

# The Prevalence of Depressive Symptoms Among Caregivers of Children with Mental Disorders Drawn at Kenyatta National Hospital

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## Abstract

Care giving to children suffering from mental disorders places emotional demands on the caregivers. This may lead to the development of depressive symptoms in the caregivers, which in turn may affect the quality of care that they give to the children. Objective: The objective of the study was to determine the prevalence of depressive symptoms among caregivers of children with mental disorders. Setting: The study was conducted at the child psychiatry and youth clinics of Kenyatta National Hospital in Nairobi, Kenya. Method: A cross sectional descriptive study. The participants were 176 caregivers whose children attended the child psychiatry and youth clinics of Kenyatta National Hospital in Nairobi, Kenya. Data was collected using the researcher designed socio demographic questionnaire and Beck's Depression Inventory. Results: The mean age was 45.5 years, (76.1 %) were female. Most of the participants were married (64.2%), had secondary level of education (46.6 %), and were employed (59.1%). Clinical depression was at (56.2%). The study found a correlation between clinical depression among caregivers and gender ( $p=0.007$ ). Conclusion: Caregivers of children with mental disorders are more likely than the general public to have clinical depression. Routine screening of caregivers at the clinics can provide opportunities for early detection of depressive symptoms and intervention.

## Keywords

Mental Disorder, Beck's Depression Inventory, Depressive Symptoms, Depression, Clinical Depression

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## 1. Introduction

The prevalence of depressive symptoms among care givers of children with mental disorders is well document in the rest of the world. Major depression in either parent can interfere with parenting quality and increase the risk of children developing mental, behavioral and social problems (England & Sim, 2009). In Kenya, depressive symptoms in caregivers of children with mental disorders remains largely unnoticed. This is partly because there is limited comprehensive documentation on the prevalence and incidence of depression. In primary health care in Kenya, the general health personnel are not well trained in the essential skills of mental health

care. As a result there are missed opportunities for screening, early detection and documentation of depression. Well-planned public awareness and education campaigns to bring mental health and physical health care closer to each other have recently been rolled out. These will not only improve health seeking behaviours but also monitor by including mental health indicators in health information and reporting systems. This study was therefore set out to screen, document and refer the caregivers who were found to have depressive symptoms. It served in creating awareness that when depressive symptoms are noticed, they should be taken seriously and medical attention sought or given. In addition, when caregivers take their children to the health care providers, the focus is always on the child and not the

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caregiver. This study served in building research capacity in Kenya. The traditional family system in Kenya was close knit as such it acted as a buffer against various kinds of stresses. Due to rapid urbanization and industrialization, the traditional family system has broken down. The nuclear family is more vulnerable to stresses and less equipped to handle mentally ill members (Sethi & Manchanda, (1978), Lau & Pang, (2007). As a result, a caregiver for a child with a mental disorder finds that they lack the support they need to care for the child.

In the child psychiatric clinic and the Youth Centre at Kenyatta National Hospital (KNH), caregivers often express feelings of sadness, hopelessness and helplessness as a result of the child's mental disorder. The shame of having a child with a disorder and the fear of what the future holds leads to a lack of interest in forming meaningful relationships. The caregivers also lack motivation to seek help for themselves even when they feel unwell.

## 2. Methodology

### 2.1. Research Design

This cross sectional descriptive study was done at the Kenyatta National Hospital. This is a major teaching and referral hospital in Nairobi, Kenya where patients are drawn from all over the country. The hospital has a mental health department which operates the weekly child, adolescent and adult outpatient clinics. The child clinic caters for ages 0 to 12 years and is open to a maximum of 16 children a week. At least 10 of these are follow up cases whereas a maximum of 6 patients attend the clinic for the first time. The Youth Center on the other hand runs three days a week and caters for 20 (twenty) 13 to 24 year olds. The majority of patients are however 13 to 18 years old. Both clinics are under the supervision of two consultant psychiatrists, nurse counselors and Master's Degree students from various specializations.

