

Intensive Transitional Post-discharge Service for Patients with Depression

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Abstract

Introduction: Psychiatric treatment for depression initiated during admission is often planned to be continued after discharge, yet outpatient follow-up service frequently fails to meet even modest standards for service regarding timeliness and frequency of contact. Here we present data from a newly designed transitional, day-to-day, CBT-based psychiatric aftercare service.

Methods: The program consisted of at least one psychiatric consultation, week-day telephone outreach and CBT-based individual therapy twice a week (in total five times), followed by group therapy twice a week for four weeks. In individual therapy, focus was on collaborative goal setting and next-of-kin participation. The group format was open, trans-diagnostic and highly structured. Self-ratings (WHO-5 Well-Being Scale (WHO-5); Becks Depression Inventory - II (BDI)) were obtained at the first day, at the end of individual therapy (after 3 weeks) and at end of group therapy (after 6-10 weeks). User evaluations were obtained at the latter two time points. Descriptive data is presented and ratings are analysed in an intention-to-treat design.

Results: In 23 months 189 patients with unipolar depression were referred to the aftercare program. 165 patients completed the initial questionnaires, which showed a high level of depression symptoms (BDI 30.9 (STD 11.4 N=166) the first day of the program (right after discharge). 114 patients continued in group therapy. 11 (5.8 %) patients were re-admitted, 74 (39.2%) patients continued treatment in regional mental health clinics and 89 (47.1%) patients were discharged to primary sector service. BDI scores improved at each time point. Overall user satisfaction, measured with Client Satisfaction Questionnaire (CSQ), was high.

Conclusion: Symptom reduction was evident during the aftercare program, and patients were satisfied with the service content. However, the results have to be interpreted with caution as we lack data from a comparable patient group receiving no service or a different type of post-discharge aftercare.

Keywords: Depression; Affective disorder; Cognitive behaviour therapy; User satisfaction; Outpatient; Aftercare; Discharge

Introduction

Nowadays patients with depression, in acute need of psychiatric treatment, are often only briefly admitted for observation and initial treatment, due to reduction in the number of psychiatric beds. However, the outpatient mental health units and primary sector psychiatrists, where treatment usually is continued, frequently operate with a waiting time. The clinical consequence of this state of affairs is very often discharge to low intensity follow-up by a general practitioner or discharging physician during the waiting period, until specialized psychiatric and psychotherapeutic outpatient treatment is available.

A recent study of a one-year follow-up intervention, for patients with depression, showed that depressed patients frequently are discharged while still symptomatic [1,2]. Likewise, a study of well-being in mental health wards showed a rather low level of well-being at discharge in patients with depression [3]. In addition, it is well-known, that the risk of suicide is highest during the first three weeks post-discharge and that half the post-discharge suicides (i.e. within one-month of discharge) occur before the first psychiatric follow-up

consultation [4]. Suicide risk is 5 times raised in the first 12 weeks after discharge compared to other periods, among depressed patients [5]. Still most of the research on outpatient treatment for depression focuses on content and format of psychotherapy, not on timing relative to referral or discharge. Generally, adherence to treatment (regarding both pharmacological and/or psychotherapeutic treatment) is low following discharge from psychiatric hospitalisation, and less than 60% turns up to the first aftercare appointment [5]. While a modest 8 session minimum has been claimed for adequacy of psychotherapy for depression and anxiety disorders [6], less than 13% of depressed patients received 8 sessions within 3 months after discharge in a large study from the Veterans Health Administration (N=45,587) [5].

Equally alarming is the fact that we seem to lack evidence for the optimal organisation of post-discharge service, for moderate to severely ill patients with depression [7]. Research on the design of outpatient mental health service largely only covers patients with severe mental disorders, i.e. psychoses, or the prevention of suicide after previous suicide attempts. Evidence supported services for patients with depression are psychological treatments, including cognitive behaviour therapy (CBT), regular telephone contact and active out-reach (to support treatment adherence) [8]. Based on these elements, and according to the discussion above, we created a

transitional outpatient aftercare program. The program was designed to fill the gap between time of discharge and time of entrance into specialized psychotherapeutic or psychiatric outpatient units, i.e. to make early discharge acceptable and secure progress and treatment adherence, whilst waiting. Furthermore, it was considered possible that some of the patients would improve sufficiently to return to primary care physician or psychologist without referral to any further treatment in the mental health service. The aim of the new aftercare program was: 1. to have the patient under close observation for deterioration and risk of suicide. 2. To stabilize the patient and alleviate symptoms. 3. To evaluate the need of and motivation for further treatment in the mental health services.

Our major questions were whether the short periods of individual and group therapy would reduce the level of symptoms, and whether the service was perceived relevant to the patients. Presently we report data from patients with unipolar depression who entered the program from March 2011 to February 2013. 62 of these patients were part of the mixed diagnostic samples, reported in our initial reports of the aftercare service [9,10].

Material and Methods

Participants

The study included 189 adult patients with unipolar depression, referred to post-discharge psychiatric aftercare service from March 2011 to January 2013. Patients were eligible for the aftercare program, if they had been hospitalized for at least one night in the psychiatric emergency ward or any of the stationary psychiatric wards. Prior to referral, the patients were diagnostically assessed by a senior resident in psychiatry (or higher charge), who also prescribed pharmacological treatment, if considered necessary. At this time, the patients were also physically examined and blood tests were either collected or scheduled. Finally, the patient's motivation for talking therapy was briefly clinically evaluated. Patients with severe physical illness, an identified on-going addiction, psychotic disorders, dementia or other disorders with general cognitive disability and/or forensic patients were not eligible for the program.

