

Emotional management therapy in early psychosis

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Background Emotional management therapy (EMT) aims to improve handling of emotional stress in schizophrenia. It consists of two sub-programmes: the first includes relaxation techniques, the second stress coping skills.

Method A pilot study of EMT in 19 patients with early psychosis produced positive results and a *post-hoc* study of 16 patients was commenced.

Results EMT showed positive results, with chronic patients improving more than patients with early psychosis.

Conclusion EMT can be effective in early psychosis, especially for cognitive functioning.

Since the early part of this century, schizophrenia has been defined by dysfunctions of cognition and emotion (Kraepelin, 1919; Bleuler, 1950). There has been substantial investigation into the experience and perception of emotion (Hellewell *et al*, 1994). It appears that people with schizophrenia are not impaired in identifying faces (Walker *et al*, 1984; Feinberg *et al*, 1986) but are slower and less accurate at recognition of emotional stimuli compared with normal and depressive subjects (Russell & Fehr, 1987; Emmenegger, 1992; Gaebel & Wölwer, 1992; Heimberg *et al*, 1992). If background stimuli are complex or stressful, people with schizophrenia worsen in their ability to appraise affect (Bellack, 1989, 1996). They seem to be unable to detect or decode cues which are essential for identifying the intensity of affects, especially negative ones (Bellack *et al*, 1992). Data from several studies suggest that these deficits are not specific to particular emotions but rather are related to dysfunctions in information processing, with attentional impairments playing a central role (Gaebel & Wölwer, 1992; Bellack, 1996).

THERAPY FOR MALADAPTIVE EMOTIONAL PROCESSING

Relatively few systematic therapies have been designed specifically to remediate maladaptive emotional processing in people with schizophrenia. For the most part, empirically validated approaches in wide use at the present time try to address such needs as part and parcel of therapies with a broader focus. These are usually comprehensive intervention packages or specific modalities which may have a beneficial impact on emotional processing but were not designed expressly for this purpose.

Integrated Psychological Therapy for people with schizophrenia (IPT; Brenner *et al*, 1987, 1994; Roder *et al*, 1988, 1992) is one example. IPT focuses primarily on information-processing dysfunctions and their impact on social functioning. Related emotional aspects are also discussed throughout therapy. The individuals work with emotionally loaded topics such as anger, sadness or distressing social interactions. Social interpersonal skills are developed and emotional life may be enriched in the course of treatment that does not explicitly focus on emotional processing. The Community Re-Entry Program and Basic Conversation Skills Module (Lieberman, 1990, 1995) of the University of California at Los Angeles Social and Independent Living Skills Program employ multi-modal therapies to teach social, problem-solving and instrumental skills. Like IPT, emotionally loaded situations are included in the curriculum, but emotional processing is not the primary focus. The same is true of specific therapies. The cognitive psychotherapy of Perris (1989) helps individuals to become aware of and then change irrational assumptions about themselves and others. Hogarty *et al* (1995) teach people specific strategies for coping with affect dysregulation. Various investigators have self-guided or coping-skills approaches. The stress-inoculation training programme for people with schizophrenia developed by Meichenbaum & Cameron (1973, 1974) uses guided self-instruction. Individuals learn step-by-step self-talk strategies that can be used as a cognitive method of coping with anxiety. In a technique devised by Falloon (1987), subjects learn to reduce arousal by saying 'stop' when they begin to panic. Kraemer *et al* (1988, 1991) emphasised helping people to develop problem-solving skills for navigating stressful situations. All of these approaches may alleviate suffering and have a beneficial effect on the individuals' emotional lives. However, they do not explicitly address the disordered processing which may underlie recurring and often catastrophic emotional experiences of individuals with psychoses. What is lacking at the present time is a systematic treatment methodology which combines techniques for remediating maladaptive styles of emotional interaction with preventive strategies which operate as 'protective mechanisms' (Holzman & Bivens, 1988).

EMOTIONAL MANAGEMENT THERAPY

Emotional Management Therapy (EMT) was designed to help people develop and refine specific strategies for coping with the impact of distress, anxiety and dysfunctions in information-processing (Hodel *et al.*, 1995, 1996; Hodel & Brenner, 1996). EMT consists of two sub-programmes, each comprising several steps. Groups of five to seven people receive training from a therapist and co-therapist. Being essentially an evolutionary development from work with the IPT, the formal procedures and therapy materials of EMT have undergone extensive empirical testing and validation (Roder *et al.*, 1988, 1992).

