BEST in Mental Health
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Best Evidence Summaries of Topics in Mental Healthcare

BEST *in* MH *clinical question-answering service*

Question

In adults with somatoform disorders and medically unexplained physical symptoms (MUPS), how effective are non-pharmacological interventions, compared to any other treatment, in improving patient outcomes?

Clarification of question using *PICO* structure

Patients:	Adults with somatoform disorders and medically unexplained physical symptoms (MUPS)
Intervention:	Non-pharmacological interventions
Comparator:	Treatment as usual, placebo, waiting list controls, enhanced or structured care, and other non-pharmacological interventions
Outcome:	Improving any patient outcomes

Plain language summary

Limited evidence suggests that some psychological therapies such as CBT, mindfulness and psychotherapy can improve patient outcomes in patients with somatoform disorders with or without medically unexplained physical symptoms. However, more high quality research is needed in this area to adequately assess the effectiveness of these interventions.

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Clinical and research implications

There is a reasonable amount of low to moderate quality evidence from two systematic reviews that psychological therapies including CBT, mindfulness and psychotherapy can reduce somatic symptoms and patient withdrawal and improve treatment response, quality of life and functional impairment compared to usual care in patients with somatoform disorders with or without medically unexplained physical symptoms. There is also some evidence from one small, low quality RCT that brief group psychoeducation can improve psychosocial functioning and patients' opinions of their condition compared to follow-up clinic visits in patients with non-epileptic psychogenic events admitted to an epilepsy monitoring clinic.

Further research is needed comparing different psychological therapies and mechanisms of change, in participants of different ages, and using blinded outcome assessment. Future RCTs should also be multi-centre with longer follow-up periods.

What does the evidence say?

Number of included studies/reviews (number of participants)

Two systematic reviews (n = 2,658 and 1,438) and one randomised controlled trial (RCT) (n = 64) were found for this question. One review was a Cochrane review which included 21 studies (n = 2,658) evaluating psychological therapy, mostly CBT (14 studies) in adults with a somatoform disorder and MUPS (Van Dessel et al. (2014)). The other systematic review included 16 studies (n = 1,438) comparing psychotherapy with treatment as usual in adults with a somatoform disorder who were receiving psychotherapy in secondary or tertiary care (Koelen et al. (2014)). The RCT was performed in the US and compared three sessions of a brief group psychoeducation intervention with a control group of patients returning for follow-up visits at seizure clinics in patients with non-epileptic psychogenic events confirmed by ictal semiology, psychosocial history and psychological screening.

Main findings

The larger systematic review found that psychological therapy significantly reduced the severity of somatic symptoms, reduced the numbers of patients withdrawing, and increased treatment response and quality of life compared with usual care. There were no significant differences between psychological therapy and usual care in dysfunctional cognitions, emotions or behaviours, or healthcare use. There were also no significant differences between psychological therapy and enhanced or structured care on any outcome (Van Dessel et al. (2014)). The review by Koelen et al. (2014) found that psychotherapy significantly improved physical symptoms and functional impairment compared to treatment as usual, however there were no significant differences in psychological symptoms.

The RCT by Chen et al. (2014) found that a brief group psychotherapy intervention significantly improved psychosocial functioning after three and six months compared to attending a seizure clinic. The intervention group also agreed more with positive statements about the impact of their condition. There were no significant differences between the groups regarding seizure frequency and reported intensity, or in the development of new and disabling symptoms without underlying medical causes.

Authors' conclusions

The two systematic reviews concluded that:

- Psychotherapy is effective in severe somatoform disorder, with large pre- to post-therapy improvements in physical symptoms, medium to large improvements in psychological symptoms and small to medium improvements in functional impairment (Koelen et al. (2014)).

- All psychological therapies combined were superior to usual care or a waiting list control in reducing symptom severity. As a single treatment only CBT was effective in reducing somatic symptoms compared with usual care. Psychological therapies in general, or CBT were not more effective than enhanced or structured care (Van Dessel at al. (2014)).

The RCT concluded that: a brief group psychoeducational program when administered early by the same team confirming the diagnosis of psychogenic nonepileptic seizures, may contribute to significant functional improvement amongst the participating patients (Chen et al. (2014)).

