



Evaluation of institutionally reared children and adolescents in terms of mental health in ankara

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Abstract

Background:

Although it has been shown in many studies that children in institutional care have a high level of behavioral and emotional problems and have many risk factors that will predispose to the development of mental illness, studies in our country, which examines the mental symptoms of children in institutional care and possible factors that may cause these symptoms, are very limited.

Methods:

Sample of the study was composed of children and adolescents who were living under institutional care at Saray Child Houses Site in Ankara and who applied to Ankara Yildirim Beyazit University Yenimahalle Training and Research Hospital Child and Adolescent Psychiatry outpatient clinics between 15.09.2019-15.01.2020 for various reasons. The participants were screened retrospectively for their sociodemographic features, whether they had special needs, and psychiatric diagnoses determined by clinical interview according to DSM 5.

Results:

Ninety-one children and adolescents raised in institutional care were examined in the study, 82 (90.1%) were boys. It was determined that they applied with the complaints of hyperactivity / attention problems (29, 31.9%), temper tantrums (15, 16.6%), renewal of medical board reports for special education (14, 15.4%). Eighty-three (91.2%) of the participants had at least one psychiatric diagnosis and the most common of these diagnoses were attention deficit hyperactivity disorder (51, 56%), mild mental retardation (23, 25.2%), depression (17, 18.6%) and conduct disorders (15, 16.5%). It was determined that there were 46 (50.5%) children with special educational needs, and children with special educational needs have significantly more co-psychiatric diagnoses than those without special needs ($p:0.038$). Children with special educational needs were found to stay on a significantly longer duration in the institution ($p:0.015$).

Conclusion:

In this study, seen that the vast majority of applicant children and adolescents have multiple psychiatric diagnoses and need multiple psychopharmacological treatments. It is necessary to evaluate the mental health problems in institutional care holistically, determine the factors that negatively affect their mental health and cognitive development, and generate goal oriented interventions.

Keywords:

Institutional reared children, mental health, children with special needs



Background

In cases where the child's physical and mental development can be negatively affected due to reasons such as impaired family functionality, abuse and neglect, having a mental or physical disability, having a disease that can prevent parents from giving care, poverty, loss of parents, war, migration, social services intervention may be required to protect the child [1]. In such cases, the need for protection is met by the government, taking into account the best interests of the child. According to the data of the Republic of Turkey Ministry of Labor, Social Services and Family in December 2018, 14.214 children are reported to be under institutional care through “the Children's Houses Site (111), Children's Houses (1.192) and Child Support Center (63)” organizations [2]. Since the first reports on the effects of institutional care on children's quality of life, many studies have been conducted on the mental health of children in institutional care, especially in western societies [3]. It is emphasized that children and adolescents living in the institutional environment are very vulnerable to mental disorders due to their experiences before being admitted to the institution such as child abuse and neglect and separation from their biological parents [4]. These children are often shown to have a family whose family functionality is impaired. Family dysfunction is known as a factor associated with the development of emotional and behavioral disorders among children and adolescents [5]. In addition, a number of factors such as the age they are directed to the institution and the length of time they spend in the institution, lead to the occurrence of various emotional and behavioral problems [6]. In recent years, research conducted with children and adolescents raised in institutional care has shown that in addition to externalizing symptoms such as hyperactivity, aggression, anti-social behavior, internalizing symptoms such as depression, anxiety and difficulty in emotion regulation are higher than the population sample [7]. In a study with institutionally reared children in the UK, 45% of adolescents between the ages of 5 and 17 were reported to have mental health problems requiring child psychiatry assessment and intervention, and these rates were four to five times higher than children in the community sample. It was shown that 37% of these children had behavioral problems that required intervention, 12% had emotional problems (mainly anxiety and depression) and 7% had symptoms of hyperactivity. It is also stated that many of the children in institutional care have more than one mental disorder [8]. In the state of Missouri, USA, 62% of the youth in the institutional care system have been shown to have at least one mental disorder throughout their life and 37% have had a mental disorder in the past year [9]. Although it has been shown in many studies that children in institutional care have a high level of behavioral and emotional problems and

have many risk factors that will predispose to the development of mental illness [4, 5, 7, 10,11], studies in our country, which examines the mental symptoms of children in institutional care and possible factors that may cause these symptoms, are very limited. In this study, it was planned to examine the sociodemographic and clinical characteristics of the children and adolescents in the institutional care of

Methods

Sample of the study was composed of children and adolescents who were living under institutional care of Saray Child Houses Site in Ankara and who applied to Ankara Yıldırım Beyazıt University Yenimahalle Training and Research Hospital Child and Adolescent Mental Health and Diseases outpatient clinics between 15.09.2019-15.01.2020 for various reasons. The mental disorders of the participants were determined by clinical interview based on DSM 5 diagnostic system. For participants with a diagnosis of mental retardation and / or autism spectrum disorder, The Aberrant Behavior Checklist (ABC) , which is routinely used in our clinic, was filled in by the caregiver. Sociodemographic data and clinical information of each participant were obtained from retrospective file records.

