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## **Dissociative Depression Among Women with Fibromyalgia or Rheumatoid Arthritis**

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*The aim of this study was to inquire about the possible relations of childhood trauma, anger, and dissociation to depression among women with fibromyalgia or rheumatoid arthritis. Fifty female patients diagnosed as having fibromyalgia (n = 30) or rheumatoid arthritis (n = 20) participated in the study. The Childhood Trauma Questionnaire, Somatoform Dissociation Questionnaire (SDQ), Dissociation Questionnaire (DIS-Q), Beck Depression Inventory (BDI), Spielberger State-Trait Anger Expression Inventory, and Dissociative Disorders Interview Schedule were administered to*

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*all participants. Women with a lifetime diagnosis of depressive disorder had higher scores for somatoform and psychoform dissociation than the nondepressive patients. However, childhood trauma scores did not differ between the 2 groups. In regression analysis, current severity of depression (BDI) was predicted by psychoform dissociation (DIS-Q) and lower education, and lifetime diagnosis of major depression was predicted by somatoform dissociation (SDQ). Whereas childhood emotional neglect predicted somatoform dissociation, psychoform dissociation was predicted by childhood sexual abuse. Mental processing of anger seems to be 1 of the dimensions of psychodynamics in trauma-related depressive conditions. In the context of the perceived threat of loss of control due to expressed anger and mental disintegration, somatoform dissociation seems to contribute to overmodulation of emotions in dissociative depression. Among patients suffering from physical illness with possible psychosomatic dimensions, assessment of somatoform dissociation in addition to psychoform dissociation may be helpful to understand diverse psychopathological trajectories emerging in the aftermath of childhood adversities. The recently proposed category of “dissociative depression” (Sar, 2011) seems to be a promising concept for future research on psychosomatic aspects of traumatic stress.*

*KEYWORDS* depression, dissociation, trauma, PTSD, borderline personality

## INTRODUCTION

Depressive disorders are common among patients with medical illness (Chapman, Perry, & Strine, 2005; Moussavi et al., 2007). Chronic pain has been reported as one of the risk factors for this elevated prevalence (Goldenberg, 2010). However, depression may increase the perception of pain (Pinerua-Shuhaibar, Villalobos, Delgado, Rubio, & Suarez-Roca, 2011), leading to a *circulus vitiosus* by reinforcement of the depression. An association between anger as a negative emotion and pain has also been reported (Burns, Bruehl, & Chont, 2013). Fibromyalgia and rheumatoid arthritis are disorders causing significant chronic pain. There are studies on both disorders reporting elevated rates of lifetime and current psychiatric disorders, including depressive disorders (Dickens, McGowan, Clark-Carter, & Creed, 2002; Fietta, Fietta, & Manganelli, 2007; Söderlin, Hakala, & Nieminen, 2000).

Childhood adversity is one of the risk factors for lifetime diagnosis of depressive (Bülbul et al., 2013; Chapman et al., 2004; Yazici-Gulec et al., 2013) and dissociative (Ogawa, Sroufe, Weinfield, Carlson, & Egeland, 1997)

disorders as well as various types of general medical conditions (Anda et al., 2009; Dong, Dube, Felitti, Giles, & Anda, 2003; Dong et al., 2004; Dube et al., 2009; Häuser, Kosseva, Üceyler, Klose, & Sommer, 2011; Williamson, Thompson, Anda, Dietz, & Felitti, 2002). In a recent study, patients with a repetitive depressive disorder reported more childhood adversity than those who suffered from their first episode (Bülbül et al., 2013). Hence, childhood adversity seems to be a factor leading to a chronic course in depressive disorder.

Depression has been attributed to sequestered anger, as proposed in Sigmund Freud's (1917/1975) historic paper "Mourning and Melancholia." In fact, sequestered anger itself can be understood as a form of dissociation (i.e., compartmentalization of unbearable emotions in the aftermath of adverse life events). As a particular type of this phenomenon, dissociative depression has been proposed as a new concept to delineate a specific patient group with childhood trauma history (Sar, 2011; Sar, Akyüz, Öztürk, & Alioglu, 2013). According to the model of functional dissociation of the self (Sar & Öztürk, 2005, 2007), emotions can be dissociated without necessarily being part of some dissociative identity or personality state (Sar, 2011).

Based on this theoretical and empirical background, we tried to conduct a preliminary inquiry on possible relationships between childhood trauma, anger, dissociation, and depressive phenomena among patients with a medical illness causing chronic pain. Fitting these conditions, women with fibromyalgia or rheumatoid arthritis constituted the study group for this inquiry. A main purpose of this study was to test a theory of dissociative depression (Sar, 2011) within a medical patient group likely to suffer from it. As a preliminary study, this effort tries to explore goals to further a program of research. We hypothesized that there would be subtle pathways between childhood adversities and a specific type of depression that may remain obscured unless assessed by measuring diverse components of stress-related psychopathology separately. As a first step in this exploratory study, we assessed somatoform and psychoform dissociation (Nijenhuis, Van der Hart, & Steele, 2002; Van der Hart, Van Dijke, Van Son, & Steele, 2000) as separate but interrelated components of trauma-related dissociative psychopathology and tried to find their correlates, which could be targeted more specifically in future research.

## METHOD

### Participants

All participants were patients in the outpatient unit of the Rheumatology Department in the Cerrahpasa Medical Faculty Hospital in Istanbul, Turkey, which is a medical center affiliated with Istanbul University. The study was approved by the ethics committee of Istanbul University, Cerrahpasa Faculty of Medicine. Written informed consent was provided by all participants after

the study procedures had been fully explained. The study was presented as a research inquiry on childhood abuse history and psychopathology. Diagnosis of fibromyalgia or rheumatoid arthritis was made by patients' attending physicians. Exclusion criteria were being younger than 18 years of age, being illiterate, and having physical or psychiatric disorders (e.g., hearing loss, ophthalmologic problems, mental retardation, psychotic disorders, and dementia) that affected the cooperation of the patient. Five patients did not participate in the study for one of these reasons. Thirty consecutive women with fibromyalgia and 20 with rheumatoid arthritis who fulfilled the respective diagnostic criteria of the American College of Rheumatology were included in the study.