Permission to perform the study was obtained from the Department of Psychiatry, University of Nairobi. Ethical approval was obtained from Kenyatta National Hospital, University of Nairobi Ethical and Research committee. All caregivers of children of children who attend these two clinics were then requested to take part in the study. Only one hundred and seventy six caregivers who gave informed consent and met the inclusion criteria took part in the study. Participation was voluntary and the participants were assured of confidentiality.

### 2.2. Sampling Procedure

Participants attending the Child Psychiatry Clinic and the Youth clinic at Kenyatta National Hospital were approached

and selected as they came until the desired number was achieved. Participation was voluntary and only those caregivers who met the inclusion criteria and gave informed consent were enlisted for the study.

### 2.3. Data Collection

The survey instruments utilized to collect data included a researcher designed Socio Demographic Questionnaire and Beck Depression Inventory II (BDI II).

#### 2.3.1. Socio-Demographic Questionnaire

This was used to collect data on the participant's age, gender, education level, socioeconomic status, number of the children in the household, employment status, monthly income, relationship to the child under their care, age of the child, duration of care giving and marital status.

#### 2.3.2. Beck Depression Inventory (BDI II)

The Beck Depression Inventory is a 21-item multiple-choice self-report scale created by Dr. Aaron T. Beck. It is one of the most widely used instruments for measuring the severity of depressive symptoms. A study by Arnau *et al.*, (2001) demonstrated that the BDI-II yields reliable, internally consistent, and valid scores in a primary care medical setting. In a setting such as the Kenyatta National Hospital where the research was conducted, it was therefore the ideal tool to use in order to detect the presence of depressive symptoms among the caregivers.

#### 2.3.3. Inclusion and Exclusion Criteria

In order to take part in the study, the caregivers had to be eighteen years and above. In Kenya, this is the legal age for an adult. In this study, biological parents or persons who regularly cared for a child were enrolled after giving informed consent. Persons who accompanied the child to the clinic because the caregivers was not able to were excluded from the study. Any caregiver who was below the age of eighteen was excluded from the study. The study was on a voluntary basis so caregivers who were not willing to take part or declined to sign the informed consent form were excluded. Both the socio demographic questionnaire and the Beck depression Inventory were in English. The principal investigator provided assistance to those who needed it while completing the questionnaires. Caregivers who did not understand or speak either English or Kiswahili were excluded from the study.

#### 2.3.4. Sample Size

In the Child Psychiatry a total of 64 caregivers accompany the children to the clinic each month. At the Youth Centre, a total number of 80 caregivers accompany the children in a month. Over the two month period when the researcher

wished to collect data, the projected number was 288. To determine the sample size of the caregivers to be drawn from the targeted population, the researcher adopted the Cochran (1963:75) formula with a 95% confidence level and 0.05

variation. The sample size in this study was adjusted to the two clinics where the study was carried out. The adjustment was done using the finite population correction and the sample size was 176.

**Table 1.** Social demographic characteristics (N=176).

	Male		Female		Total	
	N	(%)	N	(%)	N	(%)
Gender						
Female			134	(76.1)	176	(76.1)
Male	42	(23.9)				(23.9)
Age of care giver in years						
18 – 35	11	(6.3)	49	(27.8)	60	(34.1)
36 – 55	27	(15.3)	76	(43.2)	103	(58.5)
56 and above	4	(2.3)	9	(5.1)	13	(7.4)
Marital status						
Single	3	(1.7)	23	(13.1)	26	(14.8)
Married	35	(19.9)	78	(44.3)	113	(64.2)
Divorced	0	(0)	1	(0.6)	1	(0.6)
Separated	3	(1.7)	17	(9.6)	20	(11.3)
Widowed	1	(0.6)	15	(8.5)	16	(9.1)
Level of education						
No formal	0	(0)	3	(1.7)	3	(1.7)
Primary	6	(3.4)	33	(18.8)	39	(22.2)
Secondary	22	(12.5)	60	(34.1)	82	(46.6)
Tertiary	14	(7.9)	38	(21.6)	52	(29.5)
Employment						
Fulltime	32	(18.2)	72	(40.9)	104	(59.1)
Not working	3	(1.7)	35	(19.9)	38	(21.6)
Part time	6	(3.4)	25	(14.2)	31	(17.6)
Volunteering	1	(0.6)	2	(1.1)	3	(1.7)
Income in Kshs.						
Below 5,000	5	(2.8)	46	(26.1)	51	(28.9)
5,001 – 10,000	5	(2.8)	28	(15.9)	33	(18.7)
10,001 – 15,000	9	(5.1)	15	(8.5)	24	(13.6)
15,001 and above	23	(13.1)	42	(24)	65	(37.1)
No income	0	(0)	3	(1.7)	3	(1.7)