Data Collection Tools

Sociodemographic Data Form:

This study was conducted with information obtained from the interviews with children and adolescents and their parents in ADHD and control groups. Information of the participants such as age, educational status, length of stay in the institution, family contact status, reason for coming to the institution, presence of siblings in the institution, special needs status, height, weight, medications used were recorded in this form for each case.

The Aberrant Behavior Checklist (ABC):

ABC was originally developed to evaluate treatment effects (psychopharmacological, behavioral, other) in people with mental disabilities [12]. ABC has also been shown to be useful in evaluating inappropriate and incompatible behaviors in various psychiatric disorders [13]. ABC is a scale consisting of 58 items and scored from 0 (no problem) to 3 (problem is the most severe) according to the severity of the symptoms (on four different values) [14]. Five subgroups are obtained in scoring the items. These are sub-problem areas such as irritability, lethargy, social withdrawal, stereotypical behavior, hyperactivity

and speech problem. Psychiatric clinical validity and reliability study in Turkey by Karabekiroğlu and Amanda [13].

Statistical analysis

Statistical Package for Social Sciences (SPSS) 23.0 statistics program was used to analyze study data. Descriptive statistical methods (percentage, numbers, mean, standard deviation, etc.) were used to analyze qualitative data. The normal distribution of the data was tested by the "Kolmogorov Smirnov" analysis. Since the data did not show normal distribution, the Mann Whitney U test, a nonparametric test, was used to compare the scores of binary group variables. Statistical significance value was taken as $p < 0.05$.

Results

Ninety-one children and adolescents under institutional care were examined in the study. 90.1% ($n = 82$) of the participants were boys. It was determined that the participants whose average age was 120.5 ± 24.9 months were under the institutional care for an average of 3.57 ± 2.89 years. Children and adolescents taken to the institution under 6 years of age constitute 35.2% ($n = 32$) of the sample. The most frequent reason for being taken into institutional care was the deterioration of family integrity with 41.8% ($n=38$). It has been determined that 12.2% ($n=11$) of the children and adolescents who are under the care of the institution do not meet anyone from their family. It was determined that they applied with complaints of hyperactivity / inattention ($n=29$, 31.8%), temper tantrums ($n=15$, 16.5%), special needs reports renewal ($n=14$, 15.4%). Eighty-three (91.2%) of the participants had at least one psychiatric diagnosis and the most common of these diagnoses were attention deficit hyperactivity disorder (51, 56%), mild mental retardation (23, 25.2%), depression (17, 18.6%) and conduct disorders (15, 16.5%). It was determined that at least one psychiatric comorbidity was accompanied in 60.4% ($n=55$) of the participants, and 14.3% ($n=13$) were accompanied by other medical diseases (epilepsy, asthma, cerebral palsy, hypothyroidism, etc.). 14.3% ($n = 13$) of the sample was followed without medication. In this study, 44% ($n=40$) of the sample was using methylphenidate, 32.2% ($n=32$) was using risperidone, 14.3% ($n=13$) was using atomoxetine, 12.1% ($n=11$) was using aripiprazole, 16.5% ($n=15$) was using fluoxetine, 13.2% ($n=12$) was using sertraline and 8.8% ($n=8$) was using other preparations (e.g., haloperidol, desmopressin acetate, olanzapine). Multidrug use was 46.2% ($n = 42$) (Table 1). While the frequency of

psychiatric comorbidity was 73.9% (n=34) in children with special needs (n=46, 50.5%), it was 46.7% (n=21) in those who did not. The average length of stay in the institution for children with special needs was 4.07 ± 3.19 years, while it was $2.57 + 1.81$ years for those without special needs. The frequency of psychiatric comorbidity and duration of stay in the institution were significantly higher in children with special needs ($p = 0.015$, $p = 0.038$, respectively) (Table 2). While ABC total score was 76.4 ± 42.54 in children with multiple drug use of children with special needs, ABC total score was 63.66 ± 33.15 in single drug users. There was no significant difference in ABC scores between those with (n=15) and without (n=21) multiple drug use among children with special needs ($p>0.05$) (Table 3).

