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Sustained Symptom Reduction by Aftercare following Discharge from Psychiatric Inpatient Treatment: An Exploratory Study

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Authors' contributions

This work was carried out in collaboration between all authors. Authors RG and IS designed the study and contributed part of the text on the details of the aftercare program. Author WR searched the literature, wrote the manuscript and performed the data analysis. All authors read and approved the final manuscript.

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Short Research Article

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ABSTRACT

Aims: To find out whether group based aftercare with duration of ten to 20 weeks would help clients discharged from psychiatric in-patient treatment to maintain or improve clinical symptomatology over a follow-up period of at least one year.
Study Design: Exploratory study with an intervention vs. control group design.
Place and Duration of Study: The Waiern Clinic, Department of Psychosomatics, Feldkirchen (Austria), between January 2012 and June 2015.
Methodology: We included 177 patients (131 of them women; age range 22-76 years, M = 50.8, s = 10.8 years), mostly diagnosed with major depression or anxiety disorders. N = 91 patients (N = 71 of them women) were assigned to the aftercare group and N = 86 patients (N = 60 of them female) were assigned to the control group. Clinical symptomatology was assessed by the Brief Symptom Inventory (BSI) – 18, measuring depression, anxiety, and somatoform symptoms on six

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item-scales respectively. Follow-up assessment was performed by phone interviews. Only patients who had provided data at the beginning and the end of inpatient treatment and at follow-up were included in the study.
Results: For the aftercare group, mean symptom load at the end of aftercare was compared with mean symptom load at least one year later. For the control group, mean symptom load at the point of discharge from in-patient treatment was compared with mean symptom load at least one year later. Whereas the aftercare group improved significantly *(P* = .004), there was no significant change in the control group *(P* = .95) (Cohen's *d* = - 0.35).
Conclusion: Short-term aftercare following discharge from in-patient treatment may assist patients in improving clinical symptomatology over a period of at least one year.

Keywords: Aftercare; psychiatric in-patients; discharge; anxiety; depression; follow-up; evaluation.

1. INTRODUCTION

In Schizophrenia and Other Psychotic Disorders as well as in Bipolar and Related Disorders, the course of the disease, according to DSM-5 Diagnostic Criteria includes the possibility of multiple episodes, sometimes alternating with times of full remission [1]. Although their longitudinal course is less clear, epidemiological research indicates that also Anxiety Disorders [2,3], Obsessive-Compulsive disorders [4], Post-Traumatic Stress Disorders [5] as well as Somatic Symptom Disorders [6] tend to reoccur after remission with their symptoms waxing and waning over lifetime.

These considerations are illustrated by readmission rates of psychiatric patients after their discharge from in-patient treatment. Readmission rates for patients with bipolar disorder are nearly 20% within 90 days after discharge [7]. Similarly, 25% of patients with schizophrenia were readmitted within four months after leaving the hospital [8]. For a general psychiatric population, readmission rates are lower, but still substantial: a meta-analysis [9] summarized recent studies, according to which 13% of psychiatric patients were readmitted within 90 days after discharge from in-patient treatment.

Such fluctuation of symptomatology can be explained by the vulnerability-stress model, which originally was developed as an explanatory concept for schizophrenia [10], but has been extended to the explanation of mental disorders in general [11]. According to this model, clinical symptoms are triggered by major or minor life events or other stress-related occurrences in an individual's life if the person is predisposed toward a certain disorder either genetically or by early learning experiences. Current environmental conditions not only can act as stressors, however, as suggested for example by the concept of "expressed emotion" [12,13], but may also have a protective function, for example by providing social support (for summaries see [14,15]).

According to [9], "transitional interventions", i.e., "interventions whose goals were to assist in the successful transition from in-patient to out-patient care" (p. 187) are effective in reducing the risk of relapse and readmission in adult psychiatric patients. Obviously, such interventions differ according to the heterogeneous needs of various populations and can comprise aftercare in a personal one-on-one or a group setting, telephone calls, peer-support, case management, home visits as well as family education.