### 2.3.5. Data Collection Procedure

Data was collected at Kenyatta National Hospital from the child psychiatric clinic every Monday and from the youth clinic every Tuesday and Friday for a period of two months. The researcher approached the care givers in the waiting area where they were informed about the study and then ushered into a private room. In the private room the researcher explained to the caregivers the nature of the study and sought their informed consent. Those who gave consent to participate in the study signed the consent form and thereafter, the researcher administered the socio demographic

questionnaire and the Beck Depression Inventory II. To collect data from each participant, it took an average of 30-45 minutes and the process was repeated on all clinic days. The collected data was then be cleaned, coded and entered into a data sheet for computer analysis.

### 2.3.6. Data Analysis and Presentation

Descriptive and inferential analysis was done using the Statistical Package for Social Sciences (SPSS) version 12. Frequency distributions were performed on all variables and then subjected to other analysis like chi-square test statistics. The chi-square test was used to look at the statistical

significance of association between pairs of variables. Results with a p-value of  $p < 0.05$  and a confidence interval of 95% were considered as statistically significant. The results

were then presented using bar graphs, pie charts, frequency tables and narratives.

**Table 2.** Other Caregiver characteristics in relation to child (n=176).

	Male		Female		Total	
	N	(%)	N	(%)	N	(%)
Number of children in home						
1 – 3	31	(17.6)	95	(53.9)	126	(71.5)
4 – 6	10	(5.7)	32	(18.2)	42	(23.9)
7 – 9	1	(0.6)	4	(2.3)	5	(2.9)
10 and above	0	(0)	3	(1.7)	3	(1.7)
Child age in years						
2 – 3	2	(1.1)	6	(3.4)	8	(4.5)
4 – 5	4	(2.3)	14	(8)	18	(10.3)
6 – 11	4	(2.3)	35	(19.9)	39	(22.2)
12 – 18	32	(18.2)	79	(44.8)	111	(63)
Relationship of Child						
Biological	34	(19.3)	114	(64.8)	148	(84.1)
Grandchild	0	(0)	10	(5.6)	10	(5.6)
Brother/Sister	4	(2.3)	5	(2.8)	9	(5.1)
Niece/Nephew	2	(1.1)	4	(2.3)	6	(3.4)
Neighbor	1	(0.6)	0	(0)	1	(0.6)
Cousin	1	(0.6)	1	(0.6)	2	(1.2)
No. of years of Care						
Below 1 year	13	(7.4)	29	(16.5)	42	(23.9)
1 – 5 years	15	(8.5)	45	(25.5)	60	(34)
Above 5 years	14	(8)	60	(34.1)	74	(42.1)
Coping Strategies						
Problem Focused	22	(22.2)	77	(77.8)	99	(56.3)
Social Support	20	(11.4)	55	(31.5)	75	(42.6)
Avoidant	0	(0)	2	(1.1)	2	(1.1)
Combined (P F and S S)	20	(11.4)	55	(31.5)	75	(42.6)

### 3. Results

#### 3.1. Demographic Characteristics of Care Givers

The study involved 176 caregivers of children with mental disorders. Demographic data was collected on the caregiver's age, gender, and marital status, level of education, employment and income (Table 1).