Reliability of conclusions/Strength of evidence

The Cochrane systematic review was of high quality and its conclusions are likely to be reliable, although the evidence contained within it was judged to be of low to moderate quality. The review by Koelen et al. (2014) was of low quality as it only searched two databases with language restrictions so it is likely that some relevant studies were missed. The analysis involved pooling the treatment arms separately then comparing them, rather than pooling the treatment difference within each study. Therefore the analysis results are not reliable.

The RCT was judged to be low quality as it was unclear if randomisation was concealed, there was no blinding of participants or investigators and it was a small trial which only included those patients (59%) who completed the intervention in the analysis, rather than including all the patients. Therefore there is a reasonable amount of low to moderate quality evidence about the effectiveness of psychological therapy in the treatment of somatoform and MUPS disorders.

What do guidelines say?

National guidelines do not comment on somatoform disorders and medically unexplained physical symptoms.

References

Systematic reviews

Van Dessel, N., Den Boeft, M., Van Der Woden, JC., Kleinstauber, M., Leone, SS., Terluin, B., Numans, ME., Van Der Horst, HE., Van Marwijk, H. (2014). Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults (Review). *The Cochrane Database of Systematic Reviews.* 11.

Koelen, JA., Houtveen, JH., Abbass, A., Luyten, P., Eurelings-Bontekoe, EH., Van Broeckhuysen-Kloth, SA., Bühring, ME., Geenen, R. (2014). Effectiveness of Psychotherpay for Severe Somatoform disorder:meta-analysis. *The British Journal of Psychiatry:* 204, pp12-19.

Randomised controlled trials

Chen, DK., Maheshwari, A., Franks, R., Trolley, GC., Robinson, JS., Hrachovy, RA. (2014). Brief group psychoeducation for psychogenic nonepileptic seizures: A neurologist-initiated program in an epilepsy center. *Epilepsia:* 55(1), pp156-166.

Results

Systematic reviews

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Van Dessel et al (2014)	Nov 2013	***Participants*:** Participants at least 18 years old, meeting the criteria for a somatoform disorder according to DSM III, DSM IV-TR, ICD-9, or ICD-10, or the criteria for one of the alternative somatoform diagnoses proposed in the literature. Participants were characterised with MUPS on the basis of a validated scale for the assessment of MUPS. ***Intervention*:** 1. *Psychological therapies:* CBT, behavioural therapy, third-wave CBT, psychodynamic therapies, humanistic therapies, integrative therapies 2. *Physical therapies:* physical activity training, other physical therapies or running therapy ***Comparator*:** Normal/usual care or waiting list control; attention or psychological placebo; enhanced or structured care; other psychological or physical therapies ***Outcome*:** Severity/intensity of somatic symptoms; acceptability; depression and	21 studies N = 2658	All the included studies evaluated psychological therapy including CBT (14 studies), behavioural therapy (2 studies), mindfulness (2 studies), psychodynamic therapy (2 studies) and integrative therapy (1 study). Eight studies evaluated group therapy and 11 individual therapy, two studies evaluated both. The mean number of therapy sessions ranged from one to 13 over periods of one day to nine months. More patients were female (from 66% to 89%), and the mean age was 43 years (range 35 to 49 years). Compared to usual care, psychological therapy significantly reduced the severity of somatic symptoms (standardised mean difference (SMD) from 10 studies -0.34, 95% CI -0.53 to -0.16), significantly reduced the proportion of patients who dropped out (relative risk (RR) 0.93, 95%	Low The review inclusion criteria were clearly stated. The literature searches were comprehensive and included searches for unpublished studies and contact with researchers. All stages of the review and the quality assessment were performed by 2 or more reviewers. The analysis methods were appropriate.

