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Mental health of adolescents reared in institutional care in Turkey: challenges and hope in the twenty-first centur

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Abstract

The objectives of the study are (i) to describe and compare the epidemiology of emotional/behavioral problems and associated risk/protective factors among nationally representative samples of institutionally reared and similarly aged community-based adolescents brought up in their natural homes by means of youth self-reports, caregiver/parent, and teacher informants; and (ii) to identify mental health service needs and utilization. A cross-sectional survey was conducted between November 2005 through April 2006 using an equal probability cluster sample of 11–18 year old adolescents in institutional care settings (N = 350; 163 males, 187 females) and results were compared with similarly aged community sample of youth living in their natural homes (N = 2,206). The Sociodemographic Information Form, Youth Self Report (YSR), Child Behavior Checklist (CBCL) by caregivers for institutional sample and parents for the community sample, and Teacher's Report Form (TRF) were used to obtain standardized data on demographic characteristics, emotional/behavioral problems, and risk/protective factors. The prevalence of problems behaviors by YSR, caregiver/parent CBCL, and TRF were: 47, 15.1, 20.5% for the institutional versus 10.1, 7.5 and, 9.5% for the community samples, respectively ($p < 0.05$). Youth self-reports were fourfold, and all informant reports were twofold higher for institutional versus community comparisons. Furthermore, institutional sample had consistently higher rates, not only of Externalizing, but Internalizing, Social Problems, Attention Problems, and Thought Problems, as well as discrete DSM-oriented scales, suggesting that labeling of institutional youth as simply aggressive and delinquent contributes to their further marginalization and does not comprehensively address their mental health needs. In terms of protective factors, we found that: perceived social support, high competency scores, supportive caregiving, getting along well with peers and relatives (positive relationships), and problem solving skills were significantly protective of mental health. On the other hand fatalistic beliefs, cigarette and alcohol use were significantly associated with increased risk for problem behaviors ($p < 0.05$). The primary reason for institutional placement was family disruption (68.9%), poverty (15.7%), abandonment (8.4%), and physical or sexual abuse (5.4%). Only 31.2% of the youth were in fact true *orphans* (loss of one or both parents). It is therefore remarkable that in terms of service use, despite consistently high prevalence of problem behaviors across all informant sources, only 2.4% of the youth had

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received any speciality mental health services during institutional care. In conclusion, there is a pressing need to transform the social and health care policy and to provide family and community-based alternatives for youth currently in institutional care in Turkey. Before this goal is achieved, it is necessary to address their mental health needs urgently and comprehensively. The highest rates of problems by youth self-report also support the view that the youths' own voices ought to be heard and need to inform the reform process regarding their future care.

Keywords

Institutional care; YSR; Mental health services needs

Introduction

Research and human rights analyses have consistently shown that national policies that permit parents to surrender their young to institutional care are not serving the best interests of children and adolescents [5, 10, 26, 28, 29, 32, 33, 41-43]. Compared to those in developed countries, many families living in developing regions of the world continuing to struggle with rapid social change. Poverty, economic crisis, internal displacement, and migration [3, 21] as well as abuse, neglect, disruption and complex social and health burdens upon families all contribute to children being placed in institutional care. In Turkey, a major contributory factor has been parental abondonment [37] with the expectation that the in loco parentis system of residential care will do a better job in caring for the youth. Although, research till date has highlighted the negative impact of institutional care on infants and young children, less is known about the fate of adolescents currently living in institutional settings in Turkey; beyond 18 years, many of the youth are unable to enter the higher education system or find gainful employment. There has been little documentation of the risk and protective factors, especially with respect to their mental health outcomes. This paper seeks to offer new evidence on the effects of institutional care on a representative probability sample of adolescents living in institutions across Turkey.

Although the number of institutions (once termed “orphanages”) have declined in numbers worldwide, an estimated one million children currently live in residential institutions across Europe [8, 40]. In 2004, 13–18 million children worldwide were orphaned by AIDS [39]. In South Africa alone, it is predicted to have 2.3 million children orphaned by AIDS by 2020 [11].

According to the General Directorate of Social Services and the Child Protection Agency (acronym SHCEK in Turkish), in 2005 there were approximately 20,000 children and adolescents (total number about 23 million), from birth to 18 year of age, who were living in various levels of institutional or surrogate care. Consistent with the inclusionary national educational policy, 91 % of these school-age children in institutions in Turkey were able to attend regular catchment public schools outwith the institutions [36].

Among the youth concerned under SCHEK services, 92% were in residential institutional facilities, 4% in foster care, and smaller number in adoptive families, mostly among extended family households. In addition to the lack of child care policies promoting foster care and adoption services, other reasons that have contributed to the increasing number of children being placed in institutions include the following: (i) financial inability of parents to care for a child and lack of parenting skills to do so; (ii) parental unwillingness in the face of stigma to rear a child with disabilities; and (iii) loss of parental rights due to abuse and/or neglect. In the context of high unemployment, the institutions have also tended to represent a form of stable local employment and have been bureaucraticaly maintained, even though

the situation has been considered undesirable by policymakers. More recently, the conditions of children in institutional care have come under close scrutiny of the national and international media due to the poor conditions in some institutions. The situation has also been highlighted by child and disability rights advocacy groups. The debate is therefore increasingly in the forefront of political interest in Turkey and evidence-base is crucial to supplement the movement to not only shift policy to family and community-centered services for children, but for addressing the needs of the youth themselves.

