



Best Practice

Evidence Based Practice Information Sheets for Health Professionals

The Effectiveness of Individual Therapy and Group Therapy in the Treatment of Schizophrenia

Acknowledgement

This *Best Practice* Information Sheet has been based on a systematic review of research published by The Joanna Briggs Institute entitled *The Effectiveness of Individual Therapy and Group Therapy in the Treatment of Schizophrenia*¹. The primary references on which this information sheet is based are available in the systematic review report.

Introduction

It is estimated that approximately 1 percent of the world population suffers from schizophrenia. The National Institute of Mental Health suggests that in the United States alone, over 2 million people suffer from the illness in any given year.

Schizophrenia can appear in childhood but is most likely to occur in men in their late teens or early twenties and in women in their twenties and thirties.

People with schizophrenia experience all manner of symptoms including disordered perceptions of reality, hallucinations and illusions, delusions, disordered thinking and emotional expression.

There is no single cause of schizophrenia and some causes are still not known. Therefore there is no simple, single treatment for the disease and current approaches are based on clinical research and experience. Medications are the common treatment for schizophrenia, however, 5%–25% of patients continue to experience symptoms despite treatment. Further, side effects of medication are often undesirable. Finally, while medication is useful in bringing the symptoms of the disease under control, they do not provide important coping skills for the disease.

This Best Practice Information Sheet Covers the Following Concepts:

1. The Effect of Individual Therapy on Symptoms of Schizophrenia
2. Comparing Group with Individual Psychotherapy for the Treatment of Schizophrenia
3. Group Psychotherapy for the Treatment of Schizophrenia
4. The Effect of Group Psychotherapy on Schizophrenic Behaviours

These skills are provided through forms of psychotherapy.

Objectives

The objective of this *Best Practice* Information Sheet was to present the best available information on the use of Group Therapy (GT) and Individual Therapy (IT) in the treatment of schizophrenia. This review summarises the findings of all relevant studies relating to these interventions.

Levels of Evidence

All studies were categorised according to the strength of the evidence based on the following classification system.

Level I

Evidence obtained from a systematic review of all relevant randomised controlled trials.

Level II

Evidence obtained from at least one properly designed randomised controlled trial.

Level III.1

Evidence obtained from well designed controlled trials without randomisation.

Level III.2

Evidence obtained from well designed cohort or case control analytic studies preferably from more than one center or research group.

Level III.3

Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments.

Level IV

Opinion of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

The Effect of Individual Therapy on Symptoms of Schizophrenia

Numerous studies have looked at the effectiveness of types of individual therapy on improving the outcomes of subjects suffering from schizophrenia.

Individual Cognitive Behaviour Therapy

The use of individual cognitive behaviour therapy (CBT) with schizophrenic patients was recently the subject of a Cochrane systematic review². This review compared CBT plus standard care versus standard care alone. The definition of standard care for these studies included the use of anti-

psychotic medication and low-grade case management.

Only one death was reported from any study. The reviewers found that there was a difference in relapse rates favouring CBT plus standard care over standard care alone.

For global functioning as measured by the Global Assessment Scale (GAS), clients in the CBT group showed a significant improvement in mental functioning compared to standard therapy. A

measurement of mental state using Brief Psychiatric Rating Scale (BPRS) showed no significant differences in the short and medium term between treatment groups. However, in the long term BPRS scores were significantly better in the CBT group compared to standard therapy.

Therefore, individual CBT can be recommended for use and is expected to be effective in improving overall mental state and global functioning in subjects diagnosed with schizophrenia. (Level 1)

The implications for practice as stated by the authors of the review were:

"CBT is associated with a substantially reduced risk of relapse...improvements in mental state and global functioning may be achieved over and above those expected of standard care alone". The reviewers caution that for CBT to be effective there must be "active participation from both the therapist and the person receiving therapy"².

Individual Therapy vs Individual Plus Family Therapy for Relapse Prevention

The effect of individual therapy combined with family therapy compared with individual therapy alone for the prevention of a relapse was examined in subjects diagnosed with schizophrenia from both high and low Expressed Emotion (EE) families.

The concept of EE is defined as the belief that the critical attitudes towards a person with schizophrenia and the over-involvement with that person are predictive of relapse. For example, family members with critical and/or over-protective attitudes toward a person with schizophrenia can affect a relapse of that person.