Other factors included the number of children living in the home, age of the child, relationship to the child, duration of care and coping strategies (Table 2). Caregiver coping mechanisms were also analyzed (Table 2). Caregivers reported that they mainly used a combination of the problem focused strategy with social support strategy 42.6% (n=75). Only 1.1% (n=2) of caregivers were found to have been giving up the attempt to cope whereas 56.3% (n=99) of caregivers were found to have used problem focus only. This strategy involves taking action to try and make the situation better. Some care givers reported that they learnt to live with the problem by accepting the reality, others took action to try and make the situation better. Accompanying the child to the clinic was one way of making the situation better as they received education on the child's condition.

#### 3.2. Prevalence of Depression Among Caregivers

To determine the levels and prevalence of depressive symptoms among caregivers of children with mental disorders, the BDI II was used to measure depressive symptomatology. Results showed that the caregiver's BDI scores ranged from 0 to 47, with a mean score of 16.24 (SD = 9.74).

**Table 3.** Symptom Severity.

	Frequency N	Percentage %
Minimal (0-13)	77	43.8
Mild (14-19)	38	21.6
Moderate (20-28)	45	25.6
Severe (29-63)	16	9.0
Total	176	100

The result presented on (Table 3) indicate that of the 176 caregivers who participated in the study, 43.8% (n=77) had minimal depression, 21.6% (n=38) had mild depression, 25.6% (n=45) had moderate depression and 9% (n=16) had severe depression.

#### 3.3. Depression Among Caregivers

A significant difference in depression scores was found by gender ( $p = .007$ ) with 62.7% (n=84) female and 35.7% (n=15) male having BDI levels ranging from mild to severe

depression (Table 4). There was no significant difference found in depression scores of caregivers based on the number of children living in the home, age of the child with a mental disorder, relationship to the child, number of years of care and the coping strategies.

## 4. Discussion

The study findings show that 56.2% (n=99) of the caregivers were at risk of clinical depression as derived from BDI II.

This prevalence is higher than the general population which is 6 to 15%. This finding is consistent with that of Mbugua et al. (2007) done in a rural setting which found a much higher rate (79%) of clinical depression among caregivers. Family Caregiver Alliance, 2001 also reported a 30% to 59% rate of caregiver depressive disorders or symptoms. In a related study, prevalence of informal caregivers who were at risk for depression was almost three times higher than in the general populations of similar age (Schulz, Tompkins, & Rau, 1998).

**Table 4.** Correlation of Depression with Social demographic characteristics (n=176).

Social demographic Characteristic	Depression				P value
	Yes		No		
	N	(%)	N	(%)	
Gender					
Female	84	(62.7)	50	(37.3)	0.007
Male	15	(35.7)	27	(64.3)	
Age of care giver in years					
18 – 35	28	(46.7)	32	(53.3)	0.418
36 – 55	62	(63.7)	40	(36.3)	
56 and above	9	(64.3)	5	(35.7)	
Marital status					
Single	14	(51.9)	13	(48.1)	0.531
Married	59	(52.7)	53	(47.3)	
Divorced	0	(0)	1	(100)	
Separated	12	(55.0)	8	(45.0)	
Widowed	14	(87.5)	2	(12.5)	
Level of education					
No formal	3	(100)	0	(0)	0.281
Primary	25	(63.4)	14	(36.6)	
Secondary	49	(58.8)	33	(41.3)	
Tertiary	22	(42.3)	30	(47.7)	
Employment					
Fulltime	53	(51.5)	51	(48.5)	0.806
Not working	26	(63.4)	13	(36.6)	
Part time	20	(59.4)	11	(40.6)	
Volunteering	0	(0)	2		
Income in Kshs.					
Below 5,000	36	(67.9)	15	(32.1)	0.202
5,001 – 10,000	20	(59.4)	13	(40.6)	
10,001 – 15,000	11	(45.8)	13	(54.2)	
15,001 and above	31	(47.8)	34	(52.2)	
None	1		2		

The lifetime risk of suffering from major depression is 10-25% for women and 5-12% for men. Gender was found to be significantly associated with depression. Being female was found to be a statistically significant risk factor to the development of depressive symptoms with a  $p = 0.007$ . Goodhead and McDonald (2007) reported that women react to care giving with a greater tendency to become distressed and to feel burdened by care giving. Female by nature are nurturers and get emotionally drawn into their activities. They also put unreasonable burdens on themselves while sacrificing their own physical and emotional needs in a bid to provide the best for the child. This subjective care giving burden may be associated with maternal depression (Magana et al., 2006).

