

## The Relationship between Mental Health of Palestinian Mothers Due to Siege and Child Attachment

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العلاقة ما بين الضغوط النفسية الناتجة عن الحصار والصحة النفسية للأمهات الفلسطينيات و الرباط مع أطفالهن

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### Abstract

**Aim:** The current study investigated the relationship between mothers' stressors due to siege, their mental health and the attachment styles of their children. **Methods:** Participants were recruited from a list of previously studied Palestinian families in the Gaza Strip, which was part of a three-stage prospective study of 184 households. N=140 mothers were recruited to the study. Ages ranged from 18 to 64 years with a mean age of 41.53 years. Participants completed self-report questionnaires, which included a sociodemographic scale, the Gaza Siege Checklist, the Hopkins Symptoms Checklist (HSCL-25), and the Parent/Child Reunion Inventory (P/CRI). Data were collected from October to November 2008. **Results:** Mothers reported from 2-20 stressors due to siege (M=10.83, SD=4.07). Those with monthly income of less than \$350 US reported experiencing more stressors than mothers whose families had a monthly income of \$351 US or more. Results identified 16.8% of mothers met the criteria for psychiatric conditions; 19.0% reported anxiety and 15.2% reported depression. Mothers living in cities reported fewer mental health problems compared with those living in villages and camps. Further, insecure attachment of children was positively associated with total stressors and mothers' anxiety, and depression. **Conclusion:** Maternal depression and anxiety was associated with insecure attachment styles in children. Maternal depression and anxiety were also associated with experiences of siege stressors and an insecure attachment style in children. The study highlights potential targets for future intervention.

**Key word:** Attachment, Gaza Strip, Anxiety, Depression, Siege, Stressors, Mothers

**Declaration of interest:** None

### Introduction

Since the Israeli Government enacted the full Gaza blockade in 2007, which has restricted the free movement of goods and people in and out of the Gaza Strip almost completely, the population there has suffered ever-increasing infringements of their economic and social rights. The access-restricted area (the so-called "buffer zone" or no man's land) was imposed by Israel within Gaza territory and covered 35% of key agricultural land; it highlights how fundamentally the right to movement is ignored with 113,000 people unable to access their farms.<sup>1</sup> Siege on the Gaza Strip since 2007 has been a unique situation and there have been very few studies on the impact of siege in the area.

A study of N=386 Palestinian adults in the Gaza Strip showed that people commonly reported the following siege stressors: prices were sharply increased (97.67%), they feel they are in a big prison (92.23%), they cannot find things they need in the market (91.70%), they quit making daily purchases for basic needs (88.30%), and social visits were less frequent than before (85.23%).<sup>2</sup> In another study involving 502 randomly selected

participants from five areas of the Gaza Strip, the most common stressful situations due to siege were: feelings of living in a big prison, being unable to complete construction and repair work in their house due to shortage of cement and building materials, a sharp increase in prices in the last few years. Participants commonly reported traumatic events, such as hearing artillery shelling in the area, hearing the sonic sounds of jetfighters, hearing loud drones, and witnessing mutilated bodies on television. Men and boys experienced more severe traumatic events than women and girls. People living in cities reported more traumatic events than those living in villages or camps. As a reaction to stress and trauma, Palestinians participants reported anxiety symptoms such as nervousness or shakiness inside, feeling tense or keyed up; while depressive symptoms were expressed as feeling sad and physically weak. However, feelings of worthlessness and thoughts of ending life were rarely expressed.<sup>3</sup>

Bowlby's attachment theory is an essential reference for understanding relational aspects, which can impact mental dysfunction. The attachment system is theorized as a set

of instinctive affective, behavioral, cognitive, and motivational mechanisms designed to encourage infants to seek proximity to protective caregivers during times of stress. By viewing caregivers as attachment figures to turn to in times of emotional stress or uncertainty, infants can feel comfortable exploring the world around them, knowing that their caregivers are available if needed.<sup>4,5 6,7</sup>

