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Effectiveness of mutual support and psychoeducation group interventions for family caregivers of patients with schizophrenia

Key Messages

1. A client-led mutual support group for Chinese family caregivers of patients with schizophrenia is more effective and less costly to improve psychosocial functioning of families and patients' functioning than family psychoeducation group and standard care, over a 1-year follow-up.
2. Mutual support can effectively improve family care of Chinese patients with schizophrenia in Hong Kong without increasing demands for mental health services.
3. Further study is needed to assess the cost-effectiveness of family mutual support groups in diverse settings and psychiatric patient groups, whilst examining different family and patient outcomes.

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Introduction

Schizophrenia is a disruptive and distressing illness not only for the patient but also for the family taking on his or her care. While over 40% of Hong Kong schizophrenics live with their families (as in western countries), they are nevertheless very much dependant on community care services. Studies have indicated that there is a severe burden upon the whole family in caring for a family member with schizophrenia, and the families' health needs and their burden of care can often be met when adequate psychological and social support is provided by other family members, friends, and health professionals.[1] Commonly used psychosocial interventions for schizophrenia directed at families are reported to enhance knowledge about the illness, reduce relapse rates, and improve drug compliance in patients.[2]

Studies in mainland China and western countries have demonstrated that family psychoeducation that spans at least 6 months is more effective in the prevention of relapse than is individual treatment or medication use alone.[2,3] The effectiveness of family psychoeducation as a means of inducing positive changes in Chinese family caregivers' psychosocial functioning has also been questioned. This may be because Chinese families feel more reluctant, ashamed, and stigmatised to reveal private thoughts and feelings to the therapist. However, evidence for the effectiveness of mutual support groups for maintaining the psychological and social well-being of families of patients with schizophrenia is based primarily on case studies and other descriptive reports.[1,4] Empirical evidences in support of enthusiastic claims of benefits (in terms of improving family functioning and satisfying their immediate and longer-term health needs) has not established. It is therefore worth investigating/comparing the effectiveness of mutual support and psychoeducation groups as well as routine care, as a means of helping families (and patients) to improve their level of funtioning to cope with the demands of patient care.

Objectives

This study aimed to compare the effectiveness of three types of family interventions for Chinese patients with schizophrenia: mutual support groups, psychoeducational groups, and the standard psychiatric out-patient services. Cost-effectiveness and utilisation of health care services pertaining to these three types of intervention were also compared.

Methods

The study was conducted from May 2002 to October 2004, and entailed a randomised controlled trial with a three-group repeated measures design.

Sample

Ninety-six families were recruited from two psychiatric out-patient clinics in the New Territories and randomly assigned to three groups: mutual support (n=32), psychoeducational (n=33) and standard care (n=31). Eligible families met these

Table 1. Summary of pre-test and three post-test outcome scores and analysis of variance (group x time)

Instrument*	Mean (SD)												F(2, 94)
	Mutual support group (n=32)				Psychoeducation group (n=33)				Standard care group (n=31)				
	T0†	T1	T2	T3	T0	T1	T2	T3	T0	T1	T2	T3	
FBIS	29.7 (8.0)	26.2 (6.9)	23.9 (7.9)	21.6 (8.4)	30.5 (8.6)	28.4 (9.6)	27.3 (9.8)	26.8 (10)	30.3 (9.0)	29.6 (8.7)	29.9 (8.9)	30.5 (9.1)	5.23‖
PSES	17.8 (4.8)	18.2 (5.5)	18.9 (6.7)	18.2 (5.9)	18.0 (5.9)	18.4 (6.8)	18.6 (5.2)	19.0 (8)	18.2 (4.6)	18.2 (5.9)	18.0 (6.9)	17.8 (7.1)	1.75
SLOF	128 (17)	140 (18)	158 (24)	171 (26)	126 (17)	136 (20)	140 (19)	147 (21)	121 (16)	123 (19)	123 (25)	117 (21)	4.58¶
FSSI	3.6 (1.5)	3.6 (1.0)	3.8 (1.0)	3.8 (0.9)	3.9 (1.7)	4.0 (1.1)	4.0 (0.9)	4.0 (1.1)	3.6 (1.2)	4.0 (1.3)	3.9 (1.8)	4.0 (1.9)	2.40
SSQ6	2.8 (0.5)	3.0 (0.7)	3.0 (0.7)	3.0 (0.6)	2.9 (0.6)	3.0 (0.7)	3.1 (0.8)	3.0 (0.7)	2.8 (0.7)	2.9 (0.5)	2.8 (0.9)	2.9 (0.8)	1.24
Re-hospitalisation‡	13.3 (4.3)	12.1 (3.8)	11.0 (6.1)	9.6 (5.6)	13.1 (5.7)	12.8 (6.1)	12.4 (5.3)	11.2 (5)	13.2 (4.1)	13.3 (7.0)	13.5 (6.2)	16.3 (5.2)	4.60¶
Family conflicts	10.5 (3.7)	10.0 (3.9)	10.1 (3.3)	9.8 (5.6)	10.1 (4.1)	10.0 (4.5)	10.3 (3.1)	9.8 (3.1)	10.0 (3.9)	10.8 (4.8)	10.4 (6.1)	10.3 (6.8)	2.08
Medication§	12.1 (8.7)	11.8 (6.4)	11.7 (7.1)	11.2 (6.2)	11.8 (9.1)	11.5 (7.8)	11.7 (8.0)	11.3 (8)	12.3 (5.8)	11.2 (5.1)	11.9 (5.6)	12.1 (9.0)	1.96

