

Best Evidence Summaries of Topics in Mental Healthcare

BEST in MH *clinical question-answering service*

Question

In caregivers of adults with psychosis, how effective is psychoeducation, compared to any other intervention, in reducing caregiver burden?

Clarification of question using *PICO* structure

Patients: Caregivers of adults with psychosis

Intervention: Psychoeducation

Comparator: Any other intervention

Outcome: Reducing caregiver burden

Plain language summary

A small amount of low quality evidence found that psychoeducational interventions may help to reduce the burden felt by caregivers when looking after someone with psychosis. More, higher quality research is needed to make more reliable conclusions.

Clinical and research implications

There is some very limited and inconsistent evidence, from small, poor quality randomised controlled trials (RCTs) that group psychoeducational interventions may be effective in reducing caregiver burden for carers of people with psychosis (schizophrenia).

The only good quality RCT identified was conducted in a mixed population (people with schizophrenia or schizoaffective disorder) and found that a psychoeducational intervention, delivered as a series of printed booklets, reduced caregiver burden and improved quality of life.

It should be noted that all studies were conducted in Asia or the Middle East (China, India, Iran and Jordan), and any observed effects may not be transferrable to Western European settings.

Larger, high quality studies, ideally conducted in settings which are directly applicable to the UK, are needed to adequately assess the effectiveness of psychoeducational interventions for caregivers of people with non-affective psychosis.

What does the evidence say?

Number of included studies/reviews (number of participants)

We identified one systematic review¹ and four additional randomised controlled trials (RCTs),^{2,3,4,5} which were considered potentially relevant to this evidence summary. The systematic review was of good methodological quality, however, it was focused on the effects of psychoeducational interventions for siblings (not specifically carers); it included only one very small (n=9) subgroup from a single study, which assessed the effects of adding a psychoeducational intervention to usual care.¹ Two additional RCTs, one conducted in India² and one in Iran,⁴ assessed the effects of group psychoeducational interventions, compared to usual care, on patient and carer outcomes. Another Iranian RCT compared the effects of two group interventions (a psychoeducational intervention, and a behavioural and family management intervention) and unusual care on mothers of patients with schizophrenia.³ The final RCT, conducted in Jordan, included both patients with schizophrenia and patients with schizoaffective disorder and compared the effects on patients and carers of a psychoeducation intervention (delivered via a series of printed booklets) with usual care.⁵ Outcomes assessed included measures of carer burden, quality of life, knowledge of mental illness and satisfaction with the intervention.

Main findings

The small sub-group analysis, reported in the systematic review, indicated that the group psychoeducational intervention was associated with a significant reduction in siblings' burden, (measured using the Family Burden Interview Schedule (FBIS)) compared to usual care: mean difference (MD) = -8.80 (95% CI: -15.22 to -2.38), at 12 months.¹ The two trials comparing group psychoeducational interventions to usual care, in patients with schizophrenia and their carers, produced contradictory results; one study found that the psychoeducational intervention had no significant effect on carer burden (FIBS),² whilst the other reported that the psychoeducational intervention was associated with a significantly greater reduction in FBIS score than usual care, which was maintained at one month follow-up.⁴ The mean baseline, post-treatment and one month follow-up FBIS scores, in the intervention group, were 40.64 ± 2.88 , 27.87 ± 2.9 , and 21.3 ± 2.46 , respectively. The mean baseline, post-treatment and one month follow-up FBIS scores, in the

control group, were 40.51 ± 3.17 , 37.82 ± 2.78 , and 37.3 ± 2.81 , respectively.⁴ The second Iranian study reported that a group psychoeducational intervention was associated with greater reductions in mothers' burden than either a behavioural and family management intervention or usual care, however, numerical results were inconsistently reported.³ Finally, the trial conducted in a mixed population (people with schizophrenia or schizoaffective disorder) found that a psychoeducational intervention, delivered as a series of printed booklets, was associated with significant reductions in carers' burden over time, compared to usual care.⁵

Authors conclusions

Sin 2015 – Data for siblings is very limited and there is no clear, good quality evidence to indicate that psychoeducation interventions are beneficial.

