Published in final edited form as:

Psychosomatics. 2016 ; 57(2): 174–184. doi:10.1016/j.psych.2015.11.008.

Early Childhood Adversity and Its Associations with Anxiety, Depression, and Distress in Women with Breast Cancer

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Abstract

Introduction—Certain vulnerability factors have been found to place patients at risk for depression and anxiety, especially within the context of medical illness. Early childhood adversity (ECA) primes adults to become more vulnerable to depression by enhancing their reactivity to stress; this relationship is not adequately described in patients with breast cancer.

Methods—Breast cancer patients (Stage 0-IV) were assessed for ECA (i.e., the Risky Families Questionnaire [RFQ]-subscales include Abuse/Neglect/Chaotic Home Environment), distress (i.e., Distress Thermometer and Problem List [DT&PL]), anxiety (Hospital Anxiety and Depression Scale-Anxiety [HADS-A]), depression (Hospital Anxiety and Depression Scale-Depression [HADS-D]), meeting standardized cut-off thresholds for distress (DT&PL 4 or 7)/anxiety (HADS-A 8)/depression (HADS-D 8), and demographic factors.

Results—One hundred twenty-five participants completed the study (78% response rate). ECA was associated with depression ($p<.001$), anxiety ($p=.001$), and distress ($p=.006$) and with meeting cut-off threshold criteria for distress ($p=.024$), anxiety ($p=.048$), and depression ($p=.001$). On Multivariate analysis, only depression ($p=.04$) and emotional issues (i.e., component of DT&PL) ($p=.001$) were associated with ECA. Neglect, but not Abuse and Chaotic Home Environment, was associated with depression ($\beta=.442$, $p<.001$), anxiety ($\beta=.342$, $p=.002$), and self-identified

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Conflict of Interests: No conflict of interest reported by authors

problems with family ($\beta=-.288$, $p=.022$), emotion ($\beta=.345$, $p=.004$), and physical issues ($\beta=.408$, $p<.001$).

Conclusion—ECA and neglect are associated with multiple psychological symptoms but most specifically depression in the setting of breast cancer. ECA contributes to psychological burden as a vulnerability factor. ECA may help to explain individual patient trajectories and influence the provision of patient centered care for psychological symptoms in patients with breast cancer.

Introduction/Background

Depression and anxiety disorders are highly prevalent in the general population, especially in the context of medical illness and account for enormous morbidity worldwide.(1) Although biological etiologies for these conditions remain elusive, vulnerability factors to these conditions are well described.(2) In breast cancer specifically, depression is highly prevalent and leads to worse health-related quality of life and survival outcomes when they present concomitantly.(3-6) However, specific vulnerabilities for anxiety and depression among patients with breast cancer are not adequately described. Understanding vulnerability factors for depression, anxiety, and psychological distress among patients with breast cancer is timely and necessary given the 2015 Commission on Cancer distress screening mandate for cancer centers seeking their accreditation. Also, the ability to identify patients who are prone to comorbid psychological symptoms at their cancer diagnosis and during treatment will help to anticipate and deliver personalized cancer care for various patient trajectories within the setting of breast cancer.

The experience of Early Childhood Adversity (ECA) primes adults to be more vulnerable to depression later in life by causing a heightened reactivity to stress.(7-9) However, within the breast cancer setting specifically, this association has not been satisfactorily described.(10) Its further elucidation may help to explain the multiple psychological trajectories after cancer diagnoses that currently lack a clear explanation.(11) That is, although we understand when patients are most susceptible to experience depression and anxiety (e.g., first year of cancer diagnosis or at recurrence), we don't entirely understand who is at risk or why one patient suffers with depression and/or anxiety while others do not.(12, 13) ECA may be a vulnerability factor for patients with breast cancer who end up struggling with comorbid depression, anxiety, or psychological distress.

ECA under the age 13 leads to a biological profile that is similar to depression, with similarly associated poor outcomes with medical illness.(7, 14) ECA predisposes a person to have heightened stress reactivity in response to emotional stimuli.(15) ECA has been linked to neuronal dysregulation in the development of coronary artery disease(16), cancer-related fatigue(17), and sleep difficulties with even with mild stressors(18). Depressive symptoms that were found in conjunction with the homozygous short allele serotonin transporter genotype (5-HTTLPR) have also been associated with ECA.(19) Additionally, the early family environment and ECA correlate with immune dysregulation specifically in the breast cancer setting (10).