## Instruments

*Dissociative Disorders Interview Schedule (DDIS)*. The DDIS is a structured interview consisting of 132 items (Ross et al., 1989). It is used to diagnose somatization disorder, major depressive episode, borderline personality disorder, and all of the dissociative disorders according to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*; American Psychiatric Association, 1994). The validity and reliability of the Turkish version of the DDIS for the diagnosis of chronic dissociative disorders were examined in a comparison of patients who had dissociative identity disorder with those who had panic disorder, complex partial epilepsy, or schizophrenic disorder, yielding significantly more diagnoses of past or concurrent major depressive and somatization disorders in the dissociative group (Yargic, Sar, Tutkun, & Alyanak, 1998). The DDIS was previously administered to screen for major depressive episode in an epidemiological study in Turkey, revealing similar findings to those of other studies with regard to prevalences (Sar et al., 2013). More specific data do not yet exist about the reliability and validity of the DDIS for the diagnosis of depressive disorders.

*Somatoform Dissociation Questionnaire (SDQ)*. The SDQ is a 20-item self-report instrument that evaluates the severity of somatoform dissociation (Nijenhuis, Spinhoven, Van Dyck, Van der Hart, & Vanderlinden, 1996). The sum of the item scores (range = 1–5) represents the total score, which can be between 20 and 100. The typical cutoff score for pathological dissociation is reported as 40 among Turkish patients (Sar, Kundakci, Kiziltan, Bakim, & Bozkurt, 2000). Among other items on sensorimotor alterations, the SDQ covers an item directly addressing the perception of pain: "My body, or a part of it, was insensitive to pain."

*Dissociation Questionnaire (DIS-Q)*. The DIS-Q is a 63-item self-report instrument (Vanderlinden, Van Dyck, Vandereycken, & Vertommen, 1993). It evaluates the severity of psychoform dissociation, with possible scores ranging from 1 to 5. According to a study among Turkish patients, a cutoff of

2.5 predicts pathological dissociation (Sar et al., 1997). Besides a total score, the DIS-Q provides subscores representing four dimensions of psychoform dissociation: dissociative amnesia, identity fragmentation, absorption, and loss of control.

*Beck Depression Inventory (BDI)*. The BDI measures the physical, emotional, cognitive, and motivational symptoms of depression (Beck, Ward, & Mendelson, 1961). The inventory is used not for diagnosing depression but for assessing the severity of depressive symptoms. There are 21 items corresponding to symptom categories. Each item is scored from 0 to 3. The sum of the scores derived from the items provides the depression score. Validity and reliability of the Turkish version of BDI were reported by Hisli (1989).

*Spielberger State-Trait Anger Expression Inventory (STAXI)*. The STAXI assesses the intensity of feelings of anger (state anger) with seven items, the disposition to experience anger (trait anger) with six items, behaviorally expressed anger (anger-outside) with six items, suppressed anger (anger-inside) with six items, and self-control of anger behavior (anger control) with six items (Spielberger, Johnson, Russel, & Crane, 1983). The Turkish version was validated by Özer (1994).

*Childhood Trauma Questionnaire (CTQ)*. The CTQ is a 28-item self-report instrument developed by Bernstein et al. (1994) that evaluates childhood emotional, physical, and sexual abuse as well as childhood physical and emotional neglect. Items are rated on a 5-point Likert-type scale, with response options ranging from *never true* (1) to *very often true* (5). Possible scores for each type of childhood trauma range from 5 to 25. The sum of the scores derived from each trauma type provides the total score, ranging from 25 to 125. The Turkish version of the scale is as reliable and valid as its original from (Sar, Öztürk, & İkkikardes, 2012).

## RESULTS

The mean age of the study group was 46.9 years ( $SD = 10.8$ , range = 22–69). The participants had 8.5 years of education on average ( $SD = 4.3$ ). Approximately two thirds of the group described their income as middle level. According to the DDIS, 30 patients (60.0%) had a lifetime diagnosis of depressive disorder, including 12 women (24.0%) with current major depressive disorder. In the lifetime depression group, seven women (23.3%) had a *DSM-IV* dissociative disorder, whereas this rate was 5.3% ( $n = 1$ ) for the nondepressive group (Fisher's exact test  $p = .099$ ). Patients who had a lifetime diagnosis of depression were younger than those who did not. They had higher scores on somatoform and psychoform dissociation (including loss of control), trait anger, anger-outside, number of somatic complaints, and borderline personality disorder criteria compared to the nondepressive participants. Ten patients (nine in the depressive group) had SDQ scores

above 35. Only two of them (both in the depressive group) also had DIS-Q scores above 2.5 (the suggested cutoff level). There was a moderate but significant correlation between the two scales ( $r = .63$ ), suggesting some overlap between the two phenomena.

There were no significant differences in childhood trauma scores between the depressive and nondepressive patients in the present study (see Table 1). There were also no significant correlations between total childhood trauma and the current severity of depression (BDI scores; see Table 2). These data suggested that there was a relationship between lifetime diagnosis of depressive disorder and anger, dissociation, and younger age; however, a relationship with childhood trauma could not be identified by a simple comparison of the patient groups.