Kulhara 2009 – The authors stated that their trial provides preliminary evidence of the efficacy of structured psychoeducational intervention for Indian patients with schizophrenia and their caregivers.

Koolaee 2010 – The authors concluded that 'family interventions for Iranian mothers of schizophrenia patients can substantially benefit from family functioning.'

Fallahi Khoshkna 2010 – The authors concluded that a significant reduction in family burden has been achieved by implementing group psychoeducational programmes for in-patients with acute phase schizophrenia in Iranian population.

Hasan 2015 – Psychoeducation, in addition to treatment as usual, was more effective than treatment as usual in improving participants' knowledge and psychological outcomes.

Reliability of conclusions/Strength of evidence

The evidence in this summary is derived from small trials, most of which have substantial methodological weaknesses. All studies were conducted in Asia or the Middle East (China, India, Iran and Jordan), and any observed effects may not be transferrable to Western European settings. In addition, only three of the five studies identified were conducted solely in carers of patients with non-affective psychosis (schizophrenia).

What do guidelines say?

NICE guidelines for psychosis and schizophrenia in adults (CG178 2014) make the following recommendations for carer support:

"Offer a carer-focused education and support programme, which may be part of a family intervention for psychosis and schizophrenia, as early as possible to all carers. The intervention should:

- be available as needed
- have a positive message about recovery." (pp.14)

Date question received: 01/06/2016
Date searches conducted: 06/06/2016
Date answer completed: 20/06/2016

References

Systematic reviews

1. Sin, J., Jordan, C.D., Barley, E.A., Henderson, C. and Norman, I. (2015) Psychoeducation for siblings of people with severe mental illness. *Cochrane Database of Systematic Reviews*, Issue 5

Randomised controlled trials

2. Kulhara, P., Chakrabarti, S., Avasthi, A., Sharma, A., & Sharma, S. (2009). Psychoeducational intervention for caregivers of Indian patients with schizophrenia: a randomised-controlled trial. *Acta Psychiatrica Scandinavica*, 119(6), 472-483.
3. Koolaee, A. K., & Etemadi, A. (2009). The outcome of two family interventions for the mothers of schizophrenia patients in Iran. *International Journal of Social Psychiatry*.
4. Fallahi Khoshknab, M., Sheikhana, M., Rahgouy, A., Rahgozar, M., & Sodagari, F. (2014). The effects of group psychoeducational programme on family burden in caregivers of Iranian patients with schizophrenia. *Journal of psychiatric and mental health nursing*, 21(5), 438-446.
5. Hasan, A. A., Callaghan, P., & Lynn, J. S. (2014). Evaluation of the impact of a psycho-educational intervention on knowledge levels and psychological outcomes for people diagnosed with Schizophrenia and their caregivers in Jordan: a randomized controlled trial. *BMC psychiatry*, 14(1), 1.

Guidelines

National Institute for Health and Care Excellence (2014) Psychosis and schizophrenia in adults: prevention and management. CG178. LONDON: NICE.

<https://www.nice.org.uk/guidance/cg178/resources/psychosis-and-schizophrenia-in-adults-prevention-and-management-35109758952133>

Results

Systematic reviews

Author (year)	Search date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Sin et al (2015)	12 th November 2013	<p>Participants: Siblings, of all ages, of adolescent or adult individuals with severe mental illness. Studies including siblings of individuals with other diagnoses (e.g. severe depression/anxiety) were eligible for inclusion if ≥50% had a psychosis-related disorder.</p> <p>Intervention: Psychoeducation (defined as programmes involving interaction between information providers and service users and/or carers in either an individual or group format.) Interventions could be delivered to siblings on their own or amongst other family members including service users.</p> <p>Comparator: Usual care or any other intervention</p> <p>Outcome: Measures of sibling wellbeing, quality of life, distress (including depression and anxiety), knowledge about severe mental illness, coping behaviours, perceived social support or use of social/community support, satisfaction with intervention, adverse events.</p>	n=1 study (n=9 siblings)	<p>This systematic review aimed to assess the effects of psychoeducation, compared with usual care or any other intervention, on measures of wellbeing and distress in siblings of people with severe mental illness.</p> <p>The review included one study, which had nine participants, all of whom were siblings of people diagnosed with schizophrenia and a mean duration of illness of 3.6 ± 1.8 years. The study was conducted in Chinese patients and families in Hong Kong.</p> <p>The study included nine siblings as part of a study population of 84 family members. The psychoeducation intervention was delivered as a group programme for family members and patients (patients attended the educational workshop only), in addition to standard care. The programme comprised 19</p>	<p>The research objective was clearly stated and appropriate inclusion criteria were defined.</p> <p>Searching was limited to the Cochrane schizophrenia group's trials register. The authors stated that they planned to supplement this with reference screening and author contacts.</p>

