



VIIVI SNELLMAN, ANNE LECKLIN, EILA LAUKKANEN

PSYCHIATRIC INPATIENT TREATMENT OF FOSTERED ADOLESCENTS WITH A DEPRESSIVE DISORDER IS NOT VERY EFFECTIVE

ABSTRACT

This study examined the efficacy of psychiatric inpatient treatment and the use of psychotropic medication in fostered young patients with a depressive disorder. The study sample consisted of 13–17 years old adolescents (n=287) treated due to a depressive disorder in the two adolescent psychiatric units of Kuopio University Hospital, Finland, during the 10-year period 2002–2011. During the study period, there were 299 treatment periods of adolescents living at home and 93 of those placed in foster care. The data concerning demographic and clinical characteristics, treatment outcomes and medication were collected from the patients' medical records. The clinical data revealed that fostered adolescents had more previous psychiatric hospitalizations than their living at home counterparts and their treatment periods were shorter than their non-fostered peers. The decreases of BDI and HS scores from admission to discharge were significantly slighter in fostered adolescents than in their peers. Furthermore, the outcomes of inpatient treatment of severe depression were estimated by the staff teams less often as being satisfactory in fostered adolescents than in those living at home.

KEYWORDS: FOSTERED ADOLESCENTS, DEPRESSIVE DISORDER, PSYCHIATRIC INPATIENT TREATMENT, TREATMENT OUTCOME, PSYCHOPHARMACOLOGICAL MEDICATION

INTRODUCTION

Depression is a common and serious psychiatric disorder in adolescence; the 12-month prevalence has been estimated to be 10.5% among European and 7.5% among US adolescents [1,2]. The disorder is more common among girls, and the prevalence increases as adolescence proceeds [1]. In Finland during 2021, a total of 11210 children were taken into foster care, which corresponded to 1.0% of the nation's children under 18 years of age [3]. In the age group of children over 16 years of age, the share of those in foster care was 2.2% and it was clearly higher than in younger age groups.

The foster care system aims to provide a safe and nurturing environment that meets the needs of children so that they can thrive. However, both during foster care and afterwards, these children seem to fare worse than others [4,5]. Most children in foster care have traumatic family histories and life experiences that result in an increased risk for mental health disorders [6-10] with the most common problems being mood disorders, conduct disorder/oppositional defiant disorder, substance abuse disorder, attention-deficit hyperactivity disorder and anxiety disorder [7,11]. It seems that two-thirds of the hospitalizations of adolescents with a diagnosis of depression end with satisfactory clinical results as estimated by the professional staff (Snellman et al., this journal). However, it is remarkable that only every fourth hospital treatment of adolescents with a depressive conduct disorder ends with satisfactory results [12], and the vast majority (>80%) of these adolescents are living in an institution or in foster care.

When an adolescent ends up in foster care, all of his/her therapeutic needs are not always considered [13]. When the situation in the adolescent's residence suddenly escalates, prompt but sometimes inappropriate solutions are adopted. This study examines psychiatric inpatient treatment, especially psychotropic medication, of the adolescents who had a depressive disorder as a primary psychiatric diagnosis and the outcomes of the hospitalization. Those who arrived from foster care were compared to adolescents coming from elsewhere.

MATERIALS AND METHODS

SAMPLE

The study sample consisted of 13–17 years old adolescents (n=287; 242 females, 45 males) and their 392 inpatient treatment periods due to a depressive disorder in the two

adolescent psychiatric units of Kuopio University Hospital, Finland, during the years 2002–2011. These units serve as a tertiary care centre for the catchment area of North Savo District, which has around one million inhabitants. Both voluntary and involuntary forms of treatment were provided. The treatment was individualized and consisted of therapeutic sessions with a case manager nurse at least once a week, different activities, family sessions, and somatic consultation and psychotropic medication when appropriate [14].

The criteria for inclusion in the study were a duration of hospitalization of at least five days and that data collected via the Beck Depression Inventory questionnaire (BDI) was available at both admission and discharge. The same patient was included several times if he/she had been treated more than once in the adolescent psychiatric units during the years 2002–2011. Some patients had previous psychiatric hospitalization before the year 2002 and therefore none of their treatment periods between 2002–2011 were considered as first ones. Some patients (n=11 with 39 treatment periods) were included in both the fostered and non-fostered groups, since they lived at home during their first inpatient treatment but were fostered later. Similarly, some adolescents (n=19 with 57 treatment periods) were included in several diagnostic groups because they had received different diagnoses from their several hospitalizations.

