Recent and childhood adversities in patients with depressive disorders

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Background
A strong association is believed to exist between stressful life events and development of depressive disorders. Childhood adverse experiences contribute to a person's vulnerability to such disorders. The complex interplay between these variables needs further investigation.
Objectives
The objective of the present study was to clarify the impact of child abuse and recent stressful life events on patients with depressive disorders.
Patients and methods
A total of 75 patients with depressive disorders not having a comorbid mental illness were studied using the Social Readjustment Rating Scale of Holmes and Rahe and the Childhood Trauma Questionnaire.
Results
The mean age of our patients was 34.96±12.32 years, 69.3% of them were females, and the duration of illness ranged from 2 to 288 weeks with a mean of 30.94±54.61; 36% of the sample had severe depression. There was a statistically significant relationship between urban residence and magnitude of stress (P=0.049); married patients suffered less severe depression compared with unmarried ones (P=0.02). A positive and significant correlation was found between magnitude of stress and severity of depression ($P \leq 0.001$).
Duration of depressive illness was positively and significantly correlated with the raw score of Social Readjustment Rating Scale and with the severity of emotional neglect as measured by the Childhood Trauma Questionnaire (P=0.02 and 0.04, respectively).
Conclusion
The development of depression in adulthood is significantly associated with past exposure to child abuse and stressful life events. Childhood history of emotional neglect and magnitude of preonset stress may be contributing factors to the duration of depressive illness.

Keywords:
child abuse, depression, life events, stress

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Introduction

Mood is the sustained internal feeling of a person that affects his or her behavior and perception of the world. It can be normal, elevated, or depressed (Kaplan *et al.*, 2007).

Depressive symptoms include depressed or despairing mood, lack of interest, decreased mental productivity, reduction of drive and psychomotor agitation, or retardation together with some secondary symptoms such as somatic preoccupation, depersonalization, suicidal rumination, sleep disturbances, and loss of weight (Sazabo *et al.*, 2002).

Mood disorders are common; major depressive disorder has the highest prevalence among other psychiatric disorders, and the lifetime prevalence of depression is estimated to be about 17% (Kessler *et al.*, 2005). Depressive disorders often start at a young age; they may be recurrent and interfere with functioning of patients. If the total productivity years lost because of disability is considered, depression would be the leading cause of disability worldwide (World Health Organization, 2012).

Interpersonal problems, stress, medical illness of the patient or significant others, childhood problems, unresolved issues with one's family including past history of child abuse and maltreatment are considered among the psychosocial factors implicated in the etiology of and predisposition for depression (Khalsa *et al.*, 2011).

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In epidemiological studies, adverse childhood experiences such as abuse or neglect were found to be associated with marked increases in future vulnerability to develop adulthood depression (Briere *et al.*, 1997; Sansone *et al.*, 2001).

Neurobiologically, early stressors in life may lead to acute and chronic changes in the activity and regulation of the hypothalamic–pituitary–adrenal axis, with hypersecretion of corticotropin-releasing hormone. Corticotropin-releasing hormone hypersecretion may create a biological vulnerability to the development of depression directly or by increased sensitivity to stressors in adulthood (Nemeroff, 1996).

Stressful life events markedly increase the likelihood to develop depression (Paykel, 1994), and episodes of unipolar depression may be preceded by negative life events at higher rates compared with control samples (Paykel, 2003).

Regarding the course of depressive disorders, negative life events can affect the duration and relapse of depression, whereas positive life events have been associated with remission of depression (Neeleman *et al.*, 2003).

Patients and methods

The present study was conducted at the Psychiatry Outpatient Clinic, Minia University Hospital, from 1 July 2014 to 30 April 2015. The study was approved by the Ethical Research Committee in Minia faculty of medicine. Consents have been obtained from participants after discussing procedures of the study with them.

Sample

All patients diagnosed with depressive disorders according to ICD-10 research criteria (World Health Organization, 2013) from those attending the Psychiatry Outpatient Clinic, Minia University Hospital, from 1 July 2014 to 30 April 2015 were recruited to our study.