		anxiety; dysfunctional cognitions, emotions, or behaviours; adverse events; treatment response; functional disability and quality of life; healthcare use. ***Study designs***: Randomised controlled trials and cluster randomised controlled trials		CI 0.88 to 0.99; 14 studies), significantly increased treatment response (RR 3.30, 95% CI 2.08 to 5.21; 4 studies) and quality of life (SMD 0.17, 95% CI 0.03 to 0.32; 7 studies). There were no significant differences in participant rated dysfunctional cognitions, emotions or behaviours (SMD -0.11, 05% CI -0.37 to 0.16; 3 studies) or healthcare use (SMD -0.09, 95% CI -0.31 to 0.12; 4 studies). There were no significant differences in any of the above outcomes for psychological therapy when compared to enhanced or structured care (5 studies).	
Koelen et al (2014)	March 2010	***Participants*****:** The presence of a somatoform disorder according to established diagnostic criteria and receiving psychotherapy in secondary and tertiary care. All studies included adults except for one study in which the age range was 16–30 years. ***Intervention*****:** Psychotherapy ***Comparator*****:** Treatment as usual (TAU) ***Outcome*****:** Physical symptoms, psychological symptoms (depression, anxiety, anger, general symptoms) and functional impairment (health, life satisfaction, interpersonal problems,	16 studies (N = 890 psychotherapy, N = 548 TAU)	10 RCTs and 6 non-randomised trials were included. Fourteen studies were exclusively in somatoform disorder and the other two included a range of mental disorders but reported somatoform disorder separately. Most studies were conducted in Germany (n = 10). The median duration of psychotherapy was 9.2 weeks (range 2 to 25 weeks) and the median TAU duration was 9 weeks (range 5.5 to 12 weeks). The mean patient age was 39.7 years, 67% were female, the mean duration of physical	High The review inclusion criteria were clearly reported. The literature searches covered only 2 databases and were restricted by language. Two reviewers independently selected the studies and coded

		maladaptive cognitions and behaviour) measured using a validated scale and reporting in enough detail to enable effect size calculations. ***Study designs***: Prospective randomised and non-randomised controlled trials.		symptoms was 8.6 years, and the most common comorbid diagnoses were mood and anxiety disorders. The overall study quality was moderately poor but the RCTs were better quality. Psychotherapy had a significantly greater improvement in physical symptoms compared to TAU (pooled Cohen's d effect size (ES) 0.80 vs. 0.31, $p < 0.05$). Psychotherapy also had a significantly greater improvement in functional impairment compared to TAU (ES 0.45 vs. 0.15, $p < 0.01$). Results were not significantly different for psychological symptoms (psychotherapy ES 0.75 vs. TAU ES 0.51, $p = 0.21$).	the data. Quality assessment was performed using an appropriate tool and incorporated into the analysis. The main flaw with this review was the analysis. The treatment groups were pooled separately, not the within study difference, therefore breaking the randomisation of the RCTs.

Randomised controlled trials

Author (year)	**Inclusion criteria**	**Number of participants**	**Summary of results**	**Risk of bias**
Chen et al (2014)	***Participants*:** patients who were admitted to an epilepsy monitoring unit (EMU) of a medical centre from June 2011 to October 2012. To be eligible for inclusion, patients must have demonstrated VEEG-confirmed nonepileptic events of psychogenic origin	N = 64 (I=34, C=30)	The mean patient age was 50.7 years, 75% were male, 39% had posttraumatic stress disorder, 22% had daily seizures, 48% had weekly seizures, 23% had monthly seizures and the rest rarely had seizures. The mean durations of seizure history were 107 months for the intervention group and 84 months for the	High The randomisation used a random number generator but it was unclear if

	based on combined features of ictal semiology, psychosocial history and the results from psychological screening instruments. ***Intervention*:** Brief group psychoeducation: three successive monthly, 1.5 hr long group sessions. ***Comparator*:** Nonintervention assignment: on discharge patients returned to seizure clinics for follow-up visits after 3 months and after 6 months. ***Outcome*:** Primary outcomes: impairment of psychosocial functioning measured by the Work and Social Adjustment Scale (WSAS); patients' perceived progress of event frequency and event intensity since EMU discharge. Secondary outcomes: additional seizure-related emergency room visits or hospitalisations; new and disabling symptoms without other medical causes; patient knowledge and perception of their condition. Outcomes were assessed at between 3 to 5 months and 6 to 8 months after EMU discharge.		control group. Twenty patients (59%) in the intervention group completed all three sessions. The intervention group had significantly improved WSAS scores compared to the control group at both follow-up assessments. At the first follow-up the mean (standard error) scores were 18.4 (1.91) for intervention and 25.52 (1.96) for control ($p = 0.013$) and at the second follow-up they were 18.75 (1.85) for intervention and 24.86 (2.15) for control ($p = 0.038$). For patients' perceptions of their seizures the intervention group showed significantly more positive endorsements at the end of the second follow-up for the statements "my attacks do not bother me as much anymore" ($p < 0.001$) and "I am able to carry on with most daily activities despite my attacks" ($p = 0.021$) compared with the control group. There were no significant differences between the groups in patients' endorsement of seizure frequency and reported intensity, or in the development of new and disabling symptoms.	there was any allocation concealment. There was no patient or investigator blinding. It was unclear if there was blinded outcome assessment but as most outcomes were completed by the patients these were unlikely to be blinded. Analyses were per-protocol and only included those completing the intervention, which may bias the results. All outcomes were reported.

