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Effectiveness and acceptability of psycho-education group intervention for people hospitalized in psychiatric wards and nurses

Summary

Objective

To assess effectiveness and acceptability of a Psycho-education Group Intervention (PGI) on a sample of patients admitted to a Psychiatric Inpatient Unit (PIU) and on ward nurses.

Methods

Case-control study. PGI was delivered according to the model of Vendittelli and colleagues (2008). Male and female patients aged 18-70 were eligible. Cases attended the PGI, while controls did not. A 5-item ad hoc Likert-scale was used to record ward atmosphere. The Italian version of the Simple Feedback Question Form for people attending Cognitive Behaviour Therapy Group (SFQF-CBTG) was administered to each patient before discharge. The primary outcome was readmission rate after 6 months from discharge, secondary outcomes were ratings of ward atmosphere by nurses and feed-back from people hospitalized. All Statistics were performed with STATA 13.1.

Results

Fifty-two patients were enrolled, 17 cases and 35 controls. No significant differences emerged in the primary outcome, though compulsory readmissions were noticeable only among controls. Ratings of ward atmosphere in relation to group activities did not differ. Seventeen SFQF-CBTG were filled in. Most cases reported at discharge to have found the group "helpful", stating that "they would attend it in the future again", and "group topics were not difficult".

Conclusions

No evidence emerged in favour or against effectiveness of the PGI for patients and ward nurses, though the intervention was rated as acceptable and feasible.

Key words

Rehabilitation • Psycho-education • Inpatients

Introduction

The 1978 Italian reform of mental health not only brought to the closing down of asylums but led to a complete reorganization of the structure and concept of mental health care. Beside community mental health centres and services, out-patient facilities conceived to become the core of a strongly community-based organization, small psychiatric in-patient units (PIUs) were established, in the context of general hospital. These were conceived originally as acute wards, for both voluntary and compulsory hospitalizations, though over time their role and functions developed¹⁻⁴. Nowadays PIUs function as crossroads and liaison centres among many other care providers inside and mostly outside of the general hospital.

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Among the interventions delivered in PIUs, early rehabilitation interventions are also included, commonly structured as group psycho-education sessions.

Evidence exists supporting the feasibility and effectiveness of both consumer and family psycho-education⁵⁻⁸, especially based at community mental health centers⁹⁻¹⁰ (with recent research pointing out that family interventions may be not only cost-effective, but also cost-saving¹¹). On the contrary, evidence is still lacking for psycho-education group interventions (PGI) delivered to people admitted to PIUs, since the few international studies available on this topic were carried out on groups of highly selected patients, with limited generalizability to the very heterogeneous clinical population of Italian PIUs¹². Therefore, aim of the present study was to assess effectiveness and acceptability of a PGI in a sample of PIU patients and nurses.

Methods

Study features and data collection

This is a case-control study, approved by the Modena Ethics Committee and following quality standards for clinical research. The overall period of observation (from recruitment of the first participants during the first admission, to a 6-month follow-up after the discharge of the last patient) was January 1st, 2013 – March 31st, 2014.

The data under analysis were collected from the register of meetings (names of attendants to each) and from the IT system of the local Department of Mental Health (gender, age, psychiatric history, psychiatric diagnosis, voluntary vs. compulsory admission, recurrent admission to the psychiatric ward). Data were registered in a dataset on a Microsoft Excel 2010 sheet, and anonymized with access to the matching keys consented only to the PI of the study (SF).

Description of the clinical intervention

Meetings followed the procedure detailed in the PGI manual, describing appropriate rules and strategies to be applied¹³. The meetings took place every day, from Monday to Friday, in the morning, in the ward meeting room; the duration was one hour for each meeting and participation was voluntary. The PGI sessions were conducted by one resident in psychiatry and one ward nurse, alternatively acting as “conductor” and “co-conductor”, and taking notes on a white board. Five fixed (“regular”) topics were assigned to each meeting, and repeated cyclically. Additional topics could be introduced (“optional”), according to needs. A register of meetings was regularly filled in, recording: date, topic of the day, number and names of people attending, names of conductor and co-conductor. Afternoon rehabilitation

group activities were also available in the ward: these meetings were co-conducted by a final-year student in Psychiatric Rehabilitation and a ward nurse, and also took place every day, from Monday to Friday, in the ward meeting room. Several activities were proposed: breathing and relaxation techniques, music therapy, painting, discussion groups, problem solving, social skill training. Again, participation was on a voluntary basis, and duration was one hour.

Inclusion and exclusion criteria and definition of cases and controls

All people admitted to the Modena PIU in the period of observation, aged between 18 and 70 years, and living in the catchment area of the Modena Department of Mental Health (around 700 thousand inhabitants, placed in the Emilia-Romagna Region, Italy), were eligible and invited to the study. Cases were people who took part to at least five groups in the morning AND at least one rehabilitation activity in the afternoon during hospitalization; controls were people who did not take part to any of them. Exclusion criteria were: being bedridden or having a medically unstable physical condition, not being able to speak/understand Italian, presence of a severe cognitive impairment or psychorganic syndromes, patients admitted from and/or discharged to prison.