Data collection and assessment methods

The diagnosis of depression was made in an interview according to ICD-10 (International Classification of Diseases, version 10) criteria as part of the clinical examination performed by a psychiatrist specializing in adolescent care. The patients' diagnoses were categorized into four groups according to the severity of depression diagnosis as follows: 1) mild/moderate depression or cyclothymia (F32.0, F32.1, F33.1, F34.0), 2) severe depression without psychotic symptoms (F32.2, F33.2), 3) severe depression with psychotic symptoms (F32.3, F33.3), and 4) depressive conduct disorder (F92.0).

The demographic and clinical data, including estimations of depressive symptoms (Beck Depression Inventory, BDI), hopelessness (Beck's Hopelessness Scale, HS) and psychosocial functioning (Global Assessment Scale, GAS), were collected from the patients' medical records. These data were collated for the structured forms which were created for the study. Later data was transferred from the forms to Microsoft Excel. This work was done by three Master of Science (Pharmacy) students with their supervisor (AL).

BDI is a numeric self-rated scale used to measure the

severity of depression in a subjective manner [15]. The scores range from zero to sixty-three; higher scores represent more severe depressive symptoms. Scores less than 13 indicate minimal depression, scores from 13 to 18 point to mild depression, scores from 19 to 29 refer to moderate depression and scores from 30 to 63 suggest severe depression. The revised version of BDI from the year of 1996 was used.

HS is a numeric self-rated scale used to measure feelings of pessimism and hopelessness in a subjective manner [16]; its scores range between 0–20. The values under nine refer to mild or insignificant hopelessness whereas a score of fifteen or more represent critical hopelessness.

GAS is a numeric scale used to assess an individual's psychosocial functioning [17]. GAS scores were evaluated by the staff team in the hospital. The scores range from one to a hundred with the scale being divided into ten equal intervals. Low scores indicate poor psychosocial functioning with the upper value of a hundred representing superior functioning. Constant monitoring is needed when an individual's scores are less than 10. Scores less than 41 refer to severe psychosocial functional impairment in several areas whereas scores of 70 or more are regarded as a good functional capacity.

Global Assessment Scale (GAS) and Beck's Hopelessness Scale (HS) were missing from some treatment periods (n=137 and n=125, respectively). In 48% of the inpatient treatments, all three psychiatric assessments (BDI, GAS and HS) at entry and at discharge were obtained from the medical files. Two assessments (BDI and GAS or HS) were found in 37% and one assessment (BDI) in 15% of the inpatient treatments.

Data concerning the efficacy of psychiatric hospitalization, BDI, HS and GAS scores, as well as psychotropic drug therapy, were collected from the medical case summaries. The outcome of treatment was assessed as a dichotomous variable ("satisfactory"/"not satisfactory") and it was based on the estimation of the staff team. The assessment of the treatment outcome, and thus the efficacy of inpatient treatment, was based on BDI, HS and GAS scores as well as on clinical follow-up and the individual goals set in the treatment plan. In addition, the data relating to adverse childhood experiences and comorbid psychiatric disorders were collected from the medical case summaries. The experiences, for example, parental divorce, were "yes" in patients whose medical case summaries stated that the adolescent had experienced it.

STATISTICAL ANALYSES

The data were analysed using the GraphPad Prism program. Continuous variables were categorized as means or medians

and categorical variables as percentages. The statistical significance for categorical variables was analysed using Chi-squared test or Fisher's exact test when the groups were small. The non-parametric Mann-Whitney U test was used for comparisons of continuous variables of independent samples. When comparing more than two groups, Kruskal-Wallis test with the post hoc comparisons with the test of Dunn's Multiple Comparison Test were used. In all analyses, a significance level of $p < 0.05$ was applied.

ETHICAL CONSIDERATIONS

The permission for this study was provided by the ethical committee of Kuopio University Hospital and University of Eastern Finland and by the Medical Director of the University Hospital of Kuopio. Notification of the research was also sent in advance of data collection to the Data Protection Ombudsman.

RESULTS

PATIENT CHARACTERISTICS AND BACKGROUND INFORMATION

There were 299 treatment periods of adolescents living at home that were compared to the 93 hospitalizations of adolescents living in foster care (*Table 1*). Each patient had on average 1.4 (range of 1–9) hospitalizations during the study period. Most patients (79%) were hospitalized only once during the study period. The majority of the adolescents (84%) were female. The adolescents living in foster care had more often adverse childhood experiences compared to their non-fostered counterparts: parents' alcohol or drug abuse (65% vs. 39%, $p < 0.001$); parents' psychiatric disorder (65% vs. 36%, $p < 0.001$); parental divorce (63% vs. 48%, $p < 0.05$); physical abuse (48% vs. 21%, $p < 0.001$); sexual abuse (18% vs. 6%, $p < 0.001$), respectively.