In tandem with these findings, a correlational analysis conducted on scores of the self-report measures revealed significant relationships between the severity of current depression (BDI) and both somatoform (SDQ)

**TABLE 1** Clinical Measures and Childhood Trauma History Among Women With and Without a Lifetime Diagnosis of Major Depressive Disorder (Student's *t* Test)

Variable	Lifetime major depressive disorder				<i>t</i>	<i>df</i>	<i>p</i>
	Present ( <i>n</i> = 30)		Absent ( <i>n</i> = 20)				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Age	43.9	11.5	51.3	8.2	2.48	47	.017
Education (years)	8.8	4.5	8.2	4.1	0.48	47	.634
SDQ	30.0	9.8	23.9	5.5	2.82	46.4	.007
DIS-Q	1.8	0.4	1.5	0.4	2.16	44	.036
Loss of control	2.0	0.5	1.6	0.5	2.45	44	.018
Absorption	1.8	0.6	1.7	0.6	0.56	44	.580
Dissociative amnesia	1.7	0.5	1.5	0.4	1.42	44	.163
Identity fragmentation	1.6	0.5	1.3	0.4	1.74	44	.088
Beck depression	17.6	11.1	11.8	9.3	1.94	48	.058
Trait anger	22.9	6.2	18.3	4.4	2.84	48	.007
Control of anger	20.2	5.0	21.1	5.0	0.60	48	.551
Anger-inside	17.5	4.5	15.2	3.8	1.83	48	.073
Anger-outside	17.4	5.4	13.5	3.8	2.81	48	.007
Number of somatic complaints	13.0	4.8	9.4	5.7	2.41	48	.020
Number of borderline personality features	1.3	1.7	0.3	0.8	2.70	44.07	.010
Childhood trauma	42.8	11.9	42.9	11.0	0.01	46	.991
Sexual abuse	6.0	2.6	5.2	0.7	1.73	33.1	.094
Physical abuse	6.3	2.3	6.8	4.7	0.48	47	.631
Emotional abuse	8.7	4.4	8.2	5.2	0.37	47	.715
Physical neglect	9.7	2.1	10.3	1.5	1.14	47	.259
Emotional neglect	12.2	5.0	12.3	4.0	0.11	46	.917
Minimization of trauma	0.9	1.1	1.0	1.2	0.20	47	.840

Notes: SDQ = Somatoform Dissociation Questionnaire; DIS-Q = Dissociation Questionnaire.

**TABLE 2** Correlations Between Clinical Variables, Age, and Education (Pearson Correlation Coefficients)

Variable	Age	Education	BPD		STAXI				
			criteria	SDQ	BDI	Trait	Anger-in	Anger-out	Control
Age	—	-.40*	-.40*	-.06	.03	-.23	.09	-.26	.09
Education	—	—	.06	-.28	-.35*	.01	-.03	.07	.17
DIS-Q total	-.15	-.11	.37*	.63**	.60**	.56**	.38*	.51**	-.23
Identity fragmentation	-.18	-.06	.22	.66**	.53**	.39*	.20	.36*	-.25
Loss of control	-.17	-.21	.45*	.48**	.61**	.62**	.43*	.56**	-.29
Amnesia	.01	-.11	.27	.51**	.45*	.34*	.28	.33*	-.12
Absorption	-.16	.01	.16	.43*	.22	.35*	.37*	.33*	.09
SDQ	—	—	.19	—	.48**	.20	.12	.14	-.18
BDI	—	—	.18	—	—	.33*	.33*	.30*	-.06
BPD criteria	-.40*	-.06	—	.19	.18	.47**	.18	.37*	-.22
Somatic complaints	-.19	-.19	.27	.38*	.32*	-.04	.22	.07	.19

Notes: STAXI = Spielberger State-Trait Anger Expression Inventory; BPD = borderline personality disorder; SDQ = Somatoform Dissociation Questionnaire; BDI = Beck Depression Inventory; DIS-Q = Dissociation Questionnaire.

\*  $p < .05$

\*\*  $p < .001$

and psychoform (DIS-Q) dissociation. What is interesting is that BDI and psychoform dissociation scores correlated with all types of anger, but somatoform dissociation did not (see Table 2).

Further correlational analyses were conducted to inquire about possible relationships between clinical variables and childhood adversity (see Table 2). The total childhood trauma score correlated with both psychoform and somatoform dissociation as well as with anger-inside. Psychoform dissociation correlated with all types of childhood abuse but not with any type of neglect. Somatoform dissociation, however, was related to childhood emotional neglect only. In sum, although an association was not identified between depression and childhood adversity directly, such a relationship was observed between childhood adversity and dissociation. The type of this relationship (neglect vs. abuse, or omission vs. intrusion, respectively) differed for somatoform and psychoform dissociation.

Suggesting a separate track, childhood neglect did not correlate with anger and BDI scores either. All three types of abuse were correlated with loss of control. In addition, childhood sexual abuse was related to identity fragmentation and anger-inside; childhood physical abuse correlated with absorption; and childhood emotional abuse was correlated with identity fragmentation, absorption, and anger-inside (see Table 3).

To inquire about the complex relationships between childhood trauma, anger, dissociation, and depression, we conducted a logistic regression analysis. Lifetime diagnosis of depression was taken as the dependent variable

**TABLE 3** Correlations Between Childhood Trauma Scores and Clinical Variables (Pearson Correlation Coefficients)

Variable	Childhood abuse			Childhood neglect		CTQ
	Sexual	Physical	Emotional	Emotional	Physical	Total
DIS-Q total	.41*	.30*	.35*	.17	.05	.37*
Identity fragmentation	.48**	.25	.33*	.13	-.04	.33*
Loss of control	.30*	.32*	.35*	.20	.15	.38*
Amnesia	.26	.16	.19	.19	.02	.25
Absorption	.27	.41*	.37*	.03	.20	.39*
SDQ total	.18	.27	.21	.29*	.05	.32*
Trait anger	.25	.22	.20	-.13	.22	.14
Anger-inside	.29*	.28	.30*	.18	.23	.36*
Anger-outside	.28	.09	.15	.02	-.04	.14
Control of anger	-.13	.05	.02	-.15	-.05	-.07
Beck depression	.27	.10	.23	.13	.12	.23
BPD criteria	.25	.21	.24	.10	.12	.26

Notes: CTQ = Childhood Trauma Questionnaire; DIS-Q = Dissociation Questionnaire; SDQ = Somatoform Dissociation Questionnaire; BPD = borderline personality disorder.

