Meta-analysis of the effect of psychosocial interventions on social functioning in depression and schizophrenia in low and middle income countries

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Background

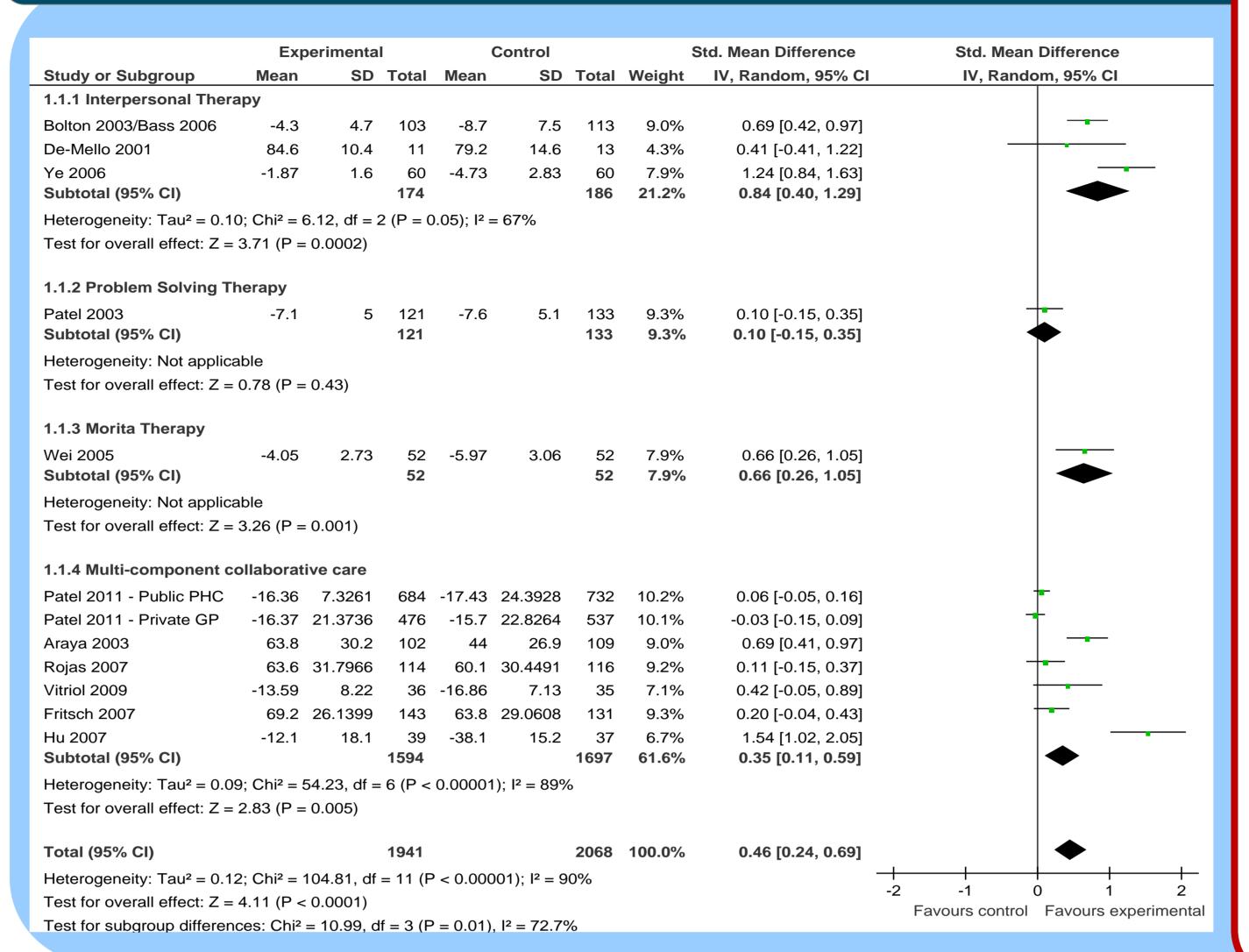
Impairment of social functioning, defined as an individual's ability to perform and fulfil normal social roles is a major reason for the high levels of stigma and disability associated with these mental disorders.

Psychosocial interventions may contribute to reducing the burden of mental disorders in low and middle income countries by improving social functioning, but the evidence has not been systematically reviewed.

Methods

Studies were identified through database searching and contacting authors up to March 2011. Two authors independently screened studies for inclusion and extracted data for the meta-analysis. Randomised control trials were included if they compared the intervention group to a control group receiving placebo or treatment as usual. Random effects meta-analyses were performed separately for depressive disorders and schizophrenia and for each intervention type.

Results: Depression



11 depression trials from 5 countries were included and showed good evidence for a moderate positive effect of psychosocial interventions on social functioning. Strong evidence that stepped collaborative care interventions, often delivered by nonspecialists and comprising structured pharmacotherapy, psycho-education, adherence support and in some cases structured psychotherapy have moderate effects on improving patient social functioning up to 12 months from start of treatment. There was also some evidence that IPT, often delivered by non-specialists, is effective at improving social functioning over a 12 month period.