Risk of bias

Systematic reviews

Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Van Dessel et al (2014)	☺	☺	☺	☺	☺
Koelen et al (2014)	☺	☹	☺	☺	☹

Randomised controlled trials

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Chen et al (2014)	☺	?	☹	?	☹	☺

☺ Low risk ☹ High risk ? Unclear risk

Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
NICE	Somatoform Unexplained MUPS	0	
MEDLINE	9. Medline; SOMATOFORM DISORDERS/; 8018 results. 10. Medline; (somatization OR somatisation OR somatoform OR hysteri* OR briquet OR polysymptom* OR multisomatoform OR somatizer*).ti,ab; 9638 results. 11. Medline; ((somatic adj3 symptom*) OR MUPS OR (medical* adj1 unexplained) OR (unexplained adj1 medical*) OR (unexplained adj3 (symptom* or syndrom*)) OR (frequent adj1 attend*)).ti,ab; 7900 results. 12. Medline; ((multiple AND (physical adj1 symptom*))).ti,ab; 0 results. 13. Medline; ((multiple AND (symptom adj1 diagnos*))).ti,ab; 92 results. 14. Medline; neurastheni*.ti,ab; 761 results. 15. Medline; 9 OR 10 OR 11 OR 12 OR 13 OR 14; 22290 results. 16. Medline; RANDOMIZED CONTROLLED TRIALS AS TOPIC/; 96234 results. 17. Medline; RANDOMIZED CONTROLLED TRIAL/; 0 results. 18. Medline; RANDOM ALLOCATION/; 82716 results. 19. Medline; DOUBLE-BLIND METHOD/; 128450 results. 20. Medline; SINGLE-BLIND METHOD/; 20223 results. 21. Medline; CLINICAL TRIAL/; 0 results. 22. Medline; CLINICAL TRIAL, PHASE I/ OR CLINICAL TRIAL, PHASE II/ OR CLINICAL TRIAL, PHASE III/ OR CLINICAL TRIAL, PHASE IV/; 0 results. 23. Medline; CONTROLLED CLINICAL TRIAL/; 0 results. 24. Medline; MULTICENTER STUDY/; 0 results. 25. Medline; CLINICAL TRIALS AS TOPIC/; 171542 results. 26. Medline; 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23 OR 24 OR 25; 453060 results.	1012	