The first sub-programme includes the steps:

- (a) Individuals describe their physiological and cognitive reaction patterns when confronted with stress, fear or excitement.
- (b) The individuals learn techniques for immediate relaxation.
- (c) They apply them *in vivo*.

The second sub-programme includes eight steps:

- (a) Emotions on a visual display are defined and described (e.g. quality, intensity, duration and course of the emotions).
- (b) People describe their own experiences of similar emotions.
- (c) Individuals report on their own experiences and on the consequences of their cognition and behaviour in coping with these emotions ("How was the emotional experience reduced or prolonged, ameliorated or exacerbated?").
- (d) Alternative strategies are added to the reported coping strategies.
- (e) Coping strategies are analysed in terms of their 'constructiveness' and 'practicability'.
- (f) The adequate strategies are listed, with only those which are neither too frightening nor inconsistent with personal interests available as subsequent options.
- (g) A particular strategy is selected and role-played in defined situations.
- (h) For habituation, the strategy is additionally role-played.

EMT was previously evaluated in a multi-centre study. The sample comprised 66 people meeting DSM-IV criteria for chronic schizophrenia (American Psychiatric Association, 1994). Results showed that in comparison with an anti-stress therapy and with a cognitive training programme, only the people receiving EMT improved significantly in terms of ability to differentiate affective stimuli and in reduction of psychopathological symptoms (Hodel *et al.*, 1996; Hodel & Brenner, 1997).

MODIFICATIONS OF EMT IN EARLY PSYCHOSIS

In contrast to people with chronic psychosis, individuals in the early stages of psychotic illness appear to have subtle deficits in emotion recognition (Kienzle & Martinius, 1995). The personality, however, seems to be very unstable. Such a fundamental instability may result in a variety of secondary disorders. Among these is a severe psychosocial vulnerability often leading to social withdrawal and isolation. A vicious circle may arise. Young people with psychosis have a restricted sphere of peer-contacts. Unlike normal adolescents, they have only limited occasions to learn social behaviour. Their social competence does not increase, and psychosocial vulnerability is not countered with adequate development of protective skills. Emotional management in stressful situations is often inadequate or insufficient. Psychopathological symptoms may worsen and the threat of decompensation may increase (Kienzle & Martinius, 1995). Thus, there is a critical need for therapy programmes that nurture, develop and refine effective emotion-recognition and processing skills in people with early-stage psychosis. Such skills can reduce vulnerability to psycho-social stressors and serve as protective factors against relapse or a worsening course.

The modified EMT was designed to address these factors, with specific attention to the following considerations.

General

Group therapy includes complex social situations. Because of their psychosocial vulnerability, many young people with psychosis have difficulty in such contexts. Groups can be anxiety provoking, thus group settings have to be carefully introduced. A subdivision of the process of EMT

seems to be reasonable: individual therapy during the first sub-programme and group therapy restricted to two or three people per group during the second sub-programme.

Limited social competence hinders acquisition of adequate coping strategies. Individuals should be extensively trained in new skills.

New social contacts are often stressful for people with early psychosis. It is essential to create a relational context that reduces fears and maximises individual participation. The therapeutic relationship is seen as a cornerstone of the modified EMT effort. It is no way peripheral or adjunctive. A positive relationship between therapist and subjects must be established before EMT begins.

Specific

An additional treatment step should be affixed to the first EMT sub-programme. Functional deficits in young people with psychosis can reduce the effectiveness of relaxation techniques. Succinct and efficient behaviours must be added. For both *in vivo* practice and actual crisis management, simple 'distractor' techniques are paired with formal relaxation exercise. Examples include looking in a shop window or whistling a tune. Such activities have several virtues. They are innately pleasurable, compete with fear responses and are readily available in any locale.

The second EMT sub-programme was modified in several aspects:

- (a) Compared with people with long-term illness, most people with early-stage psychosis remain stimulated by their job or other social environments. Topics used in therapy should be those suggested by the individual whenever possible, so as to be personally meaningful.
- (b) Oral descriptions of affective-mimic cues are sufficient.
- (c) Young people with psychosis frequently suggest far more realistic coping strategies than people with chronic psychosis. However, these strategies are often rigid, the individuals cannot flexibly change as they do not fully consider the complexity of situational demands. They must be trained in detecting and anticipating relevant aspects of situations. In EMT this work is done through cognitive rehearsal and *in*

vivo exercises; therapy takes place on the ward, as well as in the community.