Those with confirmed depressive disorders were then screened for stressful life events by the Holmes and Rahe stress scale (Holmes and Rahe, 1967) as well as for the presence of child abuse by the Childhood Trauma Questionnaire (CTQ) (Bernstein *et al.*, 1994).

Inclusion criteria

(1) Age range: 18–50 years.
(2) Both sexes.
(3) Patients with depressive disorders.

Exclusion criteria

(1) Age below 18 or above 50 years.
(2) Depressive disorders due to general medical conditions.
(3) Depressive disorders due to psychoactive substance use.
(4) Depressive disorders that are comorbid or secondary to another psychiatric disorder.
(5) Patient refusing to be involved in the study.

Tools of the study

(1) Research criteria for depressive disorders according to ICD-10 (World Health Organization, 2013):

    It classifies depressive disorders into four major categories, which are depressive disorders, recurrent depressive disorders, dysthymia, and other mood disorders (affective disorders). Each of them includes subtypes according to certain factors such as duration of illness, number and nature of symptoms, associations or not with somatic syndromes, and associations or not with psychotic symptoms.

(2) The Holmes and Rahe stress scale (Holmes and Rahe, 1967):

    The Holmes and Rahe stress scale or Social Adjustment Rating Scale (SARS) is a list of 43 stressful life events that can contribute to illness development.

    To measure stress according to the Holmes and Rahe Stress Scale or SARS, the numbers of 'Life Change Units' that apply to events in the past year of an individual's life are added, and the final score will give a rough estimate of how stress affects health – for example, death of spouse scores 100, divorce scores 73, whereas minor violations of the law scores 11.

    Its scoring is as follows:
    (a) Score of 300+: high risk of illness.
    (b) Score of 150–299: moderate risk of illness (reduced by 30% from high risk).
    (c) Score <150: mild risk of illness.

(3) CTQ (Bernstein*et al.*, 1994):

    This is a 28-item, self-report inventory assessing three domains of childhood abuse (sexual, physical, and emotional), and two domains of childhood neglect (physical and emotional). Scores for each category have shown excellent sensitivity and

specificity in correctly classifying cases of abuse and neglect in psychiatric patients (Bernstein *et al.*, 1994).

The CTQ applies to early childhood trauma that occurred at or before 12 years of age.

The present study used five CTQ subscales: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect. On each subscale, a score of less than 10 was considered negative, and a score of 10 or higher was considered positive (Bernstein *et al.*, 1994, 1997, 2003; Bernstein and Fink, 1998).

Results

Our sample included 75 patients diagnosed with depressive disorders selected from those attending the psychiatry outpatient clinic in Minia University Hospital. The mean age of the patients was 34.96±12.32 years. The majority of our patients were females (69.3%), married (69.3%), living in urban areas (62.7%), and unemployed (54.7%) (Table 1).

According to structured clinical interview using research criteria of depressive disorders of ICD-10, 16 (21.3%) patients were diagnosed with mild depressive disorders, 25 (33.3%) patients with moderate depressive disorders, 27 (36%) patients with severe depressive disorders with or without psychotic symptoms, and seven (9.3%) patients were diagnosed as having other depressive disorders including dysthymia and other specified depressive disorders (Table 2).

Regarding magnitude of stress and risk for depression as measured by SARS, 21 (28%) patients had high risk for depression, 38 (50.7%) had moderate risk, and only 16 (21.3%) patients had a slight risk for depression (Table 2).

As shown in Table 3, there was higher risk of depression (higher magnitude of stress) in males than in females, in single and divorced patients than in married patients, and in patients living in urban areas than in rural areas. The difference was statistically significant regarding residence (P=0.049).