The present study tested the assumption that a group based aftercare program for former in-patients with affective, anxiety and somatoform disorders would be able to decrease their clinical symptomatology as compared to a control group which did not participate in the aftercare program. Apart from the aftercare program, most participants of both, the aftercare and the control group, received medication from psychiatric practitioners in free practice and, in rare cases underwent psychotherapy or psychological treatment on a private basis.

2. METHODOLOGY

2.1 Participants

A total of 177 patients (N = 131 of them female) were included in the study. Ninety-one of them (N = 71 of them female) participated in the aftercare program, whereas N = 86 of them (N = 60 of them female) did not participate and constituted the control group. Prior to their participation in the study, all of them were

inpatients of the "psychosomatic" department of the Waiern clinic at Feldkirchen, in a rural area of Southern Austria.

Following ethical considerations, the decision whether to participate in the aftercare program was left to the patients (taking also into account whether weekly visits would be feasible from geographical considerations). Thus, randomization between the aftercare and the control group was not possible.

2.2 The Aftercare Program

The weekly group sessions lasted for 90 minutes each, over ten weeks and were facilitated by a female clinical psychologist at the outpatient department of the clinic. The group sessions were supplemented by an assertiveness training program and by a stress management training on a group basis whenever this was found to be necessary in individual cases. As many participants had returned to their jobs already, only part of them were able to accept these additional offers with respect to limited time resources. In addition, on the basis of individual decisions, the patients had the opportunity to participate in another ten sessions of the aftercare program after completing the first block of ten weeks.

The group program was based on the paradigm of learning theory and behavior therapy. The sessions aimed at maintaining or expanding symptom improvement which had been attained during inpatient treatment. In the first place, this goal was achieved by psycho-education on dealing with stress and by teaching participants to integrate relaxation techniques into their everyday lives. Another focus was on training self assertiveness and on practicing self-management in a vocational context. Therapeutic assignments followed a "list of positive activities" and participants were instructed to fill in protocols about the results of their therapeutic homework.

By Socratic Dialogue, participants were encouraged to suggest what they could do to transfer their newly learned skills to everyday situations, to refuse unjustified requests, to expose themselves to situations with fear and anxiety, to plan positive activities, or to attribute their somatoform symptoms in a more appropriate way. In practice, also following the self-management approach, it was found helpful to take up the participants' suggestions towards assisting to solve other participants' problems. Subsequent to the group sessions, whenever necessary, the participants were offered short one-on-one conversations with the clinical psychologist who facilitated the group sessions.

Apart from learning theory, the group program was oriented by Yalom's [16] therapeutic elements of group therapy, namely *Instillation of hope* (by seeing others who were helped), *universality* (the patient is not the only one suffering from a certain problem), *information, altruism, corrective recapitulation of the primary family group* (interactions with group members resembling former interactions with family members), *basic social skills, imitative behavior and interpersonal learning* (by interacting with other group members), *group cohesiveness* (resembling the therapeutic relationship which facilitates individual therapy), *catharsis* (the stimulation of emotions) and *existential factors* (the group experience enables members to face basic realities of human existence like the necessity to feel responsible, unavoidability of suffering and dying).

The participants had been discharged from aftercare (in the case of the aftercare group) or from inpatient treatment (in the case of the control group) between January 2012 and June 2014 and were followed up in June 2015. Thus, at least one year had elapsed between the patients' last contact to the clinic and the follow-up interviews.

2.3 Measure

Readmission rates did not appear feasible as indicators of the further course of the disorders after the patients' discharge, as patients leaving this clinic frequently are encouraged to seek professional help as soon as possible in the case of imminent relapse. Thus, readmitted patients in fact may have a more favorable course of their disease as compared to patients who do not contact the hospital anew in the case of deterioration of their symptomatology. There is empirical evidence suggesting that patients with moderate levels of symptoms - who are the typical clientele of this clinic - benefit from short-term rehospitalization with regard to their risk of repeated suicidal attempts [17], and suicide risk is high immediately after discharge from inpatient treatment. Also high-risk underprivileged patients with little or no other health service offers have been shown to benefit from hospital readmissions [18].