In Turkey, the SCHEK has been entrusted with the care of children by the State through court mandates. The Social Services and Child Protection Agency Law of 1983 stresses the availability of preventive social work at the general and community levels and encourages family supports and other alternatives to prevent placing children under State care. Furthermore, according to the Convention on the Rights of the Child (1989), to which Turkey is signatory, if it is necessary to remove children from their family, then placement in foster or adoptive families is preferable to institutional care [12]. In 2007, the number of children living institutions declined and re-unification with the birth or an extended family were provided with protection of the child's autonomy and his or her right to enjoy family-centered life. In addition, small social care units in the form of group homes integrated into the local community have been considered. Nevertheless, institutional care has been maintained as the most common form of surrogate care placement in the country.

Adolescence is a critical period not only in terms of physical growth but also in terms of continuing brain development and emergence of premorbid mental disorders [30]. To our knowledge, no prior representative study has obtained detailed assessments of mental health problems and competencies among adolescents living in institutional care. The aims of this study were: (i) to examine the prevalence of emotional and behavioral problems, and associated risk and protective factors from multiple informants among children ages 11–18 years reared in institutions in Turkey compared with a nationally representative community sample of similarly aged youngsters brought up by their own families; (ii) to define mental health needs and utilization. This study was part of the youth component of the larger epidemiological surveys on institutions in Turkey designed to generate systematic data for promoting mental health. This study adds to existing research by providing the only nationally representative epidemiological data collected till date on institutionally reared adolescents in Turkey.

Method

Sample

Currently approximately 10,000 adolescents ages 11–18 years live in institutions across the country under the auspices of the Social Services and Child Protection Administration (SHCEK). All the residential institutions administered by the SHCEK have a minimum of 85 and a maximum of 400+ children divided into *wards* of approximately 15–24 occupants. A typical ward includes a sleeping room, living room, and bathroom. Each residential facility has a director, who is generally a teacher or a social worker; there are additional staff including a social worker, a psychologist, nurses, child caregivers, and office staff.

Participants into the study were recruited form November 2005 through April 2006 among twelve institutions housing adolescents and representing in different geographical areas. The aim was to reach 393 adolescents using the probability cluster sampling method. The random sample consisted of 350 adolescents, 163 boys (46.6%) and 187 girls (53.4%), ages 11–18 years.

The study was approved by the ethics committee of the Ankara University School of Medicine and Department of Child and Adolescent Psychiatry with administrative approval of the Social Services and Child Protection Administration (SCHEK). The inclusion criteria were residence in the institution for at least 1 year, and attendance in school. Participation was voluntary and informed consent was also obtained from the adolescents as well as their caregivers and teachers. After random selection, the adolescents were interviewed at the institutions on weekends by trained personnel. For the total study sample (N = 393), response rates were 350 (89.1%) among adolescents, 284 (72.2%) among caregivers, and 281 (71.5%) among teachers.

Adolescents from the national mental health profile representative sample served as the control group. The national study was a cross-sectional population based survey with self-weighted, multi-staged, stratified and cluster sampling plan. The subjects assessed included: 2,190 CBCLs, 1,123 TRFs, and 2,206 YSRs with response rates of 83.9, 87.7, and 79%, respectively [20].

Data collection of the institutional study was carried out by four local supervisors and six field staff who were selected according to the sampling plan, that included psychologists, and social workers. A pilot study phase was conducted in an institution in Ankara, and this was not selected in the sample. All interviewers participated in 2 days of theoretical and practical training course in Ankara. A permission letter describing the survey was presented to each caregiver and youth, followed by a copy of the Socio-Demographic Information Form and CBCL, TRF and YSR. Most interviews were conducted on the weekends or after 5:30 p.m. on weekdays with caregivers. In the present study, we collected data from the teachers as well. A permission letter was presented to the teachers by the interviewers. Finally, all socio-demographic and service use information were collected from the health records and youth files.

Measures

Youth Self Report (YSR)—The YSR [1, 2] is a self-report questionnaire that is part of the ASEBA family of assessment instruments used in previous epidemiological studies in Turkey reported by our group [20, 21]. The YSR is designed to obtain 11–18 year olds' self-ratings of emotional, behavioral, and social problems, plus an open-ended item for describing and rating somatic complaints not included among the more specific items. The YSR includes 17 items for rating adaptive characteristics and 112 items for behavioral and emotional problems. Items are rated on a three-point scale as 0 = not true, 1 = somewhat or sometimes true, and 2 = very true or often true, based on preceding 6 months. The following eight syndromes are scored from the YSR; Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule Breaking Behavior, Aggressive Behavior. The Anxious/Depressed, Withdrawn/Depressed, and Somatic Complaints syndromes comprise an Internalizing group. The Rule Breaking Behavior and Aggressive Behavior syndromes comprise an Externalizing group and Total Problems are the sum of scores on all problem items. The YSR Total Competence score is obtained by summing the raw scores of the Activities and Social scales, plus Academic Performance.

The YSR also features DSM-oriented scales that were constructed for the following DSM-diagnostic categories: Affective Problems, Anxiety Problems, Somatic Problems, Attention Deficit/Hyperactivity Problems, Oppositional Defiant Problems and Conduct Problems [2].