\*  $p < .05$

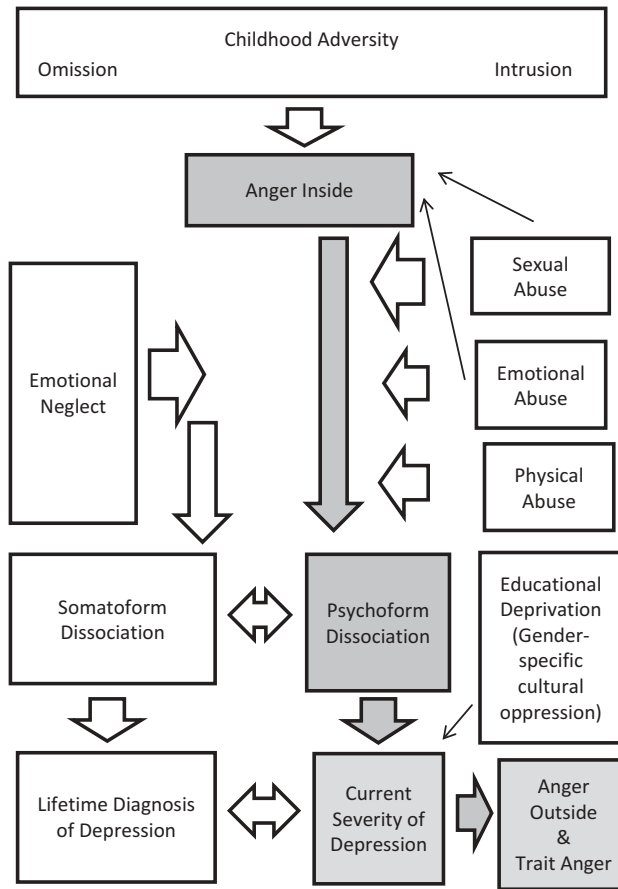
\*\*  $p < .001$

and CTQ, DIS-Q, SDQ, anger (trait, inside, outside), education, and age as independent variables. Only somatoform dissociation scores predicted the diagnosis (Cox & Snell  $R^2 = .36$ ,  $B = 0.15$ ,  $SE = 0.08$ ,  $\beta = 1.17$ , Wald = 4.08,  $df = 1$ ,  $p = .043$ ). BDI score was predicted (adjusted  $R^2 = .46$ ;  $F = 19.06$ ;  $df = 2$ , 41;  $p = .001$ ) by psychoform dissociation ( $B = 15.06$ ,  $SE = 2.86$ ,  $\beta = 0.60$ ,  $t = 5.26$ ,  $p = .001$ ) and low education ( $B = 0.81$ ,  $SE = 0.30$ ,  $\beta = 0.31$ ,  $t = 2.68$ ,  $p = .011$ ).

A stepwise linear regression analysis taking somatoform dissociation as the dependent variable and the five types of childhood trauma as independent variables yielded childhood emotional neglect as the only predictor ( $B = 0.59$ ,  $SE = 0.27$ ,  $\beta = 0.31$ ,  $t = 2.20$ ,  $p = .033$ ; adjusted  $R^2 = .08$ ;  $F = 0.83$ ;  $df = 1$ , 46;  $p = .033$ ). Among the childhood trauma types, only childhood sexual abuse ( $B = 0.08$ ,  $SE = 0.03$ ,  $\beta = 0.41$ ,  $t = 2.87$ ,  $p = .006$ ) predicted psychoform dissociation (adjusted  $R^2 = .14$ ;  $F = 8.24$ ;  $df = 1$ , 44;  $p = .006$ ).

Figure 1 summarizes the relationships between childhood adversities, anger-inside, both types of dissociation, lifetime and current depression, and trait anger/anger-outside. Processing the posttraumatic anger seems to be the main dimension of the entire algorithm representing dissociative depression.

Figure 2 demonstrates the variables interacting with loss of control (i.e., a crisis condition in the context of dissociative depression). Whereas anger-outside may lead to an increased number of borderline phenomena, it is