The Risky Families Questionnaire (RFQ) is a measure of early childhood adversity and captures the concept of ECA as a chronic stress condition. Its measures have been correlated

with inflammatory biomarkers that have also been correlated with depression and anxiety in cancer.(14, 26, 27) Therefore, our study measured ECA using the RFQ and correlated its results directly with measures that are commonly used to screen for distress, depression, and anxiety in the cancer setting. This exploratory study proposed that ECA would be significantly associated with depression, similar to non-cancer populations and with meeting screening criteria for depression, anxiety, or psychological distress in patients with breast cancer. It also sought to evaluate the association between ECA and anxiety or psychological distress. As depression appears to have greater evidence for a biological signature (i.e., correlation of serotonin transporter gene polymorphism (19) and neural activation dysregulation) (10, 14) than anxiety, ECA was thought to preferentially lead to depression over distress or anxiety in women with breast cancer.

Methods and Materials

The Mount Sinai Hospital Institutional Review Board approved this study in July 2014. Surveys were collected from participants from August 2014 to April 2015.

Participants

Patients with Stage 0-IV breast cancer within five years of diagnosis were recruited and consented to participate in this survey. Inclusion criteria consisted of a confirmed tissue diagnosis of breast cancer within the previous 5 years, as indicated by the patient. Exclusion criteria consisted of a diagnosis of breast cancer for longer than five years, as indicated by the participant. Recruitment occurred over six months in a dedicated breast cancer clinic. New and established patients were recruited to participate in the survey.

Procedure

Participants were asked to participate by either the clinic receptionist or the infusion suite nurses. They were told that the survey is confidential as part of a research initiative and that it would not be part of their ongoing care. Available psychological services were listed in the survey and patients were asked to bring up any concerns with clinic staff and in particular to tell a staff member if they felt severely depressed or had suicidal ideation. A board-certified psychiatrist oversaw the study and was available for urgent consultation. Participants completed the surveys while waiting in the clinic office space prior to being seen for their appointments or during chemotherapy infusion. Participants handed the surveys back to either a receptionist or infusion suite nurse.

The surveys consisted of the Risky Families Questionnaire (RFQ), Distress Thermometer and Problem List (DT&PL), Hospital Anxiety and Depression Scale (HADS), demographic information (gender, age, ethnicity, domestic partnership, children, employment), and breast cancer-related information (diagnosis under 5 years, hormonal therapy, chemotherapy, surgical treatment).

Measures

The RFQ is a thirteen item Likert scale questionnaire designed to calculate risk of anxiety, depression, and suicide as well as aggression, conduct disorder, delinquency, and anti-social

behavior given early life chaotic home environments.(28, 29) It contains 13 questions scored from 1 to 5 so that a minimum score is 13 and maximum score is 65. Participants are asked to think over their family life from age 5 to 15 and answer the questions such as “how often did a parent or other adult in the household push, grab, shove or slap you?” for example. Ganz and colleagues have used the RFQ to predict behavioral symptoms.(17) The three subscales of Abuse (2 questions), Neglect (3 questions), and Chaotic Home Environment (4 questions) exist within the RFQ as defined in a paper by Crosswell et al in 2014.(14)

The DT&PL is a one-item measurement that ranges from zero to 10 and is recommended by the National Comprehensive Cancer Network (NCCN) to screen for distress. It has been used widely to meet the CoC distress-screening mandate for accreditation in 2015.(30, 31) It is a one-item measure of distress. There is an accompanying problem list (i.e., subscale) that summates practical, family, emotional, spiritual, and physical issues and is used primarily for clinical purposes but has also been evaluated in research setting previously.(32) A cut-off of four or over has been accepted by the NCCN to screen for distress and It shows high sensitivity for detecting depression at elevated scores (>7), with a reported sensitivity of 0.85 in a study of 321 women with newly diagnosed stage I-III breast cancer.(33) Both cut-off points were evaluated in this study.