FIRST EVALUATION OF MODIFIED EMT

In order to investigate the efficacy of the modified EMT for people with early onset psychosis, a pilot study was conducted. We were interested in exploring the effects of EMT on emotional well-being. Because of the assumed links between emotional well-being and disorders in cognitive and social functioning, the latter were assessed as well. Eight months after the study, a descriptive rating about the maintenance of EMT effects on people’s psychopathology and social integration was conducted.

In a subsequent step, a *post hoc* study was done with data from three EMT groups of young patients: an early psychosis in-patient group, a chronic out-patient group and a chronic in-patient group. We proposed to find differences in EMT effects between these subgroups of young people with schizophrenia. Again, emotional well-being and cognitive and social functioning were measured.

METHOD

Pilot study

Sample and treatment

The sample for the study was recruited from the wards where treatment was specifically provided for patients with early psychosis (early psychosis defined by the criteria: a single hospitalisation should last less than eight months; the sum of the weeks of all hospitalisations should be less than 60). On average, patients stay at the wards for about 10–12 weeks (Merlo, 1996). Twenty-four people with early psychosis, who were consecutively admitted entered the study. During recruiting five patients dropped out. Ultimately, 19 patients participated in the comparison study. These patients met the following criteria: DSM-IV diagnoses of psychotic symptoms, post-acute phase of illness, that is remission of dominant acute symptoms, and general ability to communicate (assessed by the German version of the revised Brief Psychiatric Rating Scale (BPRS); Ventura *et al*, 1989), average intelligence (IQ between 91–110 assessed by Wechsler Intelligence Test, WIP; Dahl, 1986). All 19 patients received neuroleptic medication. The average value of prescribed neuroleptic medication in chlorpromazine

equivalents (Kaplan & Saddock, 1991) during the study was about 143 mg per day (mean=142.94 mg, s.d.=57.03). Patients were allocated either to an EMT or to a comparison group by the matching variables age and education. Then patients participated in EMT, nine in the other group. All the participants received 3–4 weeks of standard rehabilitation. However, the EMT group had additional therapy for the same amount of time (with 11 sessions of 40–50 minutes each). The EMT group showed the following characteristics: age approximately 27 years (mean=27.5, s.d.=6.9), average duration of in-patient care approximately 39 weeks (mean=39.0, s.d.=30.7). The comparison group was similar: age approximately 27 years (mean=27.2, s.d.=7.2), average duration of in-patient care approximately 18 weeks (mean=17.8, s.d.=11.3). Table 1 provides some details of the sample.

Evaluations

The following measures were used prior to and after the study: Frankfurt Health Scale (Süllwold & Herrlich, 1990) to assess emotional well-being; the Learning and Memory Test (Bäumler, 1974) to check

attentional functions as well as the ability to learn and memorise complex information; Syllable Memorising (Fahrenberg *et al*, 1977) to measure cognitive functions; Nurses’ Observation Scale for In-patient Evaluation (NOSIE; Honigfeld *et al*, 1976) to assess social functioning.

Eight months after the four-week period of the pilot study ratings about the participants’ relapses and social integration were arranged. At this time 90% of the people had been discharged and received ongoing neuroleptic medication. Ratings were carried out in single-blind fashion by in-patient staff. Relapses within eight months were calculated retrospectively. Rehospitalisations during this period were also computed. The social integration was rated by observable improved social skills eight months after the study. Rating followed Fischer’s (1978) criteria for analysing biographies. Skill improvements were rated by nominal criteria of ‘observable’ or ‘not observable’. Skill areas included social net (social activities in leisure time), independent living (independent shopping), reducing social withdrawal (frequency of sitting alone at home), improving social responsibility (ability to look after a small child) and social adjustment (presence at work).