	<p>Study design: Randomised controlled trials</p>	<p>biweekly sessions in four stages (orientation and engagement, educational workshop, therapeutic family role, and strength rebuilding and termination). The intervention group included 4 siblings and 38 other family members. The control group received standard care (routine psychiatric outpatient and family services only). The control group included 5 siblings and 37 other family members.</p> <p>The psychoeducation programme was associated with a small, but not statistically significant, improvement in family functioning at 12 months, measured using the Family Assessment Device (FAD); mean difference (MD) 3.80 (95% CI: -0.26 to 7.86). The psychoeducation programme was also associated with a statistically significant reduction in siblings' burden, measured using the Family Burden Interview Schedule (FBIS) at 12 months; MD -8.80 (95% CI: -15.22 to -2.38).</p> <p>The study did not assess any of the other outcome measures specified in the review. The study assessed outcomes for all included family members, but the review only</p>	<p>All stages of the review process included measures to minimise error and bias.</p> <p>The methodological quality of the single included study was assessed using the Cochrane risk of bias tool.</p> <p>The findings of the single included study were described in text and figures.</p>
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				reported data for siblings; the sibling data set was likely to be too small to adequately assess the effects of the intervention. It should also be noted that the study did not state that which, if any of the included family members were carers.	
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Randomised controlled trials

Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Kulhara et al (2009)	Participants: Patients with schizophrenia seeking treatment at the department of psychiatry of a tertiary-care hospital in north-India and their caregivers were included. Patients had to have a diagnosis of schizophrenia according to the DSM. Patients with comorbid axis I psychiatric disorders, personality disorders, substance abuse or dependence (except nicotine), organic brain syndrome or mental retardation were excluded. A primary caregiver was defined as someone who had been staying with patient for some time, spending most time with the patient and intimately involved in the care, such as looking after patient's daily needs, supervising treatment, accompanying the patient to	n=76 participants (psychoeducational intervention n=38, routine care n=38)	<p>This study aimed to assess the effects of a structured psychoeducational intervention for schizophrenia, compared with standard out-patient treatment, on patient and caregiver outcomes.</p> <p>Patients included in the study had a duration of illness of between 2 and 10 years and had been living with a relative continuously for at least 2 years prior to inclusion in the study. The mean age of patients was approximately 32 years, approximately half were unmarried and the majority (62%) were unemployed; most (98%) were illiterate. The mean age of carers was approximately 47 years, the majority (75%) were male and employed (72%), most (95%) were married and educated. There were no significant differences in baseline measures between carers in the intervention and control groups.</p> <p>The psychoeducation intervention comprised nine monthly</p>	<p>Randomisation used a SPSS-based program; no further details of randomisation or allocation concealment were reported.</p> <p>The nature of the intervention precludes blinding of</p>

