Reference List

Jorm AF et al (2002) Effectiveness of complementary and self-help treatments for depression. *Medical Journal of Australia,* 176:S84–96.

Jorm AF, Morgan AJ, Hetrick SE (2008). Relaxation for depression. *Cochrane Database of Systematic Reviews,* (4):CD007142.

Pilkington K et al (2005). Yoga for depression: the research evidence. Journal of Affective disorders, 89:13-24.

From evidence to recommendation

Factor	Explanation
Narrative summary of the evidence base on the scoped question	There is low quality evidence favoring relaxation over treatment as usual in reducing depression symptoms post treatment (N = 5; n = 136; SMD = -0.59; 95% CI, -0.94 to -0.24) and in treatment response (N = 2; n = 52; RR [non-response] = 0.28; 95% CI, 0.14 to 0.54). There is limited/very low quality evidence favoring relaxation over treatment as usual in reducing depression symptoms 6 months post treatment (N = 1; n = 22; SMD = -0.39; 95% CI, -1.24 to -0.45) and in treatment response 6 months post treatment (N = 1; n = 33; RR [non-response] = 0.43 (95% CI 0.22 to 0.86). In terms of drop outs, the evidence is inconclusive and so it is not possible to determine if there is a clinically important difference between relaxation and treatment as usual (N = 4; n = 122; RR [non-response] = 0.72 (95% CI 0.08 to 6.7).
Summary of the quality of evidence	See above text on narrative summary Data on functioning were typically not included in the trials and were not meta-analyzed

Relaxation training

Additional evidence (eg related evidence that was not scoped	It should be noted that Jorm et al (2008) review found (a) relaxation less effective than other psychological treatments and (b) that relaxation plus medication was more effective than medication alone (see footnote 5 GRADE table). The Pilkington et al (2005) systematic review of yoga for depression identified 5 randomized controlled trials, each of which utilised different forms of yoga interventions and in which the severity of the condition ranged from mild to severe. All trials reported positive findings but methodological details such as method of randomisation, compliance and attrition rates were missing. No adverse effects were reported with the exception of fatigue and breathlessness in participants in one study.
Balance of benefits versus harms	Although there are some data on drop-outs, data on adverse effects were not meta-analyzed. The balance of benefits versus harm seems favorable for relaxation if compared to treatment as usual but if the choice is with other psychological treatment, than the benefits will be less. Indeed if the provider decides to provide relaxation rather than more effective treatment, then this would be - relatively speaking - harmful.
Define the values and preferences including any variability and human rights issues	The intervention is consistent with the value of promotion of individual and family members' capacity and skills Although Jorm et al (2008) review mainly focused on studies of progressive relaxation, it is noted that many societies have their own culture-based forms of relaxation, such as Yoga, which has an evidence basis (Pilkington et al, 2005)
Define the costs and resource use and any other relevant feasibility issues	The administration of relaxation exercises is a relative non-sophisticated intervention that can be quickly learned. The reviewed literature involved evaluation of relaxation as a multiple session activity, with most studies involving: 5-10 sessions. Progressive muscle relaxation was the most studied form of translation, this form of relaxation would take about 20 minutes of time to administer. The feasibility of this intervention in nonspecialized health care settings depends on the time that the provider has available as the intervention, as tested in the literature, tends to involve 5-10 sessions of a 20 minutes intervention. In situations where there is sufficient staff –eg when community paraprofessional health workers (e.g community health workers, midwives, health workers) are available. This intervention is likely to be feasible in non-specialized health care settings Implementing these interventions may be done in group sessions (more cost-effective)

Relaxation training

Final recommendation

Relaxation training may be considered as treatment of adults with depressive episode/disorder. In moderate and severe depression, this intervention should be considered as adjunct to antidepressants or structured brief psychological treatments.
Strength of Recommendation: STANDARD

Limitations

The comparative effectiveness of relaxation training versus other psychological or pharmacological interventions was not assessed.

Update of the literature search – June 2012

In June 2012 the literature search for this scoping question was updated. The following systematic review was found to be relevant without changing the recommendation:

NICE Clinical Guidelines. CG90. Depression in adults: The treatment and management of depression in adults. Appendix 19: Clinical evidence forest plots. National Institute for Health and Clinical Excellence, 2010.