Table 1 Sample description of emotional management therapy (EMT) group (n=10) and the comparison group (n=9) at the beginning of the study

Group	Gender	Age (years)	Education	Number of in-patient admissions
EMT	M	19	Grade school	1
	M	22	Grade school	3
	F	23	Grade school	2
	F	23	Grade school	1
	F	24	Grade school	2
	M	27	Grade school	3
	F	29	Grade school	2
	M	32	Grade school	3
	M	34	High school	2
Comparison	F	42	Grade school	2
	F	18	Grade school	1
	F	18	Grade school	2
	M	24	Grade school	2
	M	24	Grade school	1
	F	25	Grade school	1
	F	30	Special school	1
	F	34	Grade school	1
	F	35	Grade school	1
F	37	Grade school	2	

Results

The EMT group and the comparison group began with comparable scores (analysed by a Mann–Whitney *U*-test). Figure 1 demonstrates the results of the EMT effect size analysis. This analysis was based on the differences between the before and after measurements (compared by a Wilcoxon test).

Under EMT, people with early psychosis improved with respect to cognitive function but not emotional well-being (significant improvements in the Learning and Memory Test, Syllable Memorising but not the Frankfurt Health Scale). In social functioning no significant changes could be found (see NOSIE). In summary, after four weeks with EMT people with early psychosis showed higher improvements in cognitive dysfunction than after the ward treatment alone.

Eight months after the pilot study, only four people in the EMT group experienced attenuated relapse versus six members of the control group. Rehospitalisations occurred for one person in the EMT group and two of the control group. Results of the social integration rating are described in Figure 2. The scores for improved social integration are generally higher for the EMT group (see Fig. 2).

Post hoc study

Sample and treatment

For the *post hoc* study the EMT group described above was compared with data from an EMT sample of 16 young people with chronic schizophrenia: eight out-patients (recruited from a day-care centre, all individuals lived in supported accommodation) and eight in-patients (recruited from a ward for chronic psychiatric in-patients). All 16 people were diagnosed as having chronic schizophrenia according to DSM–IV. The out-patient group can be characterised by the following variables: age approximately 26 years (mean=26.2, s.d.=2.7), intelligence within the normal range (IQ: mean=108.2, s.d.=21.5), number of in-patient admissions about seven (mean=7.3, s.d.=4.1), average duration of in-patient care approximately two years (mean=26.5 months, s.d.=3.9) and average duration of illness of five years (mean=61 months, s.d.=2.2). All eight people received neuroleptic medication. The average value of prescribed neuroleptic medication in chlorpromazine equivalents (Kaplan &

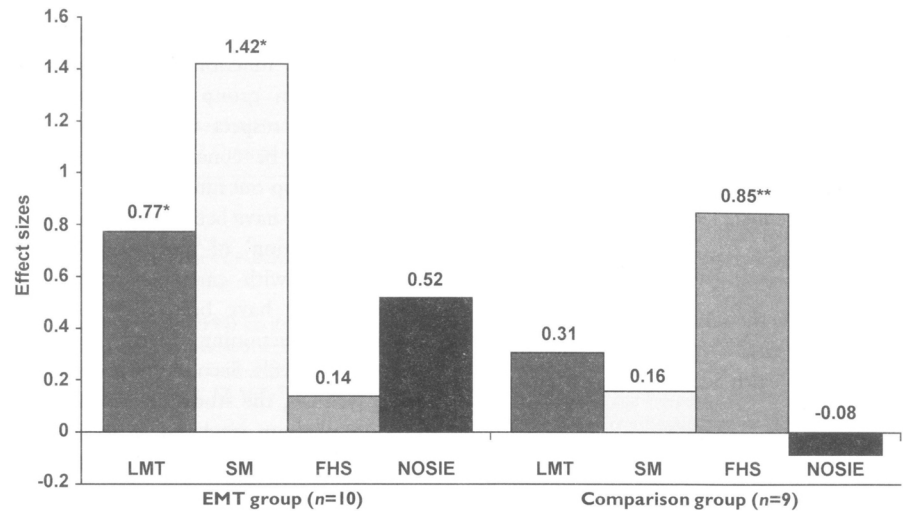


Fig. 1 Effect sizes (differences between the pre- and post-measurements of each group divided by standard deviation of all pre- measurements) of the emotional management therapy (EMT) and the comparison groups, both with early psychotics. LMT, Learning and Memory Test; SM, Syllable Memorising; FHS, Frankfurt Health Scale; NOSIE, Nurses' Observation Scale for Inpatient Evaluation. * $P < 0.05$, ** $P < 0.01$, by Wilcoxon test.