The after-care program

The aftercare service encompassed five individual sessions (45 minutes) within the first three weeks after discharge and eight group sessions (two hours including ten minutes break) within another four weeks, i.e. two sessions a week. Day-time telephone service was offered Monday-Friday. The patients were offered consultations with a psychiatrist or psychiatric senior resident and a social worker, and had access to gym facilities and physical training at the psychiatric centre. Maximum wait allowed for first consultation was next working-day.

The program psychiatrist, who also was responsible for the pharmacological treatment, diagnostic evaluation, social psychiatric letters or forms and end point referral, led the first consultation and scheduled a pharmacological plan and further psychiatric consultations (if necessary). In addition to the patient and a CBT therapist (experienced psychiatric nurse or psychologist having or attending a one-year CBT training program and receiving regular CBT supervision) one next-of-kin was invited to attend the first consultation. The next-of-kin was actively engaged to help with adherence to medication, CBT tasks and other planned activities, to secure progress between sessions. This first consultation was highly

structured, addressing the patient's experience and understanding of events up to and after admission, collaboratively deciding three goals for the immediate future and initiating the planning of possible further treatment at the end of the aftercare program. To aid the patient and next-of-kin, a pre-set form was filled out during the consultation, recapitulating all elements of treatment and support.

The individual psychotherapy was structured flexible as is recommended in [11], but in accordance with the principles of dialectic behaviour therapy [9,12]. If the patient had life threatening behaviour, the therapeutic work would be focused on that. If, or when, this was not an issue anymore, the therapist proceeded to stability issues i.e. diminishing risk of relapse to crisis level and building resources for further therapeutic work through the implementation of healthier sleep, eating and activity patterns and reduction of invalidating social contacts and risk behaviour (drinking, gambling etc). If, or when, this was not a major issue, symptom reduction was the major focus using conventional CBT techniques pertaining to the problem at hand. The structured work with suicidal ideation was carried out combined with Collaborative Assessment and Management of Suicidality (CAMS). CAMS consist of the Suicide Status Form and standard procedures and work themes, but it can be used with any psychotherapeutic frame of reference; we combined it with CBT techniques [13,14]. The work on stability was carried out mainly by the use of daily activity forms, assisted by planned telephone contacts, referral to physical training and involvement of careers. A set of CBT forms was prepared beforehand, but the full range of conventional CBT techniques was available for the therapist [9].

The same therapists conducted both the individual therapy and group therapy, and preferentially the patients participated in the group with his or her previous individual therapist. The group format was highly structured, but flexible according to the type of problems the patients brought forth. During the course of the service a comprehensive manual was developed [15].

Patients entered the group every Monday and left on Thursdays. During each session every patient was in focus for app. 10 minutes, and the question of overall well-being since last session (Well-being Meter) governed the use of CBT techniques in addressing further progress or limiting relapse. Group participants were invited to join in with reflections and feedback. Social activities among group participants were promoted, following simple rules, while still in treatment. If a patient could not accept group therapy, routine procedure was service termination and further referral as needed (see below) after the individual therapy. If the patient was considered too severely ill to dismiss from the service, continued individual treatment once a week for 4 weeks, was offered, pending a team conference decision.

Symptom rating scales

Becks Depression Inventory-II (BDI) was developed for quantification of depressive symptoms in patients diagnosed with major depression according to DSM-IV [16]. It has been widely used internationally and it correlates well with clinical evaluations and observer ratings of depression like the Hamilton Depression Rating Scale [17]. The inventory addresses the patient's mood and behaviour the previous fortnight. Score range is 0-63, where 0-13 indicates minimal depression; 14-19 mild depression, 20-28 moderate depression and 29-63 severe depression [16].

WHO Well-being Index (WHO-5) is a measure of positive well-being originally derived from the Psychological Well-Being Schedule [18]. It is considered a very sensitive outcome measure as it does not incorporate negative quality of life, i.e. distress, and it has no ceiling effect [18]. It is highly associated with depressive symptomatology measured with BDI-II among Danish patients previously admitted for depression [19], and it has been used to map well-being at admission and discharge in a Danish mental health care setting [3]. Presently, we applied a 0-25 score version, where 25 is maximum well-being. In the literature scores are frequently reported transformed (*4) to a 0-100 scale.

Collaborative Assessment and Management of Suicidality (CAMS) consists of integrated ratings of suicidality and procedures for collaborative treatment planning as well as tracking of progress [20]. The initial self-rating consists of the Suicide Status Form (SSF) which after initial screening for frequency of suicidal ideation (0-4, "never" to "all the time") includes five items related to suicidal behaviour (psychological pain, stress, agitation, hopelessness and self-hate) and a global overall risk of suicide rated as 1-5 ("no, nothing or little" to "high, much or extreme" [21]. Further questions are forwarded by the therapist as part of risk assessment and treatment planning [13,20]. As long as the initial screening for suicidal ideation is rated 2 or more the SSF is used at the next session and suicidal thoughts are the working theme of the session. When it is <2 for two sessions in a row, the use of CAMS is discontinued.

