

# Psychiatric morbidity among a sample of orphanage children in Cairo

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## Background

Children raised in orphanages have increased rates of psychiatric morbidity.

## Aims

The study aimed to detect psychiatric morbidity and various sociodemographic factors associated with it among children raised in orphanages in Cairo.

## Participants and methods

In all, 100 children were recruited from four orphanages: 25 from Nasr City orphanage for preschool girls; 25 from Heliopolis orphanage primary and preparatory boys; 25 from Maadi orphanage for preschool boys; and 25 from Hadaaek Al Kooba primary and preparatory girls. They were assessed using a General Health Questionnaire, a Child Behavior Checklist, a Childhood Trauma Questionnaire, and the Holmes and Rahe stress scale (nonadults) between June and December 2013.

## Results

The study found the following: (a) sexual and emotional abuse render the child prone to mental illness (General Health Questionnaire). (b) Change of teachers and orphanages render the child prone to emotional neglect and abuse, reactive attachment, oppositional defiance, and nocturnal enuresis. (c) Reactive attachment and oppositional defiance are more in male children. (d) Depression is more in teens. (e) Male teens are prone to sexual abuse. (f) Conduct and substance abuse is more in male teens. (g) Suicide, post-traumatic stress disorder, and substance abuse are strongly associated with sexual abuse.

## Conclusion

This study concluded that there is a high rate of emotional and developmental disorders among orphanage children and are strongly inter-related with sociodemographic characteristics.

## Keywords:

Abuse, depression, substance abuse

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## A nation of orphans on earth

UNICEF estimates the number of orphans at around 210 million worldwide. The United Nations estimates the number of street children to be 150 million worldwide. UNICEF estimates the number of orphans at around 1 700 000 and street children at around 1 000 000 in Egypt ([http://www.childinfo.org/hiv\\_aids\\_orphan](http://www.childinfo.org/hiv_aids_orphan)).

## Deprivation and abuse

Some studies have found that violence in residential institutions is six times higher than violence among foster-care children; children in group care are almost four times more likely to experience sexual abuse than children in family care. According to Foster Care Facts and Statistics (2013) in the UK 'foster children were 7–8 times, and children in residential care 6 times more likely to be assessed by a pediatrician for abuse than a child in the general population'. A study of foster children in Oregon and Washington state found that nearly one-third reported being abused by a foster parent or another adult in a foster home (Hobbs *et al.*, 1999). Studies in the USA

have suggested that some foster-care placements may be more detrimental to children than remaining in a troubled home (Karnik, 2000). Fifteen percent of these children commit suicide, 60% of the girls become prostitutes, and 70% of the boys become hardened criminals. Two million children, the majority of them girls, are sexually exploited in the multibillion-dollar commercial sex industry (The State of the World's Children, 2005).

## Psychiatric morbidity

The incidence of depression was double in the Casey study of foster children in Oregon and Washington state. These children were found to have a higher rate of post-traumatic stress disorder (PTSD) compared with combat veterans, with 25% of those studied having PTSD. Children in

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foster care have a higher probability of having attention-deficit hyperactivity disorder and deficits in executive functioning, anxiety as well as other developmental problems (McCann *et al.*, 1996; Pears and Fisher, 2005; Tarren-Sweeney and Hazell, 2006; Pecora *et al.*, 2009). *Institutional autism syndrome*: Historically, Spitz described several patterns of behavior in young children in reaction to emotional trauma, loss of primary caregiver, and lack of stimulation. These children developed symptoms that were at least similar to those often found in children with autism. Rutter *et al.* (2001) examined 165 children adopted from Romania before the age of 4. The children were examined at 4 and 6 years and compared with 52 children of the same age and sex adopted at infancy in the UK. The researchers found that 12% of Romanian adoptees had quasiautistic features (vs. none in the UK sample) that included rocking, self-injury, unusual and exaggerated sensory responses, and problems chewing and swallowing. The investigators found that, with the exception of unusual sensory responses, the rate of autistic-like behaviors in most cases steadily declined after the child entered the adoptive family. In a number of cases, however, the difficulties remained, despite good-quality care in the new home. Aberrant eating among 347 preadolescent children in court-ordered foster and kinship care in New South Wales, Australia, was noticed. A quarter of children displayed clinically significant aberrant eating problems, with no evidence of sex-related or age-related effects. There is a pattern of excessive eating and food acquisition and maintenance behaviors without concurrent obesity (termed food maintenance syndrome), resembling the behavioral correlates of hyperphagic short stature (psychosocial dwarfism) (Tarren-Sweeney, 2006). Bulimia nervosa is seven times more prevalent among former foster children than in the general population (Cook, 2005).

## Participants and methods

### Study design

This is an observational cross-sectional study.