Attachment in children is defined as a long-lasting emotional bond formed between a child and his/her caregiver. When children feel secure in their relationships with attachment figures, they perceive them as consistently available, sensitive and responsive to their needs. Children form insecure relationships with attachment figures that show deficiencies in sensitivity and responsiveness. Accordingly, by preschool age, the child with secure attachment shows relaxed and enjoyable interactions with the parent, and uses the caregiver as a secure base from which to explore the environment. In comparison with secure children, children with avoidant attachment tend to show greater affective neutrality and physical avoidance. Children with ambivalent attachment show exaggerated emotional expression and immature or angry behavior toward the parent. These children are known to show resistance, conflict or excessive dependence on the caregiver. Children with disorganized attachment show contradictory or incoherent behavior in proximity to the caregiver, such as simultaneous or successive approach and avoidance, disordered, incomplete, or undirected sequencing of movements, and confusion or apprehension. They seem unable to use their caregivers as a secure base for exploration and havens of safety.<sup>8</sup> Moreover, certain attachment patterns are particularly relevant to mental health; namely, the four attachment styles (secure, dismissing, preoccupied, and fearful), which can measure attachment dimensionally in terms of anxiety (the fear of being abandoned or rejected in close relationships) and avoidance (the preference for emotional distance).<sup>9</sup> A growing body of research links attachment insecurity to the whole spectrum of mental health problems in both children and adults.<sup>10</sup> Another study showed that maternal depression and anxiety have been linked to insecure parent-child attachment relationships.<sup>11</sup> Another reported that fearful attachment is more often found in people diagnosed with depressive disorders, while the depression related to bipolar or schizoaffective disorder is often associated with those who experience a more dismissive attachment style.<sup>12</sup> LeCompte *et al.*,<sup>13</sup> examined the psychological, social and cultural risk factors for child insecure attachment in a sample of N=33 South Asian immigrant families experiencing high migration stress in Montreal, Canada. Results suggested that child attachment security scores were associated with maternal depression, although statistically marginal, suggesting that high maternal depression is related to low child attachment security.

The aim of the current study was to investigate the relationship between mothers' stressors due to siege, their mental health and their children's attachment styles.

## **Methodology**

### **Participants**

The current study recruited N=140 mothers with at least one child aged between 6 to 18 years. Mothers' ages ranged from 26 to 65 years with a mean age of 41.61 (SD=8.79) years.

### **Instruments**

Data were collected from mother/child pairs by using the following questionnaires:

#### **Demographic questionnaire**

Demographic information about the participants was obtained using a form developed by the authors. The questionnaire included gender, age, citizenship, education level, place of residence, and number of children in the family.

#### **Gaza Siege Checklist – mothers' form <sup>2,3</sup>**

The checklist consisted of 21 items covering a wide range of daily life situations affected by the Gaza Siege, including family, health, education, social life, and economic issues. The first checklist was developed after conducting a focus group for 20 professionals working in different sectors of health, education, social services, and economic sectors. In the current study, the split half reliability of the scale was ( $r=.76$ ).

#### **Hopkins Symptoms Checklist (HSCL-25) <sup>14</sup>**

Hopkins Symptoms Checklist measures the presence and degree of symptoms of anxiety and depression during the past seven days. Each item was scored on a scale from 0 (not at all) to 3 (extremely). Examples of items are 'Nervousness or shakiness inside' and 'Feeling hopeless about the future.' The checklist comprises total anxiety and depression scales, an overall problem scale, as well as clinical cut-offs (set at 1.75). The Arabic translated version has proved reliable and valid in a multicultural context.<sup>15</sup> The internal consistency of the scale was calculated using Cronbach's alpha ( $\alpha=.92$ ).

#### **Parent/Child Reunion Inventory <sup>16</sup>**

The Parent/Child Reunion Inventory (P/CRI)<sup>16</sup> relies on the child's internal working model of his/her attachment relationship. It is based on direct observations of childhood reunions and it provides parents with hypothetical everyday separation situations. Parents are asked to select behaviors that are shown by their child at

reunion times. To assist with this, parents are asked to remember the last separation they had from their child lasting one hour or more. Parents rate each behavior as 'usually' (2), 'occasionally' (1) or 'never' (0). The P/CRI allows for the calculation of total secure and insecure scores. Six items measure secure attachment (range 0-12), and 14 items measure insecure attachment (range 0-28). The P/CRI is tentatively split into five insecure factors: insecure-avoidant-distancing (items 7, 8), insecure-avoidant (items 9, 10, 11, 12), insecure-anxious (items 13, 16), insecure-controlling (items 14, 15), and insecure-unspecified (items 17, 18, 19, 20). This scale was translated from English by Dr Thabet and was back translated by a professional with a diploma in Translation. There were no major changes identified in the translations.<sup>17</sup> The Cronbach's alpha for the secure and insecure subscales were  $\alpha=0.65$  and  $\alpha=0.77$ , respectively.