The YSR was translated into Turkish with a second translation and back-translation procedure being followed. For the Total Problems score of the Turkish YSR, the test-retest reliability is 0.82 and Cronbach's alpha is 0.89 [20]. In the present sample, Cronbach's alpha

for Total Problems was 0.91. Confirmatory factor analysis (CFA) was used to test the measurement structure of YSR scores. To test the applicability of the YSR syndromes to Turkish samples, the same statistical procedures were applied as described by De Groot et al. [16] and Dumenci et al. [18]. Very good fit between the Turkish data and the YSR factor model was indicated by the Root Mean Square Error of Approximation (RMSEA) of 0.04 [23, 24].

Teacher's Report Form (TRF)—The 2001 edition of TRF, designed for ages 6–18, has 118 specific problem items, plus two open-ended problem items, all of which are rated on a three-point scale as described for the YSR [2]. The same translation methods were used for the translation of TRF. The test-retest reliability of the Turkish TRF is 0.88 for Total Problems and Cronbach's alpha was 0.87 [20]. In the institutional care sample, the Cronbach's alpha was 0.84. Ivanova's study showed the generalizability of the overall measurement structure of the TRF to the Turkish population [23, 24]. The majority of school-age children (6–18 years) in institutions in Turkey attend regular public schools in the community outwith the institutions Therefore, the school teachers were teaching mixed classes of children, i.e., those in institutions and those living in the community, and they may be considered as more objective informants than if they were teaching classes only comprised of children living in institutions.

Child Behavior Checklist (CBCL/6–18)—The CBCL is designed to obtain parents'/caregivers' reports of their children's problems [2]. The same translation methods were used for translating the CBCL. The test-retest reliability of the Turkish form is 0.88 for Total Problems and the Internal consistency was also good (Cronbach alpha = 0.87) [20]. Internal consistency for Total Problems was 0.96 in this institutional care sample.

The new correlated eight-factor measurement structure of the CBCL for ages 6–18 (CBCL/6–18; [2] derived from an American sample was used as a benchmark to evaluate its generalizability to Turkish general population (N = 5,195) and clinical (N = 963) samples. Item-level CFA was used to evaluate the correlated eight-factor model across three Turkish samples (general population, clinical, and both children from samples whose Total Problems scores were above the Turkish national median). The results supported the generalizability of the overall measurement structure of the CBCL to the Turkish population [18].

Measures of competency—Competencies were assessed using the first section of CBCL, TRF and YSR forms. The CBCL and YSR has Activities (number of sports, mean of participation and skill in activities, number of jobs, mean job quality, number of other activities), Social (number of friends, frequency of contacts with friends, number of organization members), and School Scales (mean performance at lessons, repeated grade, school performance). TRF has academic performance, working hard, learning and happy section.

Adolescent socio-demographic information form—Data were obtained from the records of each adolescent in institutional care. The questionnaire was designed to capture basic socio-demographic information, as well as risk and protective factors thought to influence problem behaviors. This included information on the socio-demographic background of the children such as age, gender, age at first admission to the facility, contact with parents or relatives during care, information regarding siblings in the same or other institutions, reason for admission, care before admission to current institutions, moves between institutions, supportive characteristics of caregivers, problem solving skills and fatalism and hopes about the future. During the focus group interviews prior to the research study, we also tried to use the Multidimensional Scale of Perceived Social Support (MSPSS) which has 12 items that assess perceived adequacy of support from the family, from a

significant other, and from friends [25,45]. Ratings are made on a seven-point scale ranging from (1)"very strongly disagree" (7) to "very strongly agree," but we realized that the adolescents had difficulties using seven-point scale.

We therefore used only the following items related to evaluation of supportive characteristics of caregivers: *'There is a caregiver with whom I can share my joys and sorrows', 'I get the emotional help and support I need from this orphanage/caregiver', 'Asked someone I respected for advice and followed it'*.

We also used the following items to evaluate their problem solving skills and fatalistic beliefs: *'Talked to someone who could do something concrete about the problem'; 'Try to find solutions to the problem step by step'; 'Came up with a couple of different solutions to the problem'; 'I can't do anything that will change the outcome'; 'Something over which I have no control'*. We defined the fatalism as acceptance of the endorsed belief that all events are predetermined and inevitable.

Data analyses

Chi-squares and *t* tests were performed to compare the institutional care and community samples. Bivariate correlational analyses were used to examine relations between risk and protective variables and behavioral problems. Predictive factors were included in the subsequent models if they were significantly associated at $p < 0.05$ level with any outcome variable in the bivariate analysis. Multiple regression models of outcome were estimated to determine independent associations of these protective and risk factors with the problem behaviors. All independent variables were entered simultaneously. These models fit the Durbin-Watson analysis and linear models according to F analysis.

With the YSR, TRF and CBCL Total Problem score as the dependent variable, the following variables were tested: (a) child gender (dummy coded: 0 = girls; 1 = boys); (b) reason for admission (dummy coded: 0 = family disruption, poverty; 1 = abused); (c) contact with parents or relatives (dummy coded: 0 = yes; 1 = no contact); (d) moves between institutions (dummy coded: 0 = more than two; 1 = no or only one); (e) tobacco and alcohol use (dummy coded: 0 = no; 1 = yes); (f) fatalistic beliefs (dummy coded: 0 = no; 1 = yes); (g) supportive caregivers (dummy coded: 0 = negative; 1 = positive); and (h) problem solving skills (dummy coded: 0 = no; 1 = yes). Current age, age at first admission, and competency were entered as continuous variables.