* FBIS denotes Family Burden Interview Schedule, PSES Perceived Self-efficacy Scale, SLOF Specific Level of Functioning Scale, FSSI Family Support Services Index, and SSQ6 Six-item Social Support Questionnaire
† T0 denotes baseline measurement, T1 1 week after intervention, T2 6 months after intervention, and T3 1 year after intervention
‡ Duration of all admissions in a psychiatric in-patient unit at T0 to T3, in terms of average days of hospital stay over 6 months at three data collection periods
§ Medication scores were based on the converted haloperidol equivalents, as recommended by the American Psychiatric Association
‖ P<0.001
¶ P<0.005

inclusion criteria: (a) they lived with and cared for the patient diagnosed with schizophrenia of not more than 3 years' duration (ie not quite chronic), according to the criteria of the Diagnostic and Statistical Manual of Mental Disorders, 4th edition; (b) the patient had no additional co-morbidity from other mental illness and/or substance abuse at baseline; and (c) the patients and their family members were aged 18 years or above and understood Chinese language.

Instruments

The Family Burden Interview Schedule (FBIS) was designed by Pai and Kapur to assess the burden of care placed on families of schizophrenic patients. It comprises 25 items, which are rated in a three-point Likert scale, with higher scores indicating greater burden of care (total scores from 0 to 50).

The Perceived Self-efficacy Scale (PSES) was a 10-item scale developed by Jerusalem and Schwarzer and translated into Chinese by Zhang and Schwarzer, to measure competence at dealing with challenging and stressful encounters in life situations. Items are rated in a four-point Likert scale. The higher the total scores (10 to 40), the more competent an individual is at coping with demanding life situations.

The Six-item Social Support Questionnaire (SSQ6) was translated into Chinese to measure satisfaction with social support available in their immediate social environment. The items are rated in a six-point Likert scale, with higher average score (0 to 6) indicating more satisfaction with the available social support.

The Family Support Services Index (FSSI) developed by Heller and Factor was to measure the formal support services needed and used by families with a mentally ill relative. It contains 16 items about local health care services and rated for different services the families need and which they were receiving.

The Chinese verisons of the above four family measures demontrated satisfactory content validity and internal consistency among Hong Kong Chinese families.[5]

The Specific Level of Functioning Scale (SLOF) consists of 43 items on a five-point Likert scale rated by family members who observed the patient's daily behaviour. It comprises three functional areas: patient self-maintenance, social functioning, and community living skills.

Process evaluation of the two group interventions consisted of semi-structured interviews with 17 (50%) families from each group and audio recordings of all group sessions. A cost-effectiveness analysis of the three treatment regimens was performed, taking an 'all-payer' perspective as suggested by Drummond et al.[6]

Procedures

The three groups of families of patients with schizophrenia in two psychiatric out-patient clinics underwent a 6-month intervention and were then followed up over a 12-month period. The two group interventions consisted of 12 bi-weekly 2-hour group sessions at the clinics. The standard care group received routine psychiatric care. Pre-test and three post-tests (1 week, 6 months, and 12 months post-intervention) were conducted on family and patient outcomes using the research instruments described.

Results

Treatment effects

In all, 3/32 (9%) in the mutual support group, 3/33 (9%) in the psychoeducation group, and 2/31 (6%) among those receiving routine care, either dropped out or did not attend four or more group sessions. Reasons for dropping out included: insufficient time to attend, worsening of the patient's mental state, and/or being the only carer of the patient. There were no significant differences between the groups with respect to the socio-demographic characteristics of the family carers and the patients, and the antipsychotic medications of their patients.

Multivariate analyses of variance followed by repeated-measures univariate analyses and post-hoc comparisons (Table 1) revealed that the mutual support group enjoyed consistently greater improvements than the other two

Table 2. Cost-effectiveness implications of the three interventions

Item	Cost-effectiveness ratio (HK$)	
	Mutual support vs standard care	Psychoeducation vs standard care
Incremental cost per additional expected case with improved burden	2994	13 308
Incremental cost per additional expected case with improved patient functioning	2764	8872
Incremental cost per additional expected case with reduction of one psychiatric hospitalisation	1996	5323

groups, in terms of: family burden, patients' functioning, and re-hospitalisations over the ensuing year with special situations, and an explicit group ideology. Specific benefits for the mutual support group included: changes in perception of the patient's illness and management, perceived supportive social climate, and adoption of new coping methods for caregiving.