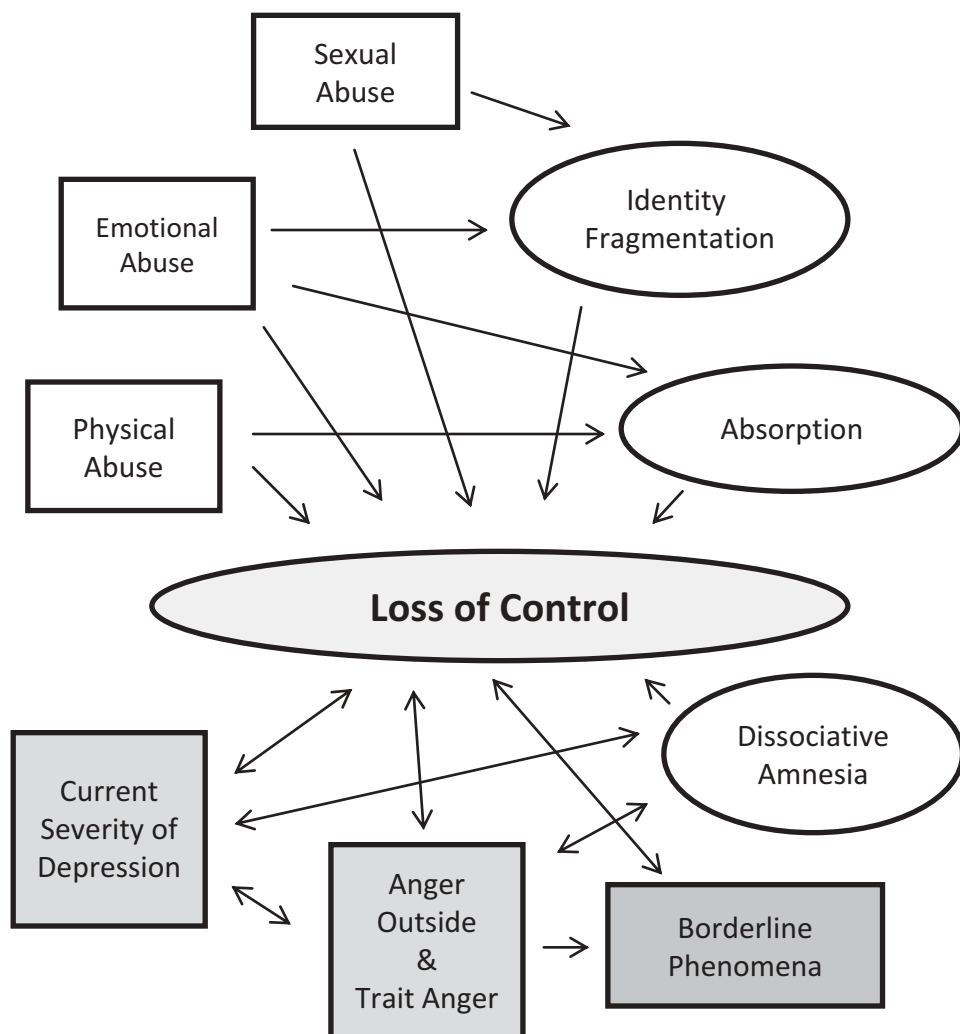


**FIGURE 1** Relationships between childhood adversity, anger, and dissociation among depressive women with fibromyalgia or rheumatoid arthritis. (Each arrow marks a significant correlational relationship.)

interesting that dissociative amnesia not only contributes to a loss of control but also interacts with current severity of depression and trait anger and anger-outside. Various types of childhood adversity have different influences on components of dissociation such as identity fragmentation and absorption; however, they all contribute to loss of control.

## DISCUSSION

Bodily and mental responses to stress may take diverse trajectories with different psychosomatic consequences. These responses may flow in separate tracks. For instance, in a study of patients with back pain, although there was no relationship between psychoform dissociation and any type of childhood



**FIGURE 2** Variables involved in potential loss of control among depressive women with fibromyalgia or rheumatoid arthritis. (Each arrow marks a significant correlational relationship.)

trauma, such a connection could be demonstrated with somatoform dissociation (Yücel et al., 2002). Hence, among patients in general medical settings, associations between stress and clinical psychopathology may be relatively subtle compared to those in persons who apply directly to psychiatric units because of their explicit mental symptoms or psychosocial antecedents. This is one of the challenges faced by clinicians who work in general medical or consultation/liason settings. Thus, in the present study on patients with fibromyalgia or rheumatoid arthritis, a simple comparison between depressive and nondepressive patients did not reveal significant

results in terms of childhood adversity. However, further analyses revealed that such relationships may be traced through considering somatoform and psychoform dissociation. Although in different ways, both phenomena proved themselves to be related to childhood psychological trauma (see [Figure 1](#)).

A significant majority (seven of eight) of the patients who had a *DSM-IV* dissociative disorder were in the lifetime depressive disorder group, supporting the newly proposed category of trauma-related dissociative depression (Sar, 2011). Indeed, patients with a lifetime diagnosis of depressive disorder had higher scores of somatoform and psychoform dissociation compared to the nondepressive group. It is interesting that whereas somatoform dissociation predicted lifetime depression, psychoform dissociation predicted BDI scores, which represented the current severity of depression.

Mental processing of posttraumatic anger seems to be one of the leading components in the psychodynamics of dissociative depression (see [Figure 1](#)). What is interesting is that although childhood emotional neglect was not correlated with posttraumatic anger-inside, it predicted somatoform dissociation. Psychoform dissociation, in contrast, was related to the current severity of depression with trait anger and anger-outside. Thus, emotional neglect and somatoform dissociation seem to be associated with an interruption in mental processing and an expression of posttraumatic anger.

We assume that psychoform and somatoform dissociation represent different ways of handling posttraumatic anger. We propose that whereas somatoform dissociation represents an overmodulation of emotion, psychoform dissociation results in an undermodulation. Overmodulation may be one reason why alexithymia was reported in a study as a predictor of somatization among patients with major depression (Yazici-Gulec et al., 2013). In this way, somatoform dissociation seems to interfere with the integrative processing of trauma through the overmodulation of emotion, whereas psychoform dissociation represents an attempt, albeit rather unsuccessful, to maintain cognitive processing (Sar & Öztürk, 2005). The biological and clinical aspects of overmodulation and undermodulation of emotions were presented by Lanius and colleagues (2010) in their review of a dissociative subtype of posttraumatic stress disorder.

Nevertheless, trait anger and anger-outside were associated with loss of control (see [Figure 2](#)), a crisis condition in the context of dissociative depression. Besides its mentally disintegrating influences (identity fragmentation, dissociative amnesia, absorption), allowing the expression of anger makes psychoform dissociation a factor leading to more readily losing control (e.g., borderline phenomena may appear transiently). Hence, somatoform dissociation may contribute to the regulation of emotions to prevent potential crisis states (e.g., suicidality in its most extreme form; Öztürk & Sar, 2008).