Outcome Rating Scale (ORS) is a brief self-report measure developed to inform psychotherapists of their patients' progress from session to session (past week) [22]. The three specified dimensions were inspired by the Outcome Questionnaire 45, although psychometric analyses have failed to support more than one factor loading [22]. As it is ORS consists of four visual analogue scales (VAS) (0-10): How well have you been doing "individually", "interpersonally", "socially" and "overall"? The patient tags the VAS line and the scores are added, summing up to a range of 0-40, where 40 is maximum high level functioning. ORS is mostly used in conjunction with the SRS in outcome-informed patient-centred therapy, where progress is tracked and a lack of progress of 5 points within the first 3 sessions (i.e. 3 weeks) guides the therapist to discuss and change approach, adapting to the needs of the specific patient [23,24]. Presently, ORS (and SRS, presented below) was only used as a descriptive measure of outcome during group therapy. As the ORS ratings were made at the beginning of the group session, the ratings were probably reflected in the patient's global rating on the "Well-being Meter". They were not integrated with the therapeutic work in other ways. An ORS rating of 25 has been described as cut-off for treatment seeking [23].

User Evaluations

Client Satisfaction Questionnaires (CSQ) is an 8-item scale loading to one factor of satisfaction with mental health care service. It can be presented at any time-point during a treatment program. Responses are 1-4, where 4 is "very or definitely" satisfied. It does not include a neutral rating [25,26]. Scoring was originally reported as a sum score 8-32, but mean scores have also been reported and items 3, 4, 7, and 8 can be used as brief one-item assessments, highly correlated to the total score [25,26]. A Danish translation has been widely used in the mental health service, but to our knowledge, it has not been validated.

Session Rating Scale (SRS) is a brief feedback scale based on four visual analogue scales (0-10) that is used at the end of a therapeutic session to monitor the patient's experience of: 1. the therapeutic relationship in the session, 2. the topics, 3. the approach and 4. an overall rating of the session [27]. The ratings are summed to a score between 0-40. Like the ORS, SRS ratings are intended to be integrated in the therapeutic process and low scores should signify a change in therapist's approach or, in severe cases, a change of therapist [23]. The SRS was developed for individual therapy and for that purpose a score below 36 is considered an indication of low therapeutic alliance and as such a risk of drop-out [24]. Presently, it was used only as a descriptive measure.

Purpose-made User Evaluations was constructed as Likert Scale feedback forms consisting of a list of positive statements about different aspects of the aftercare service (items listed in Table 2). Response possibilities were five categories ranging from very much in agreement to not at all in agreement.

Statistical Analyses

Data analyses were performed in SPSS version 19 by SA. Descriptive data is reported as means with standard deviation (STD) and frequencies (percentages). Repeated measures analysis of variance (rmANOVA) was used for the end point symptom and well-being measures on an intention-to-treat basis (ITT) with last value carried forward, and for analyses of the outcome in each group session. For ITT analyses of WHO-5 and BDI, we used the value at end of group therapy, but if this was not available, the value at end of individual therapy, and if this was not available, the entry value. However, we could not include patients in the analyses from whom we did not have any rating data. Similarly for the ORS data, we used the last measured session ORS for ITT analyses. Paired t-tests were used for pairwise comparisons of ORS across sessions.

Results

Description of the population

Of the total sample of 189 patients, 166 patients answered questionnaires at the beginning of treatment, 106 patients responded at the end of individual therapy and 66 patients responded at the end of group therapy. 126 patients (66.7%) had been referred to the programme from the emergency ward (maximum 7 days stay) and 57 (30.2 %) had been referred from stationary wards. Mean length of stay, prior to discharge, was 7.6 days (STD 12.0, N=165). 114 patients started in group therapy and 69 patients completed 6 group sessions. Mean age was 38.7 years (SD 13.8), 127 were women (67.2 %) and 74 were married or co-habiting (39.2%). 82 patients (43.4%) had recurrent depression and 72 (38.1%) had severe depression, in addition, 16 (8.5%) patients were diagnosed with co-morbid personality disorder. 105 (55.6%) of the patients were on sick leave. 149 (78.8%) received antidepressant medication and 46 (24.3%) received sedatives. Finally, 44 (23.3%) reported a moderately to severely traumatized childhood. BDI mean score was 30.8 (S.D. 11.4; N=166) and WHO-5 was 5.3 (S.D. 4.6; N=161) at the beginning of treatment.

Suicidal ideation and behavior

No patients died while in the program. Twelve (6.3%) patients entered the program after admission for a suicide attempt, 21 (11.1%)

reported suicidal behaviour within the last 6 months and 54 (28.6%) reported a lifetime history of suicidal behaviour. At the first consultation 35 patients (18,5%) reported thinking about suicide frequently or all the time during the last two weeks and 102 (53.9%) reported severe psychological pain. 29 of the patients (15.4%) considered themselves to be at moderate to high risk of a suicide attempt. CAMS were used with 45 patients (23.8%) at the first individual therapy session, and by the fifth session CAMS was still used with 6 patients (3.2%). At that point, one patient still had occasional suicidal ideation.

Symptom ratings and outcome

The patients improved in depression score and well-being ratings from day one to end of service, and the difference was significant whether analysed on an intention-to-treat basis or not (see table 1). For patients who proceeded through the entire program, and completed all questionnaires, the improvement was highly significant from time-point to time-point (BDI within subjects effect $F_{108,2} = 20,591$ $p < 0.2^{E-8}$; $N=55$).