The HADS is a 14 question psychometric measure that was developed to identify caseness (possible and probable cases) of anxiety and depressive disorders among patients in hospital clinics.(34) Physical symptoms are excluded. It is divided into a seven-question anxiety subscale (HADS-A) and a seven-question depression subscale (HADS-D). Answers to question range from 0 to 3 and therefore a HADS-A or HADS-D subscale total range from 0 to 21 is possible. Multiple cut-offs have been identified but a cut-off of 8 (on each subscale) is most commonly used to identify caseness of both depression and anxiety.

Statistical Analysis

The primary objective of this study was to assess the association of ECA, as measured by the RFQ with measure of distress, anxiety, and depression in a population of women living with breast cancer. The analysis of this study involved descriptive statistics, which included means, standard deviations, medians, and ranges, or percentages of several demographic variables and the scores of the scales. Statistical comparisons were done using correlations (i.e., Pearson) of RFQ, DT&L, HADS-A, and HADS-D and bivariate regression of the same variables. Multivariate regression was performed for the RFQ using HADS-A, HADS-D, and the DT&PL problem list as independent variables. All statistical procedures were performed using SPSS version 22 software (SPSS, Chicago, IL 2013) and statistical tests were two-tailed with 5% significance level.

Results

One hundred and twenty five participants out of 160 completed the survey questionnaire (78% response rate). The cohort was entirely female with an average age of 55.36 years (SD 13.20) and a range from 26 to 84 years. Breast cancer patient characteristics and their scaled psychological symptom results are highlighted in Table 1. Most participants were white, married, and working and had undergone either a mastectomy or lumpectomy, were taking

anti-hormonal therapy, and had received chemotherapy. Other races or ethnicities were represented (e.g., Blacks/African American 21.0%, Latino 17.8%, other 10.1%). Twenty-one participants were taking an antidepressant (16.8%), one participant had a history of psychiatric hospitalization (0.8%), and another patient reported a previous suicide attempt (0.8%). Fifty-four participants (55.1%) met the NCCN designated distress screening cut-off (DT&PL 4) while 17 (17.2%) met a more stringent pre-determined distress cut-off (DT&PL 7). Forty-six participants (36.8%) met the anxiety screening cut-off (HADS-A 8) and 25 (20.8%) met the depression screening cut-off (HADS-D 8). Latino and Other Race/Ethnicity were associated with meeting depression screening criteria. Patients who were taking antidepressants were associated with meeting both anxiety and depression screening criteria (Table 1).

The average ECA score was 23.31 (SD 10.03) with a range of 13-65. Subscale averages were 3.14 (SD 1.97) for Abuse, 5.61 (SD neglect) for Neglect, and 6.87 (SD3.52) for Chaotic home environment. The average distress score was 3.95 (SD 2.57) with a range from 0-10 and a composite average of 6.05 out of 39 issues indicated as problems over the preceding week (i.e., 15.5% of listed problems). Problems, as indicated on the DT&PL, were as follows: Practical 11% (0.66 out of 6), Family 8.8% (0.35 out of 4), Emotional 24.8% (1.49 out of 6), Spiritual 13% (0.13 out of 1), and Physical 15.5% (3.42 out of 22). The average anxiety score was 6.16 (SD 4.07) with a range from 0-17 and the average depression score was 4.08 (SD 3.79) with a range from 0-14. ECA was more likely to be elevated in patients who met criteria for distress (DT&PL 4) ($p=.008$), elevated distress (DT&PL 7) ($p=.044$), anxiety (HADS-A 8) ($p=.047$), and depression (HADS-D 8) ($p=.003$) (Table 1). Also, ECA was more likely to be elevated in patients taking antidepressants ($p=.01$) but was not significantly different among race/ethnicity, married, or working patients (Table 2).

Univariate analysis revealed that ECA was associated with elevated levels of depression ($p<.001$), anxiety ($p=.001$), distress ($p=.006$) and all five problem list subscales (i.e., on the DT&PL): Practical problems ($p=.008$), Family problems ($p=.018$), Emotional problems ($p<.001$), Spiritual problems ($p=.01$), and Physical problems ($p=.001$). ECA was not associated with age ($p=.721$). Multivariate analysis revealed that ECA was only associated with depression ($p=.04$) and the problem list subscale Emotional problems ($p=.001$) (Table 3). This multivariate model found that the anxiety, depression, distress and problems list contributed to 21.7% of the variance (adjusted $R^2 .217$) in ECA scores.