To calculate the Total Problem prevalance, the cut-off criterion was based on the 90th percentile of the normative distributions of YSR scores [2].

Results

Demographic and background characteristics

The mean ages of the youth were 14.6 ± 2.0 in institutionalized sample, and 14.4 ±2.1 in community care sample. There were no significant differences in the mean ages and gender distribution of the institutional and community care adolescents ($p > 0.05$). The mean admission age to the institutional unit was 90.3 ± 42.2 months (range 1–180 months). Among the institutional youth, 51.9% had lived with their parents and 7.4% had lived with their relatives prior to admission to the institutional unit, with 34% having previously lived in other institutions prior to referral to the present facility. In fact, 35.2% of the youth had gone through inter-institution transfers more than two times. Mean duration of institutional care was 39.8 ± 31.1 months (range 1–168 months). Thus, the youth in the study had lived for considerable duration in institutional care. In addition, 79.9% of the youth had siblings in different institutions, and 56.7% had siblings in concurrent institutional placement.

We used the UN definition of *'orphanhood,'* i.e., loss of one or both parents [39]. In the present study, it was found that 31.2% of youth in institutional care could be classified as true biological orphans were both parents are deceased. Almost 68.8% of the adolescents have at least one parent alive.

Parental psychiatric disorders were assessed from available case records compiled at the time of the children's admission into the facilities; 22.9% of the parents had a history of mental disorder. Nearly 70% of the children continued to have regular contact with their parents or close relatives in touch with them, spending vacation time with them and/or having ongoing telephone contact. The primary reason for institutional placement was family disruption (68.9%), poverty (15.7%), abandonment (8.4%), and physical or sexual abuse (5.4%). In terms of substance use frequency, 24.4% of adolescents were smokers, 10.1% alcohol users.

Comparison of behavioral and emotional problems and competencies in institutional care and in family care samples

Mean scores for the problem scales—Table 1 presents the YSR, CBCL and TRF scale mean problem scores for institutional and community care samples. The Total Problems scores overall were higher by YSR than by caregiver/parent (CBCL) and teacher informants (TRF). The mean Total Problems scores by youth, teacher and caregiver/parent reports were: 55.1 (±27.6), 37.6 (±29.4), 21.1 (±16.2) in the institutional sample versus 30.9 (±20.3), 27.5 (±22.9), 26.5 (±22.0) for the community sample, respectively. All differences were significant at $p < 0.01$.

The mean Internalizing Problems scores by youth, teacher and caregiver/parent reports were: 19.1 (±10.2), 10.8 (±8.3), 7.2 (±5.7) in the institutional sample versus 11.9 (±7.8), 9.2 (±7.4), 8.2 (±6.4) for the community sample, respectively.

On Externalizing Problems, the mean scores by youth, teacher and caregiver/parent reports were: 13.8 (±9.2), 8.0 (±9.2), 8.9 (±10.1) in the institutional sample versus 7.5 (±6.2), 5.2 (±6.8), 5.0 (±5.4) for the community sample, respectively.

On the DSM-oriented scales, the youth and teachers reported significantly more problems for institutional than community samples ($p < 0.01$). The caregivers reported more ADHD Problems, Oppositional Defiant Problems and Conduct Problems for institutional than community samples; no significant differences were reported by Affective Problems, Anxiety Problems or Somatic Problems.

In summary, the findings revealed that youth in institutional care tend to have high rate of diverse range of problems in all domains (total, externalizing, and internalizing) and with much higher rates by other informant sources in terms of Total, Externalizing Problems as well as DSM-III oriented disruptive behavior domains, but not so in terms of Internalizing Problems domains and affective, anxiety, and somatic domains. The caregivers reported fewer Internalizing Problems than parents of youth in community in care.

Prevalence of categorical behavioral problems and service use

The prevalence of clinically elevated Total Problems by youth reports was 47% in institutional versus 10.1% for community care samples, 15.1% in institutional versus 7.5% community, by caregiver versus parent reports, respectively, and 20.5% institutional versus 9.5% community, by teachers ($p < 0.05$). The prevelance of Externalizing, Internalizing, Social Problems, Thought Problems and Attention Problems are given in Tables 2 and 3. Institutional care sample had the highest prevalance rates on all problem scales except Internalizing. Even though the prevalence of problem behaviors was high among

adolescents in institutional care, only 2.4% received any speciality mental health care services. In the community sample, this was only 0.3% reflecting universal lack of availability and utilization of mental health services across the country.

Predictive factors in institutional care

Table 4 shows associations between socio-demographic factors and continuous psychological outcomes for institutional youth. YSR self report of Internalizing Problems were higher for females than males, and TRF Externalizing Problems were higher for males than females. The values presented represent unadjusted alpha values for multiple comparisons. No significant associations were found between gender and Total Problems.

Caregivers reported more CBCL Internalizing Problems for older than younger adolescents. Teachers reported higher TRF Externalizing and Total Problems for younger than older adolescents. The association between age at first admission and Externalizing and Total Problem scores was significant by teacher and caregiver reports ($p < 0.05$).