### Procedure

Eight mental health professionals (four social workers, four psychologists) received four hours of training during which the aims of the current study were reviewed. All had previous experience in data collection. Participants were recruited from list of previously studied Palestinian families in the Gaza Strip, which was part of a three-stage prospective study of 184 households. One hundred and forty mothers were contacted. A letter outlining the study aims was given to each and written consent to participate was obtained. Sociodemographic information for the study population was collected from mothers at home. Each interview took 30 minutes to complete. Data collection was done between September and November 2008.

### Statistical Analysis

Data entry and analysis were carried out using the Statistical Package for Social Science version 20 (SPSS Inc. Chicago Ill, US). Frequency and percentages were used to express quantitative data of types of stressful situations, mother's mental health disorder, attachment and resilience. For continuous variables, means and standard deviations were reported. For differences between means of two groups independent *t* tests were used. ANOVA tests were used for measuring differences between more than two groups of continuous variables, such as place of residence and stress, mother's mental health and child attachment style. Spearman's correlation coefficient was used to test the association between number of stressors, mother's mental health and child attachment style. Multivariate regression analysis was conducted in which each stressor was entered as the independent variable and the psychological symptoms of mothers (HSCL) entered as the dependent variable.

### Results

#### Sociodemographic characteristic

A total of N=140 mothers responded. Their ages ranged from 26 to 65 years with mean age of 41.61 y (SD=8.79). According to place of residence, 26.1% were from North Gaza, 37.5% from Gaza, 14.7% from the middle region of Gaza, 3.8% were from Khan Younis and 17.9% were from Rafah (south of Gaza). According to type of residence, 43.5% lived in cities, 12.5% lived in villages, and 44% lived in camps. In terms of number of children, 13.6% of families had less than 4 children, 61.4% had 5-7 children, and 25% had 8 and more siblings. As for family monthly income, 60.9% earned less than \$350 US per month, 30.4% earned \$351-700 US, and 8.7% earned more than \$701 US.

**Table 1.** Sociodemographic characteristic of the study sample (N=140)

|                           | N  | %    |
|---------------------------|----|------|
| <b>Address</b>            |    |      |
| North Gaza                | 37 | 26.4 |
| Gaza                      | 53 | 37.9 |
| Middle area               | 21 | 15.0 |
| Khan Younis               | 6  | 4.3  |
| Rafah area                | 23 | 16.4 |
| <b>Place of residence</b> |    |      |
| City                      | 58 | 41.4 |
| Village                   | 16 | 11.4 |

|                                    |     |      |
|------------------------------------|-----|------|
| Camp                               | 66  | 47.1 |
| <b>Number of children</b>          |     |      |
| Less than 4                        | 14  | 10.0 |
| 5-7 children                       | 90  | 64.3 |
| 8 and above                        | 36  | 25.7 |
| <b>Monthly family income</b>       |     |      |
| Less than \$350 US                 | 84  | 60.0 |
| \$351-700 US                       | 42  | 30.0 |
| More than \$701 US                 | 14  | 10.0 |
| <b>Husbands' education</b>         |     |      |
| Uneducated                         | 7   | 5.0  |
| Secondary school and less          | 89  | 63.6 |
| University and above               | 44  | 31.4 |
| <b>Husbands' employment status</b> |     |      |
| Unemployed                         | 70  | 50.0 |
| Skilled worker                     | 13  | 9.3  |
| Employee                           | 47  | 33.6 |
| Others                             | 10  | 7.1  |
| <b>Mothers' education</b>          |     |      |
| Uneducated                         | 4   | 2.9  |
| Secondary school and less          | 131 | 93.6 |
| University and above               | 5   | 3.6  |
| <b>Mothers' employment status</b>  |     |      |
| Housewives                         | 133 | 95.0 |
| Employee                           | 7   | 5.0  |

***Frequency of stressors related to the siege of Gaza in mothers***

Results showed that the most common stressors arising from the siege of Gaza as rated by mothers were: prices have increased sharply (89.3%), I feel I am in a big prison

(87.8%), I was not able to get specific medicine for me or for one of the family members due to shortage of fuel and absence of transportation (75.7%). Mothers reported from 3-18 stressors relating to the siege with mean of 10.16 (SD=3.76).