Patients with a lifetime diagnosis of depression (see [Table 1](#)) or an elevated BDI score (see [Table 2](#)) were characterized by a loss of control overall (but not a loss of control of anger), trait anger, anger-outside, and somatic complaints. Besides low education, identity disturbance, and dissociative amnesia, the current severity of depression (BDI score) was also associated with anger-inside. An elevated number of borderline personality disorder criteria among patients with dissociative depression seems to be related to their younger age and their being in an early period of trauma processing. A previous epidemiological study conducted in the general population revealed that women with dissociative depression were younger than those with nondissociative depression (Sar et al., 2013). There was a correlation between younger age at the onset of depressive disorder and the presence of repetitive episodes in another recent study as well (Bülbül et al., 2013).

In accordance with our findings, in a previous study on patients in Turkey with back pain, somatoform dissociation scores were related to childhood neglect (Yücel et al., 2002). In a similar study with patients with chronic pelvic pain, Nijenhuis and colleagues (2003) also found the highest correlation between somatoform dissociation and childhood emotional neglect, followed closely by physical abuse and sexual harassment—much higher than the correlations between psychoform dissociation scores and these types of experiences. Nevertheless, a previous report on patients with fibromyalgia also suggested that somatoform dissociation is related to childhood emotional abuse (Bohn, Bernardy, Wolfe, & Hauser, 2013). Hence, further studies are required to achieve a consensus among conflicting results of various studies on type of trauma.

Nijenhuis, Spinhoven, Vanderlinden, Van Dyck, and Van der Hart (1998) related somatoform dissociative symptoms to animal defensive reactions to predatory imminence and injury. A previous study claimed that somatoform dissociation was related to childhood trauma types involving physical contact, and psychoform dissociation was related to a wider range of non-contact trauma (Waller et al., 2000). Other studies reported that somatoform symptoms were more common than psychological symptoms among populations of low socioeconomic status (Escobar, Rubio-Stipec, Canino, & Karno, 1989). In contrast to these observations, in the present study somatoform dissociation was predicted by a noncontact trauma (neglect), and psychoform dissociation was related to childhood sexual and physical abuse (i.e., trauma involving physical contact) and low education. The latter is usually correlated with low socioeconomic status, and in fact it is a culturally determined type of gender-specific and culturally determined social oppression affecting women throughout their entire lives (Sar et al., 2013). We propose that rather than contact or noncontact, the qualities of omission or intrusion/oppression differentiate the two types of traumatization from each other.

Apparently, different types of childhood trauma may sustain different trajectories of dissociative psychopathology (Boysan, Goldsmith, Avu, Kayri, & Keskin, 2009). We propose that rather than being directly related to somatic memory, somatoform dissociation may be a consequence of a type of trauma that is relatively difficult for the subject to realize, as described by Stern's (2003) concept of unformulated experience. Childhood emotional neglect fits this notion because it is about a deficiency based on acts of omission rather than on intrusive types of maltreatment such as physical, sexual, and emotional abuse. The omission type of maltreatment seems to affect bodily language more readily (see [Figure 1](#)).

Among patients with somatoform dissociation, ways of intervening psychotherapeutically with the psychopathology may differ from ways of intervening among those who have psychoform dissociation. This is not only because of differences in the “language” of psychopathology but also because of differences in types of traumatic antecedents (notwithstanding possible inaccuracies of self-reports of maltreatment history among medical patients with dissociation). This point may be illuminated by research on the intrapsychic processing of posttraumatic anger, which may possibly be related to patterns of interpersonal submission (Nijenhuis et al., 1998), attachment to the perpetrator (Ross, 1997), and feelings of shame (Dorahy et al., 2013) evoked during developmental traumatization and subsequently maintained in adult life. The present study did not assess attachment patterns of the patients, which are expected to differ between dimensions characterized by omission or intrusion types of developmental trauma, and somatoform and psychoform dissociation, respectively. Further studies also should inquire whether such mechanisms might have predicted a relevant condition also associated with functional somatic conditions but different from depression, such as posttraumatic stress disorder. Posttraumatic anger seems to be the key emotion and loss of control seems to be one of the main threats perceived by patients with dissociative depression (see [Figure 1](#)). Consideration of both phenomena may help the clinician in careful titration of interventions while conducting phase-oriented trauma psychotherapy. Last but not least, possible relationships between these psychological variables and those related to the course of particular medical illnesses (e.g., early onset, severity, treatment resistance) may also be illuminated by future research.

The present study has limitations. A small sample size and possible Type II error due to the conductance of multiple statistical tests are among them. However, given the exploratory and theory-informing nature of the analysis, these limitations should not be considered absolute restrictions. As the sample consisted of female fibromyalgia and rheumatoid arthritis patients, the findings may not be generalized to male populations or to those with other physical illnesses. Nevertheless, the known preponderance of child abuse

history, chronic pain, and depression in this population made this sample beneficial for the study.

## CONCLUSIONS

In contrast to previous studies (Bülbül et al., 2013; Chapman et al., 2004; Yazici-Gulec et al., 2013), the current study did not find a difference in childhood adversity between patients with and without lifetime depressive disorder in a direct comparison. However, it was possible to pursue the subtle traces of traumatic stress by assessing anger and somatoform and psychoform dissociation. Our findings suggest that the assessment of somatoform and psychoform dissociation may lead to different and additional insights into the intrapsychic processing of traumatic stress, in particular among patients in general medical settings and those who likely suffer from psychosomatic conditions.

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## REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Anda, R. F., Dong, M. X., Brown, D. W., Felitti, V. J., Giles, W. H., Perry, G. S., . . . Dube, S. R. (2009). The relationship of adverse childhood experiences to a history of premature death of family members. *BMC Public Health*, *106*, 1–10.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, *4*, 561–571.
- Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., . . . Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of childhood abuse or neglect. *American Journal of Psychiatry*, *151*, 1132–1136.