Regarding magnitude of psychosocial stressors in relation to severity of depressive disorders, the majority of patients diagnosed with mild depressive disorders (62.5%) had a history of slight risk according to their magnitude of stress, the majority of those diagnosed with moderate depressive disorders (76%) had moderate risk, and (66.7%) of those diagnosed with severe depressive disorders had high risk; the

Table 1 Sociodemographic characteristics of the whole sample

Variables	*n* (%)
Age	
Range	18–50
Mean±SD	34.96±12.32
Sex	
Male	23 (30.7)
Female	52 (69.3)
Occupation	
Clerk	18 (24)
Manual worker	13 (17.3)
Retired	3 (4)
Unemployed	41 (54.7)
Marital status	
Single	14 (18.7)
Married	52 (69.3)
Divorced	7 (9.3)
Widow	2 (2.7)
Residence	
Rural	28 (37.3)
Urban	47 (62.7)

Table 2 Severity of mood disorders according to ICD-10 research criteria and magnitude of stress according to Social Readjustment Rating Scale

Variables	*n* (%)
Severity of mood disorders	
Mild (F32.0)	16 (21.3)
Moderate (F32.1)	25 (33.3)
Severe (F32.2, F32.3)	27 (36)
Others[a]	7 (9.3)
Assessment for stress	
High risk for depression (score of 300+)	21 (28)
Moderate risk (score of 150–299)	38 (50.7)
Slight risk (score <150)	16 (21.3)

[a]Others include dysthymia and other specified depressive disorders.

Table 3 Magnitude of stress as measured by Social Readjustment Rating Scale in relation to sex, marital status, and residence

	Magnitude of stress [*n* (%)]			*P* value
	Slight	Moderate	High	
Sex				
Male (*n*=23)	4 (17.4)	13 (56.5)	6 (26.1)	0.775
Female (*n*=52)	12 (23.1)	25 (48.1)	15 (28.8)	
Marital status				
Single (*n*=14)	5 (35.7)	5 (35.7)	4 (28.6)	0.438
Married (*n*=52)	9 (17.3)	29 (55.8)	14 (26.9)	
Divorced (*n*=7)	1 (14.3)	4 (57.1)	2 (28.6)	
Widow (*n*=2)	1 (50)	0 (0)	1 (50)	
Residence				
Rural (*n*=28)	10 (35.7)	13 (46.4)	5 (17.9)	0.049*
Urban (*n*=47)	6 (12.8)	25 (53.2)	16 (34)	

*Means statistically significant.

Table 4 Comparison between groups of depressed patients with different severity according to the magnitude of stress as measured by Social Readjustment Rating Scale

Stressor	Severity of mood disorders [*n* (%)]				*P* value
	Dysthymia and OSDD	Mild (*n*=16)	Moderate (*n*=25)	Severe (*n*=27)	
Slight	3 (42.9)	10(62.5)	3 (12)	0 (0)	0.001*
Moderate	4 (57.1)	6 (37.5)	19 (76)	9 (33.3)	
High	0 (0)	0 (0)	3 (12)	18(66.7)	

OSDD, other specified depressive disorder. *Means statistically significant.

Table 5 Comparison between groups of depressed patients with different degrees of severity according to history of child abuse and neglect as measured by Childhood Trauma Questionnaire

CTQ	Severity of depressive disorders [*n* (%)]				*P* value
	Dysthymia and OSDD	Mild (*n*=16)	Moderate (*n*=25)	Severe (*n*=27)	
Physical neglect					0.027
None or minimal	6 (85.7)	3 (18.8)	8 (32)	3 (11.1)	
Low to moderate	1 (14.3)	5 (31.2)	9 (36)	13 (48.1)	
Moderate to severe	0 (0)	3 (18.8)	2 (8)	5 (18.5)	
Severe to extreme	0 (0)	5 (31.2)	6 (24)	6 (22.2)	
Emotional neglect					0.224
None or minimal	1 (14.3)	2 (12.5)	2 (8)	1 (3.7)	
Low to moderate	2 (28.6)	6 (37.5)	11 (44)	10 (37)	
Moderate to severe	4 (57.1)	5 (31.2)	10 (40)	6 (22.2)	
Severe to extreme	0 (0)	3 (18.8)	2 (8)	10 (37)	
Physical abuse					0.30
None or minimal	6 (85.7)	15 (93.8)	24 (96)	20 (74.1)	
Low to moderate	1 (14.3)	0 (0)	1 (4)	4 (14.8)	
Moderate to severe	0 (0)	1 (6.2)	0 (0)	1 (3.7)	
Severe to extreme	0 (0)	0 (0)	0 (0)	2 (7.4)	
Emotional abuse					0.143
None or minimal	7 (100)	15 (93.8)	23 (92)	18 (66.7)	
Low to moderate	0 (0)	1 (6.2)	2 (8.0)	7 (25.9)	
Moderate to severe	0 (0)	0 (0)	0 (0)	0 (0)	
Severe to extreme	0 (0)	0 (0)	0 (0)	2 (7.4)	
Sexual abuse					0.581
None or minimal	5 (71.4)	15 (93.8)	21 (84)	19 (70.4)	
Low to moderate	2 (28.6)	1 (6.2)	4 (16)	5 (18.5)	
Moderate to severe	0 (0)	0 (0)	0 (0)	2 (7.4)	
Severe to extreme	0 (0)	0 (0)	0 (0)	1 (3.7)	

