

# Best Evidence Summaries of Topics in Mental Healthcare

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

## Question

For people with severe mental health problems who smoke cigarettes, how effective are psychoeducational interventions compared with any other or no intervention for improving smoking cessation?

## Clarification of question using *PICO* structure

*Patients:* People with severe mental health problems who smoke cigarettes  
*Intervention:* Psychoeducational interventions  
*Comparator:* Any other or no intervention  
*Outcome:* Smoking cessation

## Plain language summary

We can't be sure how effective psychoeducation is for smoking cessation due to the limited research available on this topic. One poorly reported study found that Psychoeducation did not significantly reduce or improve smoking cessation for people with Mental health problems, but further high quality research needs to be conducted in this area before any definite conclusions can be made.

## Clinical and research implications

One SR found that, in general, evidence for the effectiveness of interventions for smoking cessation and reduction in people with schizophrenia are limited. Studies that specifically evaluate psychoeducational interventions are even more limited, suggesting that further research in this area may be needed. Therefore no definite clinical implications may be made based on the available evidence.

### What does the evidence say?

#### ***Number of included studies/reviews (number of participants)***

One systematic review (SR) (Tsoi et al. 2013) and one randomised controlled trial (RCT) (Steinberg et al. 2004) met the inclusion criteria for this BEST summary.

#### ***Main findings***

The SR by Tsoi et al. (2013) aimed to evaluate the benefits and harms of different treatments for nicotine dependence for people with schizophrenia. Although 34 studies were included in this review, 5 evaluated the impact of non-pharmacological interventions involving therapy or psychoeducation on smoking cessation and/or reduction. Only one study included in this review, however, appears to have specifically evaluated a psychoeducational intervention (Steinberg 2003). In this study, no significant reductions or changes were observed in the number of cigarettes per day, or changes in expired CO level among the three intervention groups (i.e. single session motivational interviewing versus didactic psychoeducation versus minimal intervention), at one week or within one month after the intervention.

One RCT (Steinberg et al. 2004) related to the study described in Tsoi et al. (2013) above, reported on the effectiveness of a one-session motivational interviewing session versus a minimal-control intervention or a psychoeducational intervention, in order to motivate smokers with schizophrenia ( $n=78$ ) to seek tobacco dependence treatment. This study did not evaluate smoking cessation *per se*; within one month, 32% of participants in the motivational interviewing group contacted a treatment provider, compared with 11% in the psychoeducation group, and 0% in the minimal control group ( $p=0.02$ ).

#### ***Authors' conclusions***

Regarding non-pharmacological interventions, Tsoi et al. (2013) concluded there wasn't convincing evidence that these interventions had a beneficial effect on smoking in schizophrenia.

Steinberg et al. (2004) stated that a motivational interviewing session was more effective than either a one-session psychoeducation or minimal-control interventions, in promoting tobacco dependence treatment seeking.

#### ***Reliability of conclusions/Strength of evidence***

The SR by Tsoi et al. (2013) was well-conducted, but only one relevant study (to this BEST summary) that was poorly reported (as the information was derived from a dissertation abstract) was included

in this review. The RCT by Steinberg et al. (2004) was considered to have a risk of bias so that the results are unlikely to be reliable.

### **What do guidelines say?**

No guidelines were identified discussing the use of psychoeducational groups for smoking cessation in adults with mental health conditions. However, the following recommendations were found for people in closed institutions such as secure mental health units, custodial sites and retention centres (NICE ph45 pp.17-18);

- “Incorporate management of smoking in the care plan of people in closed institutions who smoke.
- Ensure those giving harm-reduction advice in situations where smoking is not permitted are trained to the same standard as the level required for the National Centre for Smoking
- Cessation and Training stage 2 assessment (or the equivalent). This includes people working in mental health and prison health services.
- Ensure staff recognise that some people perceive smoking as an integral part of their lives.
- Also ensure staff recognise the issues arising from enforced, as opposed to voluntary abstinence.
- Ensure staff recognise how the closed environment may restrict the techniques and coping mechanisms that people would normally use to stop smoking or reduce the amount they smoke. Provide the support required for their circumstances (see recommendations 3–7). This includes prescribing or supplying licensed nicotine-containing products.
- Ensure staff understand that, if someone reduces the amount they smoke (or stops completely), this can impact on their need for psychotropic and some other medications (see UK Medicines information for further details). Ensure arrangements are in place to adjust their medication accordingly.”

**Date question received:** 25/09/2015

**Date searches conducted:** 05/10/2015

**Date answer completed:** 06/11/2015

### **References**

#### ***Systematic reviews***

Tsoi, D.T., Porwal, M. and Webster, A.C. (2013) Interventions for smoking cessation and reduction in individuals with schizophrenia. *Cochrane Database of Systematic Reviews*. Issue 2.

