Prevalence of Mental Health and Behavioral Problems Among Adolescents in Institutional Care in Jordan

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Objectives: **This study aimed to establish the prevalence rates of mental health and behavioral problems of Arab youths residing in Jordanian care centers due to family disintegration, maltreatment, or abandonment and to examine how functioning varies by child characteristics and placement history.** ***Methods:*** **Child Behavior Checklist and case history data were collected for 70 youths across four Jordanian care centers.** ***Results:*** **Approximately 53% of the adolescents were identified as experiencing mental health problems, and 43% and 46% had high internalizing and externalizing scores, respectively. Ordinary least-squares regression models examining mental health functioning showed that male gender, care entry because of maltreatment, time in care, and transfers were the most significant predictors of problems.** ***Conclusions:*** **Paralleling international research, this study found high levels of mental health needs among institutionalized youths. The impact of transfers on functioning is particularly worrisome, given the standard practice of transferring youths to another facility when they reach age 12. Improving the institutional care model by requiring fewer transfers and offering family-based community alternatives may ameliorate risks of developing mental and behavioral problems. (*Psychiatric Services* 64:196–200, 2013; doi: 10.1176/appi.ps.201200093)**

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Throughout the world, government agencies and nongovernmental organizations have established care institutions for youths in need of care and protection. Youths in institutional settings are consistently identified as having high rates of mental health conditions (1), which are associated with psychosocial impairment that negatively influences their quality of life (2). Research assessing psychosocial functioning has found that many children and adolescents placed in residential care have mental and behavioral problems, including internalizing problems (such as depression and anxiety) and externalizing problems (such as rule breaking and aggression). North American and European studies have shown that internalizing problems are prevalent for 6% to 68% of youths in care homes, and externalizing disorders affect youths at rates ranging from 32% to 67% (3–5). Rates of mental health and behavioral difficulties within care centers have been consistently found to exceed rates for community samples of youths under age 18, whose overall rates of mental disorders are approximately 21% (6). Understanding the specific mental health needs of youths in institutional care requires examination of individual, agency-based, and system-level data. In turn, these data may be used to develop personalized services and programs addressing impairments in functioning that may keep these children at risk of developing mental and behavioral disorders.

Research on the needs of Arab youths in care centers within the Middle East remains a significant gap in the literature (7). Two studies of youths residing in orphanages in Turkey and another study in Iraq found similarly high rates of internalizing (6%–40%) and externalizing (18%–42%) disorders (8–10). This nascent research has only begun to establish baseline estimates of the regional prevalence of mental health needs.

This study aimed to establish prevalence rates of mental health and behavioral problems among adolescents (ages 11–18) residing in institutional care centers in Jordan and to examine how mental health functioning varies by demographic characteristics and case history of the youths. This study is part of a larger research initiative called the Community-Family Integration Teams Project (C-FIT). C-FIT is part of a partnership, supported by the United Nations Children's Fund, between the authors and the Jordanian Ministry of Social Development. The C-FIT project is aimed at improving the Jordanian

Ministry's capacity to meet the needs of children and youths currently in institutional care by engaging key local community stakeholders to design and implement the region's first formal foster care program as an alternative to institutional care.

Methods

Data were collected between December 2010 and June 2011 in four care centers across the Hashemite Kingdom of Jordan regulated by the Ministry of Social Development. Currently, Jordanian children in need of care and protection are predominantly served through congregate care centers that are subdivided into smaller units served by primary care providers that serve the needs of the children. Although no formal mental health services are provided in the care centers, educational, recreational, and supportive counseling services are available. Data collection used in-depth interviews with standardized instruments, augmented with data extracted from case files. Data were collected for 233 children, representing approximately 95% of children living in the care centers during the collection period. This study was restricted to the adolescent subsample (N=70). Facility staff providing direct care to the institutionalized youths completed a survey that included a questionnaire about youths' mental health status and behaviors. Their case files were also reviewed, and data were extracted on their case history. All procedures for this study received approval from institutional review boards in the United States and Jordan.

