Do Psychological Interventions Work for Psychosis in Adolescents?

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Background: There is emerging evidence to show that psychological interventions such as cognitive remediation therapy (CRT), psychoeducation, family therapy, and group psychotherapies may be useful for adolescents with psychosis. The current review is on the effects of various psychological interventions for adolescents with psychosis compared with treatment as usual (TAU) or other psychological interventions. **Methods:** We undertook a comprehensive search for all randomized controlled trials on the topic as per predefined criteria. For binary data, a standard estimation of risk ratio, and, for continuous data, the mean difference between groups were estimated. GRADE approach was used to assess studies. “Risk of Bias” was calculated, and finally random-effects model was used for analyses. **Results:** The review included 7 studies (n = 317). Two studies compared CRT and TAU with TAU alone. CRT showed improvement in short-term memory compared with those in the TAU group (relative risk 0.58, 95% CI 0.37 to 0.89, participants = 31, very low-certainty evidence). When comparing group psychosocial therapy with TAU, global state scores measured using Children’s Global Assessment Scale (CGAS) were clearly higher in the intervention arm (mean difference 5.10, 95% CI 1.35 to 8.85, participants = 56, very low-certainty evidence) as compared with the TAU group. None of the other interventions were found to be significantly effective for the treatment of psychosis in adolescents. **Conclusions:** Evidence suggests that psychological interventions may have beneficial effects in the treatment of adolescents with psychosis, but the evidence is of low or very low certainty.

Key words: adolescents/psychosis/psychological intervention/schizophrenia

Background

Psychosis in adolescents is rare but can have serious consequences and requires assessment by mental health

professionals. The most common and widely used treatment for psychosis is antipsychotic medications. However, there is emerging evidence to show that psychological interventions such as cognitive remediation therapy (CRT), psychoeducation, family therapy, and group psychotherapies may be useful for adolescents with psychosis. Psychological interventions for psychosis in adolescents may be used to address residual psychotic symptoms and family conflicts, reduce affective symptoms and stigma, improve cognitive functions and coping, and promote integration with peers.

Objectives

To assess the effects of various psychological interventions for adolescents with psychosis compared with treatment as usual (TAU) or other psychological interventions.

Search Methods

We searched the Cochrane Schizophrenia Group’s study-based Register of Trials including clinical trial registries (March 8, 2019).

Selection Criteria

All randomized controlled trials comparing various psychological interventions with TAU or other psychological treatments for adolescents with psychosis. For analyses, we included trials meeting our inclusion criteria and reporting usable data.

Data Collection and Analysis

Review authors R.D., A.K., and S.S.D. selected the studies, rated the quality of the studies, and performed data extraction. For binary data, a standard estimation of risk ratio and its 95% confidence interval, and, for continuous data, the mean difference between groups

and its 95% confidence interval were estimated. We used the random-effects model for analyses. “Risk of Bias” was calculated for the included studies. We created a “Summary of findings” table using the GRADE approach.

Main Results

The review included 7 studies wherein the total number of participants was 319. The studies assessed a heterogeneous group of psychological interventions with variable risk bias (figure 1). No adverse events were reported in any of the studies. None of the studies were sponsored by the industry. The review made 6 main comparisons but included mostly small trials.

Two studies compared CRT and TAU (CRT + TAU) with TAU alone and found no clear difference in global state score as measured by Children’s Global Assessment Scale (CGAS) between the CRT + TAU and TAU groups (MD -4.90 , 95% CI -11.05 to 1.25 ; participants = 50, very low-certainty evidence). Mental state scores measured using the Positive and Negative Syndrome Scale (PANSS) were lower in the TAU group (MD 8.30 , 95% CI 0.46 to 16.14 , participants = 50, very low-certainty evidence), which is likely due to the baseline characteristics in the PANSS score of the 2 groups being different from the start. It was clear that the participants in the CRT group showed improvement in short-term memory, measured using digit span test, which is a cognitive function, compared with those in the TAU group (RR 0.58 , 95% CI 0.37 to 0.89 , participants = 31, very low-certainty evidence) (figure 2).

One study assessed the effectiveness of adding group psychosocial therapy to TAU and reported that global state scores measured using CGAS were higher in the intervention arm (MD 5.10 , 95% CI 1.35 to 8.85 , participants = 56, very low-certainty evidence) as compared with the TAU arm but there was no difference in mental state scores measured using PANSS.

One study evaluated the effects of combining 2 types of psychological interventions namely cognitive

remediation program and psychoeducational treatment program (CRP + PTP) and compared this with PTP alone. This study showed that in either of the arms, following the interventions, the global state scores (CGAS, high = good) were not clearly different (MD 1.60 , 95% CI -6.48 to 9.68 ; participants = 25; studies = 1; very low certainty), as were mental state scores (brief psychiatric rating scale [BPRS] total score, high = poor, MD -5.40 , 95% CI -16.42 to 5.62 ; participants = 24; studies = 1; very low certainty) and cognitive functioning scores (span of apprehension task-12 [SPAN-12] score, high = good, MD 2.40 , 95% CI -2.67 to 7.47 ; participants = 25; studies = 1; very low certainty).

Another study compared psychoeducation combined with multifamily treatment (PTP + MFT) to MFT alone and found no difference in global state scores (CGAS, high = good, MD 3.38 , 95% CI -4.87 to 11.63 ; participants = 49; studies = 1; very low certainty) and mental state scores (PANSS total, high = poor, MD -8.23 , 95% CI -17.51 to 1.05 ; participants = 49; studies = 1; very low certainty) for psychosis in adolescents.

Other interventions that were used in the various studies included structured group therapy and computer-assisted cognitive remediation programs. However, none of the above-mentioned interventions were found to be significantly effective when compared with control interventions for the treatment of psychosis in adolescents.

Author’s Conclusions

The main outcomes of most studies were equivocal. Analyses of data suggest that some psychological interventions may have some beneficial effects in the treatment of adolescents with psychosis, but the evidence is of low or very low certainty. Most importantly, the studies designed to compare a specific psychological intervention against TAU may naturally show that some kind of psychological intervention is superior to no additional psychological intervention, without highlighting much on the inherent mechanisms or psychological processes that have been beneficial to adolescents with psychosis.

Fig 1. Risk of bias of included studies of psychological interventions for psychosis in adolescents.

Fig 2. Post-intervention effect on cognitive functioning: Not attaining normal cognitive function for comparison of cognitive remediation therapy plus treatment as usual vs treatment as usual.

Studies that compared a specific type of psychological intervention with another did not find a significant difference between the intervention and control arm. It is also important to note that the results were based on a very small number of studies and participants with a variable risk of bias, and, as such, our estimate of the effects of these interventions should be viewed with considerable caution. Conducting further good-quality trials and adding further data are, therefore, needed before making definitive inferences about the effects of psychological interventions in the treatment of psychosis in adolescents. To date, scientific support for efficacy and effectiveness of psychological treatments for adolescences with schizophrenia is virtually missing and clinical trials with active control participants merits high priority.

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Reference

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