#### ***Randomised controlled trials***

Steinberg, M.L., Ziedonis, D.M., Krejci, J.A and Brandon, T.H. (2004) Motivational Interviewing With Personalized Feedback: A Brief Intervention for Motivating Smokers With Schizophrenia to Seek Treatment for Tobacco Dependence. *Journal of Consulting and Clinical Psychology* 72 (4) pp.723-728.

***Guidelines***

The National Institute of Health and Clinical Care Excellence (2013). Smoking: harm reduction *NICE public health 189*. Retrieved from <https://www.nice.org.uk/guidance/ph45/resources/smoking-harm-reduction-1996359619525>

## Results

### *Systematic reviews*

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Tsoi et al. (2013)	November 2012	<p><b>Participants:</b> Adult smokers with schizophrenia or schizoaffective disorder</p> <p><b>Intervention:</b> Smoking cessation or reduction, comparing any pharmacological or non-pharmacological intervention.</p> <p><b>Comparator:</b> Placebo or with another therapeutic control.</p> <p><b>Outcome:</b> Smoking cessation or reduction</p> <p><b>Study design:</b> Systematic review of randomised controlled trials.</p>	34	<p>Of the 34 trials, 16 trials evaluated smoking cessation, of which 6 evaluated non-pharmacological therapy or psychoeducational interventions.</p> <p><b>Single session motivational interviewing versus didactic psychoeducation versus minimal intervention</b></p> <p>One trial (Steinberg 2003) did not detect a significant reduction in cigarettes per day (CPD) or changes in expired CO level among the three groups, at one week, or at one month after the psychosocial intervention (details not reported).</p> <p><b>American Lung Association (ALA) programme in group setting versus specialised smoking cessation group therapy designed for schizophrenia (both groups receiving transdermal nicotine patch</b></p>	Low

			<p><b>(TNP)).</b></p> <p>One study found no significant difference in smoking abstinence rate at the end of four weeks of treatment: (ALA) programme group (23.5%), and the specialised group therapy group (32.1%, P = 0.06). However, at six-month follow-up, the smoking abstinence rate was significantly higher in the ALA programme group (17.6%) than the specialised group therapy group (10.7%, P &lt; 0.03).</p> <p><b>Treatment of addiction to nicotine in schizophrenia (TANS) versus medication management (MM) (both groups receiving transdermal nicotine patch (TNP))</b></p> <p>One trial examined two manualised individual behavioural counselling approaches - treatment of addiction to nicotine in schizophrenia (TANS) and medication management (MM), alongside TNP. There were no statistically significant differences in abstinence rates between the two groups at 12 weeks after the target quit date (TANS: 15.6%; MM: 26.2%, P = 0.22), at six months (TANS: 14%; MM: 16%, P = 0.78) and at 12 months (TANS: 12%; MM: 12%, P = 0.90).</p>	
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			<p><b>Individual smoking cessation intervention (based on cognitive behavioural therapy and motivational interview) and transdermal nicotine patch versus routine care</b></p> <p>One trial compared the effect of an individual smoking cessation intervention (based on CBT and motivational interview) and TNP versus routine care in a group of patients with psychotic disorders of mixed diagnoses. Based on a subgroup analysis of people with a diagnosis of schizophrenia and schizoaffective disorder (N = 169), no overall statistically significant differences between the treatment group and the control group in either continuous abstinence or point prevalence abstinence rates were observed at three, six, and twelve months, or four years after the initial assessment. In terms of smoking reduction, there was a significant difference at three months after the initial assessment, with 42.5% of the treatment group reducing their cigarette consumption by at least 50% relative to baseline, compared with 15.7% of the control group (odds ratio 3.96, 99% CI 1.53 to 10.23, P &lt; 0.001). However, the differences in smoking</p>	
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			<p>reduction between the treatment group and the control group were not statistically significant at subsequent follow-up sessions.</p> <p><b>Smoking reduction intervention group versus waiting list</b></p> <p>One trial compared a smoking reduction intervention group with people on a waiting list. There was a significant reduction of CPD in the intervention group compared with the waiting list control group (data not reported).</p>	
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### ***Randomised controlled trials***