**Table 2.** Frequency of items of siege of Gaza (N = 140)

| <b>Items</b>                                                                                                                          | <b>N=</b> | <b>%</b> | <b>No.</b> | <b>%</b> |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|------------|----------|
| Prices are sharply increased                                                                                                          | 125       | 89.3     | 15         | 10.7     |
| I feel I am in a big prison                                                                                                           | 122       | 87.8     | 17         | 12.2     |
| I was not able to get specific medicine for me or for one of the family members due to shortage of fuel and absence of transportation | 106       | 75.7     | 34         | 24.3     |
| I stopped sending my children to school due to shortage of money and I let them do other jobs                                         | 103       | 73.6     | 37         | 26.4     |
| Social visits are less than before due to shortage of fuel and absence of transportation                                              | 93        | 66.9     | 46         | 33.1     |
| I was not able to get specific medicine for me or for one of my family members due to shortage of physicians and nurses               | 92        | 65.7     | 48         | 34.3     |
| Ability to send children to school due to shortage of money                                                                           | 85        | 60.7     | 55         | 39.3     |

|                                                                                                                          |    |      |     |      |
|--------------------------------------------------------------------------------------------------------------------------|----|------|-----|------|
| Social visits are less than before due to shortage of money due to unemployment                                          | 84 | 60.0 | 56  | 40.0 |
| I was not able to get specific medicine for me or for one of my family members due to shortage of medicine and equipment | 82 | 58.6 | 58  | 41.4 |
| Losing the job due to shortage of cement, and basic construction materials                                               | 80 | 57.1 | 60  | 42.2 |
| I started borrowing from banks and people to keep my family demands                                                      | 80 | 57.1 | 60  | 42.9 |
| I cannot find things I need in the market                                                                                | 78 | 55.7 | 62  | 44.3 |
| I went to Zakat organizations and other organizations to get food                                                        | 71 | 50.7 | 69  | 49.3 |
| I sold some of my furniture and wife's gold                                                                              | 64 | 45.7 | 76  | 54.3 |
| I thought of immigration                                                                                                 | 60 | 42.9 | 80  | 57.1 |
| I postponed the marriage ceremony of my sons due to shortage of furniture and building materials                         | 60 | 42.9 | 80  | 57.1 |
| I cannot finish some construction and repair work in my house due to shortage of cement and building materials           | 60 | 42.9 | 80  | 57.1 |
| I need to travel outside the Gaza Strip and cannot                                                                       | 40 | 28.6 | 100 | 71.4 |
| I started doing the papers for immigration                                                                               | 25 | 17.9 | 115 | 82.1 |

#### ***Siege stressors in mothers and sociodemographic variables***

A one-way ANOVA test was used to find differences in total siege stressors and other sociodemographic variables, such as number of children, monthly family income, education, place of residence. Post Hoc test using Tukey showed that mothers with low family income (less than \$250 US) ( $F(2/137)=9.6$ ,  $p=0.001$ ), not educated ( $F(5/134)=6.7$ ,  $p=0.001$ ), and mothers living in North Gaza ( $F(4/135)=7.94$ ,  $p=0.001$ ) had reported more stressors.

#### ***Mean and standard deviation of mental health using HSCL***

The results showed the mean HSCL was 1.15 ( $SD=0.56$ ), mean anxiety subscale score was 1.17 ( $SD=.64$ ), and mean depression subscale score was 1.14 ( $SD=0.57$ ). Taking in consideration the cutoff point of  $<1.76$  of HSCL, 16.8% of mothers were rated as having psychiatric conditions, 19.0% reported experiencing anxiety and 15.2% reported symptoms related to depression.