The total competence factor showed negative correlations with scores on all the problems by all informants. Adolescents who had higher competency scores had lower emotional and behavioral problems ($p < 0.05$). The reason for admission and moves between institutions was significantly related to teacher and caregiver-reported Externalizing and Total Problems scores ($p < 0.05$). Children admitted for abuse showed more problems than those who were admitted to the institutional care for family disruption or poverty. Table 4 indicates that youth had less problems when they had regular contact with parents or relatives according to teachers and caregivers ($p < 0.05$). Supportive care givers, good social relations (number of friends, getting along well with friends and relatives) were significantly related with decreased problem behavior scores ($p < 0.05$). On the other hand, youth with lower problem solving skills had higher problem behaviors. There was statistically significant correlation with respect to substance use ($p < 0.05$). There were no significant association between previous residence and parental psychiatric disorders with behavioral problems ($p > 0.05$).

Multivariate analyses

In a multiple regression analyses with forced entry of all variables, those variables that showed significant relations in our previous analyses of institutionalized adolescents' scores were examined. As shown in Table 5, multiple regression models explained about 33% of the total variance of Total Problems of YSR, 49% of TRF and 25% of CBCL. In this multivariate model, several risk and protective factors surfaced as significant predictors of Total Problems scores by multiple informants. According to the different informants, risk factors that predicted Total Problems at $p < 0.05$ included: reason for admission, lack of supportive caragiver, fatalistic beliefs, lack of problem solving skills, lack of social skills (competency), and substance use (tobacco, and alcohol use).

Discussion

Our findings indicate that adolescents in institutional care facilities had experienced significantly greater emotional and behavioral problems than those living in the community. The institutional sample had consistently higher rates, not only of Externalizing, but Internalizing, Social Problems, Attention Problems, and Thought Problems, as well as discrete DSM-oriented scales, suggesting that labeling of institutional youth as simply aggressive and delinquent contributes to their further marginalization and does not comprehensively address their mental health needs [27]. The youth in particular themselves reported far more problem behaviors on all three domains: Total, Externalizing, and Internalizing Problem scores.

First, the prevalence of Total Problems scores in the clinical range by youth, caregiver/parent, and teacher reports were: 47, 15.1, and 20.5%, in the institutional versus 10.1, 7.5, and 9.5%, for the community sample, respectively ($p < 0.05$). Far more problems were endorsed by self-reports by adolescents in institutional care. There was no significant effect of gender on Total Problems scores by informant or institutional versus community sources.

Second, youths in institutional care reported for more Internalizing Problems than evident by caregiver or teacher assessments. To raise awareness among caregivers and teachers of the distress and warning signs of internalizing concerns for helping the youth when they face such problems would be an important consideration in planning primary prevention as well as specialty mental health care services to address them. In fact, the youth in the institutional care sample reported higher scores on all three subsyndrome categories that comprise the Internalizing Problems scale (Anxious/Depressed, Withdrawn/Depressed and Somatic Complaints) or the three DSM-oriented scales that reflect internalizing-type problems (Affective, Anxiety, and Somatic). Findings of heightened internalizing concerns for institutionalized adolescent are consisted with studies from other developing countries [4, 11].

Third, the youth in institutions also suffer from far more externalizing problems as reported by self-report than by means of teacher or caregiver assessments. In a previous study in Turkey, Coskun [13] compared the emotional and behavior problems of 438 students ages 9–14 years from three types of schools (boarding, bussing, and regular catchment) in rural Ankara, and investigated the environmental and psychological predictors of academic success. The families were living in poverty and the youth were living away from their families for education and were under State protection. The YSR self and TRF teacher reports were used to measure the emotional and behavior problems. The boarding school students were the most disadvantaged among the three groups in terms of behavior problems, social support and school adjustment. Their results showed that the primary (grades 1–5) boarding school students' total adjustment scores were lower and their problem behavior scores were higher than those of the secondary (grades 6−8) boarding school students. The lower socio-economic status, rural residence, and residing far away from parents brought significant disadvantages.

Fourth, in terms of utilization of specialty care services, even though the prevalence of problem behaviors was high among adolescents in institutional care, only 2.4% received any speciality mental health services. The service utilization among the community sample was 0.3% in the mental health profile study reflecting lack of availability of services for the representative national population with almost non-existent mental health services in rural regions in the country [20]. There is therefore an unmet need for mental health services both at the national scale as well as in terms of targeted services for youth in institutional care in Turkey. The lack of services for the institutional care youth is particularly disconcerting given the high prevalence of self and informant reported problems.

The prevalence of behavioral disturbance among community school-aged youth has been estimated at 7–20% [6]. A longitudinal community study by Costello et al. [14] assessed the prevalence and development of mental disorders among 1,420 youth from age 9–16 years; the 3-month prevalence of any disorder averaged 13.3% during the study period, with 36.7% of participants (31% of girls and 42% of boys) having at least one mental disorder. The authors concluded that the risk of having a single mental disorder was much higher than point estimates would in fact suggest.

Findings from studies of child welfare samples in more developed countries may not necessarily be comparable to the community-based circumstances in a developing country,

nevertheless also indicate a high prevalence rate of 47.9% [9]. In this respect, previous studies support the view that as many 80% of youths involved with child welfare agencies have emotional or behavioral disorders, developmental delays, or other indications of need for mental health services [22]. These numbers suggest that youth in child welfare settings have over twice the rate of emotional and behavior problems found for community-based samples. Despite the estimate that one half of the welfare population had clinically significant emotional or behavioral problems, only one-fourth of this group received any mental health care [9]. The gap between need for and receipt of services is significant both on our own sample and the other samples. Although this gap parallels a similar proportion of unmet need for the general population, the magnitude is much greater due to an estimated prevalence that is 2.5 times greater in the child welfare population. Practical issues such as health care costs and overburdened care systems require more effective targeting of individuals exhibiting emotional and behavior problems [26].