<b>Author (year)</b>	<b>Inclusion criteria</b>	<b>Number of participants</b>	<b>Summary of results</b>	<b>Risk of bias</b>
Steinberg et al. (2004)	<p><b>Participants:</b> Smokers of at least 10 cigarettes per day with a diagnosis of schizophrenia or schizoaffective disorder.</p> <p><b>Intervention:</b> Motivational Interviewing(MI) intervention; a counselling style incorporating the concepts identified as making up the “spirit”2 of MI by Miller and Rollnick (2002).</p> <p><b>Psychoeducational intervention;</b> Participants were engaged in a brief psychoeducational discussion on general</p>	78 (MI n=32, psychoeducational n=34, minimal-control n=12)	<p>At one week, 26% of participants in the motivational interviewing group contacted a treatment provider, compared with 0% in the psychoeducation group, and 0% in the minimal control group (<math>p&lt;0.01</math>).</p> <p>At one month, 32% of participants in the motivational interviewing group contacted a treatment provider, compared with 11% in the psychoeducation group, and 0% in the minimal control group (<math>p=0.02</math>).</p>	High

	<p>benefits of quitting and the deleterious health effects of smoking based on an American Lung Association brochure (1997).</p> <p><b>Comparator:</b> <i>Minimal-control intervention;</i> The minimal-control intervention followed a greatly abbreviated assessment because the standard advice and referral for treatment were meant to be the only active ingredients in this intervention.</p> <p><b>Outcome:</b> Motivating smokers with schizophrenia or schizoaffective disorder to seek tobacco dependence treatment.</p>		
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## Risk of bias

### *Systematic reviews*

Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Tsoi et al. (2013)	😊	😊	😊	😊	😊

### *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
Steinberg et al. (2004)	?	?	🙁	🙁	😊	?

😊 Low risk

🙁 High risk

? Unclear risk

## Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
<b>Guidelines</b>			
NICE	Smoking Cessation	102	1
<b>Systematic Reviews</b>			
MEDLINE	<p>1 exp Patient Education as Topic/ (73858)      2 exp Health Education/ or Education/ (159453)      3 "psychoeducat*".ab,ti. (3033)      4 1 or 2 or 3 (161565)      5 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (92640)      6 tobacco.ab,ti. (74812)      7 "smok*".ab,ti. (211680)      8 5 or 6 or 7 (278219)      9 4 and 8 (8816)</p> <p><b>10 – 30 Systematic Review Filters Applied</b></p> <p>31 9 and 30 (67)</p>	67	0
EMBASE	<p>1 exp Patient Education as Topic/ (92501)      2 exp Health Education/ or Education/ (568222)      3 "psychoeducat*".ab,ti. (4612)      4 1 or 2 or 3 (569883)      5 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (81743)      6 tobacco.ab,ti. (85800)      7 "smok*".ab,ti. (282975)      8 5 or 6 or 7 (353257)      9 4 and 8 (28414)</p> <p><b>10 - 39 Systematic Review Filters applied</b></p> <p>40 9 and 39 (1069)</p>	1069	0
PsycINFO/CINAHL	1 exp Patient Education as Topic/ (0)	156	1

	<p>2 exp Health Education/ or Education/ (41854)</p> <p>3 "psychoeducat*".ab,ti. (6763)</p> <p>4 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (17342)</p> <p>5 tobacco.ab,ti. (16137)</p> <p>6 "smok*".ab,ti. (42086)</p> <p>7 4 or 5 or 6 (62625)</p> <p>8 *psychoeducation/ or *client education/ or *education/ or *educational therapy/ or *health education/ or *treatment/ (76364)</p> <p>9 1 or 2 or 3 or 8 (93248)</p> <p>10 7 and 9 (2463)</p> <p>11 (Cochrane\$. or review or overview or (review adj2 literature) or (synthes\$. adj3 (literature\$ or research or studies or data))).ti. (132139)</p> <p>12 (meta analysis or literature review or systematic review).md. (125478)</p> <p>13 (pooled analys\$. or ((data adj2 pool\$) and studies) or ((hand or manual\$ or database\$ or computer\$ or electronic\$) adj2 search\$) or ((electronic\$ or bibliographic\$) adj2 (database\$ or data base\$))).ab,ti. (9126)</p> <p>14 exp Meta Analysis/ (3729)</p> <p>15 11 or 12 or 13 or 14 (228437)</p> <p>16 (comment reply or editorial or letter or review book or review media).dt. (274646)</p> <p>17 (electronic collection or dissertation abstract or encyclopedia).pt. (445804)</p> <p>18 (rat or rats or mouse or mice or hamster or hamsters or animal or animals or dog or dogs or cat or cats or bovine or sheep).ab,sh,ti. (278265)</p> <p>19 16 or 17 or 18 (933917)</p> <p>20 15 not 19 (137296)</p> <p>21 10 and 20 (156)</p>		
<b>Primary Studies</b>			
MEDLINE	<p>1 exp Patient Education as Topic/ (73858)</p> <p>2 exp Health Education/ or Education/ (159453)</p> <p>3 "psychoeducat*".ab,ti. (3033)</p> <p>4 1 or 2 or 3 (161565)</p> <p>5 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (92640)</p> <p>6 tobacco.ab,ti. (74812)</p>	1340	0