**Table 3.** Mean and standard deviation of mental health using HSCL

|                            | Mean | SD  |
|----------------------------|------|-----|
| <b>Mean HSCL</b>           | 1.15 | .56 |
| HSCL - Anxiety subscale    | 1.17 | .64 |
| HSCL - Depression subscale | 1.14 | .57 |

#### ***Differences between mental health problems rated by HSCL and other socioeconomic variables (place of residence, number of siblings, and family monthly income)***

In order to find the differences between the places of residence, number of siblings, monthly income and mental health, a one-way ANOVA test was performed. Post hoc Tukey test showed that mothers living in cities reported fewer mental health problems compared with those who lived in villages and camps ( $F(2/137)=15.2$ ,  $p=0.001$ ). Results also showed that mothers with a monthly income

of less than \$350 US reported more mental health problems than the other two groups. This group were more affected by siege than the other groups ( $F(1/137)=4.5$ ,  $p=0.01$ ).

#### ***Parent/Child Reunion (attachment style of children)***

The current study showed that mean secure attachment was 8.67 ( $SD=2.40$ ) and mean insecure attachment was 14.16 ( $SD=5.10$ ).

**Table 4.** Means and Standard deviations of attachment

| Attachment                 | Mean  | SD   |
|----------------------------|-------|------|
| <b>Secure attachment</b>   | 8.67  | 2.40 |
| <b>Insecure attachment</b> | 14.16 | 5.10 |

***Differences between attachment and other socioeconomic variables (place of residence, number of siblings, and family monthly income)***

A one-way ANOVA test was performed. Post hoc Tukey test showed that children living in families with monthly incomes of less than \$350 US demonstrated more insecure attachment than the other two groups ( $F(2/137)=3.15, p=0.04$ ).

***The relationships between stressors arising from siege and mental health of mothers and child attachment styles***

In order to find the relationship between stressors due to the siege of Gaza and the mental health of mothers as relates to parent/child reunion, the Pearson correlation coefficient test was conducted. Results indicated that the total stressors were positively associated with maternal mental health ( $r(140)=0.27, p<0.001$ ), anxiety ( $r(140)=0.25, p<0.001$ ), depression ( $r(140)=0.26, p<0.001$ ) and insecure attachment of children.

**Table 5.** Relationships between stressors related to siege as experienced by mothers and attachment of children

|                                        | Siege | Mean HSCL | Anxiety | Depression | Secure attachment |
|----------------------------------------|-------|-----------|---------|------------|-------------------|
| Maternal experience of siege stressors |       |           |         |            |                   |
| Mean HSCL                              | .27** |           |         |            |                   |
| Anxiety subscale                       | .25** | .92**     |         |            |                   |
| Depression subscale                    | .26** | .95**     | .74**   |            |                   |
| Secure attachment-child                | -.14- | -.13-     | -.10-   | -.14-      |                   |
| Insecure attachment-child              | .34** | .22*      | .16     | .24**      | .02               |

***Prediction of child insecurity and maternal stressors due to the siege of Gaza***

Using a multivariate regression model, insecure attachment scores were entered as dependent variables and each siege-related stressor reported by mothers as

independent variables. Total secure attachment: I sold some of my furniture and my gold. ( $\beta=0.32, t(135), p<0.001$ ). I need to travel outside the Gaza Strip and cannot ( $\beta=0.18, t(135), p<0.01$ ), and negatively predicted by I thought of immigration ( $\beta=-0.17, t(135), p<0.02$ ),  $R^2=.23, F(1/135)=12.20, p=0.001$ .