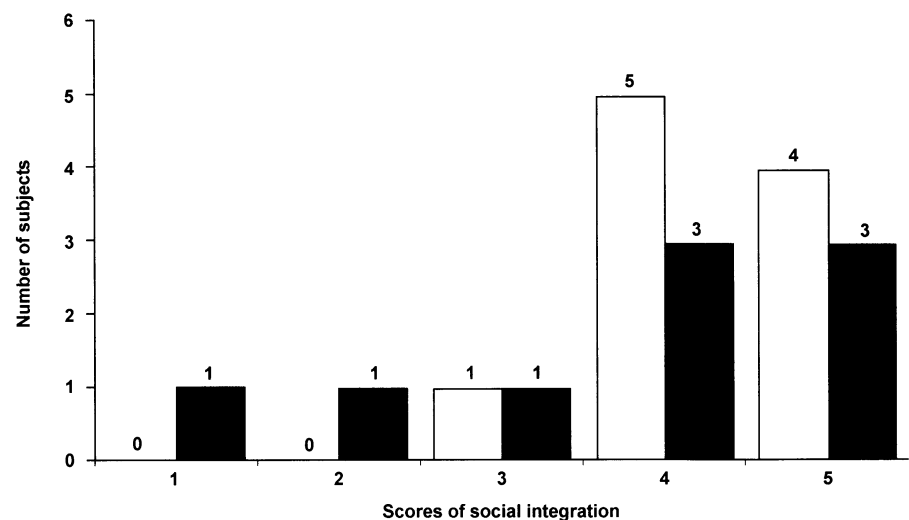


Fig. 2 Comparison of scores of social integration between emotional management therapy (EMT) ($n=10$) and comparison groups ($n=9$) by number of subjects per score at eight-month follow-up (1=lowest, 5=highest). □, EMT group; ■, comparison group.

Sadock, 1991) during the study was about 558.34 mg per day (mean=558.34 mg, s.d.=276.77). The eight in-patients showed the following characteristics: age approximately 27 years (mean=26.8, s.d.=6.8), intelligence within the range of normality (IQ: mean=104.2, s.d.=12.6), number of in-patient admissions about eight (mean=8.3, s.d.=4.7), average duration of in-patient care approximately four years (mean=41.6 months, s.d.=9.4) and average duration of illness of six years (mean=70 months, s.d.=6.2). Again, all eight patients

received neuroleptic medication. The average value of prescribed neuroleptic medication in chlorpromazine equivalents (Kaplan & Sadock, 1991) during the study was about 221 mg per day (mean=221.4 mg, s.d.=169.6).

Psychopathological symptoms did not significantly differ between the three groups, however, delusional beliefs and hallucinations of the people with early psychosis were more accentuated (assessed by the German version of the revised BPRS; Ventura *et al*, 1989).

All 16 people participated in an unmodified EMT lasting eight weeks with a total of 16 sessions of 90 minutes each. Before the *post hoc* study, data of the 16 people were compared with control groups. Results showed significant positive effects for EMT in cognitive and social functioning (Hodel & Brenner, 1996; Hodel *et al*, 1996).

Evaluations

In each group the same measures were used prior to and after EMT as in the pilot study (Frankfurt Health Scale, Syllable Memorising, NOSIE).

Results

The before measurements were compared by a Kruskal–Wallis one-way ANOVA between the groups. Unequal before scores were found only for the NOSIE ($\chi^2=15.7$, $P=0.01$). An additional Wilcoxon test was carried out for an analysis of the EMT effect sizes by comparing the differences between the before and after measurements of the groups. The results are presented in Figure 3.

Only chronic patients showed significant changes under EMT on all measures; in syllable memorising, all three groups improved similarly; in social functioning (NOSIE), the group of chronic out-patients showed highest improvements.

DISCUSSION

The results of the pilot study indicate that EMT has positive effects in early psychosis.

Significant improvements were found in cognitive skills but not in emotional well-being. In social functioning, the EMT and the comparison group demonstrated no changes. With respect to this result, two factors should be considered. First, considering the drop-out rate during recruiting, the sample may have been skewed toward a ‘negative selection’ of more socially disabled people with early psychosis. The drop-outs may have been disproportionately higher functioning in terms of social-interpersonal skills. Second, for people with early psychosis, the study’s relatively brief duration of four weeks may have been insufficient to allow improved social functions to emerge.