CTQ, Childhood Trauma Questionnaire; OSDD, other specified depressive disorder.

difference between groups was statistically significant (*P*=0.001) (Table 4).

In comparing groups of patients with depressive disorders (according to severity) and history of child abuse and neglect as measured by the CTQ, patients with moderate and severe depressive disorders had higher scores on physical neglect, emotional neglect, physical abuse, emotional abuse, and sexual abuse than mild and other depressive disorders; the difference was statistically significant in the domain of physical neglect (Table 5).

In comparing patients having mild and other depressive disorders with those having moderate and severe depressive disorders, patients with moderate and severe depressive disorders had higher scores of SARS (representing magnitude of stress) and higher scores of physical neglect, emotional neglect, physical abuse, emotional abuse, and sexual abuse; the difference was statistically significant for magnitude of stress (*P*=0.001) and emotional abuse (*P*=0.019) (Table 6 and Fig. 1).

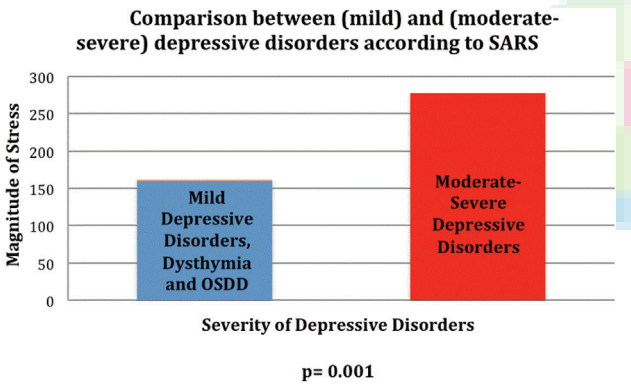
Logistic regression analysis was performed to reveal the independent variables for prediction of severity of depressive disorders, and showed that the magnitude of stress (*P*=0.001) and emotional abuse (*P*=0.09) were the variables contributing most to the prediction of severity of depressive disorders (Table 7).

Table 6 Comparison between groups of depressed patients with different degrees of severity according to Social Readjustment Rating Scale and Childhood Trauma Questionnaire variables

	Severity of depressive disorders		*P* value
	Mild+others[a] (*n*=23)	Moderate+severe (*n*=52)	
Raw score of SARS			0.001[a]
Range	73–274	109–583	
Mean±SD	159.34±61.61	277.88±108.37	
Physical neglect			0.858
Range	5–18	5–15	
Mean±SD	9.26±3.33	9.38±2.47	
Emotional neglect			0.200
Range	7–20	8–21	
Mean±SD	14.17±3.36	15.23±3.21	
Physical abuse			0.346
Range	5–10	5–18	
Mean±SD	6.08±1.31	6.55±2.21	
Emotional abuse			0.019[a]
Range	5–9	5–16	
Mean±SD	6.04±1.11	7.09±2.69	
Sexual abuse			0.140
Range	5–7	5–13	
Mean±SD	5.21±0.59	5.55±1.37	

OSDD, other specified depressive disorder; SARS, Social Readjustment Rating Scale. [a]Others=dysthymia and OSDD.