	Entry			End of ind. Therapy			End of group therapy			End (ITT)			r.m. ANOVA (ITT)			Effect Size (ITT)
	Mean	S.D	N	Mean	S.D	N	Mean	S.D.	N	Mean	S.D	N	df	F	p	
BDI	31,0	11,4	164	20,3	11,9	101	19,1	13,1	56	24,2	13,9	164	163,1	68,286	4,7E-14	0,54
WHO-5	5,3	4,6	160	10,9	6,3	97	11,6	7,4	53	8,9	6,8	160	159,1	59,907	1,1E-12	0,63
ORS				18,0	8,5	113	22,2	11,7	113	22,4	11,6	113	112,1	20,582	1,4E-05	0,44

Table 1: Symptom and outcome ratings in the aftercare service

Table note: BDI: Becks Depression Inventory – II. WHO-5: World Health Organization Well-being Scale, 5-items. ORS: Outcome Rating Scale. ITT: Intention to treat sample i.e. missing data is supplemented with last value carried forward. The last ORS value is the rating at the eighth session or lower number, while the values at end of group therapy is the last measure (also including ratings at later sessions, if the patient continued for more than eight sessions), see Figure 3. The difference between each measure at the three time-points (two for ORS) is significant in paired sample t-test ($p < 0.05$), except for the difference of WHO-5 between end of individual and group therapy. Repeated measures analysis of variance (r.m. ANOVA) is used for comparison of the 'Entry' and the 'End' (ITT) ratings.

WHO-5 within subjects effect $F_{102,2} = 20,127$ $p < 0.4^{E-8}$; $N=52$) (see Figure 1). This effect was also seen when controlling for the type of ward the patients had been discharged from; and for both BDI and WHO-5 the interaction between subgroup and time was significant in ITT analyses (Figure 2). While 101 patients had BDI scores corresponding to severe depression on the first day, only 64 had these high scores as their last measure in the program (intention-to-treat sample; $N=164$). 89 (47.1%) patients were discharged from the regional mental health service at the end of the program, 11 (5.8%) were re-admitted during the program and 74 (39.2%) patients were referred to further specialized outpatient treatment in the regional mental health service (mostly CBT based group therapy for depression). Outcome ratings and attendance in group therapy is shown in Figure 3. The increase in ORS from session 1 through 8 was significant in the rm ANOVA including 29 subjects who responded after each of the eight sessions ($F_{196,7} = 2,915$; $p < 0.006$, $N=29$), however, this increase was not significant in the post-hoc pairwise comparisons. Paired t-tests across the separate sessions were significant, due to the different N in these analyses (Figure 3).

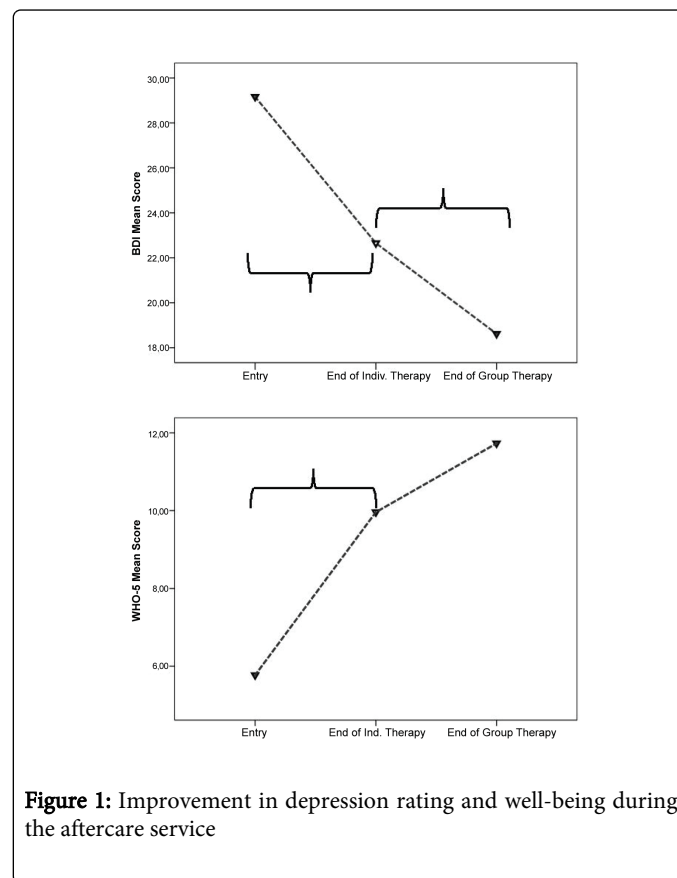


Figure 1: Improvement in depression rating and well-being during the aftercare service

Only patients completing both modules and rating scales at all time-points are included. For BDI $N=55$ for WHO-5 $N=52$. See Table 1 for abbreviations and text for results of the statistical analyses.

Differences marked by asterisks are significant (**) $p < 0.0001$, (*) $p < 0.05$ in post-hoc pairwise comparisons.