Univariate analysis revealed that the ECA subscales were also associated with elevated levels of depression, anxiety, distress and its Problem List subscales. Specifically, the Neglect subscale was associated with depression ($p<.001$), anxiety ($p<.001$), and distress ($p=.007$). The Abuse subscale was associated with depression ($p=.009$), anxiety ($p=.079$), and distress ($p=.022$). And, the Chaotic Home Environment was associated with depression ($p=.019$), anxiety ($p=.021$), and distress ($p=.008$).

The multivariate associations of Abuse, Neglect, and Chaotic Home Environment (i.e., RFQ subscales) with depression, anxiety, distress and the Problem List subscale (i.e., Practical, Family, Emotional, Spiritual, and Physical) are presented in Table 4. Essentially, the Neglect

subscale is significantly associated with elevations in depression ($\beta=.442$, $p<.001$), anxiety ($\beta=.342$, $p=.002$) and problems with family ($\beta=.288$, $p=.022$), emotional ($\beta=.345$, $p=.004$), and physical ($\beta=.408$, $p<.001$) issues but not with distress or spiritual and practical issues. The Abuse subscale is significantly associated with problems with spirituality/religious concerns ($\beta=.362$, $p=.004$) and otherwise the Abuse and Chaotic Home Environment were not associated with depression, anxiety, distress or other highlighted distress problems by multivariate analysis.

Elevated ECA scores were associated with patients who met depression-screening criteria (HADS-D 8) ($p=.001$, CI 1.035-1.137), anxiety-screening criteria (HADS-A 8) ($p=.048$, CI 1.000-1.081), and both 'distressed' (DT&PL 4) ($p=.024$, CI 1.07-1.113) and 'distressed' (DT&PL 7) ($p=.006$, CI 1.020-1.120) levels of distress-screening while controlling for age. Multivariate logistic regression models (i.e., incorporating Abuse, Neglect and Chaotic Home Environment) were created to evaluate whether their RFQ subscales were associated with meeting standard cut-off points for depression (HADS-D 8), anxiety (HADS-A 8), 'distressed' (DT&PL 4), and (DT&PL 7) levels of distress-screening and are presented in Table 5. Only the Neglect subscale was associated with meeting both depression ($p=.001$) and anxiety ($p=.004$) cut-off screening criteria. None of the subscales were associated with meeting distress-screening criteria.

Discussion

The results show that early childhood adversity, and neglect specifically, is associated with both depression and anxiety in patients with breast cancer. In a multivariate model, depression but not anxiety, was significantly associated with early childhood adversity. This distinction is surprising since anxiety and depression tend to occur co-morbidly both concurrently and independently of medical illness.(35) But, it is consistent with the biological data that show similar elevated cytokine profiles in ECA and depression but not necessarily anxiety states and further support this conclusion. However, the Neglect subscale was associated with anxiety, depression, and distress and meeting screening criteria for both depression and anxiety whereas Abuse and Chaotic Home Environment were not. Of note, the prevalence of distress, anxiety, and depressive symptoms, along with antidepressant use among this cohort is consistent with other studies.(3, 4, 36) In addition, the rates of early childhood adversity are slightly lower than that seen in another cohort of breast cancer survivors who were more than 5 years out from diagnosis (23.27 versus 27.75). However, the RFQ subscale distribution was similar.(14)

This exploratory study supports ECA and specifically neglect as a vulnerability risk factor that predisposes breast cancer patients for comorbid depression and emotional problems and meeting depression-screening criteria. This finding should be repeated prospectively. ECA could be measured at diagnosis and patients could be followed to evaluate for subsequent rates of distress, anxiety, and depression and cancer-related outcomes. This study may have practical implications for distress screening and triaging for the early identification of patients at risk for psychopathological symptoms in the setting of breast cancer. ECA has the additional distinction of having known biological correlates that exist in depressive states and should lead to further research.