The treatment periods of the adolescents living at home represented their first psychiatric hospitalization significantly more often compared to the fostered adolescents (62% vs. 31%, $p < 0.001$) (*Table 1*). However, 67% of the treatment periods of the adolescents suffering from a severe psychotic depression represented their later hospitalization, regardless of their domestic status (fostered or not).

Comorbid psychiatric disorders were common, particularly in adolescents with mild/moderate depression or cyclothymia (*Table 1*). Neurotic, stress-related and somatoform disorders, as well as mental and behavioural

disorders due to psychoactive substance misuse, were the most common comorbid psychiatric diagnoses in this study.

PSYCHIATRIC INPATIENT TREATMENT

The median length of hospital treatment was 20 days (range 5-369 days). As a whole group, fostered adolescents had shorter treatment periods compared to non-fostered adolescents (median 13 days vs. 21 days, $p < 0.001$). Fostered adolescents also had more previous hospitalizations compared to their living at home counterparts. *Table 1* shows results for different diagnostic groups separately.

Positive changes were observed in all psychiatric assessments (BDI, HS, GAS) (*Table 2*). At admission, the majority of the adolescents (61%) had GAS values < 40 indicating severe psychosocial functional impairment. At discharge, the psychosocial functioning was still severely impaired more often in fostered adolescents compared to non-fostered counterparts (44% vs. 14%, $p < 0.001$). In addition, in the diagnostic group of severe depression without psychotic symptoms, the fostered adolescents had significantly more depressive symptoms at discharge. In line with this, the decreases of BDI and HS scores from admission to discharge were significantly slighter in fostered adolescents than in their peers (*Figure 1*).

At the end of inpatient treatment, the treatment outcome was estimated by the staff team. In most cases, treatment ended with satisfactory clinical results in adolescents suffering from mild/moderate depression or cyclothymia. There were no statistically significant differences in the treatment outcome between fostered and non-fostered adolescents with mild/moderate depression, cyclothymia or depressive conduct disorder. However, in adolescents suffering from severe depression without psychotic symptoms, a clinically satisfactory result was obtained more often in those living at home than in fostered adolescents (72% vs. 41%, $p < 0.001$). Similarly, in adolescents suffering from severe depression with psychotic symptoms, the treatment outcome was satisfactory more often in those adolescents living at home in comparison to fostered adolescents (64% vs. 35%, $p < 0.05$).

Figure 2 shows the average changes in BDI, HS and GAS assessments between admission and discharge, both in adolescents whose treatment outcome was “satisfactory” and in those whose treatment outcome was “not satisfactory”, estimated by the staff team. There were statistically significant differences in the attenuation of depression symptoms (mainly in BDI) between these patient groups.

Most of the adolescents were receiving psychotropic medication during their hospital stay (*Table 3*) with antidepressants being the drugs most often prescribed. Antipsychotic medications were more often prescribed to fostered adolescents than to their living at home counterparts (73% vs. 52% of treatment periods, $p < 0.001$). Quetiapine was the most used psychotropic medicine. It was prescribed mostly due its antipsychotic, antidepressant and mood stabilizing properties. However, in 26% of the prescriptions, it was used in order to help control of anxiety and sleep disorders. In addition, antidepressants were prescribed together with an antipsychotic medication to 37% of the patients. These combinations were administered more commonly to fostered than non-fostered adolescents (47% vs. 34%, $p < 0.05$).