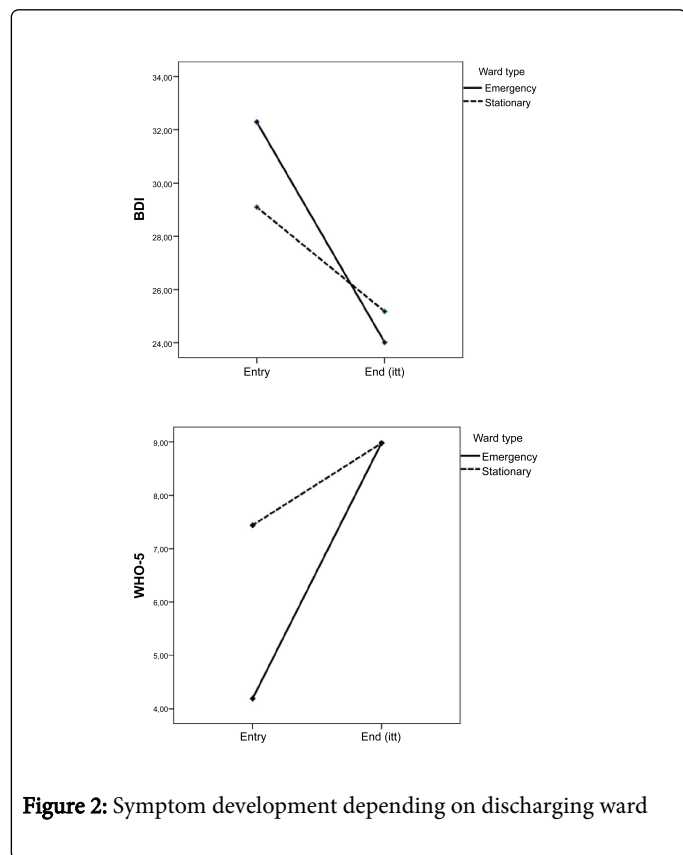


Figure 2: Symptom development depending on discharging ward

The emergency ward (N=105) is intended for brief observations and stabilization only, with a maximum length of stay of 7 days, while stationary wards (N=50) include both closed and open wards and allows up to 60 days of stay. End point measure is intention-to-treat (ITT) i.e. with last value carried forward. BDI: Beck's Depression Inventory – II. WHO-5: World Health Organization Well-being Scale, 5-items. For both scales the rm. ANOVA showed no between-group effect, but an interaction effect (BDI group*time effect $F_{157,1}: 5.869$ $p < 0.02$; N=159. WHO-5 group*time effect $F_{153,1}: 10.208$ $p < 0.002$; N=155).

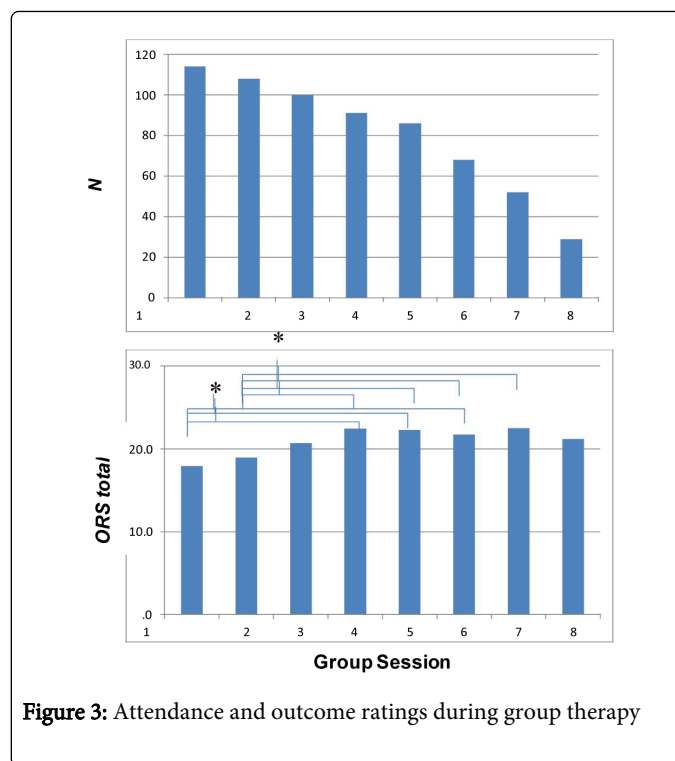


Figure 3: Attendance and outcome ratings during group therapy

Top panel: Number of patients attending the eight scheduled sessions, delivered twice a week. In rare cases the patients were given the opportunity to stay in the group, which had an open format, and 10 patients participated in 12 sessions, one patient continued for session 15-20. Bottom panel: Mean ORS score. Asterisks mark comparisons between sessions, where the difference is significant (paired t-test; $p < 0.0005$) ORS: Outcome Rating Scale, range 0-40.

User Evaluation and Satisfaction

When asked at the end of the individual therapy module, the majority of responders appreciated the content and structure of therapy, while they were less content with the five session limit. Likewise, at end of group therapy, the majority of responders appreciated the content and format of the group therapy, but rated the duration of the service poorer, see table 2 for elaboration. Satisfaction with service was generally high with mean total CSQ 3.38 (S.D. 0.45; N=88) after individual therapy and after group therapy 3.41 (S.D. 0.49; N=50). Although SRS increased from 31.4 (S.D. 7.6; N=113) at the first group session to 33.4 (S.D. 8.1; N=30) at the eighth session, this increase was not significant (SRS within subjects effect $F_{203,7}: 1,814$ $p < 0.09$; N=30).

	Disagree		In between		Agree		N
	No	%	No	%	No	%	
Evaluation after individual therapy							
The content of the talks agreed with me	1	1,1	3	3,2	89	95,7	93
The design of the talks agreed with me	2	2,2	5	5,5	84	92,3	91
Five sessions were sufficient for me	38	42,7	16	18,0	35	39,3	89
Three weeks of intensive care were sufficient for me	32	42,1	16	21,1	28	36,9	76
The entire aftercare structure worked well	2	2,6	17	21,3	61	76,3	80

Evaluation after group therapy	No	%	No	%	No	%	
The content of the group sessions agreed with me	4	6,8	7	12,1	47	81,1	58
The design of the group sessions agreed with me	3	5,3	8	14,0	46	80,7	57
Eight group sessions were sufficient for me	22	37,3	8	13,6	29	49,1	59
Four weeks of intensive group therapy were sufficient for me	26	46,4	6	10,7	24	42,9	56
The full aftercare program covered my needs	11	19,0	8	13,8	39	67,3	58

Table 2: Purpose-made user evaluations

Table note: A selection of items form the purpose made user evaluation at end of individual and of group therapy. The ratings of very much and partly disagree are collapsed in the "Disagree" rating and likewise the very much and partly agree is collapsed in the "Agree" rating.