The findings of our study also underscore the effects of fatalistic beliefs, lack of supportive caregiving, and the poor problem solving abilities as being powerful predictors of adolescents' emotional and behavioral problems. Previous research has also examined the effect of fatalism, the belief in external control over life chances, as a risk factor in particular for development of adolescent depression [31]. The higher rate of self-reported internalizing problems in terms of affective, anxiety and somatic concerns, by adolescents support the hypothesis (not directly tested by the present research) that the youth felt helpless over their life chances and control over their lives, otherwise externally unrecognized by key informants. It has been hypothesized that adolescents who demonstrate greater fatalism would be at higher risk for emotional and behavioral problems [31, 38]. Consistent with research on young adolescents, the results also indicate that caregivers play a crucial role in mitigating problem behaviors [19, 34]. Adolescents are more likely to have trusting relationships with caregivers who are consistent and nurturing. Adolescents reared in a high quality caregiving ecology are placed on a positive developmental path that has the potential to produce long-term positive outcomes [7].

Although these findings regarding the quality of the caregiving environment have long been emphasized, implementation of reforms has lacked substantively behind in many developing countries. The World Health Organization has recently launched the new Gap Action Programme (mhGAP) which aims at scaling up services for mental disorders especially for low and middle income developing countries. For the first time, the mhGAP has emphasized child mental health and child development as a major goal [44]. In the absence of family and community-centered services that are urgently needed, caregiver training and support remain critical steps. In planning for preventive mental health services interventions that improve problem solving skills and decrease fatalistic beliefs among adolescents in residential care are likely to be important nodal points given their important protective effects. It was notable also that both tobacco and alcohol use were additional important negative predictors of mental health in particular among adolescents in institutional care. Our results again support research suggesting that substance use and dependence are associated with behavioral problems [15] and this seems also to hold true for middle income developing countries.

The present study also underscores the importance of negative impact of abuse and neglect on the emergence of emotional and behavioral problems in affected children. This finding is consistent with previous research documenting the impact of maltreatment during childhood that leads to higher incidence of physical, emotional and behavioral as well as cognitive problems [10, 17]. Our results are also consistent with findings of previous studies which indicate that the risk of psychopathology may be mitigated in children that remain in contact with a parent or a parental figure, obtain social support, or benefit from improved

competencies in an orphanage [35]. Specifically, our findings support the observation that the youth who experience early maltreatment, family disruption, and lack of family contact, have higher risk of psychopathology. In contrast, the risk of psychopathology seems lower when adolescents remain in contact with their birth family with protective effect of family relationships, positive early care experiences, and higher likelihood of remaining in contact with their families.

Limitations

The results of this study should be viewed in the light of a number of limitations. Because of the cross-sectional nature of this study, it is difficult to draw conclusions about a causal inferential relation between institutional rearing and mental health problems. Despite the limitations of the cross-sectional design, our national sampling frame both with respect to representative institutional and community care samples, enables us to describe meaningful prevalence estimates and explores the predictors of mental health among of institutionalized adolescents in Turkey. As our prior local validation studies of CBCL, TRF and YSR refer to factor analytic evaluation by Confimatory Factor Analysis (CFA) on the instruments' eight-factor measurement structure, the cross-national application of the 90th percentile cut-off criterion for Turkish samples, based on the original US manual is presumptive and calls for future comparison of data from local clinical and community groups using under the curve (AUC) analysis. In assessing predictive factors in institutional care, we chose to multiple correlations between emotional/behavioral problems and independent variables for institutionalized adolescents. Our results were presented without adjustment for alpha values and should be interpreted with caution.

Despite some limitations, a major strength of this study is its relatively large sample size, good response rates in view of current declining rates in many studies, and use of measures with multiple informants. This study is in fact one of very few investigations that provides empirical comparison of adolescent self-reports with other key informants in institutional care in a developing country setting.

Policy and clinical care implications

The documentation of the topography of protective and risk factors among adolescents is a necessary but not sufficient step for eliciting policy reforms to end the institutional care of adolescents in the twenty-first century in Turkey. Whereas the national policies in Turkey, among other countries, ought to be geared to abolish institutional care proper, in the interim, there remains an urgent need for interventions based on identified risk and protective factors serving the needs of the youth. The goal of this project was to promote policies favoring family-centered care and support, prevention of family separation, and promotion of development of therapeutic counseling services to prevent families at risk of child abandonment. A broad perspective is needed to provide community-based care aimed at families to prevent breakdown (found 68.9% in our study) and to support those in need. When this is not possible, making placement decisions has remained complex. For adolescents already in the institutional care system, and especially for those youngsters who have entered the system earlier and stayed for longer period of time without experiencing family life, it has been difficult to make the transition that could adopt them into family life. At this time, there is a need to create high quality safe environments and child friendly care within the social welfare system. These reforms need to evaluate and organize care systems, provide caregiver training, scrutinize and maintain high standards of conduct and support. There is also a need for rights based advocacy to strengthen and promote the well-being of children and adolescents. Although, as also in many other countries, Turkey is a signatory to the U.N. Convention of the Rights of the Child, implementation of a rights based framework has lagged behind the adoption of the convention. This study provides empirical evidence

relevant to the mission of the GAP project [44] with respect to urgently addressing disparities in particular with respect to development of child mental health services. The youth's voices in particular need to be taken into consideration.