Mental health and behavioral functioning were measured with the Arabic-language version of the Child Behavior Checklist (CBCL) (11), which was completed by institutional care providers (9,10). The CBCL subscales measure total problems, internalizing problems, and externalizing problems, and additional subscales are based on criteria for *DSM-IV* diagnostic categories (affective disorder, anxiety disorder, and so on). The CBCL also offers the advantage of having cut scores for borderline and clinical ranges based on age- and gender-specific norms. As a reference, the borderline clinical cutoff for the CBCL T scores is >65, and the clinical cutoff is >69.

Youth characteristics and case factors were collected in face-to-face interviews, and data were extracted from youths' case files, including reason for entry into the care center system, length of stay in years, and number of transfers to other care facilities (categorized as none, one, and two or more). Reason for entry was coded into the following categories: child maltreatment (including neglect and physical, sexual, or other abuse), family disintegration (such as divorce or the imprisonment of a parent), and being abandoned or orphaned. Physical abuse was measured from one item drawn from the University of California, Los Angeles, Posttraumatic Stress Disorder Index.

The analysis aimed to establish the prevalence of mental health problems among adolescents in institutional care and to examine associations between child and case history factors and functioning. Descriptive statistics were used to examine the study demographic characteristics and prevalence. Ordinary least-squares (OLS) regression models were used to examine which demographic (age and gender) and case history (reason for entry, length of stay, and number of transfers) factors predicted mental functioning. All analyses were conducted with Stata, version 12.0.

Results

Most of the 70 adolescents were male (56%, N=39), and the mean±SD age was 14.2±2.2 years. Entry into care was predominantly from having been abandoned or orphaned (53%, N=37), followed by family disintegration (24%, N=17) and abuse or neglect (23%, N=16). A history of physical abuse was reported by 28% (N=19) of youths. The average length of stay in care was 6.6±5.8 years, with 69% (N=48) experiencing at least one and 49% (N=34) two or more relocations.

Fifty-three percent (N=37) of adolescents were identified as being above the borderline clinical cutoff on the CBCL total problems scale, with nearly 40% (N=27) in the clinical range. Overall, 43% (N=30) of youths had internalizing scores above the cutoff, with a high percentage of scores indicating that youths were withdrawn and depressed (31%, N=22) or anxious and depressed (23%, N=16). Similarly, high externalizing scores were indicated for 46% (N=32) of youths, with above-borderline aggressive behavior and rule-breaking subscores in about one-third of the sample, 29% (N=20) and 32% (N=22), respectively. The largest percentages of subscale scores above the cutoff were found for conduct problems (49%, N=34) and social problems (46%, N=32). High prevalence rates were also found across several *DSM-IV*–related areas, most notably for the *DSM*-oriented scales of conduct problems (49%, N=34), affective disorders (33%, N=23), anxiety disorders (23%, N=16), and attention-deficit hyperactivity disorder (ADHD) (19%, N=13).

Table 1 presents OLS regression model results with significant F tests for the following CBCL scales: total, internalizing, and externalizing problems and the CBCL *DSM*-oriented scales for affective disorders, anxiety disorders, somatic disorders, and conduct problems. The intercept for each model provides a base for interpretation.

Controlling for all other variables in the model, we found that males scored 6.1 points higher on total problem scores than females. The reason for entry was also a significant predictor of problems; youths entering because of child maltreatment scored 7.0 points higher than those entering because of family disintegration and 8.0 points higher than abandoned or orphaned youths. Youths experiencing two or more transfers reported scores 7.6 points higher than those experiencing no transfers.

The model for internalizing scores showed that males scored 5.2 points higher than females. Youths entering care because of maltreatment scored 8.8 and 8.0 points higher than those entering because of family disintegration or from being abandoned or orphaned, respectively. For every additional year in care, internalizing T scores were approximately .5 points lower. Youths experiencing two or more relocations scored 4.7 points higher than those experiencing no transfers, whereas youths experiencing one transfer scored 4.5 points higher.