It was determined that subjects from high EE families are more likely to relapse compared to subjects from low EE families. However, this difference was not found to be significant. Further, neither treatment was found to be more successful than the other at preventing subject relapse. The lack of significance between the two treatment groups however, may be a result of the small numbers of subjects used in the study. Larger, carefully designed trials using these treatment regimens must be performed before either treatment can be recommended for subjects suffering with schizophrenia.

Comparing Group with Individual Psychotherapy for the Treatment of Schizophrenia

While the effectiveness of individual CBT on subjects with schizophrenia can be established, how group psychotherapies compare in treatment effectiveness to individual therapies has rarely been researched.

Group vs Individual Psychotherapy

An examination of the effectiveness of group versus individual psychotherapy on outcomes of symptoms and social effectiveness in subjects with schizophrenia

Evaluation Scales

Brief Psychiatric Rating Scale (BPRS)

The BPRS is used to assess the severity of a range of psychiatric symptoms. It is a 16-item scale with each item consisting of a 7-point scale varying from 'not present' to 'extremely severe'. Scores range from 24-168 with a higher score indicating increased severity.

Global Assessment Scale (GAS)

The GAS is an overall measure of subject function and has a scale from 1 (needs constant supervision) to 100 (no symptoms).

Psychiatric Assessment Scale (PAS)

The PAS also assesses subject symptoms and consists of eight categories, each with a four-point scale. The higher the score the greater the severity of the symptoms.

The Personnel questionnaire is a self-report measure to assess delusion and preoccupation.

Psychiatric Evaluation Form (PEF).

The PEF consists of 19 psychopathology scales and one overall severity of illness scale which rates subject psychiatric state from 1 (none) to 6 (extreme).

The Clinical Global Impressions (CGI) scales

Used to assess general severity of illness at pre-treatment (CGI-S) and improvement at post-treatment (CGI-I). Total possible score is 7. The lower the CGI score the greater the improvement in global illness severity.

Quality of Life Scale (QLS)

Used to assess changes in the patients' quality of life over the treatment phase. Total possible score is 126. The higher the score the greater the improvement in interpersonal functioning.

Modified Scale for the Assessment of Negative Symptoms (SANS)

Used to assess changes in negative symptoms over the period of treatment. Total possible score is 100. The lower the score the lower the severity of negative symptoms.

Behavioural Assessment Task (BAT)

A videotape program of scenarios to assess accuracy of social perception and to identify patients with different social skills. Total possible score is 18. The higher the score the greater the improvement in social competence.

The Global Assessment of Functioning Scale (GAF)

Used to assess overall psychosocial functioning and symptom level. Total possible score is 90, the higher the score the greater the improvement in psychosocial functioning and symptoms.

Positive and Negative Syndrome Scale for Schizophrenia (PANSS)

Used to determine the presence of schizophrenic symptoms.

Skill attainment

Determined by a series of role-playing tests. Subject performances on the role playing tests were evaluated using 4-point Likert scales rating from 1 (poor) to 4 (excellent).

The Goal Attainment Scale (GATS)

Used to measure attainment of treatment goals. GATS consists of a scale ranging from -2 (regression in goal attainment) to 0 (goal attainment) to 2 (exceeded goal).

Distinct verbal unit

Separated at either end by a silence period and/or a change in content of the discussion.

concluded that group psychotherapy was significantly more effective than individual psychotherapy at improving subject outcome ratings at both 12 and 24 months post-treatment. Neither treatment was found to be more effective than the other at preventing subject relapse, re-hospitalisation or likelihood of discharge. However, the absence of any description of the treatment regimes means that these results should be treated with caution. Therefore, no recommendations for the use of either therapy regime can be made based on this study.

A comparison of the effectiveness of personal group therapy and supportive therapy on relapse rates and social functioning in subjects with schizophrenia found that brief episodes of either treatment were less effective than long term treatment. However, due to the nature of data presentation, these findings could not be independently evaluated and no recommendations as to the usefulness of either of these therapies can be made.

Therefore, comparisons of individual and group psychotherapies in the treatment of subjects with schizophrenia yield inconclusive results due to incomplete reporting of treatments or data in the available literature.

Group Psychotherapy for the Treatment of Schizophrenia

Numerous studies have attempted to compare the effectiveness of different forms of group therapy to each other and to control or waiting list subject groups.

Group Psychotherapy vs Control

The effectiveness of group psychotherapy on psychiatric symptoms in subjects with schizophrenia has been compared to both an activity oriented task group and a control group.