Cost-effectiveness analysis

The cost for each family was the sum of the costs for all direct mental health services used by the families and patients (plus the cost of the group intervention). The average costs per case in the mutual support and psychoeducation groups were also higher than for standard care (ie HK$4406, HK$4797 and HK$3389, respectively). There were statistically significant differences between the average costs per case among the three groups ($F(2, 95)=22.39$, $P<0.0005$) and hence the average cost per case of the mutual support group was significantly higher than the standard care but lower than for the psychoeducation group. However, the number of family caregivers who indicated significantly improved family burden and patient functioning in the mutual support group (n=20 and 19, respectively) was more than in the psychoeducation group (n=12 each) and those receiving standard care (n=8 and 6, respectively). The mutual support group also enjoyed a significantly greater reduction in the number of re-hospitalisations (22-fold) than in the psychoeducation group (14-fold) and those receiving standard care (4-fold). An analysis of the cost-effectiveness of mutual support and pschoeducation, in terms of different benefits additional to those accruing from standard care is summarised in Table 2. Thus, the psychoeducation group incurred more expenses but fewer patients could improve. The mutual support group was more cost-effective than the other two groups in terms of improvements in family burden, patient functioning, and psychiatric hospitalisations.

Discussion

The overall results of this 6-month controlled trial of supportive interventions directed at families caring for patients with schizophrenia are encouraging and positive. The families in the mutual support group reported greater improvements in terms of burden of care (including finance, family routine, leisure, interaction, and mental health), compared to those receiving psychoeducation or merely standard care. Similar results were reported in recent studies in western and other Asian populations. Thus, where family caregivers are able to participate in a support group, improvements ensue with respect to their psychological adjustment (ability to cope with their caregiving role, and to ameliorate the physical and mental state of the patient cared for).[4] The mutual support group also indicated greater improvements in all three aspects of the patient functioning (self-maintenance, social functioning, and community living skills), and more reductions in patient re-hospitalisations than in the other two groups. This finding emphasises the importance of peer support and empowerment among the families resulting from mutual support, all of whom feel themselves 'in the same boat' among fellow sufferers.[4,7]

Like the studies of clinical efficacy stemming from family psychoeducation and behavioural programmes for schizophrenia, our mutual support group demonstrated positive effects on psychosocial functions of both the patients and their families, but without increasing health care service use. These findings are also consistent with studies directed at other types of mental illnesses,[4,5] where family support groups accrued increased savings (monitary and non-monitory) relative to routine care, largely due to shorter hospital stays and more appropriate use of services.

Most of the participants in the mutual support group families were also able to perceive the positive impact of the group activity on them. Imparting information about the illness, patient management, identifying available family support resources, and sharing of successful and unsuccessful caring experiences were all important components of the mutual support. This was achieved through group members imparting information and disclosing their differing perspectives on caring for their schizophrenia sufferer. As a result, family caregivers gained experiential knowledge directly from others who had lived through and resolved their life problems, rather than theoretically from health professionals.[4] For family carers, learning to care for their schizophrenia sufferer should be considered the most important goal of group participation. This need (for adequate information about the illness, medication, and treatment plan, as well as effective ways of coping with caregiving) can be met mainly by the group participants themselves, and sometimes by the group facilitator.

Lastly, the economic evaluation of the three interventions for families of people with schizophrenia indicated that mutual support groups were the most cost-effective

means of attaining improvements with respect to family burdens, patient functioning, and re-hospitalisations. As few economic evaluations of family intervention strategies for patients with mental illness have been performed,[3] our findings provide initial evidence in support of such an approach for patients with schizophrenia under psychiatric care in the local community.

Limitations

First, our sample was small and all the patients were from psychiatric out-patient clinics and had no more than 3 years of illness and no history of substance abuse. Thus, our findings may not be generally applicable and cannot be generalised to patients with longer illness duration or other co-morbidities (drug abuse). Second, the group facilitators or leaders were not expert family or group therapists, though they worked from protocols specifically designed for the group programmes. However, the mutual support group was led by families and did not demand intensive training to become faciltators/peer group leaders. Third, group interventions were provided by a research team in a university department with adquate resources and support. The same interventions may not be readily transferred and embedded in routine psychiatric care settings and untrained clincial staff.

It is important to plan and implement support group interventions in collaboration with the suitable clinicians, in order to ensure that the interventions become embedded into routine psychiatric services and are endorsed by the corresponding staff.

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