As this study also attests, the youth in institutional care continue to face a challenging journey and may be unable to overcome the otherwise permanent obstacles that hinder their optimal development. All those involved in care of youngsters, including professionals, parents, teachers and other members of the community, have important obligations to promote their rights. Although Turkey is currently moving towards a child protection policy that prioritizes placing young children in family-centered care, many adolescents in institutions continue to experience disruptions in their development. These adolescents are likely to require special services to help them to develop problem solving skills, therapy to help decrease fatalistic beliefs and substance abuse. Successful evidence-based prevention programs will require careful assessment of adolescents' needs, development of culturally consistent interventions that are appropriate for these needs, and an integration of adolescent psychosocial health and social policy. The use of standardized self-reports can cost-effectively provide clinicians with appropriate norms against which individual adolescents' problem scores can be evaluated. Although the aforementioned legislation and policy emphasize the goal of family reunification as much as that of adoption, the number of adolescents who returned to their biological parents in Turkey in recent years has not risen appreciably.

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Table 1

Mean scores of CBCL, YSR, and TRF emotional and behavioral problems

Scales	YSR		CBCL		TRF	
	Institution mean (SD)	Family care mean (SD)	Institution mean (SD)	Family care mean (SD)	Institution mean (SD)	Family care mean (SD)
Empirically based						
Anxious/depressed	8.8 (5.0)*	5.7 (3.9)	3.6 (2.9)*	4.3 (3.3)	5.8 (4.5)	5.5 (4.1)
Withdrawn/depressed	5.2 (2.9)*	3.6 (2.6)	2.6 (2.5)	2.5 (2.4)	4.0 (3.7)*	2.9 (2.9)
Somatic complaints	4.9 (4.1)*	2.6 (2.5)	0.96 (1.9)*	1.4 (2.1)	1.0 (1.8)	0.8 (1.7)
Social problems	6.1 (3.8)*	3.5 (2.9)	3.0 (2.9)*	2.3 (2.2)	2.7 (2.9)*	2.0 (2.4)
Thought problems	5.7 (4.2)*	2.3 (2.2)	1.5 (2.4)*	1.1 (1.7)	1.4 (2.1)*	0.8 (1.4)
Attention problems	5.3 (2.7)*	2.9 (2.4)	3.2 (3.1)*	2.5 (2.3)	12.9 (1.1)*	8.7 (8.6)
Rule breaking behavior	4.1 (3.6)*	2.0 (2.2)	2.9 (3.7)*	1.0 (1.5)	2.0 (2.7)	1.4 (2.2)
Aggressive behavior	9.7 (6.4)*	5.6 (4.6)	5.9 (6.9)*	3.9 (4.3)	6.1 (6.9)*	3.8 (4.9)
Internalizing	19.1 (10.2)*	11.9 (7.8)	7.2 (5.7)*	8.2 (6.4)	10.8 (8.3)*	9.2 (7.4)
Externalizing	13.8 (9.2)*	7.5 (6.2)	8.9 (10.1)*	5.0 (5.4)	8.0 (9.2)*	5.2 (6.8)
Total Problems	55.1 (27.6)*	30.9 (20.3)	21.1 (16.2)*	26.5 (22.0)	37.6 (29.4)*	27.5 (22.9)
DSM-oriented						
Affective problems	7.3 (4.5)*	3.8 (3.3)	2.0 (2.5)	2.1 (2.4)	2.9 (2.8)*	1.9 (2.4)
Anxiety problems	3.8 (2.5)*	2.9 (2.0)	1.4 (1.5)	1.9 (1.8)	1.7 (1.8)*	1.3 (1.5)
Somatic problems	3.0 (3.1)*	1.4 (2.0)	0.6 (1.4)	0.8 (1.4)	0.7 (1.4)*	0.5 (1.3)
ADH problems	3.4 (2.3)*	1.9 (1.8)	2.1 (2.4)*	1.9 (1.8)	6.2 (6.2)*	4.7 (4.8)
Oppositional defiant problems	3.7 (2.3)*	2.5 (2.0)	1.9 (2.3)*	1.5 (1.7)	1.6 (1.9)*	1.0 (1.5)
Conduct problems	4.3 (4.4)*	1.9 (2.4)	3.5 (4.9)*	1.1 (2.0)	2.8 (4.2)*	1.5 (2.9)

*The means of institution sample were differ from family care sample significantly at $p < 0.01$

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Table 2

The prevalance of internalizing, externalizing and total problem by CBCL, TRF and YSR (%)

	Internalizing		Externalizing		Total problem	
	Institution	Family care	Institution	Family care	Institution	Family care
CBCL						
Girls	7.3	14.4*	19.7*	3.9	14.6*	7.1
Boys	3.6	8.9*	16.7*	7.4	15.5*	7.9
Total	5.5	11.7*	18.2*	5.7	15.1*	7.5
TRF						
Girls	23.7*	10.6	15.3*	4.5	23.7*	5.8
Boys	9.6*	5.3	19.2*	11.3	17.3*	13.1
Total	16.7*	8.0	17.3*	7.9	20.5*	9.5
YSR						
Girls	42.3*	11.9	34.5*	10.7	49.8*	10.7
Boys	39.3*	12.3	45.8*	12.3	42.4*	10.3
Total	40.1*	11.5	41.9*	10.9	47.0*	10.1