Limits of this study are that it is an exploratory cross-sectional study that obtained survey data at various time points in the cancer trajectory. The study did not use the Structural Clinical Interview for DSM Disorders (i.e. SCID), the gold standard, for diagnosing a depressive or anxiety disorder in clinical research but relied on the HADS as a surrogate measure of depressive or anxiety symptomatology. Although actual rates of anxiety and depression can be extrapolated from the HADS, other measures of distress, anxiety and depression could have been used as well. Also, this study chose to evaluate early childhood adversity (i.e., RFQ) as a surrogate measure of chronic stress but other scales (e.g., Depression Anxiety Stress Scale, Perceived Stress Scale, Trier Inventory for Chronic Stress, or the Childhood Trauma Questionnaire) could have been used in place of or concomitantly with the RFQ in order to compare or validate our findings. Also, the RFQ is inherently subjected to retrospective memory of childhood scenarios and events and is not an objective measure of actual early childhood adversity. For example, it's possible that patients who are depressed more readily recall a childhood experience that was marked by neglect and there is not a way to determine causation in this study. Depressed or anxious patients may inadvertently recall a more adverse setting than was actually the case. However, this is a limitation of surveys that rely on recall memory, in general. It should be noted that the high rates of patients having received chemotherapy indicate that this sample may be skewed towards those with advanced disease and may not fairly represent patients with early stage breast cancer.

This exploratory study contributes to the literature on ECA and its association with depression specifically among patients with breast cancer. Psychosocial and biological interventions should be based on an understanding of an underlying causal mechanism that could affect change.(37) Theoretical constructs are not always mentioned or directly examined in studies(37). Therefore, understanding variables, such as early childhood adversity and its underlying biological correlates, is necessary to design effective interventions. For instance, there may be a common link between ECA, cumulative life stress and cancer-related fatigue, Quality of Life, and Cancer-related distress (7). Therefore, a single effective intervention may be beneficial for that constellation of symptoms (38). And conversely, specific interventions such as increased psychosocial support with childrearing may lead to improved outcomes (39), for instance.

In summary, a history of ECA in adulthood places breast cancer patients at increased risk for anxiety and depressive symptoms, which are already extremely common in breast cancer. Anyone under an increased amount of stress can experience a precipitation of depressive symptoms(41), and in the setting of breast cancer, this has been shown to lead to impaired coping and inferior survival outcomes(6). Predictors of psychological distress, anxiety, and depression in breast cancer should be further elucidated in order to identify high-risk patients for distress and other psychological consequences of cancer (40). The assessment of ECA in breast cancer patients and its incorporation into screening and treatment paradigms for comorbid depression during breast cancer treatment and into the survivorship period deserves further study.

Acknowledgements

none

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Cohort Demographics and Treatment Characteristics by Screening Criteria for Distress, Anxiety, and Depression.

Table 1

	Cohort		Meets Distress Screening Criteria (DT&PL 4)		Meets Distress Screening Criteria (DT&PL 7)		Meets Anxiety Screening Criteria (HADS-A 8)		Meets Depression Screening Criteria (HADS-D 8)		
	(n = 125)		Yes (54)	No (44)	Yes (17)	No (81)	Yes (46)	No (79)	Yes (25)	No (95)	
	Mean	SD	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	T
Age	55.36	13.20	52 (55.6)	43 (56.8)	57.8 (14.9)	55.8 (14.0)	53.9 (15.6)	56.9 (11.9)	57.2 (14.9)	55.3 (13.1)	-605
ECA(RFQ)	23.31	10.03	26.6 (12.5)	20.6 (6.7)	30.8 (16.3)	22.0 (8.3)	25.7 (11.3)	21.9 (9.1)	30.7 (13.5)	21.5 (9.2)	-3.214**
Race/ Ethnicity	n	%	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	χ^2
Black	26	21.10	13 (38.1)	13 (61.9)	2 (9.5)	19 (90.5)	10 (38.5)	16 (61.5)	2 (7.7)	24 (92.3)	20.454***
White	63	51.20	28 (52.8)	25 (47.2)	9 (17.0)	44 (83.0)	22 (35.5)	40 (64.5)	9 (14.5)	53 (85.5)	
Latino	22	17.80	10 (62.5)	6 (37.5)	5 (31.1)	11 (68.8)	2 (33.3)	4 (66.7)	8 (42.1)	11 (57.8)	
Other	12	10.10	3 (50)	3 (50)	1 (16.7)	5 (83.3)	6 (54.5)	5 (45.5)	5 (45.5)	6 (54.5)	
Married											
Yes	61	49.20	21 (48.8)	22 (51.2)	9 (20.9)	34 (79.1)	24 (40.7)	35 (59.3)	12 (20.3)	47 (79.7)	.017