**Table 6.** Multivariate regression model predicting child insecure attachment style and maternal stressors arising from the Gaza siege

|                                                    | Unstandardized Coefficients |            | Standardized Coefficients | t     | p    | 95.0% Confidence Interval for B |             |
|----------------------------------------------------|-----------------------------|------------|---------------------------|-------|------|---------------------------------|-------------|
|                                                    | B                           | Std. Error | Beta                      |       |      | Lower Bound                     | Upper Bound |
| (Constant)                                         | 12.42                       | 0.63       |                           | 19.86 | 0    | 11.19                           | 13.66       |
| I sold some of my furniture and my gold            | 3.3                         | 0.79       | 0.32                      | 4.2   | 0    | 1.75                            | 4.86        |
| I need to travel outside the Gaza Strip and cannot | 3.19                        | 0.88       | 0.28                      | 3.62  | 0    | 1.45                            | 4.94        |
| I thought of immigration                           | -1.79                       | 0.79       | -0.17                     | -2.28 | 0.02 | -3.35                           | -0.24       |

### **Prediction of child secure attachment style and maternal stressors due to the siege of Gaza**

In a multivariate regression model, secure attachment scores were entered as dependent variables and each stressor of siege experienced by mothers was entered as

an independent variable, secure attachment was negatively predicted by stressor: I went to Zakat organizations and other organizations to get the food ( $\beta = -0.28$ ,  $t(135)$ ,  $p < 0.001$ ,  $R^2 = 0.06$ ,  $F(1/135) = 9.20$ ,  $p = 0.001$ )

**Table 7.** Multivariate regression model predicting child secure attachment style and maternal stressors due to siege of Gaza

| Secure attachment                                                 | Unstandardized Coefficients |            | Standardized Coefficients | t     | P     | 95.0% Confidence Interval for B |             |
|-------------------------------------------------------------------|-----------------------------|------------|---------------------------|-------|-------|---------------------------------|-------------|
|                                                                   | B                           | Std. Error | Beta                      |       |       | Lower Bound                     | Upper Bound |
| (Constant)                                                        | 9.3                         | 0.28       |                           | 33.1  |       | 8.75                            | 9.86        |
| I went to Zakat organizations and other organizations to get food | -1.22                       | 0.4        | -0.25                     | -3.05 | 0.001 | -2.01                           | -0.43       |

## **Discussion**

The current study investigated the impact of siege stressors on the mental health of Palestinian mothers and attachment style of their children. Results showed that the most commonly reported stressors relating to the siege of Gaza as experienced by mothers were: prices have increased sharply (89.3%); I feel I am in a big prison (87.8%); I was not able to get specific medicine for me or for one of the family members due to shortage of fuel and absence of transportation (75.7%). The mean stressors arising from an experience of the siege of Gaza was 10.16. Higher levels of stress were reported by mothers who had low monthly family income (less than \$250 US), were educated, and lived in the North of Gaza. The current study found the mean subscale scores for anxiety and depression were 1.17 and 1.14, respectively. Psychiatric

conditions were identified for 16.8% of mothers, 19.0% reported anxiety and 15.2% reported symptoms related to depression. Mothers living in cities reported fewer mental health problems compared with those who lived in villages and camps. Results also found that mothers with a monthly income of less than \$350 US reported more mental health problems than the other two groups. It appears that this group were more affected by siege than the other groups. Similarly, in a study of university students in the Gaza Strip, Juma and Thabet<sup>18</sup> found that the most commonly reported stressors arising from siege were the sharp increase in prices due to border closures (92%) and an adverse impact on their ability to study due to Gaza's electricity being cut off and also gas shortages (83.5%). Within the student population studied, the mean number of stressors reported by men was 12.38 and 10.33

for women. For symptoms related to depression, 9.5% of men and 12% women reported severe symptom levels; 10.3% men reported experiencing anxiety compared to 13.8% of women. There was a positive correlation between total stress due to siege and symptoms associated with depression and anxiety among students. Moreover, a study of N=502 Palestinian families in the Gaza Strip found the most common stressful situations arising from the siege were: feelings of living in a big prison, being unable to finish some construction and repair work in their homes due to shortages of cement and building materials, prices increased sharply in the last few years.<sup>3</sup> Further, there was a positive relationship between stressors due to the siege and closure and psychological symptoms. By way of further comparison, studies on mental health following earthquakes in Lushang and Wenchang, China found prevalence rates for anxiety and depression remained high nearly five years later.<sup>19</sup> The current study found that mental health problems among mothers was lower than a study on 114 refugee women-at-risk who had been resettled to Australia, as well as factors contributing to symptoms of trauma, anxiety, depression, and somatization.<sup>20</sup> The level of psychiatric symptomatology is compared to reference groups of women from Sudan and Burma. Participants' psychiatric distress met levels symptomatic for traumatization (41%), PTSD (20%), anxiety (29%), and depression (41%). Forty two percent also reported high levels ( $\geq 1.75$ ) of somatization. Results were not consistent with the secondary analysis on baseline data from N=288 HIV-positive women, enrolled in a parenting intervention in Uganda. Total JHCL-25 mean score was 1.9, mean depression score was 2.0, and mean anxiety score was 1.8.<sup>21</sup> In the Middle East, Karam *et al.*, assessed a nationally representative sample of the Lebanese population (N=2857 adults).