Therefore, clinical symptoms of anxiety, depression, and somatoform disorders were measured by the German version of the Brief Symptom Inventory – 18 (BSI-18 [19]; German: [20]) before and after inpatient treatment and at the end of a follow-up period. The BSI-18 comprises three six-item subscales for anxiety, depression, and somatoform symptoms, respectively and the Global Severity Index (GSI), i.e., the arithmetic mean of all 18 items as an indicator of overall symptom load. The GSI was used for data analysis, as a symptom reduction on one of the sub-scales might have gone along with symptom increase on another scale.

The psychometric properties, especially the factorial, convergent and discriminant validity of the German version of the BSI-18 have been confirmed by its authors. Cronbach's α for the German version was satisfactory (ranging from α = .79 for the Somatoform subscale to α = .91 for the Global Severity Index (GSI) [20].

Similarly, for example the Spanish [21] and the original U.S. form of the BSI-18 achieved satisfactory results with respect to their factorial [22] and convergent validity [22,23]. The validation studies point to satisfactory agreement of the BSI-18 subscales and the respective clinical diagnoses on the basis of DSM. Therefore, for the sake of parsimony, no other measures were included in the evaluation study.

The BSI-18 was administered in a paper-pencil format before and after in-patient treatment and by phone interviews at the time of follow-up, because this seemed more convenient than having the patients return a paper version of the questionnaire by mail. As this procedure was used both for the aftercare and the control group, no distortion of the results was expected.

3. RESULTS AND DISCUSSION

At the time of follow-up, age range was between 22 and 76 years *(M* = 50.8, *s* = 10.8 years). Following the International Classification of Diseases [24], of the total sample, N = 132 were diagnosed with Major depressive disorder (F32, F33) or Bipolar disorder, current episode depressed (F31), and two were diagnosed with Persistent mood (affective) disorder (F34). Twenty-nine patients were diagnosed with Phobic anxiety or Other anxiety disorders (F40, F41), N = 12 with Reaction to severe stress, and adjustment disorders (F43), N = 1 with Somatoform disorders (F45). One patient was diagnosed with a Sleeping disorder (G47).

In Fig. 1 the descriptive statistics for the total BSI scores before (t_1) and after (t_2) inpatient treatment and at the end of the follow-up period (t_3) are shown. As the requirements for ANOVA were not fulfilled, data analysis was performed by non-parametric statistics. The aftercare group did not differ significantly from the control group at t_1, neither with respect to their overall clinical symptomatology as measured with the GSI of the BSI questionnaire (Mann-Whitney Test: U = -.104, P = .92), nor with regard to the scores on the anxiety (Mann-Whitney Test: U = -.110, P = .91), depression (Mann-Whitney Test: U = -.408, P = .68), or somatoform (Mann-Whitney Test: U = -.243, P = .81) subscales of the BSI. Similarly, the aftercare group and the control group did not differ significantly from each other with respect to the participants' age (Mann-Whitney Test: U = -.283, P = .78), gender (Pearson χ^2 = 1.566, df = 1, P = .23) or ICD-10 diagnosis (Pearson χ^2 = 20.221, df = 21, P = .51).