The externalizing model found that males scored higher than females by

Table 1

Ordinary least-squares regression to predict mental and behavioral problems among institutionalized Jordanian youths

	Child Behavior Checklist scale[a]						Child Behavior Checklist *DSM*-oriented scale[b]							
	Total problems (N=68)		Internalizing domain (N=68)		Externalizing domain (N=68)		Affective disorder (N=68)		Anxiety disorder (N=68)		Somatic problems (N=64)		Conduct problems (N=68)	
Variable	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Female	−6.05*	2.51	–5.22**	1.87	−9.26**	3.09	−1.91	1.91	−4.63**	1.70	–.27	1.21	−8.86**	2.89
Age	.09	.64	.36	.48	.22	.79	.07	.49	–.21	.44	–.09	.31	.27	.74
Reason for entry (reference: child maltreatment)														
Family disintegration	−7.02†	3.77	−8.80**	2.80	−7.68†	4.63	−3.16	2.87	−4.69†	2.55	−4.07*	1.82	−6.53	4.34
Abandoned or orphaned	−7.98*	3.58	−7.98**	2.66	−7.43†	4.39	−4.39	2.72	−3.34	2.42	−4.01*	1.72	−4.70	4.11
Youth-reported physical abuse	3.74	2.79	.76	2.07	3.44	3.42	1.12	2.12	3.00	1.89	1.55	1.38	5.07	3.21
Length of stay (years)	–.34	.27	–.46*	.20	–.32	.33	–.56**	.20	–.36*	.18	–.14	.13	–.30	.31
Transfers (reference: none)														
1	4.68	3.70	4.52†	2.74	2.75	4.53	4.99†	2.80	2.16	2.50	3.15†	1.78	1.76	4.25
≥2	7.59**	2.79	4.69*	2.07	8.05*	3.43	3.52†	2.12	3.50†	1.89	3.28*	1.35	6.38*	3.21
Intercept[c]	65.50***	3.68	67.15***	2.74	66.02***	4.52	65.86***	2.80	63.6***	2.49	54.4***	1.76	69.65***	4.24

[a] Total problems, F=3.06, df=8 and 59, p≤.01, R^2=.29; internalizing domain, F=4.77, df=8 and 59, p≤.001, R^2=.39; and externalizing domain, F=2.32, df=8 and 59, p≤.05, R^2=.24

[b] Affective disorder, F=3.90, df=8 and 59, p≤.001, R^2=.35; anxiety disorder, F=2.87, df=8 and 59, p≤.01, R^2=.28; somatic problems, F=2.87, df=8 and 55, p≤.01, R^2=.30; and conduct problems, F=2.30, df=8 and 59, p≤.05, R^2=.24

[c] The borderline clinical cutoff for the Child Behavior Checklist T scores is >65, and the clinical cutoff is >69.

*p≤.05, **p≤.01, ***p≤.001

†p≤.10

9.3 points. Scores for youths entering care because of maltreatment compared with those entering because of family disintegration or from being abandoned or orphaned showed a trend toward statistical significance (p≤.10). Youths experiencing two or more transfers scored 8.1 points higher than those experiencing no relocations in the total externalizing model.

For the affective disorder model, length of stay in care was predictive of lower scores, with scores .6 points lower with each additional year in care. The number of transfers experienced was also found to be a moderately significant predictor, with scores 5.0 and 3.5 points higher for one transfer and two or more transfers, respectively, compared with none.

The anxiety disorder model found that males scored higher than females by 4.6 points. For every additional year in care, scores were approximately .4 points lower. Anxiety disorder scores for youths whose reason for entry was maltreatment were 4.7 points higher than for those with family disintegration; scores for youths experiencing two or more transfers were 3.5 points higher than for those with none.

The model for somatic problems found that youths entering care because of maltreatment scored 4.1 and 4.0 points higher than those entering after family disintegration or after being abandoned or orphaned, respectively. Youths experiencing two or more transfers scored 3.3 points higher than those experiencing no transfers, whereas youths experiencing one transfer scored 3.2 points higher.

Conduct problems was the final model with significant results. Males scored 8.9 points higher, on average, than females. Having two or more transfers was also a significant predictor, with these youths scoring approximately 6.4 points higher than those with no transfers.