Gender is also one of the factors that interacts with culture and has a bearing on the epidemiology of depression (Patel, 2001). Depressive disorders represent the fifth greatest burden for women, and the seventh greatest burden for men, across all physical and mental illnesses (Lopez and Guarnaccia, 2000).

In the African context, and as the study results show, care giving falls mainly on the female members. Besides care giving the woman may be pursuing her education, career, marriage, childbearing, child rearing and taking care of the other adults in the homestead. These provide the emotional context within which depression may take hold. When the child has a mental disorder and more so behavioral problems which lead to non-compliance, there is increased parent-child

conflict and stress, hostility and disruption. All these result in a poorer sense of competence in parental role, greater parenting stress and maternal depression (CHADD, 2005).

The study found that the longer the duration of care, the worse the level of symptoms but was not a statistically significant risk factor to the development of depressive symptoms ( $p=0.057$ ). Saunders (2003) found that caring exerts pressure on the caregiver. As the stressors increase and the condition persists, the caregiver symptoms may worsen. This deterioration of caregiver health may impact on their ability to continue their role responsibility.

The average age of onset is 25 years old. The mean age of majority caregivers 63.7% ( $n=62$ ) with depressive symptoms was 45.5 years. Both gender spread across that age bracket of 36 to 55 years. These findings are unlike those of earlier studies which found that caregivers in the 18-35 year age bracket may have been offering substantial care as the sole care giver. Being a younger caregiver was predictive of higher levels of depressive symptoms. Goodhead and McDonald (2007) found that younger caregivers experience higher levels of burden.

In the current study there was no statistically significant association between younger caregivers (19 to 35 years) and the risk of clinical depression. The researcher presupposes this may be due to the fact that the caregivers in this study were mainly siblings who lived with their parents or relatives who provided for them. In cases where the caregivers were young and married they expressed their satisfaction with the support they got from their spouses while caring for the child with a mental disorder. In a study by Feldman *et al.*, (2007) on caregiver social networks, it was found that participants who scored above the Beck Depression Inventory's (BDI) cut off point received less social support than participants without depressive symptoms. It is therefore, apparent that social support was a protective factor for the young caregivers.

Marital status differed by gender and married caregivers were the majority 64.2% ( $n=113$ ), followed by the singles 14.8% ( $n=26$ ), separated 11.4% ( $n=20$ ), widowed 9.1% ( $n=16$ ) and then the divorced 0.6% ( $n=1$ ) were the least. Mbugua *et al.*, 2007 found that married caregivers were likely to have a higher prevalence of depressive symptoms. This they argued may be due to lack of emotional support from the spouse. The findings of the current study are consistent with those of Mbugua *et al.*, 2007 which found 52.7% ( $n=59$ ) of caregivers who were married to have depressive symptoms.

Mbugua *et al.*, (2007) found married caregivers to be at a higher risk of depression due to lack of emotional support from the spouse. In the current study, relational/marital status had no statistically significant association with clinical depression. In earlier studies, Frey *et al.* (1989) found that

divorced/separated and single caregivers may have adopted coping strategies therefore had a lower risk of clinical depression compared to married caregiver. In this study, married caregivers were the majority 64.2% ( $n=113$ ). Of these, 52.7% ( $n=59$ ) were found to have clinical depression, a trend that is similar to that found in the study by Mbugua *et al.* There was only 0.6% ( $n=1$ ) divorced care giver. This may not be adequate to show a clear association with clinical depression. Separated caregivers were 11.4% ( $n=20$ ).

