Prevalence and predictors of depression among orphans in Dakahlia's orphanages, Egypt

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Abstract

Background: Children entering foster care have a higher prevalence of clinically significant depressive symptoms than children reared at home.

Objective: The aim of the study was to assess the prevalence and predictors of depression among orphans in Dakahlia governorate orphanages.

Methods: A cross-sectional descriptive study included all the 200 orphans in orphanages of Dakahlia governorate, Egypt. Data collection tools included structure interview for personal data and the Arabic version of the multidimensional child and adolescent depression Scale (MCADS).

Results: The study revealed that 20% of orphans had depression with total mean score (72.65±1.10). Logistic regression analysis revealed that the only independent predictors of depression is child gender, Girls were about 46 times more likely to have depression than boys.

Conclusion: Depression is common among orphans, especially girls. Mental and psychological should be part of routine health care provided to orphans.

Key words: Orphans; Orphanage; Prevalence; Predictors; Depression.

Running title: Depression among orphans

Introduction

Losing a parent and the bereavement that follows is difficult for children, and the effects may not manifest until many years afterwards.[1] Depression is a deep sadness with long-term, harmful effects on the health and development of the individual. When parents die, children not only miss their physical presence, but also the many positive things they gave them when they were alive, such as love, care and protection. In many instances, orphans and vulnerable children have no one to share their grief with, and this can compound their sense of helplessness. Lack of support during the grieving process and inadequate help in adjusting to an environment without their parents may lead children to become depressed.[2] In addition, when orphans are placed with poorer households, anxiety about the future, including the prospect of not finishing school, may lead to depression.[3]

Children entering foster care report more depressive symptoms and have a higher prevalence of clinically significant depressive symptoms than children reared at home. Depression might be associated with a history of abuse or neglect, multiple foster care placements, family dysfunction, and family history of alcohol or drug abuse, female gender, and older age.[4]

Researchers had found that orphaned children are more likely to suffer from internalizing problems, such as depression and anxiety.[5,6] Other research had found orphans to be more depressed, more anxious, less optimistic about the future, and more likely to express anger feelings and have more disruptive behaviors compared to non-orphans.[7]

In Egypt the shelters or orphanages provide the social and health care; as well as educational, professional, religious and recreational activities for children deprived of family care taking into account the separation between both sexes. The orphanage harbors either true orphans or foundling abandoned by mothers after illegal pregnancies. To the best authors' knowledge there are no studies on depression in orphans in Dakahlia, Egypt. So the present study was conducted to assess the prevalence and predictors of depression among orphans in Dakahlia governorate orphanages, Egypt.

Population and Methods

This is a cross-sectional descriptive study carried out on all children in 10 orphanages in Dakahlia governorate, Egypt during the period from June to December 2011. The orphanages are El-Baneen, Dar-Ebnaty, El-Banat, Marmena Dar El-Nahda, and El-kalema El-kebtia in Mansoura city. Tahseen-El-Seha and El-Safa in Talkha city, Fagr-El-Eslam in Bilqas city, and El-ketab-El-moqadas and El-Amal in Mit Ghamer city.

Inclusion criteria were orphans in the age of 6 to 18 years of both sexes with no mental retardation. There were 262 orphans residents in the above mentioned orphanages. Two hundreds orphans were included in the study. Forty-two were

excluded because of their age (either below 6 or above 18 years) and the 20 involved in the pilot study were excluded from the full-scale study.

Ethical considerations: The study protocol was approved by the Research Ethics committee of the Faculty of Nursing, Mansoura University. The nature of the study is harmless; all data are kept confidential and used only for the research purpose. The study subjects willingly agreed to participate in the study and gave their verbal consent and each participant was free to withdraw at any time throughout the study. Before the interview, children were informed about the purpose of the study and assured them about confidentiality of data. The interview took about 20-30 minutes.

A pilot study was carried out on 20 children in three orphanages in Dakahlia Governorate. These orphanages were purposively selected because the number of resident children was less than 10 in each home and they were excluded from the full-scale study. They were chosen to test clarity and simplicity of the tool used. Following the pilot study, the final form of tool was reconstructed and made ready to use.

Structured interview questionnaire was used to collect:

1- Socio-demographic data: e.g. age, gender, level of education and duration of stay in orphanage.