Table 1. The characteristics of the study sample

Diagnosis	Mild/moderate depression or cyclothymia		Severe depression without psychotic symptoms		Severe depression with psychotic symptoms		Depressive conduct disorder	
	Fostered adolescents (n=16)	Adolescents living at home (n=69)	Fostered adolescents (n=32)	Adolescents living at home (n=151)	Fostered adolescents (n=17)	Adolescents living at home (n=64)	Fostered adolescents (n=28)	Adolescents living at home (=15)
Gender, female n (%) ^a	14 (88%)	62 (90%)	25 (78%)	134 (89%)	16 (94%)	59 (92%)	21 (75%) *	6 (40%)
First inpatient treatment n (%) ^a	5 (31 %) **	49 (71 %)	10 (31%) ***	103 (68%)	4 (24%)	23 (36%)	10 (36%) *	10 (67%)
Four or more inpatient treatments n (%) ^a	4 (25%) **	3 (4%)	11 (34%) ***	1 (1%)	7 (41%)	14 (22%)	9 (32%) *	0 (0%)
Voluntary treatment n (%) ^a	13 (81%)	61 (84%)	25 (78%)	129 (85%)	8 (47%)	44 (69%)	21 (75%)	7 (47%)
Antidepressant medication at admission n (%) ^a	7 (44%)	23 (33%)	14 (44%)	61 (40%)	10 (59%) *	19 (30%)	12 (43%)	3 (20%)
Antipsychotic medication at admission n (%) ^a	7 (44%)**	9 (13%)	16 (50%) ***	25 (17%)	13 (77%)	38 (59%)	12 (43%) *	1 (7%)
Psychiatric comorbidity n (%) ^a	6 (37%)	26 (38%)	3 (9%)	33 (22%)	4 (24%)	8 (12%)	3 (11%)	3 (20%)
The length of hospitalization, median (range) ^b	15 (6-45)	13 (5-86)	15 (5-67) *	24 (5-96)	19 (5-101)	29 (11-369)	8 (5-60)	16 (5-59)

Statistical significance (fostered adolescents vs. adolescents living at home): *** p<0.001; ** p<0.01; * p<0.05

^a Analysed using Chi-squared test/Fisher's exact test

^b Analysed using Mann-Whitney U test

Table 2. Scores of BDI, GAS and HS of fostered adolescents and adolescents living at home suffering from depressive disorders

Diagnosis	Mild/moderate depression or cyclothymia		Severe depression without psychotic symptoms		Severe depression with psychotic symptoms		Depressive conduct disorder	
	Fostered adolescents (n=16)	Adolescents living at home (n=69)	Fostered adolescents (n=32)	Adolescents living at home (n=151)	Fostered adolescents (n=17)	Adolescents living at home (n=64)	Fostered adolescents (n=28)	Adolescents living at home (=15)
Severe depression								
BDI ≥ 30 at entry, n (%)	6 (38%)	20 (29%)	22 (69%)	84 (56%)	6 (35%)*	42 (66%)	7 (25%)	3 (20%)
BDI ≥ 30 at discharge, n (%)	1 (6%)	5 (7%)	11 (34%)	39 (26%)	1 (7%)	(25%)	3 (11%)	1 (7%)
Moderate depression								
BDI = 19 – 29 at entry, n (%)	6 (38%)	33 (47%)	7 (22%)	42 (28%)	6 (35%)	15 (23%)	9 (32%)	2 (13%)
BDI = 19 – 29 at discharge, n (%)	3 (19%)	10 (14%)	12 (38%)**	24 (16%)	9 (53%)*	(28%)	5 (18%)	1 (7%)
Mild depression								
BDI = 13 – 18 at entry, n (%)	1 (6%)	11 (16%)	3 (9%)	10 (7%)	2 (12%)	3 (5%)	0 (0%)	3 (20%)
BDI = 13 – 18 at discharge, n (%)	4 (25%)	15 (21%)	2 (6%)	24 (16%)	1 (6%)	12 (19%)	3 (11%)	3 (20%)
Minimal depression								
BDI < 13 at entry, n (%)	3 (19%)	5 (7%)	0 (0%)	15 (10%)	3 (18%)	4 (6%)	12 (43%)	7 (47%)
BDI < 13 at discharge, n (%)	8 (50%)	39 (56%)	7 (22%)*	64 (42%)	6 (28%)	18 (28%)	17 (61%)	10 (67%)
Critical hopelessness								
HS ≥ 15 at entry, n (%)	1 (7%)	13 (19%)	13 (41%)	47 (31%)	7 (41%)	20 (31%)	3 (11%)	1 (7%)
HS ≥ 15 at discharge, n (%)	2 (13%)	4 (6%)	6 (19%)	21 (14%)	4 (24%)	(20%)	3 (11%)	0 (0%)
Severe psychosocial functional impairment								
GAS < 40 at entry, n (%)	12 (75%)	47 (68%)	26 (81%)**	75 (50%)	14 (82%)	45 (70%)	16 (57%)	6 (40%)
GAS < 40 at discharge, n (%)	7 (44%)**	5 (7%)	11 (34%)**	13 (9%)	11 (65%)**	20 (31%)	12 (43%)	4 (27%)