Outcome measures

Effectiveness of the PGI was assessed as reduction in the risk of subsequent readmissions, both compulsory and voluntary, and as differences in the mean and median scores of the ward atmosphere. This was assessed by means of an ad hoc scale developed by Vendittelli et al. in collaboration with the Italian National Health Institute, and already used for similar purposes¹³⁻¹⁷. This 5-item scale records professional ratings of the quality of communication with patients, the presence/absence of aggressive, violent or bizarre behaviours, and the quality of the atmosphere in the ward. This third sub-score was defined as outcome measure of effectiveness of the PGI on nurses, who are the professional group in closest contact with PIU patients.

Acceptability of the PGI was assessed by means of the Italian version of the Simple Feedback Question Form for people attending Cognitive Behaviour Therapy Group (SFQF-CBTG)¹⁸. This is a 5-item self-administered scale with ratings on a 0-10 Likert scale: patients were asked to fill it in before discharge.

Statistical analysis

STATA 13.1 (College Station, Texas) was used for all analyses. Descriptive statistics included frequencies and proportions for binary variables, mean, median, range and standard deviation for continuous variables.

Inferential analysis was carried out with parametrical (Student's T-Test) and non-parametrical statistical tests (Fisher's Exact Test; Wilcoxon-Mann-Whitney's test). Also, binary logistic models were implemented. First, all collected variables were tested individually with the response variable (0 = not relapsed, 1 = relapsed). Only covariates reaching a $p < 0.25$ level of statistical significance at the univariate analysis were subsequently included in the multiple model¹⁹. In the multivariate regression analysis, the usual level of significance $p < 0.05$ was set.

Results

Sample features

Table I summarises the main features of the sample. This was composed of 52 subjects suffering from severe mental disorders, all Caucasian, 62% ($n = 32$) of which female. Seventeen people were enrolled as cases (33% of the overall sample), and 35 as controls (67% of the overall sample). Schizophrenia Spectrum and Other Psychotic Disorders were the most common diagnoses both among cases and controls (53% vs 54%). Table I also displays the results of the simple logistic regression, showing a statistically significant difference between cases and controls as to: age (with more cases aged less than 47 years); psychiatric diagnosis (with more bipolar/depression disorders and less

personality disorders among cases); median length of hospitalization (with more cases having hospitalizations longer than 12 days) and previous hospitalizations (with more cases having been hospitalized before).

Effectiveness on people affected by psychiatric disorders

Table II displays the results of the multiple regression analysis. The variable Diagnosis, though initially included (significant at the simple logistic regression), was found to have a p-value of .58; therefore, it was excluded and the model was run again.

Significant differences between cases and controls as to the number of re-admissions and of voluntary vs. compulsory re-admissions were tested with the Fisher's exact test. Results are listed in Table III.

Effectiveness of PGI on ward atmosphere

The mean sub-score measuring ward atmosphere among patients was 2, both when the group took place and when it did not. Among ward nurses, the atmosphere was rated 1 as a mean, again with no difference whether the group activity took place or not. No significant differences were found (results not shown).

Acceptability of PGI

Table IV displays mean values of scores at the SFQF-CBTG among patients of the PGI ($n = 17$), referring to the participants' subjective level of satisfaction after

TABLE I. Sample features, cases vs controls, including results of the simple logistic regressions.

		Cases (n = 17)	Controls (n = 35)	OR	p-value	95% CI
Sex M/F (M/F%)		6/11 (35/65%)	14/21 (40/60%)	1.20	.76	.39-3.70
Age Mean (SD)		39 (16)	46 (13)	-	-	-
Age Dichotomized according to the median (47 years)	< 47	11 (65%)	15 (43%)	0.38	.10	.12-1.19
	≥ 47	6 (35%)	20 (57%)			
<i>Primary Diagnosis (according to the DSM-5)</i>				1.83	.10	.88-3.77
Schizophrenia Spectrum and Other Psychotic Disorders		9 (53%)	19 (54%)			
Bipolar and related disorders + depressive disorders		7 (41%)	7 (20%)			
Personality disorders + substance-related and addictive disorders		1 (6%)	9 (26%)			
Median length of hospitalization (16 days)	< 16	7 (44%)	24 (68%)	0.15	< .01	.04-.55
	≥ 16	10 (56%)	11 (32%)			
Previous hospitalizations (median: 1; range: 0-15)	No	10 (59%)	24 (69%)	4.8	.01	1.41-16.37
	Yes	7 (41%)	11 (31%)			

TABLE II. Results of the multiple logistic analysis.