Improvement in global functioning of subjects with schizophrenia (measured by GAS scores) was not significantly different for any of the three study groups. However, Overall Severity of Illness scores (a sub-scale of the Psychiatric Evaluation Form [PEF]) showed significant differences between treatment groups from first to second evaluation with the group treatment subjects scoring poorer on this scale than control subjects. Both group and task group therapy arms showed similar numbers of subjects scoring poorer on the post-treatment evaluation (by PEF) than in the admission assessment.

Therefore, the 3 hours of group therapy per week was found to be ineffective if not detrimental to patients with schizophrenia over the first 20 days of their admission when compared to the control condition where all manner of interactions with staff and others were possible. It is suggested that the eight one-hour sessions may not have been enough time for a group to properly develop. Therefore, these forms of group psychotherapy should be evaluated over longer periods of time before they can be recommended as effective forms of treatment for the person suffering from schizophrenia.

Interactive Behavioural Training vs Waiting List

The effectiveness of Interactive Behavioural Training (IBT) on symptom severity and quality of living in subjects diagnosed with schizophrenia was compared with subjects on a waiting list.

The Clinical Global Impressions (CGI) scales, the Quality of Life Scale (QLS), the Modified Scale for the Assessment of Negative Symptoms (SANS), the Behavioural Assessment Task (BAT), the Global Assessment of Functioning Scale (GAF), the BPRS (described previously) and the Positive and Negative Syndrome Scale for Schizophrenia (PANSS) were used to determine overall social functioning level. Only the GAF measure showed any improvement in post-treatment scores for the IBT group. All other measures showed no significant change following treatment. Waiting list subjects showed no significant changes in scores from pre to post-treatment.

From this study it can be concluded that the form of interactive behavioural training described is ineffective at improving social functioning and cannot be recommended. (Level II)

Group Psychotherapy vs Modular Skills Training

A study of subjects suffering from schizophrenia compared modular skills training to group psychotherapy in an effort to improve medication and symptom management skills as well as the symptoms of schizophrenia. Modular skills training was found to be significantly more effective at improving medication and symptom management skills at 6 and 12-month follow-up compared to group psychotherapy. However, the modular skills treatment was not found to be more effective at improving symptoms of schizophrenia when compared with traditional psychotherapy. When the

subjects from both treatment groups were pooled to examine the effect of general therapy, there was a significant improvement in BPRS and SANS scores at 6-month follow-up when compared to pre-treatment values.

Therefore, skills training or group psychotherapy can be effective in improving overall psychological symptoms. The skills training program is of further benefit by producing an improvement in the living skills of subjects with schizophrenia. (Level II)

Coping Skills Training vs Problem Solving Group Training

A small study was conducted with 14 subjects to determine the effect of either a coping skills or a problem solving approach on attainment of treatment goals, and hospitalisation rates.

Mean Goal Attainment Scale (GAS) scores for the Coping Skills Training (CST) group were significantly better than Problem Solving Group Training (PSGT) scores at both post-treatment and follow-up, however both treatments showed significant improvements in scores from pre- to post-treatment. Only CST showed significant improvements in GAS scores from post-treatment to 6 month follow-up. Therefore, CST appears to have a longer lasting effect on improving goal attainment than PSGT in patients with schizophrenia.

Hospitalisation rates between the two treatment groups were not significantly different. Due to the size of the study the significance of the findings should be reviewed with caution. Before the CST and PSGT methods can be recommended for use in improving goal attainment skills in subjects with schizophrenia, a larger, carefully designed and controlled study must be performed.

The Effect of Group Psychotherapy on Schizophrenic Behaviours

Group Psychotherapy has also been used in the treatment of specific behavioural problems of subjects with schizophrenia.

Group Psycho-educational Training and Medication Compliance

Subjects diagnosed with schizophrenia and presently in remission from symptoms were either treated with psychoeducational training to improve medication compliance or placed in a control group. It is suggested that this program not be used for patients in the acute stage or who suffer cognitive impairment.

Of completers, significantly more experimental subjects were compliant with their medications at post-treatment compared to pre-treatment than were control subjects.

However, the success of a treatment is also dependent upon ensuring that subjects complete the treatment. Many subjects did not complete treatment and when these subjects were factored into the results there were no significant improvements in medication compliance in either the experimental or control group.

A subjective self-report assessment determined that a greater percentage of subjects in the experimental group stated that they felt less comfortable with their own medication management than did controls at both pre- and post-treatment. These differences, however, were not significant.