BDI = Beck Depression Inventory, GAS = Global Assessment Scale (missing data n=137, 34.9%), HS = Beck's Hopelessness Scale (missing data n=125, 31.9%); statistical significance (fostered adolescents vs. adolescents living at home): ** p<0.01; * p<0.05; analysed using Chi-squared test/Fisher's exact test

Table 3. Psychotropic medication used in the inpatient care of fostered adolescents and adolescents living at home suffering from depressive disorders

Diagnosis	Mild/moderate depression or cyclothymia		Severe depression without psychotic symptoms		Severe depression with psychotic symptoms		Depressive conduct disorder	
	Fostered adolescents (n=16) n (%)	Adolescents living at home (n=69) n (%)	Fostered adolescents (n=32) n (%)	Adolescents living at home (n=151) n (%)	Fostered adolescents (n=17) n (%)	Adolescents living at home (n=64) n (%)	Fostered adolescents (n=28) n (%)	Adolescents living at home (n=15) n (%)
Psychotropic medication	16 (100%)	57 (83%)	31 (97%)	146 (97%)	17 (100%)	63 (98%)	24 (86%)	10 (67%)
Antidepressant	11 (69%)	42 (61%)	25 (78%)	130 (86%)	10 (59%)	36 (56%)	17 (61%)	7 (47%)
Antipsychotic	13 (81%) ***	23 (33%)	22 (69%) *	69 (46%)	16 (94%)	61 (95%)	17 (61%) *	3 (20%)
Antidepressant + antipsychotic	8 (50%) **	12 (17%)	16 (50%)	55 (36%)	9 (53%)	33 (52%)	11 (39%)	2 (13%)
Anxiolytic	8 (50%) *	14 (20%)	16 (50%)	48 (32%)	9 (53%)	41 (64%)	5 (18%)	3 (20%)
Sedative	9 (56%)	28 (40%)	12 (37%)	58 (38%)	5 (29%)	31 (48%)	7 (25%)	5 (33%)
Other ^a	0 (0%)	1 (1%)	2 (6%)	3 (2%)	1 (6%)	5 (8%)	1 (4%)	0 (0%)

^a includes lamotrigine (n=7), valproic acid (n=3), methylphenidate (n=1), naltrexone (n=1) and topiramate (n=1); statistical significance (fostered adolescents vs. adolescents living at home): *** p<0.001; ** p<0.01; * p<0.05; analysed using Chi-squared test/Fisher's exact test

Figure 1. The average changes of BDI, HS and GAS scores of fostered adolescents and adolescents living at home. The changes of BDI and HS scores represent the decrease of those scores between the admission and the discharge. Conversely, the changes of GAS scores represent the increase of those scores

BDI = Beck Depression Inventory, HS = Beck's Hopelessness Scale, GAS = Global Assessment Scale
Statistical significance (fostered adolescents vs. adolescents living at home): *** $p < 0.001$; * $p < 0.05$
Analysed using Mann-Whitney U test