		Cohort	Meets Distress Screening Criteria (DT&PL 4)		Meets Distress Screening Criteria (DT&PL 7)		Meets Anxiety Screening Criteria (HADS-A 8)		Meets Depression Screening Criteria (HADS-D 8)		
		(n = 125)	Yes (54)	No (44)	Yes (17)	No (81)	Yes (46)	No (79)	Yes (25)	No (95)	
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	T	
Working											
	Yes	64 64.10	27 (54.0)	23 (46.0)	7 (14.0)	43 (86.0)	24 (38.7)	38 (61.3)	8 (12.9)	54 (87.1)	3.240
Lumpectomy											
	Yes	53 44.60	23 (57.5)	17 (42.5)	7 (17.5)	33 (82.5)	22 (44.9)	27 (55.1)	12 (24.5)	37 (75.5)	.993
Mastectomy											
	Yes	61 50.00	22 (46.8)	25 (53.2)	7 (14.9)	40 (85.1)	20 (33.9)	39 (66.1)	8 (13.6)	51 (86.4)	2.968
Chemotherapy											
	Yes	69 55.60	30 (55.6)	24 (44.4)	10 (18.5)	44 (81.5)	30 (43.5)	39 (56.5)	13 (18.8)	56 (81.2)	.180
Anti-hormones											
	Yes	62 52.10	25 (50.0)	25 (50.0)	8 (16.0)	42 (84.0)	26 (43.3)	34 (56.7)	13 (21.7)	47 (78.3)	.175
Taking Antidepressant											
	Yes	21 16.80	14 (73.7)	5 (26.3)	5 (26.3)	14 (73.7)	15 (68.2)	7 (31.8)	9 (40.9)	13 (59.1)	6.583*

Abbreviations: DT&PL, Distress Thermometer and Problem List; ECA, Early Childhood Adversity; HADS-A, Hospital Anxiety and Depression Scale-Anxiety; HADS-D Hospital Anxiety and Depression Scale-Depression; RFQ, Risky Families Questionnaire; SD, Standard Deviation.

100p

10p
**
<math>p<.05</math>
*

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Table 2

Demographic and Treatment Associations with Early Childhood Adversity (ECA) as measured by the Risky Families Questionnaire (RFQ)

		ECA (RFQ)	
		<i>Mean (SD)</i>	<i>T</i>
Black	Yes, n=25	20.92 (7.25)	1.326
	No, n=94	23.89 (10.55)	
White	Yes, n=62	23.19 (9.67)	.085
	No, n=57	23.35 (10.43)	
Latino	Yes, n=18	26.89 (13.88)	-1.68
	No, n=101	22.62 (9.08)	
Other	Yes, n=12	23.25 (10.15)	.007
	No, n=107	23.27 (10.03)	
Married	Yes, n=58	22.97 (8.52)	.321
	No, n=61	23.56 (11.29)	
Working	Yes, n=63	22.2 (8.01)	.266
	No, n=27	22.7 (8.02)	
Antidepressant	Yes, n=22	29.68 (12.67)	-2.762 **
	No, n=97	21.81 (8.72)	

Abbreviations. ECA, Early Childhood Adversity; RFQ, Risky Families Questionnaire; SD, Standard Deviation.

*
 $p < .05$,

**
 $p < .01$

 $p < .001$

Table 3

Multivariate linear regression associations with early childhood adversity among women with breast cancer.

Variable	Regression Coefficient (SE)	Beta	t value	P value
HADS-A	-.533 (.367)	-.225	-1.452	.151
HADS-D	.868 (.451)	.316	2.089	.040 *
DT&PL	-.152(.447)	-.040	-.340	.735
• Practical	2.084 (1.338)	.182	1.558	.124
• Family	.708 (2.043)	.039	.346	.730
• Emotional	2.973 (.882)	.476	3.369	.001 **
• Spiritual	2.390 (5.527)	.044	.432	.667
• Physical	-.218 (.411)	-.071	-.530	.598
Adjusted R ²	.217			

Abbreviations. DT&PL, Distress Thermometer and Problem List; HADS-A, Hospital Anxiety and Depression Scale–Anxiety; HADS-D Hospital Anxiety and Depression Scale–Depression; RFQ, Risky Families Questionnaire; SD, Standard Deviation.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$

Table 4

Early Childhood Adversity Subscale (Abuse, Neglect, Chaotic Home Environment) Associations with Outcomes of Depression (HADS-D), Anxiety (HADS-A), Distress (DT&PL) and Problem List (Practical, Family, Emotional, Spiritual, and Physical) by Multivariate Linear Regression.