Discussion

The patients referred to the new post-discharge program had, as expected, a high load of depression symptoms and around a fifth of the patients reported suicidal risk. In the brief period of which they participated in the program, their symptoms diminished to the level of moderate depression, none of the patients had a persisting suicidal risk, and about half of the patients could be discharged from mental health services altogether. The content and structure of the program was evaluated positively by the patients, but the majority would have preferred to continue with more sessions for a longer period of time.

In this clinical descriptive study, we have data from self-ratings, but regrettably we do not have registry data on patients who did not complete the ratings scales. This means that attrition rates, which might seem high, from referral to start 12% and from start to end of individual therapy 36% are very conservative measures of adherence given that rating scales were sometimes forgotten by patients or therapists and some patients did not want to fill in questionnaires. Dropout is a major problem in outpatient studies as well as clinical practice [28] and the size of it in our sample is comparable to previous reports in effectiveness studies on depression [29]. However, in our population and with the aim of the study, it is a serious problem that has to be dealt with in future designs - not only regarding data registration, but also concerning the content of the service. The telephone out-reach was not sufficient to secure attendance, but contact was established with most patients. Home-visits were not regularly scheduled, although it was done at a few occasions, or the police was called to do it, if we were concerned about suicide risk. Increasing suicidal thoughts or behaviour were the reason for re-admission in the majority of the 11 cases, the other major reason was severely affected daily living function, due to cognitive deficits. For patients with suicidal risk, that stayed in the program, CAMS served well in combination with CBT and the reduction of CAMS sessions is even better than reported by the founders of CAMS, i.e. in five sessions 13% still used CAMS and only one had occasional suicidal thoughts compared to the probability of 50% reported from a specialized clinic for suicide prevention [13]. We did not continue the use of CAMS in the group setting, but instead the therapists monitored the patients through their mood rapport on the "Well-Being Meter". Again drop-out was high during group therapy, and while it might be due to lost ratings, this is less likely as the scoring of ORS and SRS was integrated in the group procedures. Dropping out of group therapy did not lead

to premature dismissal from the program and the patient could still consult psychiatrist for pharmacological treatment and therapists by phone. As such, those stopping pre-maturely according to the program design were not left without treatment. But we do not have symptom or user ratings from these patients and of course monitoring of suicide risk in these patients, without bi-weekly face-to-face meetings, were less secure. It seems yet unsolved whether inpatient or outpatient service is the best solution for diminishing risk of suicide [30,31].

The 55 patients adhering to the full program have a remarkable effect of 7 weeks treatment, as BDI score is reduced from 29 to 18, i.e. passing from severe to mild depression and WHO-5 increases from a level of depression previously observed only in patients under admission - to close to the cut-off [12,5] when screening for depression in population samples. Looking at inpatient studies, BDI was in the comparable ranges at admission and more improved at discharge, but the length of stay was variable 27-172 days) [32]. The significant interaction for both BDI and WHO-5 between subgroup and time in ITT analyses indicates that the patients who were discharged directly from the emergency ward (i.e. with shorter stays) benefitted more from the programme. In a one-month inpatient study BDI scores resembled our findings [33]. Looking at outpatient studies of psychotherapeutic interventions, patients have lower BDI scores at end of treatment, when the treatment period is longer (15 weeks) [34], but similar scores when treatment is 8 weeks [35].

In group therapy, the ORS fails to increase 5 points across the 8 sessions that would support the notion of reliable therapeutic progress. While the number of drop-outs severely weakens our possibility to conclude on the eight session data, the first four sessions show the anticipated step-wise improvements across sessions. Still, we need to consider the possibility that the open group format is too challenging for these rather ill patients. Every week, the group has to accommodate new patients and it undoubtedly requires a large proportion of the therapists' focus to welcome and integrate these patients. On the other hand the open design gives "old" patients the beneficial experience of helping and setting an example for newcomers. While the purpose-made evaluations were positive regarding the group format, it has to be noted that we did not ask specifically for evaluation of the open format. This type of questions could, in the future, be pursued in a qualitative manner, with focus group interviews.

Both the standardized user evaluations (CSQ) and the purpose-made ones indicated high satisfaction with the service, but it has to be considered, like with the SRS, that the bias in this type of questionnaires are in the direction of positive responses [25,26]. The use of SRS was not optimal since it was designed for ratings of individual sessions, since the start of this project a Group Session Rating Scale has been developed by the same team of researchers,

which could be used in future studies [36]. Given the severity of symptoms it is no wonder that the patients ask for more therapy, and ideally they should continue treatment in one program instead of having to be referred to different outpatient clinics. This was, however not organisationally feasible. The dissatisfaction with the number of sessions could also be a result of insecurity about future treatment, and no longer having the support of the other group members and staff. In this case, a booster session with a next-of-kin after the end of group therapy might be helpful and make the patients feel more comfortable about ending therapy.

In the stepped care model for treatment of depression [8], the aftercare program works at step four, which is described by medication, complex psychosocial interventions and combination treatment? The aftercare program also serves the idea of stepped care through the gate-keeping function for further regional mental health services. Informally, we were informed by the therapists receiving these patients for specialized group therapy for depression, after the program, that the patients were more motivated and adherent to the subsequent therapy than others. This of course has to be quantified systematically, but it seems like the aftercare program served the purpose of visitation and motivating the patients for further treatment.