<p>the hospital and liaising with the treatment team.</p> <p>Intervention: Structured psychoeducational intervention, carried out by two mental health professionals. The primary caregiver was required to attend all sessions. Concerns of the patients were addressed separately they were not required to attend the intervention sessions so the carer could speak freely. Content of these sessions included education about aetiology, symptoms, treatment and prognosis (two sessions); discussion on medication management, alternative treatments, realistic goal setting, substance abuse, marriage and related issues (two sessions); communication training consisting of improving clarity of communication, ways of providing positive and negative feedback (one session); problem-solving training consisting of management of day-to-day problems, non-compliance and stressful life-events (one session); education about identification of early signs of relapse and how to seek help (one session); information about caring for children, disability benefits, employment opportunities, accessibility to mental health facilities.</p>		<p>sessions, delivered by two mental health professionals who had received two months training from consultant psychiatrists and were supervised by the same consultants during the trial.</p> <p>Analysis (post-trial assessments, two-way repeated ANOVA) of caregiver outcomes indicated that only caregiver satisfaction with the intervention ($F=49.53$, $p<0.001$) and perceived social support amongst caregivers ($F=14.27$, $p<0.001$) were significantly higher in the intervention group than in the control group; the psychoeducational intervention had no statistically significant effect on measures of caregiver burden or caregiver coping.</p>	<p>participants and study personnel. Outcome assessments were conducted blind to treatment allocation.</p> <p>Both intention-to-treat and completer analyses were reported; 33 participants and carers (15 in the intervention group and 18 in the control group) did not complete the study.</p> <p>Results were reported for all</p>
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	<p>Comparator: Treatment as usual: routine out-patient care</p> <p>Outcome: Psychopathology (PANSS) Disability levels (Schedule for Assessment of Psychiatric Disability), caregiver-burden (Family Burden Interview Schedule), caregiver-coping (Coping Checklist), caregiver-support (Social Support Scale) and caregiver-satisfaction (Patient Satisfaction Questionnaire)</p>			specified outcomes.
Koolaee and Etemadi (2010)	<p>Participants: Iranian mothers, aged 45 to 65 years, who were caring for a son or daughter with schizophrenia according to DSM-IV, living in Tehran. Mothers were excluded if they: had a diagnosis of mental illness; cared for more than one family member with a chronic physical or mental illness; had been the primary carer for fewer than 3 months.</p> <p>Intervention: Psychoeducation group intervention, consisting of 12 weekly 2 hour sessions over 3 months. Content included: programmes purposes and goals; etiology; symptoms and outcome of schizophrenia; family as a hierarchical system; prevalence and heredity of schizophrenia; pharmacological interventions and problem solving to prevent relapse.</p>	n=55 (n=18 behavioural family management, n=19 psychoeducation, n=18 standard care)	<p>This study aimed to compare the effects of a psychoeducational intervention, behavioural and family management, and standard care, in Iranian mothers of patients with schizophrenia.</p> <p>The study authors stated that there were no significant differences in the sociodemographic characteristics of patients and carers across the three groups. However, reporting of participant characteristics was limited and was for the total study population only (no breakdown by group).</p> <p>Analysis (ANCOVA) indicated no statistically significant difference in baseline scores between the three groups. The authors stated that the psychoeducation intervention was associated with greater reductions in burden in mothers (measured using a Persian translation of the Family Burden Interview Schedule (FBIS)), compared with the other two treatments. Whereas the behavioural family</p>	<p>No details of randomisation or allocation concealment methods were reported.</p> <p>The nature of the intervention precludes blinding of participants and study personnel. However, participants in different groups</p>

<p>Comparator: Behavioural family management group intervention consisting of 12 weekly 12 hour sessions over 3 months. Standard care.</p> <p>Outcome: Caregiver burden (FBIS), expressed emotion (FQ) and severity of patient's positive symptoms (BPRS). Outcomes were measured at baseline and at 3 and 6 months.</p>		<p>management intervention was associated with significantly reduced emotional expression in mothers (measured using a Persian translation of the Wiedmann Family Questionnaire) compared to the other groups. It should be noted that numerical results were inconsistently reported between the text and the results table.</p>	<p>received the intervention on different days of the week, so that they were unaware of other interventions. Outcome assessments were conducted independently (blinding not reported).</p> <p>It was not clear whether all study participants were included in the analyses; 3 pairs of participants in the behavioural and family management group, and 2 in</p>
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				each of the other groups, did not complete the study. Results were reported for all specified outcomes, but were not consistent between text and tables.
Fallahi Khoshkna et al (2013)	<p>Participants: Caregivers of patients, aged 8 to 35 years, with schizophrenia, according to DSM-IV) hospitalised in a psychiatric centre in Tehran. Caregivers who had previously attended a family psychoeducational programme, or had any cognitive impairment, substance abuse or other intellectual disability were excluded.</p> <p>Intervention: Psychoeducational programme consisting of four 2 hour sessions held weekly. Content was based on educational programme of psychiatric nursing and converted to understandable text for patients and families. Caregivers</p>	n=71 (n=36 psychoeducational programme, n=35 control group)	<p>This study aimed to assess the effect of group psychoeducation therapy on family burden in caregivers of Iranian patients with schizophrenia.</p> <p>The mean age of schizophrenia patients in the study was 29.6 ± 6.9 years, 85% were male, 74% were single, 51% were unemployed, and 63% were educated to secondary school level. The majority (73%) had paranoid schizophrenia, the mean duration of disease was 6.7 ± 5 years, and the mean number of hospitalisations was 2.7 ± 1.5. There were no significant differences in baseline demographic, socioeconomic, or clinical characteristics between patients in the two groups.</p>	'Block randomisation,' 71 patient and caregiver pairs were randomly selected from 90 patients who met the inclusion criteria and had an eligible caregiver. No further details of

