

Current Studies Evidencing the Role of Curcumin as a Neuroprotective Therapeutic Intervention for Schizophrenia: A review and recommendation

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Background

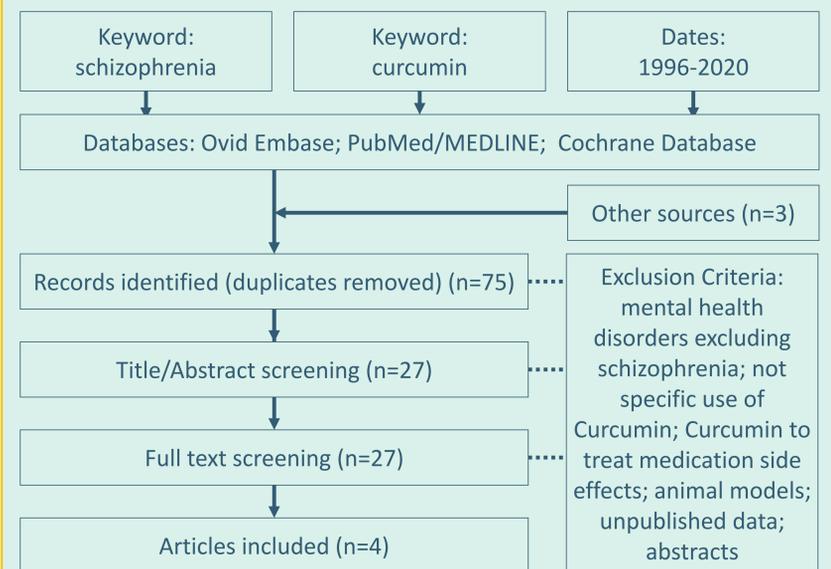
Curcumin, a polyphenol derived from the turmeric root, has shown neuroprotective benefits in a variety of animal models^[1,2] and neuropsychiatric disorders including bi-polar disorder, obsessive compulsive disorder, post-traumatic stress disorder and autism^[2].

Scientists now investigate the effectiveness of curcumin as a therapeutic adjunct in the delivery of antipsychotic medication for patients with treatment resistant schizophrenic symptoms.

Persisting cognitive and negative symptoms have been linked to poor treatment outcomes in schizophrenia patients^[3].

This review aimed to appraise existing studies attempting to evidence the benefits of curcumin effectiveness in schizophrenia. Doing so will identify further questions yet to be addressed.

Method



Results

	Study type	N (treat)	Dose	Weeks	IL6	Memory	PANSS	CDS	Cognition	Symptoms	Serum BDNF
Kucukgoncu et al. ^[4]	RCT-pilot	12 (6)	180mg	8	p=0.016	p=0.028					
Miodownik et al. ^[3]	RCT	38 (20)	3000mg	24			p=0.02	no sig.			
Wynn et al. ^[5]	RCT-letter to ed.	36 (17)	360mg	8					no sig.	no sig.	p=0.043
Chiu et al. ^[6]	Randomised, parallel group study	17 (8)	1000mg	16			p<0.003				
		17 (7)	4000mg	16			p<0.01				

Conclusions

Assimilating findings to answer curcumin's role as a therapeutic intervention in schizophrenia proved difficult and was significantly handicapped by variation in outcome measures.

PANSS should be adopted for future trials as it appears to screen for a wider battery of schizophrenic symptoms. Moreover, trials looking to study cognitive improvements should also consider adopting the MCCB.

Statistically significant changes to total PANSS scores were seen ^[3,6], alongside 'negative' ^[3] and 'cognitive' ^[6] PANSS sub-score changes. Thus highlighting curcumin's potential as an adjunct to established antipsychotics predominantly offering better positive symptom control.

Curcumin's neuroprotective ^[3,5] and anti-inflammatory^[4] characteristics were evidenced with raised neurotrophic growth factor levels^[5] and reduced IL-6 levels ^[4]

What can be concluded from the results is that curcumin produces a degree of benefit in dosages ranging from 180mg to 4000mg. Further studies should consider optimising curcumin delivery by establishing dose effectiveness.

Undoubtedly further research is required on a national scale, involving a greater number of participants, allowing for treatment arms that can be further delineated by disorder severity. Future research must also focus on mapping the specific symptom improvements attributed to curcumin's neuroprotective effects.

References

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