Discussion

Institutionalized youths in Jordan experience high rates of mental health problems. To the extent that mental health and behavioral problems vary, adolescent characteristics (gender, for example) and individual case history factors (such as entering care after maltreatment or experiencing multiple relocations) were associated with higher levels of mental health and behavioral difficulties within this sample.

Mental health problems were identified for more than 50% of Jordanian adolescents, with levels of internalizing (43%) and externalizing scores (46%) comparable with those for youths in North American and European care centers (3–5). Elevated rates of clinical range problems were found within the following *DSM-IV*–related areas: conduct problems (49%), affective disorders (33%), and anxiety disorders (23%).

The analysis found several trends in how mental health functioning varied

by child characteristics and case history. Gender was found to be a significant predictor in most of the models, with males scoring worse. Research on youths in care centers has indicated that males score higher on externalizing disorders (including aggression and rule-breaking behaviors) and females have higher rates of internalizing problems (such as depressive and anxious symptoms) (5,12). This sample, however, found that males scored higher not only in the expected externalizing domain (such as the total external and conduct problems areas) but also in the internalizing domain (including total internalizing, affective disorder, and anxiety disorder). It does not appear that either males or females in the sample have undergone the differentiation between externalizing and internalizing symptoms typical in community samples, which may be a result of a ceiling effect in the level of dysfunction for both. This may also be related to differences in their pathways into care, with females more likely to come into care for protection from maltreatment—a particular pathway that may be associated with high levels of externalizing problems.

In examining how mental health functioning varied by case history, our regression models for pathways into care, number of transfers, and length of stay yielded consistent findings. Most notably, maltreatment as the reason for entry into care was found to be a significant factor in most models. Maltreated children face simultaneous traumas, including not only the experience of the abuse itself but also ruptured ties to their families and communities, which likely contribute to their heightened levels of emotional and behavioral disorders. Alternatively, scores on CBCL subscales may be lower for children who are longer-term residents of the facilities; that is, children who were abandoned or orphaned at an early age may develop resilient coping over the years, including identification with their center-based peers as their substitute families (7). Also, children orphaned at an early age may have been protected from longer exposure to abuse and neglect.

Number of transfers within care centers and length of stay were also associated with more problems for youths. The importance of transfers to mental health facilities adds to an emerging literature on the impact of change and instability on child functioning. The findings also hint at the transactional processes by which the child, changed by accumulating experiences of transfers and disruption, may go on to elicit differential caregiving interactions due to their escalating behavior problems and sensitivity to rejection. These pathways highlight important potential points of entry for intervention, which call for more in-depth examinations of how change affects children and their experiences over time.

Length of stay and number of transfers are structural problems; therefore, they require structural changes. Care center transfers occur not only because of poor or disruptive behavior but most commonly are a result of cultural age and gender norms. In Jordan, care centers serve specific age ranges, and when children reach a certain age (such as 12 years), they are transferred to a different center serving only adolescents and are segregated by gender (7). Considering the negative implications for youth mental health and behavioral problems, it may be important to consider minimizing transfers.

Specific programs may be required for children entering institutionalized care centers due to maltreatment. Staff working within care centers may benefit from additional training focusing on neglected and abused children. Assisting youths in dealing with issues of trauma and separation requires capacity building in this area and may necessitate formalized assessment procedures whereby staff can enhance their understanding of individual child needs. Staff may benefit from standardized assessment tools to better track child functioning and inform practice and programming to the extent that resources exist for individualized or specialized treatment models embedded in the larger center milieu. Results indicate that mental health services need to be implemented within institutionalized care centers to effectively assess and treat these high-risk children. Service mechanisms to support these youths transitioning out of care centers are also recommended.

Conclusions

Our findings are consistent with research in other countries that has found large proportions of institutionalized youths with mental health and behavioral problems; together, these findings reinforce concerns for youths in institutional care (1,5,9,12). These findings also underscore the need to provide effective services to address the high rates of youth mental health and behavioral problems in institutional care centers (5,12). Our findings underscore the potential limits to which improving the institutional care model can effectively ameliorate these risks. As other research has suggested, family-based alternatives or smaller group models in the community are needed to better care for and protect children and youths (2,9).

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