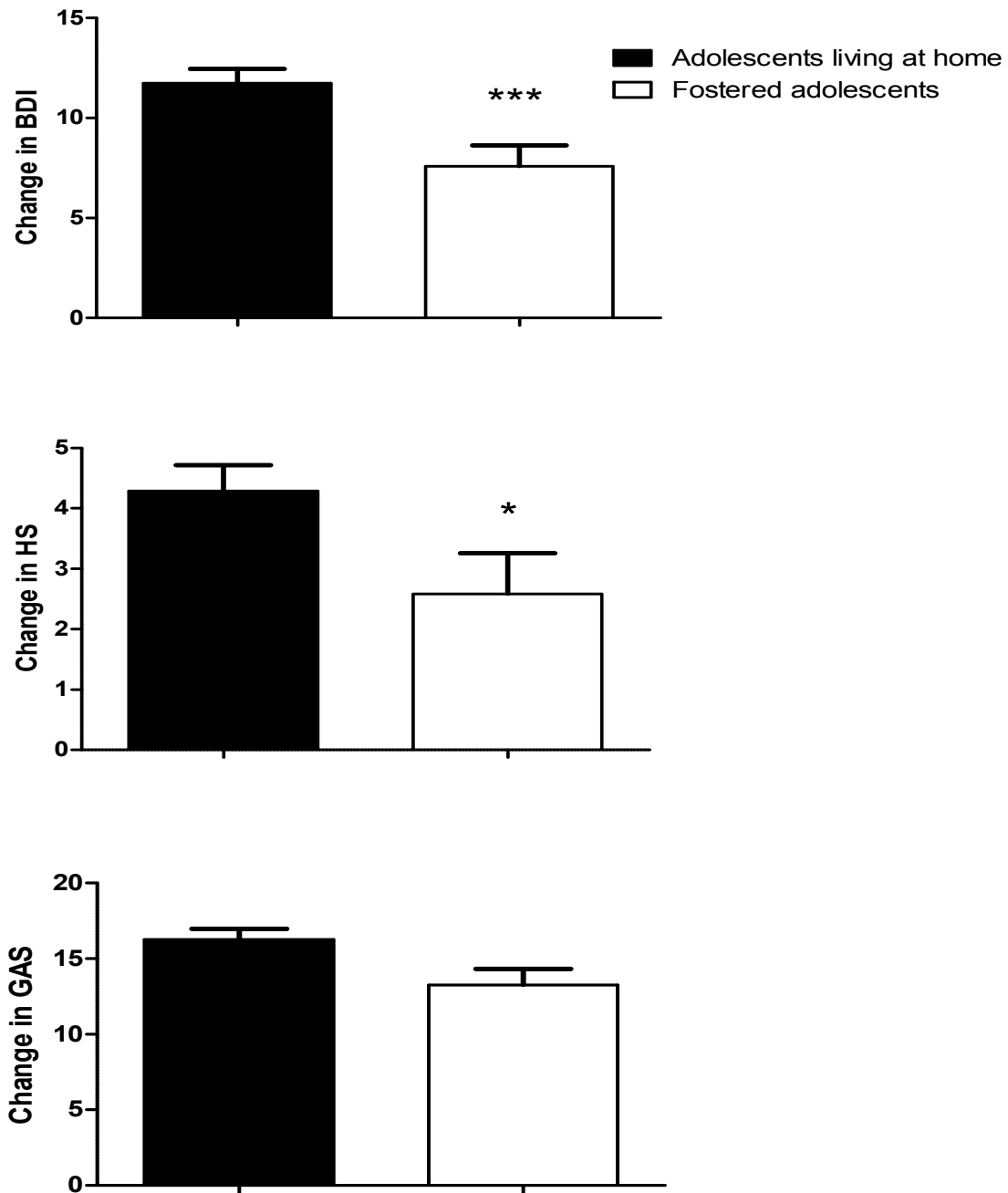
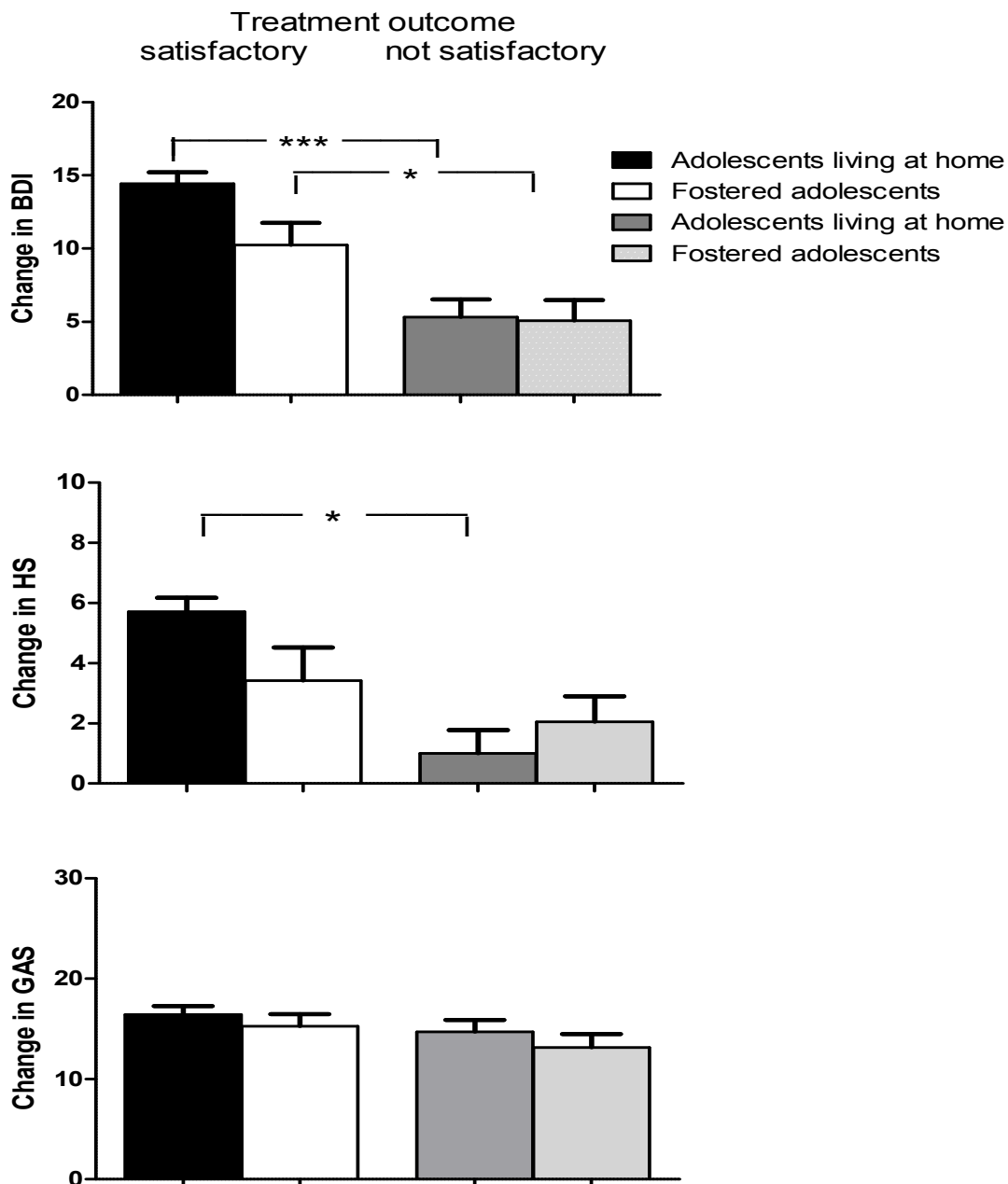