Respondents were interviewed using the fully structured World Health Organization (WHO) Composite International Diagnostic Interview 3.0. Lifetime prevalence of any Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) disorder was 25.8%. Anxiety (16.7%) and mood (12.6%) were more common than impulse control (4.4%) and substance (2.2%) disorders.<sup>22</sup>

The study showed that mean secure attachment was 8.67 and mean insecure attachment was 14.16. Such findings were inconsistent with previous research using the same scale in a sample of N=13 mothers previously admitted to psychiatric hospital. In the study, the mean secure attachment score was 11.33 and mean insecure attachment score was 5.00.<sup>23</sup> Results suggested that total stressors experienced by mothers during the siege of Gaza were positively associated with their experience of mental health, anxiety, and depression and linked also to having insecurely attached children. The current study results

were consistent with those of Campbell *et al.*<sup>24</sup> who found that mothers who experienced intermittent or chronic symptoms of depression and who evidenced less sensitivity to their children's needs had offspring at greater risk of experiencing insecure attachment. Therefore, while children of depressed mothers are more vulnerable to attachment insecurity, not all will be adversely affected or respond in a similar manner. Similarly, in a longitudinal study of postnatal depression and maternal attachment in middle-class mothers (N=111) and their infants, chronic maternal depression was significantly associated with less secure attachment 12 months after birth.<sup>25</sup>

A similar finding was identified in a population-based study in the Netherlands of N=606 infant-mother dyads. Results showed that infant attachment moderated the effect of parent stress on child emotional and behavioral problems. Parent stress was related to more aggression and attention problem behaviors in insecurely attached children, but not in securely attached children. Moreover, higher levels of stress in parents was associated with more withdrawal problem behaviors in insecurely attached children. This was particularly the case for insecure resistant and disorganized children.<sup>26</sup> The current study showed that children living in families with a monthly income of less than \$350 US appeared to have less secure attachments compared with the other two groups.

The importance of economic stability as a mediating factor for the development of secure attachments was also supported in Fraley *et al.*<sup>27</sup> Their longitudinal research of mother-child dyads examined attachment from one month post-natal until the children reached 18 years of age. Conducted at the National Institute of Child Health and Human Development on the Study of Early Child Care and Youth Development, the study concluded that secure children were more likely than insecure children to have had more supportive parenting over time, to have come from families characterized by stability (e.g., low levels of parental depression, fathers living in the household), and to have had higher-quality friendships in adolescence. A study conducted in the Gaza Strip with N=392 parents ( $n=380$  mothers;  $n=12$  fathers) of preschoolers indicated that 86% of preschoolers were securely attached and 9.7% were insecurely attached to their mothers. Further, the insecure attachment with mothers was among children with low monthly income.<sup>17</sup> Consistent with the current findings, Lecompte *et al.*,<sup>28</sup> found that maternal depressive symptoms were related to lower child attachment security scores. Lower support from friends was related to greater child ambivalent attachment behaviors. A higher sense of belonging to the country of origin was related to greater child disorganized attachment behaviors. These findings suggest that migration stresses, which include maternal depression, lack of social support and the sense of



belonging, are associated with child attachment, and these variables should be considered in the design of appropriate interventions.

## Limitations

The present study has some limitations that are important to consider when interpreting the results: (1) the data were derived from children/adolescents (and mothers) as part of a cohort who were studied when Gaza was experiencing traumatic stressors related to siege and war; and, (2) the study sample may not be representative of the whole Palestinian population suffering from other types of war trauma and stress.