	<p>were also provided with written educational handouts containing information regarding schizophrenia management and care. Content included orientation; description of psychosis; aetiology; schizophrenia diagnostic symptoms; discussing living with hallucinations and delusions; introduction to correct use of medications and non-organic interventions; recurrence of the disease, role of the treatment on recurrence prevention; strategies for coping with schizophrenia; review of available social supports and services and conclusion.</p> <p>Comparator: Treatment as usual</p> <p>Outcome: Family Burden Interview Schedule (FBIS)</p>	<p>The mean age of carers was 54 ± 13.5 years and most (93%) were female. Most carers (79%) were parents of the patient and the majority (63%) reported a severe decline in social relations due to patient care. The mean duration of living with the patient was 22.2 ± 10 years. There were no significant differences in baseline demographic, socioeconomic, or clinical characteristics between carers in the two groups. Baseline FBIS scores were similar in the two groups.</p> <p>FBIS scores were significantly reduced, during the study and at follow-up, in both groups. The psychoeducation intervention was associated with a significantly greater reduction in FBIS score than usual care, which was maintained at one month follow-up. The mean baseline, post-treatment and 1 month follow-up FBIS scores, in the intervention group, were 40.64 ± 2.88, 27.87 ± 2.9, and 21.3 ± 2.46, respectively. The mean baseline, post-treatment and 1 month follow-up FBIS scores, in the control group, were 40.51 ± 3.17, 37.82 ± 2.78, and 37.3 ± 2.81, respectively.</p>	<p>randomisation or allocation concealment were reported.</p> <p>The nature of the intervention precludes blinding of participants and study personnel.</p> <p>Outcome assessments were conducted blind to group allocation.</p> <p>Five carers in the intervention group did not complete the study; no completion rate</p>
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				information was reported for the control group. It was not clear whether all study participants were included in the analysis. Full results were reported for the specified outcome measure.
Hasan, Callaghan and Lynn (2015)	<p>Participants: Participants aged 18 years or older with DSM-IV schizophrenia or schizoaffective disorder, and their primary caregivers, from four outpatient mental health clinics in Jordan.</p> <p>Intervention: Treatment as usual, supported with psycho-educational booklets each fortnight for 12 weeks. Follow-up phone calls to primary caregivers were also made to ensure that they had read and understood the booklet and to allow them to ask</p>	n= 121 (n=58 psychoeducation, n=63 control)	<p>This study aimed to assess the effects of a psychoeducational intervention, delivered via a printed booklet, on outcomes for patients with schizophrenia and their caregivers.</p> <p>The mean age of patients included in the study was 41 years; 54% had a diagnosis of schizophrenia and 46% had a diagnosis of schizoaffective disorder, and the mean duration of illness was approximately 12 years. The majority (69%) of patients were male, 64% were unemployed, and 55% were single or divorced. There were</p>	Randomisation was by random number generator, and was conducted by an independent researcher who had no contact with or access to recruited