### Participants

One hundred patients were recruited from four orphanages:

- (1) twenty-five from Nasr City orphanage for preschool girls;
- (2) twenty-five from Heliopolis orphanage primary and preparatory boys;
- (3) twenty-five from Maadi orphanage for preschool boys; and
- (4) twenty-five from Hadaek Al Kooba primary and preparatory girls.

### Procedures

The children were assessed using the following tools:

- (1) General Health Questionnaire (GHQ).
- (2) The Child Behavior Checklist (CBCL).
- (3) Childhood Trauma Questionnaire.
- (4) Holmes and Rahe stress scale between June and December 2013.

Informed consent was obtained from children and teachers.

### Statistics

Descriptive statistics were obtained on Excel 2010 (Excel Microsoft).

Analytical associations were determined using SPSS version 22 (IBM) ( $\chi^2$ -test).

## Results

### Sample description

Figure 1a shows that male and female children were equally distributed: 50% were male and 50% were female.

Figure 1b shows that age groups were equally distributed: 50% primary children (6–12 years old) and 50% preparatory adolescents (12–18 years old).

Figure 1

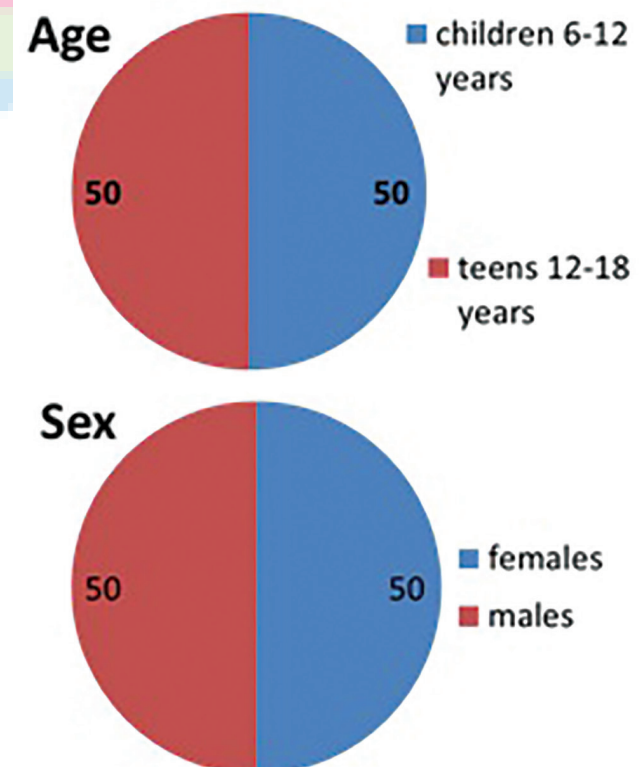


Figure one shows that males and females are equally distributed 50% males and 50% females and shows that age groups are equally distributed 50% primary children (6–12 years old) and 50% preparatory adolescents (12–18 old).

Figure 2 shows that 90% of participants reported emotional neglect and 83% reported emotional abuse; 54% of participants reported physical neglect and 31% reported physical abuse; 12% reported sexual abuse.

Figure 3 shows that 62% of participants scored more than 300 on the Holmes and Rahe scale and 48% were cases according to the GHQ.

Figure 4 shows that 28% of participants had anxiety disorder; 12% abused psychoactive substances (including nicotine); 21% had nocturnal enuresis; 20% had depressive episodes; 18% had conduct disorders and 18% had PTSD; 11% had reactive attachment; 9% had oppositional defiant disorder; and 6% had suicidal tendencies.

**Significant associations**

(1) Sexual and emotional abuse render the child prone to mental illness.

Table 1 shows significant association between the scores for emotional and sexual abuse in the Child Trauma Scale (CTS) and scores in the GHQ.

(2) Change of teachers and orphanages render the child prone to emotional abuse and neglect, besides some disorders.

**Figure 2**

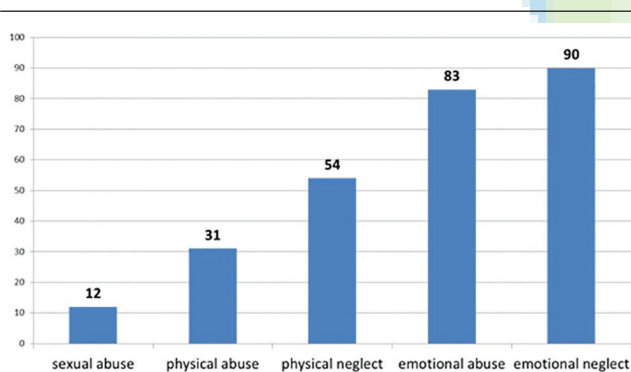


Figure two shows that 90% of participants report emotional neglect and 83% report emotional abuse. 54% of participants report physical neglect and 31% report physical abuse. 12% report sexual abuse.