- Bohn, D., Bernardy, K., Wolfe, F., & Hauser, W. (2013). The association among childhood maltreatment, somatic symptom intensity, depression, and somatoform dissociative symptoms in patients with fibromyalgia syndrome: A single-center cohort study. *Journal of Trauma & Dissociation, 14*, 342–358.
- Boysan, M., Goldsmith, R. E., Avu, H., Kayri, M., & Keskin, S. (2009). Relations among, anxiety, depression, and dissociative symptoms: The influence of abuse subtype. *Journal of Trauma & Dissociation, 10*, 83–101.
- Bülbül, F., Cakir, Ü., Ülkü, C., Üre, I., Karabatak, O., & Alpak, G. (2013). Childhood trauma in recurrent and first episode depression. *Anatolian Journal of Psychiatry, 14*, 93–99.
- Burns, J. W., Bruehl, S., & Chont, M. (2013). Anger regulation style, anger arousal and acute pain sensitivity: Evidence for an endogenous opioid “triggering” model. *Journal of Behavioral Medicine*. doi:10.1007/s10865-013-9511-z.
- Chapman, D. P., Anda, R. F., Felitti, V. J., Dube, S. R., Edwards, V. J., & Whitfield, C. L. (2004). Epidemiology of adverse childhood experiences and depressive disorders in a large health maintenance organization population. *Journal of Affective Disorders, 82*(2), 217–225.
- Chapman, D. P., Perry, G. S., & Strine, T. W. (2005). The vital link between chronic disease and depressive disorders. *Preventing Chronic Disease, 2*(1), A14.
- Dickens, C., McGowan, L., Clark-Carter, D., & Creed, F. (2002). Depression in rheumatoid arthritis: A systematic review of the literature with meta-analysis. *Psychosomatic Medicine, 64*(1), 52–60.
- Dong, M., Dube, S. R., Felitti, V. J., Giles, W. H., & Anda, R. F. (2003). Adverse childhood experiences and self-reported liver disease: New insights into a causal pathway. *Archives of Internal Medicine, 163*, 1949–1956.
- Dong, M., Giles, W. H., Felitti, V. J., Dube, S. R., Williams, J. E., Chapman, D. P., & Anda, R. F. (2004). Insights into causal pathways for ischemic heart disease: The Adverse Childhood Experiences Study. *Circulation, 110*, 1761–1766.
- Dorahy, M. J., Corry, M., Shannon, M., Webb, K., McDermott, B., Ryan, M., & Dyer, K. F. W. (2013). Complex trauma and intimate relationships: The impact of shame, guilt and dissociation. *Journal of Trauma & Dissociation, 14*(7), 72–79.
- Dube, S. R., Fairweather, D. L., Pearson, W. S., Felitti, V. J., Anda, R. F., & Croft, J. B. (2009). Cumulative childhood stress and autoimmune diseases in adults. *Psychosomatic Medicine, 71*(2), 224–250.
- Escobar, J. I., Rubio-Stipec, M., Canino, G., & Karno, M. (1989). Somatic Symptom Index (SSI): A new and abridged somatization construct: Prevalence and epidemiological correlates in two large community samples. *Journal of Nervous and Mental Disease, 177*(3), 121–180.
- Fietta, P., Fietta, P., & Manganelli, P. (2007). Fibromyalgia and psychiatric disorders. *Acta Biomedica: Atenei Parmensis, 78*(2), 88–95.
- Freud, S. (1975). Trauer und Melancholie [Mourning and melancholia]. In A. Mitscherlich, A. Richards, & J. Strachey, *Psychologie des Unbewussten [Psychology of Unconsciousness] Study Edition* (Vol. 3, pp. 193–212). Frankfurt am Main, Germany: S. Fischer Verlag. (Original work published 1917)
- Goldenberg, D. L. (2010). The interface of pain and mood disturbances in the rheumatic diseases. *Seminars in Arthritis and Rheumatism, 40*(1), 15–31.

- Häuser, W., Kosseva, M., Üceyler, N., Klose, P., & Sommer, C. (2011). Emotional, physical, and sexual abuse in fibromyalgia syndrome: A systematic review with meta-analysis. *Arthritis Care and Research*, *63*, 808–820.
- Hisli, N. (1989). Beck Depresyon Envanterinin üniversite öğrencileri için geçerliği, güvenilirliği [Validity and reliability of the Beck Depression Inventory among university students]. *Psikoloji Dergisi*, *7*(23), 3–13.
- Lanius, R. A., Vermetten, E., Loewenstein, R. J., Brand, B., Schmahl, C., Bremner, J. D., & Spiegel, D. (2010). Emotion modulation in PTSD: Clinical and neurobiological evidence for a dissociative subtype. *American Journal of Psychiatry*, *167*, 640–647.
- Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V., & Ustun, B. (2007). Depression, chronic diseases, and decrements in health: Results from the World Health Surveys. *Lancet*, *370*, 851–858.
- Nijenhuis, E. R. S., Spinhoven, P., Van Dyck, R., Van der Hart, O., & Vanderlinden, J. (1996). The development and the psychometric characteristics of the Somatoform Dissociation Questionnaire (SDQ-20). *Journal of Nervous and Mental Disease*, *184*, 688–694.
- Nijenhuis, E. R. S., Spinhoven, P., Vanderlinden, J., Van Dyck, R., & Van der Hart, O. (1998). Somatoform dissociative symptoms as related to animal defensive reactions to predatory threat and injury. *Journal of Abnormal Psychology*, *107*(1), 63–73.
- Nijenhuis, E. R. S., Van der Hart, O., & Steele, K. (2002). The emerging psychobiology of trauma-related dissociation and dissociative disorders. In H. D'haenen, J. A. den Boer, & P. Willner (Eds.), *Biological psychiatry* (pp. 1079–1098). Chichester, England: Wiley.
- Nijenhuis, E. R. S., Van Dyck, R., Ter Kuile, M., Mourits, M., Spinhoven, P., & Van der Hart, O. (2003). Evidence for associations among somatoform dissociation, psychological dissociation, and reported trauma in chronic pelvic pain patients. *Journal of Psychosomatic Obstetrics and Gynecology*, *24*, 87–98.
- Ogawa, J. R., Sroufe, L. A., Weinfield, N. S., Carlson, E. A., & Egeland, B. (1997). Development and the fragmented self: Longitudinal study of dissociative symptomatology in a nonclinical sample. *Developmental Psychopathology*, *9*, 855–879.
- Özer, A. K. (1994). Sürekli öfke (SL-öfke) ve öfke ifade tarzı (öfke-tarz) ölçekleri ön çalışması [A preliminary study on scales of trait anger and anger expression style]. *Turkish Journal of Psychology*, *9*, 26–35.
- Ozturk, E., & Sar, V. (2008). Somatization as a predictor of suicidal ideation in dissociative disorders. *Psychiatry and Clinical Neurosciences*, *62*, 662–668.
- Pinerua-Shuhaibar, L. L., Villalobos, N. N., Delgado, N. N., Rubio, M. A., & Suarez-Roca, H. H. (2011). Enhanced central thermal nociception in mildly depressed nonpatients and transiently sad healthy subjects. *Journal of Pain*, *12*(3), 360–369.
- Ross, C. A. (1997). *Dissociative identity disorder: Diagnosis, clinical features, and treatment of multiple personality*. New York, NY: Wiley.
- Ross, C. A., Heber, S., Norton, G. R., Anderson, D., Anderson, G., & Barchet, P. (1989). The Dissociative Disorders Interview Schedule: A structured interview. *Dissociation*, *2*, 169–172.