<p>questions about its content. The content of each booklet included information on diagnosis, myths about schizophrenia, symptoms, coping with symptoms, treatment options and how to live better with schizophrenia and have meaningful and satisfying lives.</p> <p>Comparator: Treatment as usual</p> <p>Outcome: Knowledge about schizophrenia (KASQ), schizophrenia symptoms (PANSS), family burden (FBIS), carers' quality of life (S-CQoL).</p>		<p>no significant differences in baseline demographic, socioeconomic, or clinical characteristics between patients in the two groups.</p> <p>The mean age of primary care givers was approximately 49 years, most (76%) were female, 83% were married, and 63% were unemployed. Most carers were parents (40%) or spouses (32%) of the patient. There were no significant differences in baseline demographic or socioeconomic characteristics between carers in the two groups. There were no significant differences in carer FBIS and quality of life scores, at baseline, between the two groups.</p> <p>Analyses (repeat measure ANOVA) indicated that the group time effect was significant (i.e. improvements were significantly greater, over time, in the psychoeducation group than in the control group) for all carer outcomes: Knowledge About Schizophrenia Questionnaire (KASQ) $F=186.55$, $p<0.001$; Schizophrenic Carers' Quality of Life Scale (S-CQoL) $F=75.98$, $p<0.001$; FBIS $F=73.94$, $p<0.001$.</p> <p>Note: approximately half of the patients in this study had a non-affective psychosis diagnosis,</p>	<p>participants. The allocation sequence was concealed until participants were assigned to either arm of the study.</p> <p>The nature of the intervention precludes blinding of participants and study personnel. Outcomes were assessed independently and blind to group allocation.</p> <p>All randomised participants were included in the analyses;</p>
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				<p>3 participants in the intervention group and 5 in the control group did not complete the study.</p> <p>Results were reported for all specified outcome measures.</p>
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Risk of bias

Systematic reviews

Author (year)	RISK OF BIAS				
	Inclusion criteria	Searches	Review process	Quality assessment	Synthesis
Sin et al (2015)	😊	😩	😊	😊	😊

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
Kulhara et al (2009)	?	?	😩	😊	😩	😊
Koolaee and Etemadi (2010)	?	?	?	?	?	😊
Khoshknab et al (2013)	?	?	😩	😊	?	😊
Hasan, Callaghan and Lynn (2015)	😊	😊	😩	😊	😊	😊

😊 Low risk

😩 High risk

? Unclear risk

Search details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>Guidelines</i>			
NICE	Psychosis Schizophrenia	44	
MEDLINE	Psychoeducat*.ti,ab (psychos* OR psychotic).ti,ab schizophren*.ti,ab exp PSYCHOTIC DISORDERS/ exp SCHIZOPHRENIA/ 12 OR 13 OR 14 OR 15 Apply Limits 11 AND 16 17 [Limit to: (Document type Clinical Trial or Controlled Clinical Trial or Meta-analysis or Randomized Controlled Trial or Review)]	519	
EMBASE	Psychoeducat*.ti,ab exp PSYCHOEDUCATION/ 1 OR 2 (psychos* OR psychotic).ti,ab schizophren*.ti,ab exp PSYCHOSIS/ EMBASE exp SCHIZOPHRENIA/ 4 OR 5 OR 6 OR 7 3 AND 8 9 [Limit to: (EBM-Evidence Based Medicine Meta Analysis or Systematic Review) and (Clinical Trials Clinical Trial or Randomized Controlled Trial or Controlled Clinical Trial)]	58	
PsycINFO/CINAHL	Psychoeducat*.ti,ab	315	

	exp PSYCHOEDUCATION/ (psychos* OR psychotic).ti,ab schizophren*.ti,ab exp SCHIZOPHRENIA/ exp PSYCHOSIS/ 19 OR 20 21 OR 22 OR 23 OR 24 25 AND 26 27 [Limit to: (Methodology Literature Review or Meta Analysis or Systematic Review or Treatment Outcome/Clinical Trial)]		
CENTRAL	psychoeducat* psychos* or psychotic schizophren* MeSH descriptor: [Psychotic Disorders] explode all trees MeSH descriptor: [Schizophrenia] explode all trees #2 or #3 or #4 or #5 #1 and #6 62	692	

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