The current study found no statistically significant relationship between caregiver education and depressive symptoms. This was not in line with other studies which found that caregivers who had lower levels of education were more likely to report depressive symptoms (McLearn *et al.*, 2006; McLennan *et al.*, 2001). However, the association between caregiver education and level of education was in the direction similar to previous studies (i.e., lower education associated with more depressive symptoms). A larger sample of primary caregivers of children with mental disorders may have resulted in a clearer association between caregiver depression and levels of education.

Poverty dramatically increases the risk of common mental disorders, such as depression (Dohrenwend BP, Dohrenwend BS 1974, 1969) Poverty was revealed by parents as being responsible for their inability to meet certain important needs of the mentally ill child. This included the inability to buy drugs for the children and at times even getting bus fare to get to hospital (Ambikile and Outwater, 2012, Emerson, 2003). Unemployed caregivers with little or no income were also found to be at risk of depression (Brannan & Heflinger, 2006, Mbugua *et al.*, 2007). In the current study, the researchers findings were not significant but showed a trend that those caregivers with lower incomes (below Kshs 5,000) had a 69.9% ( $n=36$ ) prevalence rate of depressive disorders compared to those with an income above Kshs. 15, 001 where rates dropped to 47.8% ( $n=31$ ).

Employment status too was not significantly related to depressive symptoms. The study found that caregivers who were not working away from home had been involved in small groups (chamas), run their kiosks and as a result were satisfied with their lives. Of all the caregivers in this study, 1.7% ( $n=3$ ) caregivers did not have an income at all but were either married and the spouses were very supportive or were young caregivers who lived with their parents.

Studies on care giving have reported biological parents to have higher levels of parental stress. Brannan and Heflinger (2006) found that being a biological parent increased subjective internalized strain of the caregiver. The caregiver had more negative feelings such as worry, guilt, sadness, and fatigue in regards to their child with a mental health. Though



in this study there was no statistically significant association between being a biological parent of the child with mental disorder and clinical depression, it is important to note that most of the biological parents were female (57.4%). More female (62.7%) were found to have clinical depression than their male counterparts (35.7%).

The study found that 43.8% of caregivers were not at risk of depressive disorders. The coping strategies that the caregivers reportedly used played a role in protecting them against development of symptoms. 66.7% of caregivers reported to rely on social support as a way of coping with the child's mental disorder. The caregivers perceived social support as a positive factor in the care of the children which helped maintain child wellness. The support was in the form of help by a friend or neighbor in providing care for the child when the caregiver was away. During the clinics, the caregivers had an opportunity to share their experiences among each other. This improved their commitment towards follow up clinics for the children. Vogel et al., (2007) reported that knowing someone else who sought services increases the likelihood of seeking services. When children with mental disorders attend the clinics regularly, their functioning improves and as a result the caregivers' wellness is maintained.

## 5. Conclusion

Organization (WHO) predicts that depression will be the most common illness in the world by the year 2020 (WHO, 2001). There is a high prevalence of depression among caregivers as have been reported in various studies. The Beck Inventory scores in this study indicated that majority of caregivers of children with mental disorders had scores indicating risk of mild, moderate, and severe depression (clinical depression).

The results of this study suggest some risk factors for caregiver depressive symptoms occur across populations (e.g., gender and duration of care). The researcher however feels that each population has additional unique risk factors that may predispose or be protective. Recognition of mental disorder specific risk factors associated with the development of caregiver depressive symptoms will guide clinical care and the design of future interventions.

The results of this study have implications for clinical practice, training and policy initiatives. The low level of awareness among caregivers suggested that dissemination of accurate information about psychological / psychiatric problems and available help seeking avenues are imperative. There is a need to plan models of service delivery in the child psychiatric clinics and focus on the integration of mental

health into general health care of the whole family. There is need for longitudinal studies that would show how persistent depression is over time among caregivers.

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