	7 "smok*".ab,ti. (211680) 8 5 or 6 or 7 (278219) 9 4 and 8 (8816) 10 "randomized controlled trial".pt. (411604) 11 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (886238) 12 (retraction of publication or retracted publication).pt. (8160) 13 10 or 11 or 12 (981069) 14 (animals not humans).sh. (4021841) 15 ((comment or editorial or meta-analysis or practice-guideline or review or letter or journal correspondence) not "randomized controlled trial").pt. (3568489) 16 (random sampl\$ or random digit\$ or random effect\$ or random survey or random regression).ti,ab. not "randomized controlled trial".pt. (55575) 17 13 not (14 or 15 or 16) (730768) 18 9 and 17 (1340) 19 from 18 keep 1-1340 (1340)		
EMBASE	1 exp Patient Education as Topic/ (92501) 2 exp Health Education/ or Education/ (568222) 3 "psychoeducat*".ab,ti. (4612) 4 1 or 2 or 3 (569883) 5 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (81743) 6 tobacco.ab,ti. (85800) 7 "smok*".ab,ti. (282975) 8 5 or 6 or 7 (353257) 9 4 and 8 (28414) 10 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (1134266) 11 RETRACTED ARTICLE/ (7691) 12 10 or 11 (1141774) 13 (animal\$ not human\$).sh,hw. (3949480) 14 (book or conference paper or editorial or letter or review).pt. not exp randomized controlled trial/ (4259300) 15 (random sampl\$ or random digit\$ or random effect\$ or random survey or random regression).ti,ab. not exp randomized controlled trial/ (66775)	2579	0

	16 12 not (13 or 14 or 15) (878023) 17 9 and 16 (2579)		
PsycINFO/CINAHL	1 exp Patient Education as Topic/ (0) 2 exp Health Education/ or Education/ (41923) 3 "psychoeducat*".ab,ti. (6769) 4 *habits/ or *health behavior/ or *personal satisfaction/ or *"tobacco use"/ or *smoking/ (17389) 5 tobacco.ab,ti. (16158) 6 "smok*".ab,ti. (42148) 7 4 or 5 or 6 (62732) 8 *psychoeducation/ or *client education/ or *education/ or *educational therapy/ or *health education/ or *treatment/ (76460) 9 1 or 2 or 3 or 8 (93369) 10 7 and 9 (2465) 11 (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab. (168934) 12 (animals not humans).sh. (6162) 13 exp Clinical Trials/ (9089) 14 random*.mp. (147744) 15 13 not 14 (3932) 16 11 not (12 or 15) (168335) 17 10 and 16 (318) 18 exp Eating Disorders/ (24888) 19 exp Anorexia Nervosa/ (9395) 20 exp Bulimia/ (6927) 21 exp Attempted Suicide/ (8414) 22 exp Self Mutilation/ (1100) 23 exp Self Injurious Behavior/ (3952) 24 exp Bipolar Disorder/ (21571) 25 exp Affective Disorders/ (131345) 26 exp Major Depression/ (102707) 27 exp Dysthymic Disorder/ (1413) 28 exp Neurosis/ (7518)	41	1

	29 exp Seasonal Affective Disorder/ (958) 30 exp Anxiety Disorders/ (67218) 31 exp Panic Disorder/ (7031) 32 exp Phobias/ (11475) 33 exp Posttraumatic Stress Disorder/ (24315) 34 exp Somatoform Disorders/ (11308) 35 exp Hypochondriasis/ (1156) 36 exp Hysteria/ (1958) 37 exp Conversion Disorder/ (1115) 38 exp Munchausen Syndrome/ (119) 39 exp Munchausen Syndrome by Proxy/ (213) 40 exp Neurasthenia/ (297) 41 exp Chronic Fatigue Syndrome/ (1622) 42 exp Obsessive Compulsive Disorder/ (11049) 43 exp Psychological Stress/ (7914) 44 exp Schizophrenia/ (76740) 45 (Mood adj disorder*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (13481) 46 (Mental adj6 Disorders).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (108839) 47 schizo*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (115874) 48 hebephrenic*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (419) 49 oligophreni*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (520) 50 psychotic*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (39787) 51 psychos*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (186194) 52 (chronic* adj mental*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests &		
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	measures] (3702) 53 (severe* adj mental*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (8199) 54 (mental* adj disorder*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (108531) 55 (mental* adj ill*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (45393) 56 (emotion* adj disorder*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (4155) 57 18 or 19 or 20 or 21 or 22 or 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 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 (583817) 58 17 and 57 (41)		
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