Outcome Variable: Depression (HADS)	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	.503 (.123)	.442	4.086	<.001 ***
• Chaotic	-	-	-	NS
Outcome Variable: Anxiety (HADS)	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	.432 (.139)	.349	3.102	.002 **
• Chaotic	-	-	-	NS
Outcome Variable: Distress (DT&PL)	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	-	-	-	NS
• Chaotic	-	-	-	NS
Outcome Variable: Practical Issues	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	-	-	-	NS
• Chaotic	.055(.032)	.198	1.735	.086
Outcome Variable: Family Issues	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	.049 (.021)	.288	2.329	.022 *
• Chaotic	-	-	-	NS
Outcome Variable: Emotional Issues	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	.161(.057)	.345	2.904	.004 **
• Chaotic	-	-	-	NS
Outcome Variable: Spiritual Issues	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	.131 (.045)	.362	2.934	.004 **
• Neglect	-	-	-	NS

• Chaotic	-	-	-	NS
Outcome Variable: Physical Issues	Regression Coefficient (SE)	Beta	t value	P value
• Abuse	-	-	-	NS
• Neglect	.418(.115)	.408	3.633	<.001 ***
• Chaotic	-	-	-	NS

Abbreviations. DT&PL, Distress Thermometer and Problem List; HADS-A, Hospital Anxiety and Depression Scale–Anxiety; HADS-D Hospital Anxiety and Depression Scale–Depression; RFQ, Risky Families Questionnaire; SD, Standard Deviation.

*
 $p < .05$,

**
 $p < .01$,

 $p < .001$

Table 5

Multivariate Logistic Model Examining Early Childhood Adversity Subscale (Abuse, Neglect, Chaotic Home Environment) Associations with Meeting 1) Depression-Screening Criteria 2) Anxiety-Screening Criteria 3) Distress-Screening Criteria (NCCN Cut-off) and 4) Distress-Screening Criteria (High Cut-Off)

Depression Screening (HADS-D 8)	<i>B (SE)</i>	OR	Sig	95% CI	
				Lower	Upper
• Abuse	-.001 (.171)	.999	.996	.715	1.396
• Neglect	.288 (.089)	1.334	.001 ***	1.121	1.586
• Chaotic Home	.01 (.091)	1.01	.912	.845	1.208
• Constant			<.001		
Anxiety Screening (HADS-A 8)	<i>B (SE)</i>	OR	Sig	95% CI	
				Lower	Upper
• Abuse	-.140 (.149)	.869	.347	.649	1.164
• Neglect	.234 (.08)	1.264	.004 **	1.080	1.479
• Chaotic Home	-.006 (.077)	.994	.940	.855	1.156
• Constant			.005		
Distress Screening (DT&PL 4)	<i>B (SE)</i>	OR	Sig	95% CI	
				Lower	Upper
• Abuse	.180 (.189)	1.197	.340	.827	1.734
• Neglect	.094 (.085)	1.098	.272	.929	1.298
• Chaotic Home	.036 (.094)	1.036	.704	.862	1.247
• Constant			.050		
Distress Screening (DT&PL 7)	<i>B (SE)</i>	OR	Sig	95% CI	
				Lower	Upper
• Abuse	-.125 (.207)	.882	.545	.588	1.324
• Neglect	.159 (.100)	1.173	.111	.964	1.427
• Chaotic Home	.164 (.104)	1.178	.116	.960	1.446
• Constant			<.001		

Abbreviations. DT&PL, Distress Thermometer and Problem List; HADS-A, Hospital Anxiety and Depression Scale-Anxiety; HADS-D Hospital Anxiety and Depression Scale-Depression; RFQ, Risky Families Questionnaire; SD, Standard Deviation. *Notes.*

 $p < .001$,

**
 $p < .01$,

*
 $p < .05$

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