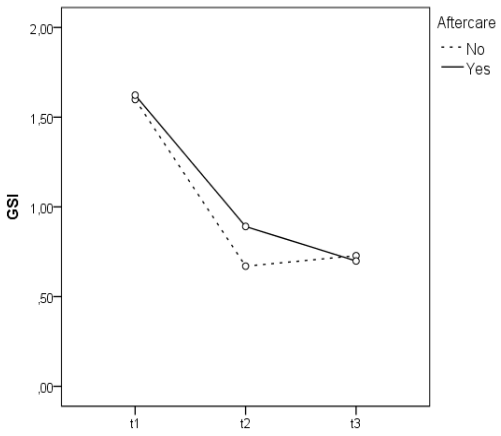

Fig. 1. Symptom change in the course of time (t_1 = start, t_2 = end of inpatient treatment, t_3 = follow-up

At t_2, overall symptom load (GSI) was significantly higher in the aftercare group as compared to the control group (Mann-Whitney Test: U = - 2.003; P = .045). From t_2 to t_3, symptom load in the aftercare group was reduced highly significantly (Wilcoxon Test: U = -2.852; P = .004), whereas in the same period there was no significant change in the control group (Wilcoxon test: U = -.066; P = .95). The

effect size for the aftercare group as compared to the control group was *d* = - 0.35.

The present results have shown that participating in a group-based aftercare treatment significantly improved clinical symptomatology in patients with anxiety and affective disorders. These improvements were observed in comparison to a control group on a long term basis after discharge from in-patient treatment.

Following the diathesis-stress model of mental disorders, the course of mental disorders depends on everyday stressors on the one hand and on resources on the other. After discharge from the hospital, patients face a multiplicity of daily hassles as well as major life events which can have a detrimental effect on the further course of their disorders. The present results suggest that a limited period of aftercare can enable the patients to cope with everyday stress successfully.

The beneficial effect of aftercare can partly be explained by social support provided by the group. It should be noted, however, that social support, apart from positive effects, eventually comprises detrimental elements: "negative social support" may include disappointed expectations of being supported as well as "over-involvement", "criticism", or devaluation on the part of the alleged supporter [14], (p. 42). It can thus be easily understood that a mere self-help approach would not suffice for patients with affective or anxiety disorders to assist them in coping with everyday life stress (cf., for example [25]).

In contrast to self-help approaches, in the present study social support provided by the fellow patients was supplemented and moderated by the professional assistance of the clinical psychologist who facilitated the group sessions. In addition, the participants were offered professional guidance with regard to acquiring problem solving skills and training self-assertiveness. As the positive effects still were present after a period of at least one year following the termination of aftercare, it can be assumed that the patients had learned self-management strategies which enabled them to cope with life stress successfully also on a long-term basis without further professional assistance.

Limitations of the present study pertain to the fact that no randomization between the aftercare and the control group had been as possible. Therefore, a strict causal interpretation of the results has to be left to possible randomized trials in the future. It could also be argued that the sample was not homogeneous with respect to the participants' clinical pathology. It should be noted, however, that from the standpoint of clinical practice, it would neither be realistic nor desirable to provide aftercare to groups of patients with identical clinical diagnoses. The interventions provided in the aftercare group did not address the specific pathology of the respective disorder but rather aimed at helping the patients manage the practical aspects of their everyday lives. The BSI as an outcome measure could be criticized on the grounds that it only measures a restricted range of clinical symptomatology. Taking the participants' clinical diagnoses into account, however, which almost exclusively were mood, anxiety, or somatoform disorders, the BSI can be expected to assess this symptomatology in a satisfactory, valid, and economic way.

4. CONCLUSION

Aftercare following inpatient treatment seems to be highly advisable. The present exploratory findings suggest that patients with depression, anxiety and other psychological disorders will be able to reduce their clinical symptomatology as a result of professionally provided aftercare and that these improvements will still be present one year following termination of the aftercare. These exploratory findings could instigate future research on the basis of randomized trials.

CONSENT

All participants agreed orally to take part in the study. According to Austrian legislation, no written informed consent or ethical approval by an ethics committee was necessary for offering aftercare on an outpatient basis to the former inpatients of the Waiern clinic and for evaluating the outcome by a short questionnaire. All Austrian rules, regulations, and ethical standards were strictly adhered to.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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