Figure 2. The average changes of BDI, HS and GAS scores of fostered adolescents and adolescents living at home in cases of satisfactory and not satisfactory treatment outcome. The changes of BDI and HS scores represent the decrease between the admission and the discharge. Conversely, the changes of GAS scores represent the increase of those scores.

BDI = Beck Depression Inventory, HS = Beck's Hopelessness Scale, GAS = Global Assessment Scale
Statistical significance (satisfactory vs. not satisfactory): *** $p < 0.001$; * $p < 0.05$
Analysed using Kruskal-Wallis test



DISCUSSION

This clinical data shows that adolescents placed in foster care and suffering from depressive disorders had more previous hospitalizations than their counterparts. They also had often an antipsychotic medication both at admission and during their hospital stay. According to the assessments of the staff teams, a clinically satisfactory result was achieved less often in fostered adolescents suffering from severe depression (either psychotic or non-psychotic) when compared to treatment outcomes of the adolescents living at home. Furthermore, the length of the inpatient treatments were shorter in fostered adolescents. The subjective feelings of hopelessness and depression relieved less in fostered adolescents compared to those living at home. This, and the fact that almost half of the fostered adolescents were still experiencing severely impaired psychosocial functioning at discharge, indicates that these adolescents remained particularly vulnerable to the manifestations of mental health problems and the need for subsequent rehospitalizations [18,19].

Fostered children and adolescents have often experienced different types of maltreatment and a lack of stability in their childhood [20]. According to our study, the adolescents living in foster care had also experienced more often adverse childhood experiences such as a parent's alcohol or drug abuse and/or parents' psychiatric problems and physical/sexual abuse compared to their living at home counterparts. It is known that traumatic life experiences in childhood may increase the risk of mental health disorders and the need for mental health services and psychotropic medication [21,22]. It has also been reported that adolescents in foster care exhibit more psychiatric symptoms than their non-fostered peers [23]. Overall, comorbid psychiatric disorders were particularly common in adolescents (fostered or not) with mild/moderate depression or cyclothymia. These patients can usually be treated in outpatient care, but hospitalization may have been needed, e.g., due to psychiatric comorbidities, suicidality, severe impairment in psychosocial functioning or inadequate outpatient care.

Here, depressed adolescents placed in foster care had more previous psychiatric inpatient treatments compared to adolescents living at home. Fostered adolescents also had shorter psychiatric inpatient treatment and many of them were discharged with severely impaired psychosocial functioning, according to their GAS scores. Furthermore, the treatment outcomes of fostered adolescents with severe depression were more often estimated being "not

satisfactory" when compared to the treatment outcomes of their counterparts. It should be noted that some of the fostered adolescents had lived at home during their first inpatient treatment(s) and were fostered later, implying possibly an already complicated situation. The management of acute crises may have been the aim of the inpatient care in some challenging cases. In addition, inadequate outpatient psychiatric treatment or unstable foster care placement may also have been reasons for several hospitalizations. It's noteworthy that the comprehensive care of the adolescents with severe psychiatric symptoms consists of the different kinds of intervention of adolescent psychiatry, school and child welfare.