- Sar, V. (2011). Dissociative depression: A common cause of treatment resistance. In W. Renner (Ed.), *Female Turkish migrants with recurrent depression* (pp. 112–124). Innsbruck, Austria: Studia Verlag.
- Sar, V., Akyüz, G., Öztürk, E., & Alioglu, F. (2013). Dissociative depression among women in the community. *Journal of Trauma & Dissociation, 14*, 423–438.
- Sar, V., Kiziltan, E., Kundakçı, T., Bakim, B., Yargic, L. I., & Bozkurt, O. (1997). The reliability and validity of the Turkish version of the Dissociation Questionnaire (DIS-Q). In *Papers presented at the 33rd Turkish National Psychiatric Conference of the Psychiatry* (pp. 43–53). Antalya, Turkey: Bakirköy State Hospital for Nervous and Mental Diseases and Psychiatric Association of Turkey.
- Sar, V., Kundakci, T., Kiziltan, E., Bakim, B., & Bozkurt, O. (2000). Differentiating dissociative disorders from other diagnostic groups through somatoform dissociation in Turkey. *Journal of Trauma & Dissociation, 1*(4), 67–80.
- Sar, V., & Öztürk, E. (2005). What is trauma and dissociation? *Journal of Trauma Practice, 4*(1–2), 7–20.
- Sar, V., & Öztürk, E. (2007). Functional dissociation of the self: A sociocognitive approach to trauma and dissociation. *Journal of Trauma & Dissociation, 8*(4), 69–89.
- Sar, V., Öztürk, E., & İki kardes, E. (2012). Çocukluk çağı ruhsal travma ölçeğinin Türkçe uyarlamasının geçerlilik ve güvenilirliği [Validity and reliability of the Turkish version of the Childhood Trauma Questionnaire]. *Türkiye Klinikleri Tıp Bilimleri Dergisi, 32*, 1054–1063.
- Söderlin, M. K., Hakala, M., & Nieminen, P. (2000). Anxiety and depression in a community-based rheumatoid arthritis population. *Scandinavian Journal of Rheumatology, 29*(3), 177–183.
- Spielberger, C. D., Johnson, E. H., Russel, F. S., & Crane, R. S. (1983). Assessment of anger: The State Trait Anger Scale. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances of personality assessment* (Vol. 2, pp. 159–187). Hillsdale, NJ: Erlbaum.
- Stern, D. B. (2003). *Unformulated experience: From dissociation to imagination in psychoanalysis*. London, England: Routledge.
- Van der Hart, O., Van Dijke, A., Van Son, M., & Steele, K. (2000). Somatoform dissociation in traumatized World War I combat soldiers: A neglected clinical heritage. *Journal of Trauma & Dissociation, 1*(4), 33–66.
- Vanderlinden, J., Van Dyck, R., Vandereycken, W., & Vertommen, H. (1993). The Dissociation Questionnaire: Development and characteristics of a new self reporting questionnaire. *Clinical Psychology and Psychotherapy, 1*, 21–27.
- Waller, G., Hamilton, K., Elliott, P., Lewendon, J., Stopa, L., Waters, A., . . . Chalkley, J. (2000). Somatoform dissociation, psychological dissociation, and specific forms of trauma. *Journal of Trauma & Dissociation, 1*(4), 81–98.
- Williamson, D. F., Thompson, T. J., Anda, R. F., Dietz, W. H., & Felitti, V. J. (2002). Body weight, obesity, and self-reported abuse in childhood. *International Journal of Obesity and Related Metabolic Disorders, 26*, 1075–1082.
- Yargic, L. I., Sar, V., Tutkun, H., & Alyanak, B. (1998). Comparison of dissociative identity disorder with other diagnostic groups using a structured interview in Turkey. *Comprehensive Psychiatry, 39*, 345–351.

- Yazici-Gulec, M., Altintas, M., Inanc, L., Hazal-Bezgin, C., Kaymak-Koca, E., & Gulec, H. (2013). Effects of childhood trauma on somatization in major depressive disorder: The role of alexithymia. *Journal of Affective Disorders, 146*, 137–141.
- Yücel, B., Ozyalcin, S., Sertel, H. O., Camlica, H., Ketenci, A., & Talu, G. K. (2002). Childhood traumatic events and dissociative experiences in patients with chronic headache and low back pain. *Clinical Journal of Pain, 18*, 394–401.