Table 2 shows significant association between history of change of teachers and scores for emotional neglect and abuse in the CTS and having nocturnal enuresis, oppositional defiance, and attachment disorders according to the CBCL.

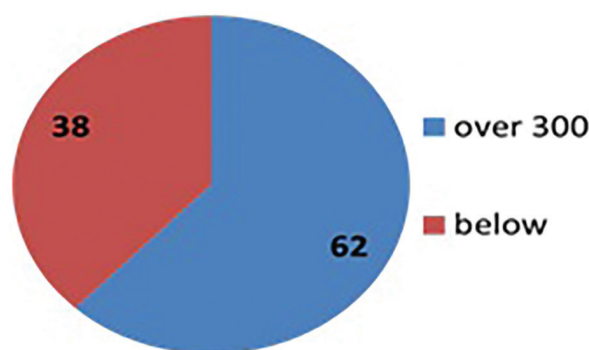
(3) Reactive attachment and oppositional defiance are more in male children.

Table 3 shows significant association between male sex and oppositional defiance and attachment disorders according to the CBCL.

(4) Depression is more in teens.

**Figure 3**

**Stress (Holmes and Rahe)**



**Psychiatric cases GHQ**

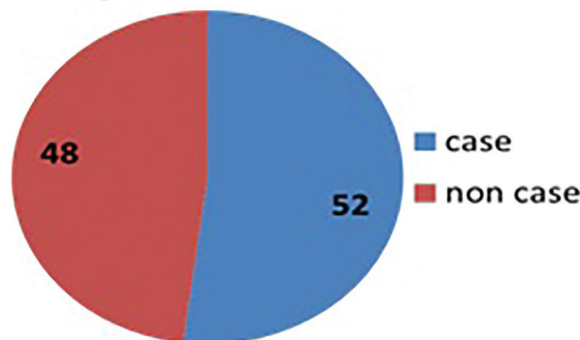


Figure three shows that 62% of participants scored more than 300 on Holmes and Rahe scale and 48% were cases according to the General Health Questionnaire.

**Table 1: Associating GHQ and CTQ (P = 0.001)**

Statistical test	GHQ	Emotional neglect	Emotional abuse	Physical neglect	Physical abuse	Sexual abuse
Chi square	.160	64.000	43.560	64.000	4.000	57.760
Asym. sig	.689	.000	.000	.424	.046	.000

**Table 2: Associating changing teachers and presence of abuse and psychiatric disorders in orphans (P = 0.001)**

Statistical test	Changing teachers	Emotional neglect	Emotional abuse	Nocturnal enuresis	Oppositional defiance	Reactive attachment
Chi square	.000	64.000	43.560	43.560	64.000	64.000
Asym. sig	1.000	.000	.000	.000	.000	.000

**Figure 4**

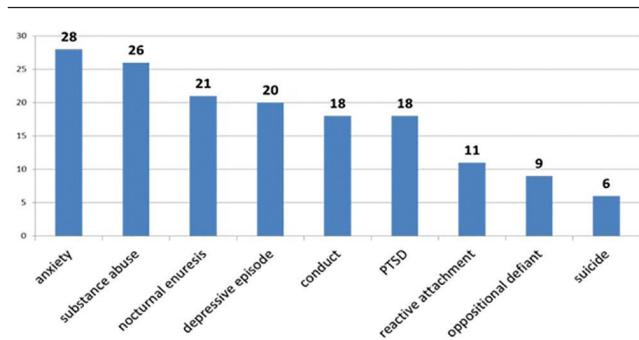


Figure 4 shows that 28% of participants has anxiety disorder, 12% abuse psychoactive substances (including nicotine) 21% has nocturnal enuresis 20% has depressive episodes, 18% conduct disorders and 18% Post traumatic stress disorder, 11% reactive attachment, 9% oppositional defiant disorder and 6% had suicidal tendencies.

**Table 3: Associating presence of reactive attachment and oppositional defiance to age group (children) and gender (male) (P = 0.001)**

Statistical test	Age	Reactive attachment
Chi square	.000	64.000
Asym. sig	1.000	.000
Statistical test	Age	Oppositional defiance
Chi square	.000	64.000
Asym. sig	1.000	.000
Statistical test	gender	Reactive attachment
Chi square	.000	64.000
Asym. sig	1.000	.000
Statistical test	gender	Oppositional defiance
Chi square	.000	64.000
Asym. sig	1.000	.000

Table 4 shows significant association between ages 12–18 and depressive disorder according to the CBCL.

(5) Male teens are prone to sexual abuse.

Table 5 shows significant association between ages 12–18 years and male sex and sexual abuse in the CTS.