2- The Multidimensional Child and Adolescent Depression Scale (MCADS).[8] The scale has two compatible Arabic and English versions. The Arabic version was the one used. It was designed to define the profile of teenager's depression. It has eight dimensions. Each dimension is assessed by five statements, so the MCADS has 40 brief statements. The eight dimensions are:

1. Pessimism, represented by statements from 1-5
2. Weak concentration, represented by statements from 6-10
3. Sleep problems, represented by statements from 11-15
4. Anhedonia, represented by statement from 16-20
5. Fatigue, represented by statement from 21-25
6. Loneliness, represented by statement from 26-30
7. Low self- esteem, represented by statement from 31-35
8. Somatic complaints, represented by statements from 36-40

A three point Likert scale was used to rate the intensity of the depression where None = 1, Sometimes = 2, A lot =3, except for statement 1,6,11,16,23,34 and 35 which were scored as follow: non as 3, sometimes as 2 and a lot as 1. Each item should be answered by selecting only one of the three alternatives which mostly

describes the emotional state of the child. With regard to the reliability of the scale, Cronbach's alpha ranged from 0.63 to 0.92, while the test retest reliability ranged between 0.56 and 0.87. The criterion- related validity ranged between 0.30 and 0.85.[8]

Data were analyzed using SPSS (Statistical Package for Social Sciences) version 16.0. Quantitative variables were presented as Mean ± SD. Qualitative data was presented as number and percent. The total score of depression was classified into depressed and non-depressed, cut off point of Mean + 1 Standard deviation.[9] Qualitative variables were presented as number and per cent. Comparison between groups was done by Chi-square or Fisher's exact test, as appropriate. Significant predictors on bivariate analysis were entered into logistic regression model using Wald forward methods. OR and their 95 % CI were calculated. $P \leq 0.05$ was considered to be statistically significant.

Results

Table (1) shows that the age of the studied subjects ranged from 8-18 years, with a mean of 14.6±2.5 years. Children aged less than 15 years constituted 51.0% of the studied subject. Males constituted 76.0% of studied orphans. Orphans who are in preparatory school accounted for 46.5%. Seventy percent of the orphans have been in orphanage from 5-9 years while 19.5% of them have been there for 10 years.

Table (2): shows that the total score of multidimensional children and adolescent depression scale ranged from 52.0-104.0 with a mean of 72.65 ± 1.1. The highest mean score was obtained for weak concentration and fatigue (9.52± 1.87 and 9.50 ±2.26; respectively). The lowest mean score was obtained from somatic complaints 8.41 ± 2.43 followed by loneliness and low self- esteem (8.50±2.24 and 8.82 ±2.28; respectively).

Table (3) Shows that one-fifth of the orphans are depressed with no significant difference with age and duration of stay in orphanage. Depression is significantly lower among educated orphans compared to those who just read and write. Depression is significantly higher among girls than boys (68.8% vs. 4.6%; respectively). The logistic regression analysis revealed that the only independent predictor of depression is child gender. Girls were about 46 times more likely to experience depression than boys (table 4).

Discussion

Children in foster care show higher rates of clinically significant behavior problems and psychological disorders compared with children not in care.[10] The present study indicates that 20% of the studied orphans have depression. This high prevalence may be related to many factors. First, before admission to orphanages; early childhood painful experience, parental conflict, trauma from separations from one or both parents, emotional pain of being rejected or abused, and relocation from one relative home to the orphanage. Second, after admission to orphanages; separation from

his/her family, psychological trauma, related to the environment of the orphanages itself like: mistrust, insecurity, maltreatment by their foster family, and risk of neglect, abuse, and exploitation. Also children in foster care were using denial as a coping mechanism to handle depression. They may have steeled themselves against the emotional trauma experienced before and during their placement in foster care. Furthermore, children in foster care may have had other psychological or behavioral disorders that are manifested as depression[4]. This result is close to the incidence of depression reported by Elebiary et al, [11] in Egypt who found that 20 to 24% of their studied institutionalized children had depression.

Multivariate logistic regression analysis revealed that the only independent predictor of depression is child gender. Girls are 45 times more likely to experience depression than boys. This may be attributed to the fact that girls are preparing to become women during the adolescence period and that they face a number of burdens in every day life as a result of their social status and roles relative to boys, along with having difficulty in expressing themselves during this period.[12] It might also be attributed to more feelings of frustration among them due to the prevalent culture of preference of boys, and discrimination among girls. It may be related to the fact that depression-prone women, effect of adolescent stage, anxiety about the future especially girls more anxious about the future than boys and effect of culture discrimination.