It is also important to invest in stable foster care combined with adequate psychiatric outpatient care, modified to the needs of each adolescent. Untreated mental health disorders may have long-term consequences for an individual. Adolescents who have experienced trauma are more likely to demonstrate externalizing behaviours, including disruptive or impulsive behaviour or conduct disorders, and fostered adolescents more likely demonstrate these kinds of behaviours upon placement [24]. Externalizing behaviours are a risk factor for the adolescent to have an increased number of changes in his/her foster care placements. Furthermore, placement instability increases the risk for continued mental health problems into adulthood [20].

Most of the young patients received psychotropic medication, particularly antidepressants, during their hospital stay. Overall, antipsychotic medications were more often prescribed to fostered adolescents than to their counterparts. Antipsychotics are administered to adolescents, e.g., in the treatment of severe depression, bipolar disorder and disruptive and aggressive behaviours such as conduct disorder [25-27]. They can also be combined with antidepressants in the treatment of psychotic depression [25]. These combinations were prescribed more often to fostered than non-fostered adolescents in our study. Quetiapine was the most often administered medication; this drug was also used in order to help control behavioural problems, anxiety and sleep disorders. Higher usage rates of psychotropic medications of fostered adolescents have also been reported previously [28,29]. According to the reports of dosReis et al. [29], Raghavan et al. [30] and Zito et al. [31], adolescents placed in foster care often were being treated with multiple concurrent psychotropic medications. Regardless of the indication, possible adverse events of psychotropic medications, such as psychiatric and metabolic effects, must be considered and monitored carefully [25,32].

Fostered adolescents have often suffered adverse childhood experiences which will significantly impact on their entire lives. Several hospitalizations and inadequate treatment outcomes may also have many negative long-term effects on the course of an individual's life. Adults with a history of foster care do seem to struggle in multiple areas in comparison to their peers [5,20].

LIMITATIONS

The present study has some limitations. It was a retrospective study investigating the efficacy of inpatient treatment in fostered adolescents suffering from a depressive disorder, and the use of psychotropic medication during their hospitalization. The data were collected from patients' medical records which had not been written for scientific purposes. Some patients (n=11 with 39 treatment periods) were included in both the fostered and non-fostered groups since they lived at home during their first inpatient treatments but were fostered later. Similarly, some adolescents (n=19 with 57 treatment periods) were included in several diagnostic groups because they had received different diagnoses in their several hospitalizations. In addition, data of GAS and HS scores were missing from some treatment periods (n=137 and n=125, respectively). However, this method may obtain more authentic results than possibly with other approaches, such as interviews, because our data are based on the medical records written by professional staff.

The psychiatric diagnoses were made by psychiatrists who applied the ICD-10 diagnostic system without any structured interview, which would have been more reliable. Furthermore, we had no access either to the adolescents' outpatient information or to their inpatient data with respect to any treatment periods before the study period (2002–2011). If this missing information had been available, it would have been possible to gain a wider perspective of the treatment of depressed adolescents.

CONCLUSIONS

In conclusion, it is demanding to treat adolescents with a depressive disorder, especially if they are arriving from foster care. Fostered adolescents often are burdened by a traumatic family history and life experiences which significantly affect their entire lives. It seems that inpatient treatment of these adolescents is less beneficial compared to their non-fostered counterparts. The hospitalization of fostered adolescents can be only one part of their

comprehensive care. Therefore, it is important to invest in stable foster care combined with adequate psychiatric outpatient care tailored to the needs of each individual adolescent.

Disclosures

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Authors

Viivi Snellman M.Sc. (Pharm.)¹
Anne Lecklin Ph.D. (Pharm.)¹
Eila Laukkanen Ph.D.²

¹ School of Pharmacy, University of Eastern Finland, Kuopio, Finland

² Department of Adolescent Psychiatry, Kuopio University Hospital and Faculty of Health Sciences, University of Eastern Finland, Kuopio, Finland

Correspondence

Viivi Snellman
School of Pharmacy
University of Eastern Finland
P.O. Box 1627
FIN 70211 Kuopio, Finland

viivis@student.uef.fi

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