Assessment of psychological status at pre- and post-training time points using the Brief Psychiatric Rating Scale (BPRS) and the Global Assessment Scale (GAS) showed no significant differences between treatment groups or any significant changes within groups at pre- and post-treatment. At one-year follow-up, any effect of psycho-educational training on

medication compliance disappeared and no significant differences between groups for all measures were found. Therefore, the effectiveness of group psycho-educational training has not been determined to be effective at improving medication compliance or in improving the symptoms and social functioning in subjects with schizophrenia and cannot be recommended.

Group Psychotherapy and Self-disclosure

It is believed that stimulating verbal interaction is key to avoiding a primary characteristic of regression in subjects with schizophrenia, that of social withdrawal.

Therefore, the effect of psychotherapy on verbal interaction by patients with schizophrenia was examined. Comparison was of three different types of group therapies (activities, re-motivation, or social interaction) with each other and with one control condition. The number of verbal interactions in the activities and re-motivation groups was found to be significantly higher than in the social living and control groups with the number of verbalisations of the activities group significantly higher than any other condition. The re-

motivation group showed significantly more verbal interaction than the social and control group. Therefore formation of an activities group can be expected to significantly improve the verbal interaction of a group of male subjects who are all suffering from schizophrenia. (Level II)

Group Psychotherapy and Polydipsia

In a subgroup of subjects suffering from schizophrenia, polydipsia (self-induced water intoxication) is a complication. Therefore regular hospital treatment was compared to a combination of psychotherapy and regular hospital treatment to improve management of polydipsia. Fluid intake was monitored for 5 weeks by weighing subjects 4 times per day.

Polydipsia in the experimental group was reduced significantly during the study compared to control. However, at 2-month follow-up, mean increases in body weight returned to pre-treatment levels. Therefore group psychotherapy cannot be recommended for use in treating polydipsia in subjects with schizophrenia unless treatment is continued indefinitely. The effect of a longer study needs to be determined. (Level II)

Therapy Protocols

Individual Cognitive Behavioural Therapy

Involved:

- 1) "the recipient establishing links between their thoughts, feelings and actions with respect to the target symptom"
- 2) "the correction of the persons misperceptions, irrational beliefs and reasoning biases related to the target symptom."
- 3) "the recipient monitoring their own thoughts, feelings and behaviours with respect to the target symptom" and

- 4) "the promotion of alternate ways of coping with the target symptom."

Individual Therapy

Developed insight and control of symptoms through education and support to cope with life stressors and to recognise the beginnings of stress. Continued for 12 months with 3 months of day treatment and 9 months of community treatment.

Family Therapy

Psychoeducation, communication training and problem solving training. Continued for 12 months with 3 months of day

treatment and 9 months of community treatment.

Supportive Therapy

Involved active listening, correct empathy, appropriate reassurance, reinforcement of patient health promoting initiatives, and reliance on the therapist for support and problem solving in times of crisis.

Averaged 1.9 ± 0.7 sessions per month (year 1) to 1.5 ± 0.6 per month (year 3). All therapy sessions were an average of 30 to 45 minutes in duration.

Personal Group Therapy

Encouraged subjects to identify affective, cognitive and physiological experiences of stress. to enhance personal and social adjustment through identification and management of affect dysregulation. There were three stages to the treatment, a) the basic phase, b) intermediate phase, and c) the advanced phase.

- 1) Basic phase (first few months after discharge):
 - a) Formation of a treatment contract
 - b) Provision of minimum effective dosing
 - c) Basic psychoeducation regarding the nature and treatment of schizophrenia
 - d) Techniques of supportive therapy
 - e) Step by step plan for the resumption of expected roles
 - f) Internal coping
- 2) Intermediate phase (first 18 months after discharge):
 - a) Advanced psycho-education
 - b) Internal coping strategies and relaxation and cognitive reframing techniques
 - c) Skills training
- 3) Final phase (last 18 months of treatment):
 - a) Encourage timing of social and vocational initiatives in the community
 - b) Awareness of ones own prodromes
 - c) Use of progressive relaxation techniques
 - d) Awareness of ones affect
 - e) Principles of criticism management and conflict resolution
 - f) Use of real life situations

Personal group therapy sessions numbered an average of 2.9 ± 0.7 per month (year 1) to 2.1 ± 0.9 per month (year 3). All therapy sessions were an average of 30 to 45 minutes in duration.

Group Psychotherapy

Helped subjects "gain insight into intrapsychic and interpersonal difficulties by focusing on here and now group interactions and expression of feelings." Three one-hour sessions per week for the three months.

Or

Insight-oriented and supportive group process that contained information on schizophrenia and the importance of adhering to treatment. 90-minute sessions twice per week for 6 months. During the one-year follow-up period, the group continued to meet for an average of once per week.