Based on the frequent contacts the program in some ways resembled day treatment programmes more than traditional outpatient service and our results are also in line with the results of a systematic review, concerning day treatment programmes for patients with anxiety/depressive disorder, where day treatment programmes were suggested to be superior to outpatient care [37]. Two descriptive studies of post-discharge follow-up for depressive disorders, one concerning US veterans and one concerning severely depressed patients in UK, showed that between 25% to one third of the populations did not see a psychiatrist within the first month after discharge. In these studies, very few patients received psychotherapy and medication adherence was low [5,7]. Compared to this, the present sample had much better service, as 166 (87.8%) received a psychiatric consultation within 3 days after discharge and of these 114 (60.3%) completed the full individual therapy series and proceeded to group therapy.

This study was naturalistic and descriptive and consequently has the limitations inherent in that design. Diagnoses were based on clinical interview and categorized according to the ICD-10, and not on standardised interviews or research criteria. Outcome is based on self-ratings, not on intervention-blinded observer ratings, and the patients were aware of participating in a new service, which might have confounded their ratings. Likewise therapists were part of a new team, who had participated in the design of the program, and therefore probably were more engaged and enthusiastic than could be expected, when the program is implemented elsewhere.

However, most problematic is of course the lack of a comparison group receiving treatment as usual, no treatment or another aftercare service. This is not unproblematic to design, given the severity of these patients symptomatology. A large number of these patients would not have been discharged with that level of symptoms, if the aftercare program did not exist. However, it is possible that the improvement in ratings is the result of the natural course after discharge, or that improvement could have been larger if the patients had stayed in hospital.

The measurements were obtained at the last day of therapy and we did, regrettably, not follow-up on the patients after they stopped in the

aftercare program. It would be meaningful to have data on work and social function three or six months after enrolment, as it has been suggested, that the lack of aftercare could be the foundation of persisting symptoms and disability [7]. In theory, immediate treatment after discharge could have important effects apart from just improving symptoms faster. In a diagnostically mixed sample treated in the first year of the aftercare program, we could see this long-term effect on registry data of admittance and bed days. Both were reduced the year following the aftercare program, compared to a historical comparison group [10]. According to crisis theory, the patient passes through periods, where the benefit of addressing the patients' difficulties is increased, i.e. there might be a window-of-opportunity [38]. Our results support the idea that one window-of-opportunity is the period right after discharge.

Conclusion

The aftercare program seemed an acceptable and safe alternative to continued admission, for patients with moderate-severe depression. Minor adjustments are feasible to implement. Clinically important improvement was evident in the first period after discharge, and patients were mainly satisfied with the service. However, we lack data from a comparable patient group receiving treatment as usual and follow-up ratings that substantiate the impact of the program and the results have to be considered preliminary. Future studies should feature a randomized controlled trial design and a cost-effectiveness analysis.

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Trial registration

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References

1. Hansen HV, Christensen EM, Dam H, Gluud C, Wetterslev J, et al. (2012) The effects of centralised and specialised intervention in the early course of severe unipolar depressive disorder: a randomised clinical trial. *PLoS One* 7: e32950.
2. Dam H, Bendsen BB, Jakobsen K, Larsen EB, Nilsson FM, et al. (2010) [Large differences in treatment of depression between departments of psychiatry]. *Ugeskr Laeger* 172: 3183-3187.
3. Folker H, Folker AP (2008) [WHO-5 as a simple method for measuring quality of life in daily psychiatric clinics]. *Ugeskr Laeger* 170: 830-834.
4. Windfuhr K, Kapur N (2011) Suicide and mental illness: a clinical review of 15 years findings from the UK National Confidential Inquiry into Suicide. *Br Med Bull* 100: 101-121.
5. Pfeiffer PN, Ganoczy D, Bowersox NW, McCarthy JF, Blow FC, et al. (2011) Depression care following psychiatric hospitalization in the Veterans Health Administration. *Am J Manag Care* 17: e358-364.
6. Wang PS, Berglund P, Kessler RC (2000) Recent core of common mental disorders in the United States - Prevalence and conformance with evidence-based recommendations. *Journal of General Internal Medicine*, 15: 284-292.