The ratings administered eight months after the pilot study indicated fewer relapses and a better social integration for the EMT group. It might be that the extensive *in vivo* trainings of the EMT contributed to such beneficial ‘longer-term’ effects. The value of training in real-life contexts has been demonstrated elsewhere (in skills training with people with learning disabilities). In EMT, people learn how to cope with realistic situations through repeated practice in everyday situations.

The *post hoc* study showed significant differences in emotional well-being in young out-patients with chronic course and young in-patients with chronic course. There were similar levels of improvements in cognitive skills in all three groups. In social functioning only young people with chronic schizophrenia showed significant

improvements. Once again, there is the possibility that a four-week therapy regimen was insufficient to yield gains with the young early-stage in-patients with psychosis. Another explanation could be a diminished correspondence between the groups; the outcome of early psychosis is more heterogeneous in comparison with chronic schizophrenia. The early onset of psychotic symptoms could be a first step to chronic schizophrenia, but a full recovery could also be possible. However, such an assumption demonstrates the necessity of detecting people at high-risk at the first onset of symptoms or even in the prodromal phase. This can be done consistently only by developing valid and reliable instruments (McGorry, 1992). Ideally, such instruments would be easy to use in the field and have high face validity. Perhaps versions could also be developed for use by families, strengthening the early detection process. Thus, people are more likely to be vectored toward much needed interventions in the critical early stages of illness. This can also set the stage for secondary prevention efforts and ongoing assistance to diminish the impact of disabilities and to improve long-term outcome (McGorry, 1993). A joint effort of community-based resources, family involvement and in-patient facilities when needed is desirable.

The conclusions offered here concerning EMT in people with early psychosis should be judged as tentative. Our samples are small and most of the measures show a high variance within the groups’ assessments. Therefore, these results are best viewed as preliminary. Nevertheless, the following summary can be made. For intervention with people with early psychosis, EMT appears promising in terms of improved sense of cognitive functioning and relapse rates, as well as maintaining improved social integration. Further research is necessary to clarify the strengths, weaknesses and general utility of this methodology. EMT may prove to be a potent adjunct to existing therapies and could play a substantial role in secondary prevention.

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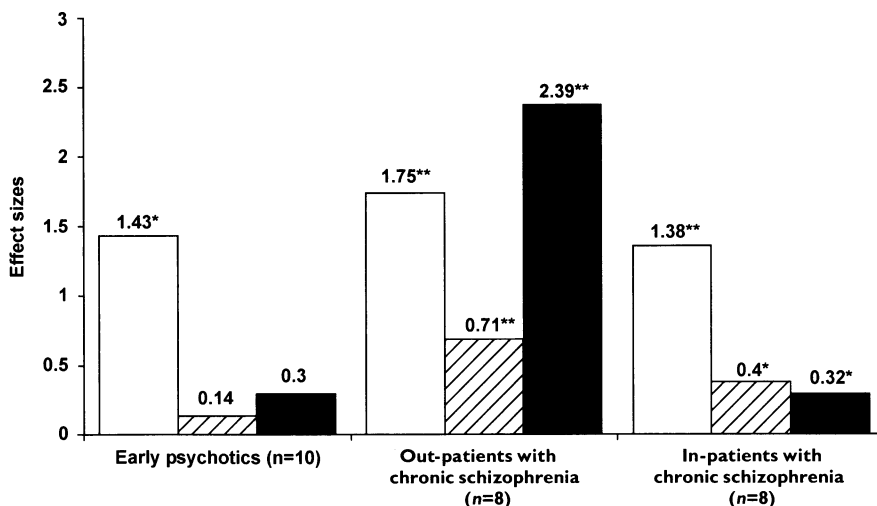


Fig. 3 Effect sizes (differences between the pre- and post-measurements of each group divided by standard deviation of all pre-measurements) of the emotional management therapy (EMT) with early psychotics, out-patients with chronic schizophrenia and in-patients with chronic schizophrenia. □, Syllable Memorising; ▨, Frankfurt Health Scale; ■, Nurses' Observation Scale for Inpatient Evaluation. * $P < 0.05$, ** $P < 0.01$, by Wilcoxon test.

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