Or

Two 45-minute psycho-educational group psychotherapy sessions per week for 4 months with art therapy, illustrations of the quantity of water being consumed and physiological discussions regarding the risk of excessive water intake. Followed up for a further 2 months.

Task Group

Subjects worked together on a common project "without discussing intra-psychic and interpersonal problems." Three one-hour sessions per week for the three months of the study.

Interactive Behavioural Therapy

Used cognitive behavioural strategies such as instruction, modelling and behavioural reversal, combined with group process strategies. Consisted of 16 sessions of 50 minutes, divided into four stages.

- 1) The **Orientation and Cognitive Networking** stage was designed to encourage social interactions between group members.
- 2) The **Warm-up and Sharing** phase: emphasised self-disclosure
- 3) The **Enactment** phase: patients enact an interpersonal situation in which the remainder of the group participate.

- 4) **Affirmation** phase: the leader and the group members identify and verbally reinforce socially competent behaviours

Modular Skills Training

Used modules from the UCLA Social and Independent Living Skills Program addressed:

Symptom Management

1. Identifying warning signs of relapse
2. Managing warning signs
3. Coping with persistent symptoms
4. Avoiding alcohol and street drugs

Medication Management

1. Obtaining information about anti-psychotic medication
2. Knowing correct self-administration and evaluation
3. Identifying side effects of medication
4. Negotiating medication issues with health providers

90 minutes twice weekly for 6 months followed by a basic social skills training group once per week for the one year follow-up period.

Coping Skills Training

Consisted of four treatment modules, focusing on skills required for coping in the community. Included individual goal setting, relaxation training, time management, cognitive restructuring, social skills training, and group cohesion techniques. Each module comprised a mini-lecture to present a coping skill, group exercises to practice the skill and homework assignments with a partner from the group.

Subjects met weekly for 90 minutes for the 24 weeks of the study.

Problem Solving Group Training

Used a standard problem solving approach in which problems are initiated by the members of the group and addressed in the group.

Problem solving has six elements

1. orientation to the problem,
2. defining the problem in behavioural terms.
3. develop solutions using brainstorming techniques.
4. evaluate the solutions for potential results.
5. choose the solution to address the problem
6. assess the results.

Subjects met weekly for 90 minutes for the 24 weeks of the study.

Psychoeducational Training

Groups of 4-6 subjects were involved in ten 90-minute sessions, the first five sessions held once per week, the second five once every two weeks. Four phases:

1. sessions 1-3: group familiarity with each other and knowledge of their disease and available therapies.
2. session 4 onwards: subjects make regular entries about medication intake.
3. sessions 5-6: identifying early warning signs of impending relapse and determining an optimum medication strategy.
4. sessions 7-10: record all aspects of well being, including medication, to design coping strategies.

Activities Group

Relied little on verbalisation as the medium of therapy

Social Living Group

Relied heavily on verbal interaction as the form of therapy.

Motivation Therapy Group

Relied on some verbalisation but not as much as Social Living Group.

Control

The final group, the control, involved unstructured group leisure time activities.

Recommendations

For subjects suffering from schizophrenia, undergoing treatment as described in this *Best Practice* Information Sheet:

- Individual Cognitive Behavioural Therapy can be effective in improving overall mental state and global functioning (level I).
- Interactive Behavioural Training is not effective at improving social functioning (level II).
- Longer term Group Psychotherapy or Modular Skills Training can be effective at improving overall psychological symptoms (level II).
- Modular Skills Training is effective at improving living skills (level II).
- Group Psychoeducational Training is not effective for improving medication compliance (level II).
- The use of Activities Groups can be effective at improving social interaction (level II).
- Group Psychotherapy is ineffective at producing lasting improvement in subjects presenting with polydipsia (level II).

¹ Hodgkinson B, Evans D, O'Donnell A, Nicholson J, Walsh K. The Effectiveness of Individual Therapy and Group Therapy in the Treatment of Schizophrenia. Adelaide. The Joanna Briggs Institute for Evidence Based Nursing and Midwifery; 1999 Report No. 5

² Jones C, Cormac I, Mota J, Campbell C. Cognitive behaviour therapy for schizophrenia. In: The Cochrane Library; 1998.

• The Joanna Briggs Institute for Evidence Based Nursing and Midwifery, Margaret Graham Building, Royal Adelaide Hospital, North Terrace, South Australia, 5000.

<http://www.joannabriggs.edu.au> ph: (08) 8303 4880, fax: (08) 8303 4881

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- Ms Mellanie Fernandez
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