* $p < 0.05$

Table 3

The prevalance of social problems, thought problems and attention problems by CBCL, TRF and YSR (%)

	Social problems		Thought problems		Attention problems	
	Institution	**Family care**	**Institution**	**Family care**	**Institution**	**Family care**
CBCL						
Girls	6.6*	2.1	4.4*	2.4	8.0*	2.4
Boys	6.0*	2.6	10.7*	3.7	14.3*	5.4
Total	6.3*	2.4	7.6	3.1	11.2	3.9
TRF						
Girls	4.2*	1.0	8.5*	1.5	6.8*	0.1
Boys	1.9	1.8	9.6*	2.9	5.8*	2.0
Total	3.1*	1.4	9.1*	2.2	6.3*	1.0
YSR						
Girls	10.6*	2.7	19.0*	1.9	32.2*	2.6
Boys	12.3*	3.1	17.1*	2.2	30.1*	2.2
Total	11.7*	2.9	18.3*	2.0	31.4*	2.4

* $p < 0.05$

Table 4

Correlations between emotional/behavioral problems and independent variables for institutionalized adolescents (Spearman's correlation)

Independent variables	Internalizing			Externalizing			Total problems		
	YSR	TRF	CBCL	YSR	TRF	CBCL	YSR	TRF	CBCL
Gender (girls)	**0.203***	−0.094	−0.032	0.013	**−0.159***	0.070	0.104	0.079	0.054
Age	0.063	0.047	**0.216***	−0.025	**−0.237***	−0.033	0.036	**-0.165***	−0.030
Age at first admission	0.117	−0.094	0.022	−0.052	**−0.247***	**−0.147***	0.012	**−0.220***	−0.103
Reason for admission (Abuse)	0.012	0.056	0.086	0.063	**0.104***	**0.136***	0.096	**0.113***	**0.118***
Previous residence (another institution)	0.052	0.018	0.030	0.085	0.025	0.022	0.032	0.022	0.030
Moves between institutions	0.091	0.036	0.079	0.078	**0.180***	**0.292***	0.037	**0.131***	**0.250***
No siblings in the same institutions	0.069	0.092	−0.037	0.058	0.028	**0.198***	0.021	0.063	0.100
No contact with parents or relatives	0.025	**0.139***	−0.061	0.85	**0.116***	**0.133***	0.52	**0.197***	**0.117***
Total competence	**−0.112**	**−0.342***	**-0.165***	−0.027	**−0.455***	**−0.315***	−0.084	**−0.591***	**−0.376***
Social relations (for YSR)	**−0.156***	–	–	−0.031	–	–	**−0.109***	–	–
Supportive caregivers	**−0.152***	−0.068	−0.118	**−0.194***	**−0.141***	**−0.151***	**−0.185***	−0.089	−0.103
Fatalism	**0.318***	−0.045	0.048	**0.217***	**0.112***	−0.011	**0.272***	**0.108***	−0.036
Problem solving skill	**−0.212***	**−0.299***	−0.008	**−0.208***	**−0.213**	−0.058	**−0.187***	**−0.252***	0.039
Substance use (tobacco and alcohol)	**0.114***	0.051	**0.139***	**0.287***	**0.154***	**0.131***	**0.190***	**0.122***	**0.145***

*Correlation at $p < 0.05$

Table 5

Multiple regression models of institutionalized adolescents' total problems according to the YSR, TRF and CBCL

Independent variables	CBCL		TRF		YSR	
	P	**CI 95%**	***P***	**CI 95%**	***P***	**CI 95%**
Age	NS	NS	0.062	(−5.7)−(0.15)	NS	NS
The age of admission	NS	NS	0.096	(−2.3)−(1.9)	NS	NS
Reason for admission (abuse)	**0.023**	**(2.5)−(32.7)**	0.463	(−41.1)−(90.6)	NS	NS
Moves between institutions	0.066	(−0.43)−(13.5)	0.369	(−27.2)−(10.2)	NS	NS
Contact with parents or relatives	0.709	(−8.6)−(5.9)	0.934	(−20.7)−(19.1)	NS	NS
Competency	0.003	(−7.4) to (−4.4)	**0.001**	**(−4.9)** to **(−1.5)**	NS	NS
Supportive caregivers	NS	NS	0.728	(−3.17)−(4.5)	**0.011**	**(−7.8)** to **(−0.7)**
Fatalistic beliefs	NS	NS	**0.035**	**(1.2)−(31.3)**	**0.020**	**(1.5)−(14)**
Problem solving skills	NS	NS	0.178	(−12.6)−(2.4)	**0.008**	**(−2.8)** to **(−15)**
Social relations	NS	NS	NS	NS	0.889	(−2.1)−(2.4)
Substance use (tobacco and/or alcohol)	**0.011**	**(3.3)−(25.3)**	**0.045**	**(1.9)−(2.6)**	**0.001**	**(5.9)−(24)**
R; R^2; F; P	*0.680; 0.25; 11.03; 0.001*		*0.701; 0.49.1; 4.28; 0.001*		*0.780; 0.33; 4.19; 0.001*	
Durbin-Watson	*1.787*		*1.969*		*1.912*	

NS non significant in bivariate analyses, *CI* confidence interval

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