	27. Medline; ((clinical ADJ trial*) OR ((singl* OR doubl* OR treb* OR tripl*) adj3 (blind* OR mask*)) OR placebo* OR (randomly adj1 allocated) OR (allocated adj2 random*)).ti,ab; 432112 results. 28. Medline; PLACEBOS/; 32601 results. 29. Medline; 27 OR 28; 443095 results. 30. Medline; 26 OR 29; 698341 results. 31. Medline; 15 AND 30; 1012 results.		
EMBASE	1. EMBASE; exp SOMATOFORM DISORDER/; 20696 results. 2. EMBASE; ((somatic adj3 symptom*) OR (MUPS) OR (medical* adj2 unexplain*) OR (unexplain* adj2 (symptom* OR syndrom* OR medical* OR disorder* OR disease* OR problem*)) OR (frequent adj2 attend)).ti,ab; 10467 results. 3. EMBASE; ((multiple adj2 (physical* adj2 symptom*))).ti,ab; 82 results. 4. EMBASE; ((multiple adj2 (symptom* adj2 diagnos*))).ti,ab; 87 results. 5. EMBASE; neurastheni*.ti,ab; 801 results. 6. EMBASE; 1 OR 2 OR 3 OR 4 OR 5; 30097 results. 7. EMBASE; 6 [Limit to: (EBM-Evidence Based Medicine Evidence Based Medicine or Systematic Review) and (Clinical Trials Clinical Trial or Randomized Controlled Trial or Controlled Clinical Trial)]; 92 results. 8. EMBASE; 7 [Limit to: (EBM-Evidence Based Medicine Evidence Based Medicine or Systematic Review) and (Clinical Trials Clinical Trial or Randomized Controlled Trial or Controlled Clinical Trial) and Publication Year 2015-2016]; 1 results.	92	
PsycINFO	16. PsycInfo; SOMATOFORM DISORDERS/; 7186 results. 17. PsycInfo; (somatization OR somatisation OR somatoform OR hysteri* OR briquet OR polysymptom* OR multisomatoform OR somatizer*).ti,ab; 13077 results. 18. PsycInfo; ((somatic adj3 symptom*) OR MUPS OR (medical* adj1 unexplained) OR (unexplained adj1 medical*) OR (unexplained adj3 (symptom* or syndrom*)) OR (frequent adj1 attend*)).ti,ab; 6231 results. 19. PsycInfo; ((multiple AND (physical adj1 symptom*))).ti,ab; 0 results. 20. PsycInfo; ((multiple AND (symptom adj1 diagnos*))).ti,ab; 54 results. 21. PsycInfo; neurastheni*.ti,ab; 1077 results. 22. PsycInfo; 16 OR 17 OR 18 OR 19 OR 20 OR 21; 24398 results. 23. PsycInfo; (Randomized AND Controlled AND Trial).ti,ab,pt; 14467 results.	74	

	24. PsycInfo; (Pragmatic AND Clinical AND Trial).ti,ab,pt; 171 results. 25. PsycInfo; (Randomized AND Controlled AND Trial).ti,ab; 14467 results. 26. PsycInfo; Randomization.ti,ab; 2982 results. 27. PsycInfo; (Random AND Allocation).ti,ab; 443 results. 28. PsycInfo; (Double-Blind AND Method).ti,ab; 1569 results. 29. PsycInfo; (Double AND Blind AND Procedure).ti,ab; 462 results. 30. PsycInfo; (Double-Blind AND Studies).ti,ab; 4046 results. 31. PsycInfo; (Single-Blind AND Method).ti,ab; 337 results. 32. PsycInfo; (Single AND Blind AND Procedure).ti,ab; 98 results. 33. PsycInfo; (Single-Blind AND Studies).ti,ab; 649 results. 34. PsycInfo; Placebos.ti,ab; 769 results. 35. PsycInfo; Placebo.ti,ab; 32296 results. 36. PsycInfo; (random* OR sham OR placebo*).ti,ab; 168537 results. 37. PsycInfo; (((singl* OR doubl*) ADJ (blind* OR dumm* OR mask*))).ti,ab; 20879 results. 38. PsycInfo; (((tripl* OR trebl*) ADJ (blind* OR dumm* OR mask*))).ti,ab; 45 results. 39. PsycInfo; 23 OR 24 OR 25 OR 26 OR 27 OR 28 OR 29 OR 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37 OR 38; 171721 results. 40. PsycInfo; 22 AND 39; 1151 results. 41. PsycInfo; 40 [Limit to: Publication Year 2014-2015]; 74 results.		
CENTRAL	#1 MeSH descriptor: [Somatoform Disorders] explode all trees #2 MeSH descriptor: [Psychophysiologic Disorders] this term only #3 somatization or somatisation or somatoform or somatizer* or multisomatoform or (somatic NEAR/2 (symptom* or syndrom*)) #4 MUPS or “medical* unexplained” or “unexplained medical*” or (unexplained near/2 symptom*) #5 neurastheni* #6 (#1 or #2 or #3 or #4 or #5) #7 SR-DEPRESSN or HS-DEPRESSN #8 (#6 not #7)		

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