(6) Conduct and substance abuse is more in male teens.

Table 6 shows significant association between ages 12–18 years and male sex and conduct and substance abuse disorders according to the CBCL.

(7) Suicide, PTSD, and substance abuse are strongly associated with sexual abuse.

Table 7 shows significant association between ages 12–18 years and male sex and suicide, PTSD, and substance abuse disorder according to the CBCL.

**Table 4: Associating age group (teens) and presence of depressive episodes (P = 0.001)**

Statistical test	Age group (teens)	Depressive episodes
Chi square	.000	36.000
Asym. sig	1.000	.000

**Table 5: Associating age group (teens) and gender (male) and presence of sexual abuse (P = 0.001)**

Statistical test	Age group (teens)	Sexual abuse
Chi square	.000	57.760
Asym. sig	.000	.000
Statistical test	Gender (males)	Sexual abuse
Chi square	.000	57.760
Asym. sig	1.000	.000

**Table 6: Associating age group (teens) and gender (male) and presence of conduct disorder and poly-substance abuse (P = 0.001)**

Statistical test	Gender	Conduct disorder
Chi square	.000	38.440
Asym. sig	1.000	.000
Statistical test	Age	Conduct disorder
Chi square	.000	38.440
Asym. sig	1.000	.000
Statistical test	Gender	Poly-substance abuse
Chi square	.000	23.040
Asym. sig	1.000	.000
Statistical test	Age	Poly-substance abuse
Chi square	.000	23.040
Asym. sig	1.000	.000

**Table 7: Associating suicide, sexual abuse PTSD, and poly-substance abuse (P = 0.001)**

Statistical test	Suicide	Sexual abuse
Chi square	77.440	57.760
Asym. sig	1.000	.000
Statistical test	Suicide	PTSD
Chi square	.000	40.960
Asym. sig	1.000	.000
Statistical test	Sexual abuse	PTSD
Chi square	57.760	40.960
Asym. sig	.000	.000
Statistical test	Sexual abuse	Poly-substance abuse
Chi square	57.760	23.040
Asym. sig	.000	.000

## Discussion

Equal distribution of sex and age groups is due to the random selection of orphanages. In Egypt boys and girls are segregated in orphanages and primary education children are segregated from preparatory adolescents.

Emotional neglect implies a feeling of being unloved and unwanted, including by society. Emotional abuse

involves inconsiderate remarks that upset a person, including comments by teachers. Physical neglect mainly involves not being given food or medication, including by society. Physical abuse includes being beaten, including by teachers. Twelve percent reported sexual abuse mainly on streets, by step-parents, distant relatives, and older colleagues.

Sixty-two percent were prone to psychosomatic disorders and 48% were psychiatric cases.

Fawzy and Fouad (2010) reported that the prevalence rate of depression was 21% and that of anxiety was 45% among orphanage children in Sharkia governorate in Egypt. This agrees with the present study's findings in which 28% of participants had anxiety disorder and 20% had depressive episodes.

Musisi *et al.* (2007) reported that 8.3% of orphans in a sample in Uganda compared with 5.1% of nonorphans had past suicidal wishes ( $P = 0.30$ ) and more reported past 'forced sex/abuse' ( $P = 0.05$ ). This agrees with the present study's findings in which 6% had suicidal tendencies.

- (1) Sexual and emotional abuse render the child prone to mental illness.
- (2) Suicide, PTSD, and substance abuse are strongly associated with sexual abuse.

Koumi *et al.* (2012) reported that among a sample of orphanage children in Cairo nocturnal enuresis was found in 23.3% and oppositional defiant disorder in 17.36%. Age at first admission, causes of receiving institutional care, and two or more moves between institutions were significantly associated with an increased risk of behavioral and emotional problems (Koumi *et al.*, 2012). This study found that among orphans nocturnal enuresis was 20% but oppositional defiant disorder was 9%.

- (1) Change of teachers and orphanages render the child prone to emotional abuse and neglect, besides some disorders.

Bos *et al.* (2011) reported that female sex was protective for virtually all types of psychopathology among children with a history of institutional rearing in a Romanian sample. The seemingly protective effect in girls may be the result of biological differences and cultural practices (Bos *et al.*, 2011). This agrees with the present study's findings:

- (1) Conduct and substance abuse is more in male teens.
- (2) Reactive attachment and oppositional defiance are more in male children.

- (3) Male teens are prone to sexual abuse.

### Limitations

- (1) No medical records are available for orphans.
- (2) Orphans are at higher risk for sexual abuse and associated PTSD, substance abuse, and suicide. There is no trained social service to report sexual abuse by step-parents and older colleagues in previous institutes.
- (3) Administrative shifting of teachers leads to an absence of a stable figure of attachment for children and no longitudinal awareness of the history of children's behavior.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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