## Conclusion

The current study is the first to explore the impact of siege stressors on the mental health of Palestinian mothers and the attachment style of their children. Data showed that maternal depression and anxiety is associated with insecure attachment children. Maternal depression and anxiety were associated with the siege-related stressors they experienced and how securely their children were attached to them. Findings highlight potential targets of intervention, including identifying and treating mothers affected by stress and trauma in the Gaza Strip and supporting the development of secure mother-infant attachment relationships, particularly in populations at high risk of stress and trauma exposure.

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## المخلص

الهدف من الدراسة هو البحث في العلاقة بين الضغوط الناجمة عن الحصار على غزة والمشاكل النفسية عند الأمهات وبين الرباط مع الأطفال داخل العائلات الفلسطينية.

**المنهجية:** تم اختيار عينة مكونة من 140 أم من أصل 184 أب وأم من قاعدة بيانات الدراسة التتبعية للعائلات الفلسطينية في قطاع غزة- المرحلة الثالثة والتي تم اختيارها من جميع المناطق في غزة. وتراوحت الأعمار للأمهات بين 18 إلى 64 سنة وكان المتوسط الحسابي للعمر = 41.53 سنة، و الأطفال من 6-18 سنة، وتم جمع البيانات باستخدام مقياس الخصائص الديمغرافية والاجتماعية، واستبيان الضغوط الناجمة عن الحصار، واستبيان قائمة جون هوبكنز، و مقياس الانفصال والالتصاق بالألم (الرباط). وتمت عملية جمع البيانات في شهري أكتوبر ونوفمبر من عام 2008.

**النتائج:** أظهرت النتائج أن أكثر أنواع الضغوط النفسية الناتجة عن الحصار على قطاع غزة هي: الارتفاع الحاد للأسعار (90.8%)، وأشعر أني في سجن كبير (88.5%)، لا أستطيع إيجاد ما أحجته من البقالة (91.70%)، ولا أستطيع الحصول على العلاج لي أو لأحد من أفراد عائلتي بسبب نقص في الوقود أو غياب المواصلات (73.4%)، ولا أستطيع الحصول على الدواء لي أو لأحد أفراد عائلتي بسبب نقص الرعاية الصحية (62.58%). و كان متوسط الضغوط النفسية الناجمة عن الحصار هو 10.83. وأظهرت النتائج أن الأمهات اللواتي يعشن في أسر دخلها الشهري أقل 350 دولار لديها ضغوط نفسية أعلى من الامهات اللواتي يعشن في أسر دخلها الشهري 351 دولار وأعلى.

ومن الاعراض النفسية للأمهات: البكاء سريعاً (21.7%)، وصعوبة في النوم (16.8%)، والقلق المستمر (16.3%)، والصداق (15.2%)، والشعور بالتشنج والتوتر (15.2%). أظهرت النتائج أن 19% من الامهات لديهن قلق و 15.2% لديهن اكتئاب. وتبين أن الأمهات اللواتي يعشن في المدينة لديهن مشاكل نفسية أقل من اللواتي يعشن في القرى والمخيمات. وأظهرت النتائج أيضاً أن الأمهات اللواتي يقل الدخل الشهري لديهن عن 350 دولار شهرياً يعانيان من مشاكل نفسية أكثر من اللواتي لديهن دخل مرتفع. وقد أشارت النتائج أن الرباط غير الآمن مع الأطفال ارتبط مع زيادة الضغوط وقلق واكتئاب الامهات.

**الخلاصة:** هذه الدراسة الاولى التي تكشف أنواع الضغوط الناجمة عن الحصار والمشاكل النفسية لدي الأمهات الفلسطينيات وعلاقة ذلك بالرباط مع الأطفال. وأظهرت النتائج بأن الإكتئاب والقلق يرتبطان بالرباط غير الآمن مع الأطفال. وأيضاً فإن الإكتئاب والقلق يرتبطان بالضغوط النفسية الناتجة عن الحصار. وعليه ننصح بتدخلات نفسية إجتماعية لعلاج الامهات المتأثرات بالضغوط والصدمات في قطاع غزة ودعم تطوير علاقة الرباط بين الامهات والرضع وخاصة عند الأمهات الأكثر عرضة لخطر الضغوط النفسية والصدمات النفسية.

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