Table 1. Sociodemographic characteristics of institutionalized children.

Characteristics (n=91)	n	%
Gender		
<i>Girl</i>	9	9.9
<i>Boy</i>	82	90.1
Age of institutionalization		
<i>0-6</i>	32	35.2
<i>6 and above</i>	59	64.8
Reason for Coming to the Institution		
<i>Disruption of Family Integrity</i>	38	41.8
<i>Poverty</i>	16	17.6
<i>Neglect</i>	16	17.6
<i>Death of at least one of the parents</i>	9	9.9
<i>Abuse</i>	8	8.8
<i>Other</i>	4	4.4
Family Interview Status		
<i>Meeting with both mother and father</i>	20	22.0
<i>With mother only</i>	29	31.7
<i>With father only</i>	18	19.8
<i>With only second degree relative</i>	13	14.3
<i>Absent</i>	11	12.2
Sibling Presence in Institutional Care		
<i>Yes</i>	72	79.1
<i>No</i>	19	20.9
Special Needs		
<i>Yes</i>	46	50.5
<i>No</i>	45	49.5
Complaint of Application		
<i>Hyperactivity/Inattention</i>	29	31.8
<i>Temper tantrums</i>	15	16.5
<i>Special needs reports renewal</i>	14	15.4
<i>Bullying / Resisting the Rules</i>	14	15.4
<i>Frequent crying / Unhappiness</i>	12	13.2
<i>Other</i>	7	7.7

Table 2. Comparison of Clinical Features of Children with Special Needs (CSN) and Children without Special Needs (CWSN)

Characteristics	CSN (n=46)	CWSN (n=45)	p-value
Duration of Stay in the Institution Mean \pm SD	4.07 \pm 3.19	2.57 \pm 1.81	0,038 ¹
Psychiatric Comorbidity (n, %)	34/73.9	21/46.4	0,015 ¹

Abbreviations: SD: Standard Deviation; p <0.05; 1: Mann Whitney U

Table 3. Comparison of Clinical Features of Children with Special Needs According to their drug use

Characteristics	Multiple drug users (n=13)	Single drug users (n=20)	p-value
Total ABC Mean \pm SD	76.4 \pm 42.54	63.66 \pm 33.15	0.391
Psychiatric Comorbidity (n, %)	34/73.9	21/46.4	0,015 ¹

Abbreviations: ABC: The Aberrant Behavior Checklist; SD: Standard Deviation; p <0.05; 1: Mann Whitney U

Discussion

In this study, socio-demographic data and clinical features of children and adolescents who are under institutional care of Saray Child Houses Site in Ankara, who applied to our clinic, were analyzed retrospectively. In this study, it was determined that half of the children under institutional care have special needs. It has been shown that children with special needs are more likely to stay in the institution and the frequency of additional psychiatric diseases than those without special needs. An Illinois-based study reported that 29% of school-aged children under institutional care receive special education services [15]. In another study conducted in the USA, 47% of the youth growing under institutional care were found to have special needs. Various studies show that the prevalence of special needs among children and adolescents under institutional care ranges from 14 to 47% of the population [16]. Although our results are similar to the results of previous studies, it is seen that our sample has a higher need for special needs. This difference may result from methodological differences such as sample selection between studies.

It has been stated that mental health of these children may be at risk due to the negative effects of mental disorders and risk factors related to living under preventive care [16]. In a recent study, it was shown

that children in institutions with special needs stay longer period of time under institutional care than others [17]. In this sense, our results support the results of previous research.

When the reasons for being taken into institutional care were examined, it was found that the need for care was most frequently caused by the disruption of family integrity, poverty, neglect and abuse. It has been determined that 12.2% of the children and adolescents who are in the care of the institution do not meet anyone from their family. These findings are similar to the results of studies conducted in our country and others [7,18,19].