7. Ramana R, Paykel ES, Melzer D, Mehta MA, Surtees PG (2003) Aftercare of depressed inpatients--service delivery and unmet needs. *Soc Psychiatry Psychiatr Epidemiol* 38: 109-115.
8. NHS (2007) Clinical Guideline 23. Depression: management in primary and secondary care.
9. Arnfred SM, Nilsson ME, Larsen JK (2013) Beneficial effect of brief intensive cognitive behavioural therapy-based psychiatric aftercare for early discharged non-psychotic patients. *Dan Med J*, 60: A4584.
10. Nilsson M, Mir S, Larsen JK, Arnfred S (2014) Fewer re-admissions and bed days following an intensive transitional post-discharge aftercare programme for a mixed diagnostic group of patients. *Nord J Psychiatry* .
11. Gibbons CJ, Stirman SW, Brown GK, Beck AT (2010) Engagement and retention of suicide attempters in clinical research: challenges and solutions. *Crisis* 31: 62-68.
12. Linehan M, Kevin Dawkins (1995) Treating borderline personality disorder the dialectical approach. Guilford Publications: New York, NY.
13. Jobs DA, Wong SA, Conrad AK, Drozd JF, Neal-Walden T (2005) The collaborative assessment and management of suicidality versus treatment as usual: a retrospective study with suicidal outpatients. *Suicide Life Threat Behav* 35: 483-497.
14. Nielsen AC, Alberdi F, Rosenbaum B (2011) Collaborative assessment and management of suicidality method shows effect. *Dan Med Bull* 58: A4300.
15. Noes-Rasmussen K, Psykoterapi manual til IPA-O gruppe. 2013, Psykiatrisk Center Ballerup, Region Hovedstadens Psykiatri. p. 1-93.
16. Beck AT, Steer RA, Brown GK (1996) Manual for the BDI, San Antonio, Texas: Th Psychological Corporation.
17. Beck AT, Steer RA, Garbin MG (1988) Psychometric Properties of the Beck Depression Inventory - 25 Years of Evaluation. *Clinical Psychology Review*, 8: 77-100.
18. Bech P, Olsen LR, Kjoller M, Rasmussen NK (2003) Measuring well-being rather than the absence of distress symptoms: a comparison of the SF-36 Mental Health subscale and the WHO-Five Well-Being Scale. *Int J Methods Psychiatr Res* 12: 85-91.
19. Kessing LV, Hansen HV, Bech P (2006) General health and well-being in outpatients with depressive and bipolar disorders. *Nord J Psychiatry* 60: 150-156.
20. Jobs DA (2006) Managing Suicidal Risk: A Collaborative Approach. NY: Guildford Press. 222.
21. Jobs DA, Kahn-Greene E, Greene JA, Goeke-Morey M (2009) Clinical improvements of suicidal outpatients: Examining suicide status form responses as predictors and moderators. *Arch Suicide Res* 13: 147-159.
22. Miller SD, Duncan BL, Brown J, Jacqueline AS, David AC (2003) The Outcome Rating Scale: A preliminary study of the reliability, validity and feasibility of a brief visual analog measure. *Journal of brief therapy*, 2: 91-100.
23. Reese RJ, Norsworthy LA, Rowlands SR (2009) Does a continuous feedback system improve psychotherapy outcome? *Psychotherapy (Chic)* 46: 418-431.
24. Miller SD, Duncan BL, Sorrell R, Brown GS (2005) The partners for change outcome management system. *J Clin Psychol* 61: 199-208.
25. Attkisson CC, Zwick R (1982) The client satisfaction questionnaire. Psychometric properties and correlations with service utilization and psychotherapy outcome. *Eval Program Plann*, 5: 233-237.
26. Larsen DL, Attkisson CC, Hargreaves WA, Nguyen TD (1979) Assessment of client/patient satisfaction: development of a general scale. *Eval Program Plann* 2: 197-207.
27. Miller SD, Duncan BL, Sorrell R, Brown J, Chalk MB (2003) Using Formal Client Feedback to Improve Retention and Outcome: Making Ongoing, Real-time Assessment Feasible. *Journal of brief therapy*, 5: 5-22.
28. Larsen DL, Nguyen TD, Green RS, Attkisson CC (1983) Enhancing the utilization of outpatient mental health services. *Community Ment Health J* 19: 305-320.
29. Hans E, Hiller W (2013) Effectiveness of and Dropout from Outpatient Cognitive Behavioral Therapy for Adult Unipolar Depression: A Meta-Analysis of Nonrandomized Effectiveness Studies. *Journal of Consulting and Clinical Psychology*, 81: 75-88.
30. Hawton K, Townsend E, Arensman E, Gunnell D, Hazell P, et al. (2000) Psychosocial versus pharmacological treatments for deliberate self harm. *Cochrane Database Syst Rev* : CD001764.
31. Crawford MJ, Thomas O, Khan N, Kulinskaya E (2007) Psychosocial interventions following self-harm: systematic review of their efficacy in preventing suicide. *Br J Psychiatry* 190: 11-17.
32. Köhler S, Hoffmann S, Unger T, Steinacher B, Fydrich T (2012) Adherence to guidelines and effectiveness of inpatient treatment for unipolar depression. *Int J Psychiatry Clin Pract* 16: 103-112.
33. Elhai JD, Contractor AA, Biehn TL, Allen JG, Oldham J, et al. (2013) Changes in the Beck Depression Inventory-II's underlying symptom structure over 1 month of inpatient treatment. *J Nerv Ment Dis* 201: 371-376.
34. Dozois DJ, Bieling PJ, Patelis-Siotis I, Hoar L, Chudzik S, et al. (2009) Changes in self-schema structure in cognitive therapy for major depressive disorder: a randomized clinical trial. *J Consult Clin Psychol* 77: 1078-1088.
35. Shamsaei F, Rahimi A, Zarabian MK (2009) Efficacy of Pharmacotherapy and Cognitive Therapy, Alone and in Combination in Major Depressive Disorder. *European Psychiatry*, 24.
36. Kelley Q, Scott M, Barry D, Jesse O (2013) Group Session Rating Scale: Preliminary psychometrics in substance abuse group interventions. *Counselling & Psychotherapy Research*, 13.
37. Marshall M, Crowther R, Almaraz-Serrano A, Creed F, Sledge W, et al. (2001) Systematic reviews of the effectiveness of day care for people with severe mental disorders: (1) acute day hospital versus admission; (2) vocational rehabilitation; (3) day hospital versus outpatient care. *Health Technol Assess*, 5: 1-75.
38. Tobitt S, Kamboj S (2011) Crisis resolution/home treatment team workers' understandings of the concept of crisis. *Soc Psychiatry Psychiatr Epidemiol*, 46: 671-683.

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