Results: Schizophrenia

	Ехр	erimenta	al	(Control			Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
2.1.1 Psycho-educat	ion								
Li 2005	78	10.3	36	70.2	15.9	33	9.8%	0.58 [0.10, 1.06]	
Wang 2008	-4.2		98		1	95	11.2%	0.52 [0.24, 0.81]	
Wei 1997 Subtotal (95% CI)	-0.8	0.3	50 184	-2.1	0.7	50 178	9.6% 30.6%	2.40 [1.88, 2.91] 1.15 [0.06, 2.25]	
Heterogeneity: Tau ² = Test for overall effect:	•			2 (P < 0	.00001);	$I^2 = 95^\circ$	%		
2.1.2 Multi-compone	nt struct	ured psy	choth	erapies					
Chen 2003	-4.04	3.89	32	-7.63	4.27	31	9.6%	0.87 [0.35, 1.39]	
Guo 2010	82.9	8.1998	406	80.8	9.3465	338	11.8%	0.24 [0.10, 0.38]	-
Yildiz 2004	132.6	33.85	15	96.2	30.24	15	7.6%	1.10 [0.33, 1.88]	
Zimmer 2007 Subtotal (95% CI)	43.25	6.54	20 473	34.14	4.53	36 420	8.7% 37.6%	1.69 [1.05, 2.32] 0.93 [0.23, 1.63]	
Heterogeneity: Tau ² =			-	3 (P < 0	.00001);	$l^2 = 89^{\circ}$	%	- / -	
Test for overall effect:	Z = 2.60	(P = 0.00)	09)						
2.1.3 Art Therapy									
Meng 2005 Subtotal (95% CI)	67.79	15.03	50 50	56.93	15.24	50 50	10.4% 10.4%	0.71 [0.31, 1.12] 0.71 [0.31, 1.12]	•
Heterogeneity: Not ap	plicable							. , .	
Test for overall effect:	Z = 3.45	(P = 0.00)	006)						
2.1.4 Muti-componer	nt comm	unity car	e						
Li 2002	-1.61	4.56	38	-3.64	4.05	38	10.0%	0.47 [0.01, 0.92]	
Pang 2002	-1.37	0.68	120	-1.6	0.92	120	11.4%	0.28 [0.03, 0.54]	_
Subtotal (95% CI)			158	.		158	21.4%	0.33 [0.10, 0.55]	•
Heterogeneity: Tau ² = Test for overall effect:				(P = 0.4)	19); I ² = 0)%			
Total (95% CI)			865			806	100.0%	0.84 [0.49, 1.19]	•
Heterogeneity: Tau ² =	0.27; Ch	$ni^2 = 85.38$	8, df =	9 (P < 0	.00001);	$l^2 = 89^\circ$	%		-2 -1 0 1 2
Test for overall effect:					-				-2 -1 0 1 2 Favours control Favours experimental
Test for subgroup diffe	erences:	$Chi^2 = 6.$	13, df =	3 (P =	0.11), l ² :	= 51.1%	6		. a. ca. c co i a caro oxponinontal

13 schizophrenia trials from 3 countries were included.10 of these were included in the metaanalysis and showed a large positive effect on social functioning, though 7 of these trials were of low quality. Excluding these did not substantially affect the size or direction of effect, although the precision of the estimate was substantially reduced. The generalisability of these findings is also restricted by the predominance of trials of hospital inpatients in China. However, there was good evidence from three high quality trials that a combination of structured psychological therapies (for e.g. psycho-education, social skills training and IPT), delivered in combination with anti-psychotic medication, leads to large improvements in patient social functioning compared to medication alone.

Selection of studies

2 records identified 9590 unique records identified from from contacting database searching 9592 unique records identified from database searching 9592 records single screened for 7240 records excluded irrelevance based on abstract/title 2352 records double 2285 records excluded screened 67 full text articles 41 studies excluded: 2: Study not RCT representing 65 studies double assessed for 2: Pharmacological or physical eligibility 11: Equivalence trial 24 studies included in the qualitative 3 studies excluded: 21 studies included in the meta-analysis

Conclusion

- 1. This review provides strong evidence for depression and weaker evidence for schizophrenia for the use of a range of psychosocial interventions to improve social functioning in LMIC, with or without concurrent pharmacological interventions.
- 2. For schizophrenia there is an absence of evidence from high quality trials and the generalisabilty of the findings is limited by the over-representation of trials conducted in populations of hospital patients in China.
- 3. For both disorders, improvements in social functioning were maintained at long follow-up periods of over a year.

Implications for research

- 1. All trials of interventions for mental disorders in LMIC should use locally validated social functioning scales to measure social functioning outcomes in addition to measuring clinical and economic outcomes.
- 2. Trial participants should be followed-up for a sufficiently long time to detect changes in social functioning compared with clinical symptoms. Minimum follow-up times of six months for depression and 12 months for schizophrenia are recommended.
- 3. Trials (particularly for schizophrenia) should be conducted of psychosocial interventions by non-specialist health workers, to directly inform efforts to scale up mental health services.
- 4. Trials are needed of other psychosocial interventions such as wellness promotion, vocational rehabilitation and cognitive remediation which hold promise for delivering improvements in social functioning but which have not yet been evaluated in LMIC.

Implications for practice

- 1. Psychosocial interventions delivered in out-patient and primary care settings are effective at improving social functioning in people with depression and should be incorporated into efforts to scale up services.
- 2. The social functioning of patients should be monitored as part of routine clinical practice in order to ensure that treatments go beyond clinical effectiveness and meet the wider needs of patients.
- 3. The scarcity of specialist human resources in these settings indicates that these packages of care should be delivered by non-specialists working under the supervision of specialists, who provide capacity building, continued supervision and referral pathways to enhance the effectiveness of these interventions. These findings directly inform efforts such as the WHO Mental Health Gap Action Programme to scale up mental health services in LMIC.
- 4. Providing interventions which improve patient social functioning will not only reduce the burden of mental disorders by enabling people to fulfil a productive social role, but may also be the most effective way to combat stigma.