It was determined that 91.2% of the children under institutional care had at least one psychiatric diagnosis that met the DSM-5 criteria, and 60.4% of them were accompanied by at least one psychiatric comorbidity and 14.3% accompanied by other medical diseases (e.g. epilepsy, asthma, cerebral palsy, hypothyroidism). Children under institutional care are much more likely to have risk factors that predispose to the development of mental disorders than other children. 76.2% of youth living in institutional care in Norway have been shown to meet the criteria for symptoms, onset, duration, and dysfunction for at least one DSM-4 diagnosis [20]. In a recent study conducted in our country, the presence of psychopathology at the level of diagnosis according to DSM-5 criteria was shown in 90.2% of the children under institutional care who applied to a child psychiatry outpatient clinic [21]. In the same study, 52.5% of those diagnosed with psychiatric disorders were shown to be accompanied by at least one psychiatric comorbidity. In another study conducted with children under institutional care, it was stated that psychiatric comorbidities were as high as 37% in those diagnosed with psychiatric disorders [21]. Studies with children and adolescents under institutional care have reported prevalence estimates of 44-96% for at least one psychiatric disorder [20]. It is well known that prevalence rates of psychiatric disorders vary according to age and gender [22,23]. The results of the frequency of mental disorders in children under institutional care of our study are very similar to the results of the study conducted in our country [21]. However, in order to determine the prevalence of mental disorders of children under institutional care, it is thought that epidemiological studies to be carried out with larger samples are needed in our country.

It was determined that the children under institutional care applied to our outpatient clinic most frequently with complaints of hyperactivity/inattention, temper tantrums and special needs reports renewal. It has been determined that the most common diagnoses seen in children presenting with these

symptoms are the most frequent attention deficit hyperactivity disorder (56%), mild mental retardation (26.3%), depression (18.6%) and conduct disorders (16.5%). It was determined that 85.6% of the sample had at least one psychotropic drug use and 46.2% more than one. The most commonly used psychotropes were methylphenidate (44%), risperidone (32%) and fluoxetine (16.5%), respectively. In studies conducted, the ADHD prevalence or ADHD risk ranges from 3.8 to 68% due to heterogeneity in procedures for estimating ADHD rates of children in institutional care [24]. In a study conducted with a large sample in our country, it was stated that problems related to attention, externalizing problems and social problems were more common in children and adolescents under institutional care compared to the population sample [25]. In metaanalysis evaluating the prevalence of mental disorders in children under institutional care, the most common mental disorders were shown to be disruptive disorders (27%), anxiety disorders (18%) and depressive disorders (11%) [4]. In a recent study conducted in our country, it was stated that children under institutional care who applied to the child psychiatry outpatient clinic were diagnosed with ADHD (52.5%) most frequently, followed by major depressive disorder (24.6%) and conduct disorder (24.6%), respectively [21]. Attachment theory emphasizes that attachment between child and parent plays a very effective role in child's development and mental health [26]. Many studies have shown the link between disorganized attachment models and a tendency for mental disorders [27, 28]. It is known that negative experiences such as abuse and serious neglect in institutional reared children and adolescents reduce the possibility of safe attachment, which is very important for psychosocial development and mental health [29, 30]. In this sense, attachment theory is among the factors that will explain the prevalence of mental disorders in children under institutional care. In addition, it is thought that the negative experiences (eg peer bullying, frequent institutional change) they experienced while in the care of the institution may contribute to the worsening of the already existing manifestation symptoms or to the occurrence of coexistent disorders [17, 31].

It was stated that institutional reared children use two to three times more psychotropic drugs than similar children in the society such as emotional and behavioral consequences of negative life events to children, and differences in access to psychosocial interventions [32]. In addition, it was found that two or more psychotropic drugs were used in the treatment of 27.2% to 52% of children in pediatric psychiatry outpatient clinics [33]. It has been shown that this pattern is most often preferred for children in institutional care, children with special needs and children from low-income families [33]. In our study,

in the treatment of institutional reared children with mental retardation and / or autism spectrum disorder, ABC scores were compared between those who used multiple drugs and those who were followed by single drug and / or behavioral therapy only. In the symptom control of multiple drug use evaluated according to ABC scores, no superiority was found compared to the other group. Although safety issues, including drug-drug interactions and negative metabolic effects, are well documented, studies on the efficacy and quality of treatment for children and adolescents are insufficient [34]. Our results require that multi-drug use in institutional reared children with special needs should be re-evaluated in a longer sample in the longitudinal pattern in the future.

In our study, it can be considered as a limitation that the sample size is small and that it is composed of children under institutional care who apply to a tertiary hospital only. When other limitations are examined, the fact that the clinical information was obtained only from children and caregivers and that no information was received from teachers or parents suggests that the reliability of the data may be low. Another limitation is that the study is carried out retrospectively, as a file scan.

The results of this study can contribute to the determination of factors that negatively affect the mental health of children in institutional care and to develop targeted mental interventions. The number of children and adolescents taken into institutional care is increasing day by day. Therefore, it is thought that the data obtained from the epidemiological studies to be carried out nationwide in this field will contribute to the development of preventive mental health services.

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