	OR	p-value	95% CI
Participation to PGI	3.60	.18	.57-23.00
Age (dichotomic, less or more than 47)	0.13	.02	.02-.75
Length of hospitalization (dichotomic, less or more than 12 days)	0.02	< .01	.01-.26
Previous hospitalizations	15.90	< .01	2.37-106.82

TABLE III. Differences in number of readmissions (cases vs controls), and in the voluntary vs compulsory readmissions (cases vs controls).

	Controls (n, %)	Cases (n, %)	Total (n, %)	Fisher's exact test
Not re-admitted	21 (60)	9 (53)	30 (58)	F = 0.77; p = .43
Re-admitted	14 (40)	8 (47)	22 (42)	
Total	35 (100)	17 (100)	52 (100)	
Voluntary readmission	11 (79)	8 (100.0)	12 (80)	F = 0.27; p = 0.24
Compulsory readmission	3 (21)	0 (0.0)	3 (20)	
Total	14 (100.0)	8 (100.0)	22 (100.0)	

TABLE IV. Acceptability of GPI: results at the SFQF-CBTG.

	"I think the group helped me"	"I learned something that may be helpful"	"I think the group was boring"	"I will participate again"	"Topics discussed were difficult"
Mean	8.87 = enough/very much	8.13 = tend to agree	7.31 = tend to disagree	8.07 = tend to agree	5.88 = were not difficult
SD	1.02	1.54	3.59	1.03	3.05

attending the group. Participation was generally rated positively.

Discussion and conclusions

The study here discussed aimed at assessing effectiveness and acceptability of a PGI in a sample of PIU patients and nurses. No significant results emerged from the analysis of primary outcome. Yet, compulsory re-admissions were registered only among people who did not attend PGI (controls), consistently with other studies in this field¹⁷. Nevertheless, this finding needs further in-depth analysis of causative relationships, since it may be possible that people attending the groups were those also showing higher adherence to care.

Both mean and median scores of ward atmosphere were compared, given that in previous studies only mean was calculated, while in the present study the distribution of this variable was not normal. Ratings from both patients and ward staff did not differ whether the

group intervention was held or not. Yet, interestingly, results were similar to those reported after the first year of treatment at the PIU in Campobasso, Italy¹⁵. This may imply that a longer duration of intervention is required to impact positively on the ward atmosphere, which, moreover, may be influenced by other factors related to the ward work-organization.

The pooled results of the 17 SFGF-CBTGs showed a good level of acceptability by participants, who agreed on finding the intervention "helpful" and on "having learned something that may be helpful" from it, and also expressed the intention to take part to the group again, in the future. The topics covered during the groups were found "not difficult", suggesting that people hospitalized in PIU, even in acute conditions, may be able to participate and learn more than it is sometimes expected by ward personnel. Interestingly, if for any reason the group was cancelled (personnel too busy on urgent activities, residents away for training engage-

ments etc.), people were asking about it, and whether it was going to be re-scheduled. Some participants took notes during groups, and expressed interest in continuing such activity in the community mental health service once discharged. Similarly, nurses frequently rated the PGI as “interesting” or “productive”. It was described as useful in fulfilling the need of patients to be informed adequately, but also not “too seriously”, in the more relaxed and informal situation allowed by the group. For this, some nurses described the experience of taking part to groups as “relaxing”. Altogether, these data suggest a good level of acceptability of the PGI by both people hospitalized and personnel, consistently with previous studies¹⁷.

Relapses were not influenced by participation to the GPI; differently, they were more common among younger people and among those who had been already hospitalized in the past, consistently with available literature²⁰. Interestingly, the longer the hospitalization, the lesser the probability of relapse. This as well had been already reported, though its meaning is less clear, considering the many variables co-impacting in the discharge process²⁰.

Even if no significant results stemmed out, a good level of feasibility and acceptability of the PGI was noticeable, from both patients and ward nurses. Such findings prompt to further research on the impact of psychoeducation, and psychotherapy in general, on subjects (both users and personnel) and institutions; psychotherapy interventions may concur dramatically to improve therapeutic standard within psychiatric services, with positive impact also on the organizational level²¹.

This study has several limitations. First, due to its retrospective nature and small sample size, no causal relation can be inferred. Yet, despite the negative results as to the primary outcome, the positive rating in terms of acceptability of the PGI was reliable and found to be similar to the one reported in other Italian PIUs¹⁷. Second, many missing values were found in the scale measuring ward atmosphere. Nevertheless, the available data were consistent with previously published studies, adopting longer follow up periods¹⁶. Finally, it was not possible to include measures of the frequency of patients’ aggressiveness towards self or others or in the use of physical restraints. Yet, the rating of the ward atmosphere may be reliably considered as a proxy for such events, since the scale includes specific items on aggressive episodes.

The study here described could not provide evidence in favour or against effectiveness of the PGI on users and nurses of an in-patient psychiatry acute ward. Nevertheless, good overall acceptability and feasibility were confirmed. Further prospective multicentre research is needed, reaching larger samples of subjects and testing the effectiveness of the PGI activity possibly for longer periods, after discharge, in community care.

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Conflict of interest

None

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