The foregoing result is in congruence with a previous which documented that girls become more depressed than boys.[13] It was reported that girls' internalizing behavior significantly increased over time, whereas boys' internalizing behavior remained fairly stable.[14] Moreover, Salama[15] stated that adolescent girls are twice as likely as boys to experience depression. Risk factors include stressful life events, unstable care giving, poor social skills and child physical punishment.

Conclusion

One-fifth of orphans suffer from depression. The highest rates of depression were among girls. Logistic regression analysis revealed that the only independent predictors of depression is child gender, girls were about 46 times more likely to have depression than boys. Mental and psychological care should be part of routine health care provided to orphans.

There is a need for well-developed system of care for orphans to be implemented in all orphanages. Regular psychological assessment of the children should be carried for early detection and proper management of any mental abnormalities, especially among girls. Such program should raise awareness among caregiver about the importance of psychological conditions of the orphan, and consequence of psychological problems like depression through training. Further national research is needed to substantiate these findings and to extend this work to younger age groups, and studying possible interventions to help these children develop into more stable individuals.

Conflict of Interest: None declared.

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Table 1: Socio-demographic characteristics of the studied orphans

Items	Number (200)	%
Age (years)**:**		
< 15	102	51.0
15+	98	49.0
Min-Max	8.00- 18.00	
Mean± SD	14.6±2.5	
Gender:		
Boys	152	76.0
Girls	48	24.0
Education		
Read and write	17	8.5
Primary	47	23.5
Preparatory	93	46.5
Secondary	43	21.5
Duration of stay in orphanages (years)**:**		
<5	21	10.5
5-	140	70.0
10+	39	19.5
Min-Max	1.00-18.00*	
Mean± SD	7.8± 3.2	

* Few children were admitted at earlier age in Fagr-eleslam orphanage.

Table 2: Mean scores of Multidimensional children and adolescent

MCADS subscales	Min-Max	Mean ±SD
- Pessimism	5.0-13.0	9.14± 1.72
- Weak concentration	5.0-15.0	9.52± 1.87
- Sleep problems	5.0-15.0	9.35 ±1.85
- Anhedonia	5.0-14.0	9.40 ±2.04
- Fatigue	5.0-15.0	9.50 ±2.26
- loneliness	5.0-15.0	8.50± 2.24
- Low self- esteem	5.0-14.0	8.82 ±2.28
- Somatic complaints	5.0-15.0	8.41 ± 2.43
Total mean scores	52.00-104.00	72.65 ± 1.1

Table 3: Bivariate analysis of depression among orphans based on sociodemographic data

	Depressed N(%)	**Non-depressed** N(%)	**Significance**	**OR(95% CI)**
Total	40 (20.0)	160(80.0)		
Age (years)**:**				
<15	17(16.7%)	85(83.3%)		1(r)
15+	23(23.5%)	75(76.5%)	χ^2=1.4,P=0.2	1.5(0.8-3.3)
Gender:				
Boys	7(4.6%)	145(95.4%)		1(r)
Girls	33(68.8%)	15(31.2%)	χ^2=93.8,P≤0.001	45.6(15.8-137.7)
Education:				
Read and write	10(58.8%)	7(41.2%)		1(r)
Primary	8(17.0%)	39(83.0%)	FET,P=0.003	0.14(0.03-0.6)
Preparatory	13(14.0%)	80(86.0%)	FET, P≤0.001	0.11(0.03-0.5)
Secondary	9(20.9%)	34(79.1%)	χ^2=8.1,P=0.004	0.19(0.1-0.7)
Duration of residency (years)**:**				
<5	7(33.3%)	14(66.7%)		1(r)
5-	22(15.7%)	118(84.3%)	FET, P=0.7	0.4(0.1-1.2)
10+	11(28.2%)	28(71.8%)	χ^2=0.2,P=0.7	0.8(0.2-2.9)

r= reference group, OR= Odds Ratio, CI= Confidence Interval, FET= Fisher's Exact test

Table 4: Multivariate logistic regression analysis of independent predictors of depression among orphans

	β	**P**	**OR (95% C.I)**
Gender:			
Boys	-		1(r)
Girls	3.8	≤0.001	45.6(17.2-120.6)
Constant	-3.0		
Model χ^2	83.8		
% correctly percentage	89%		

r= reference group, OR= Odds Ratio, CI= Confidence Interval