Figure 1



Comparison between mild and moderate–severe depressive disorders according to Social Readjustment Rating Scale. OSDD, other specified depressive disorder.

Table 7 Logistic regression analysis to reveal the independent variables for prediction of severity of depressive disorders

	Odds ratio	95% CI	*P* value
Magnitude of stress	1.02	1.01–1.03	0.001*
Emotional abuse	1.32	0.96–1.81	0.092

CI, confidence interval. *Means statistically significant.

Discussion

It is common in clinical practice to ask patients who present with depressive symptoms whether there were any recent adversities that preceded the onset of depressive disorder or early childhood trauma that could influence the course and outcome of illness and the development of proper treatment plan (Mazure and Druss, 1995).

The final sample of the present study included 75 patients, which is relatively smaller than other studies trying to evaluate the effects of childhood trauma on adult depression (Heim *et al.*, 2009) or those trying to find a relationship between stressful life events and depression (Kendler *et al.*, 1999). However, we included only patients within the age range 18–50 years, aiming at exclusion of childhood and elderly depression to control for age as a confounding factor affecting outcome measures. Similar studies involved adult patients only (Bradley *et al.*, 2008; Mandelli *et al.*, 2015), some studies involved elderly patients (Gameiro *et al.*, 2014), and some were concerned with childhood depression (Khan *et al.*, 2015).

The relationship between stress and depression is well established, suggesting that stressful life events markedly increase the risk of depression (Paykel, 1994). Our results reveal that the more the magnitude of the stresses, the more the severity of depressive disorder.

Sociodemographic characteristics of our sample are similar to those found in a study conducted by Heim *et al.* (2009) regarding age group (18–45 years), inclusion and exclusion criteria, and also results related to CTQ variables, as females were found to be more affected by psychosocial stressors

than males. Similar results were also obtained from a study conducted by You and Conner (2009).

People living in urban areas were found to be more affected by stressful life events than those living in rural areas; these results were similar to the results obtained by Palesh *et al.* (2006) who found that women living with breast cancer in rural communities who have experienced multiple stressful life events may have an increased risk for mood disturbance, whereas having greater emotional self-efficacy may provide resilience against mood disturbance. Despite methodological differences between studies, these results support the hypothesis that people living in urban areas are more prone for depressive disorders than those living in rural areas.

Married and divorced individuals were found to be more exposed to stressful events than single individuals, and these results were found to be different from the results obtained by Heim *et al.* (2009). This may be explained by the psycological consequences of the responsibilities and the economic burden of marriage and raising children in our society.Regarding stressful life events, we found a statistically significant relationship between magnitude of stressful life events and severity of depression (P=0.001), and this was consistent with the results obtained in other studies (Kendler *et al.*, 1999; Bogdan and Pizzagalli, 2006; Shapero, 2014; Fried *et al.*, 2015).

Child abuse was found to be significantly correlated with development of depression in later life and was in agreement with other studies (Frederico *et al.*, 2008; Harkness *et al.*, 2008; Gilbert *et al.*, 2009).

Epidemiological studies have found that adverse experience during childhood, such as abuse, neglect, or loss is associated with an increased risk to develop depression (Briere *et al.*, 1997). Regarding the magnitude of child abuse and neglect in relation to severity of depressive disorders, the present study demonstrates that physical neglect and emotional abuse are associated with severe depressive disorders.

Our results were found to be different from results obtained by Chapple (2003) in the domain of physical neglect and in agreement with Nanni *et al.* (2013) regarding emotional abuse. Our findings can be explained by the statement of Perry (2012), who stated that the immediate emotional effects of abuse, neglect, and an inability to trust can translate into lifelong psychological consequences, including low self-esteem, depression, and relationship difficulties.

Limitations of the study

(1) The sample size was relatively small.
(2) The study was conducted in one hospital, and therefore the sample may not be representative of the whole society.
(3) The Holmes and Rahe Stress Scale deals with stressful life events from an objective rater's perspective without giving weight to the subjective meaning of the stressor to different individuals.
(4) Lack of a healthy control group for comparison regarding childhood trauma and life events.

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Conflicts of interest
There are no conflicts of interest.

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