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Differential efficacy of written emotional disclosure for subgroups of fibromyalgia patients

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Abstract

Objectives—To identify differential health benefits of written emotional disclosure (ED).

Methods—Pain-coping style and demographic characteristics were examined as potential moderators of ED treatment efficacy in a randomized controlled trial with female fibromyalgia patients.

Results—Of three pain-coping styles, only patients classified as interpersonally distressed (ID) experienced significant treatment effects on psychological well-being, pain, and fatigue. Treatment effects on psychological well-being were also significantly greater for patients with a high level of education.

Conclusions—Patients with an ID-coping style and/or high education appear to benefit most from ED.

Written emotional disclosure (ED) of stressful experiences has received widespread attention for improving psychological and physical well-being in healthy populations (for review, see Frattaroli, 2006; Smyth, 1998). In clinical samples, however, the salutary effects are smaller and less consistent (see Frisina, Borod, & Lepore, 2004). As a result, it is important to identify for whom ED confers therapeutic benefits (Pennebaker, 2004).

We previously reported on the effects of ED in a randomized controlled trial with female fibromyalgia (FM) patients (see Broderick, Junghaenel, & Schwartz, 2005 for study details). For the present study, we explored patients' pain-coping style and demographic characteristics as moderators of ED treatment response. Recent meta-analytic evidence suggests that individuals with poorer health or higher levels of distress benefit more from ED (Frattaroli, 2006). As such, we were particularly interested in the differential efficacy for patients with maladaptive coping styles.

Method

The research protocol was approved by the Stony Brook University Institutional Review Board.

Participants

Ninety-two patients were randomly assigned, stratified by MPI coping classification, to the ED condition ($N = 31$) or one of two control conditions ($N = 61$, neutral writing or usual care group). Table 1 displays patients' demographic and medical characteristics.

Procedure

ED patients completed three 20-minute writing sessions in the laboratory with instructions to focus on emotional expression and cognitive reappraisal of an important stressful event. Those in the neutral writing condition wrote about daily activities in relation to the time invested.

Measures

Three composite measures assessing pain, fatigue, and psychological well-being were used to examine clinical outcomes (Broderick *et al.*, 2005).

The *Multidimensional Pain Inventory* (MPI; Kerns, Turk, & Rudy, 1985) was used to classify patients into three distinct coping clusters: Adaptive (AC) patients report low pain impact and high functional activity; dysfunctional (DYS) patients report high pain impact, affective distress, and functional limitations; interpersonally distressed (ID) patients report poor support by their significant others in response to pain (Turk & Rudy, 1988).

Results

Multilevel modelling (SAS, Version 8.2, PROG MIXED) was used to generate full information maximum-likelihood estimates of an intent-to-treat repeated measure ANOVA.

Pain-coping style

Of the 92 patients, 45% were classified as AC ($N = 41$), 16% as DYS ($N = 15$), and 39% as ID ($N = 36$). Within coping styles, there were no significant baseline differences between treatment and control groups on the outcome variables. For ID patients, those in the ED condition improved more, from baseline to 4-month follow-up, than controls for psychological well-being ($d = 0.87$, $t(226) = 3.44$, $p < .001$), pain ($d = -1.04$, $t(226) = -3.40$, $p < .001$), and fatigue ($d = -1.04$, $t(224) = -2.65$, $p < .01$); ID patients benefited significantly from the intervention. For DYS and AC patients, the treatment effects were non-significant.

To directly test whether the treatment effect differed significantly across MPI classifications, we examined the omnibus three-way coping style-treatment-time interaction effect. This was non-significant for pain and fatigue. For psychological well-being, it trended towards significance at $p = .08$ ($F(2, 226) = 2.60$); ID patients improved more than AC patients ($d = 0.74$, $t(226) = 2.15$, $p = .03$).

Demographic variables

Of the five demographic variables, only educational status yielded a significant effect. Improvement in psychological well-being was significant for highly (graduate level) educated patients ($d = 1.70$, $t(226) = 4.36$, $p < .0001$), but not for patients with moderate (college; $d = 0.12$, $p = .53$) and lower (up to high school) educational status ($d = 0.32$, $p = .33$). The omnibus educational status-treatment-time interaction effect was significant at $p < .01$ ($F(2, 226) = 6.58$).

Discussion

This study examined potential moderators of treatment efficacy for ED. We can only speculate why patients with higher education showed greater benefit in psychological well-being. Possibly, they were more comfortable or adept at expressing their thoughts and feelings in writing. We are not aware of another study examining how education moderates disclosure, but this deserves further investigation.

In the comparison of pain-coping styles, only ID patients benefited significantly from ED. These patients report relatively more negative pain-related responses and less social support

from significant others. Perhaps, this restrains their interpersonal disclosure of painful events. Expressing stressful experiences in ED writing may be an asset in situations with low interpersonal expression (Lepore, Silver, Wortman, & Wayment, 1996). Zakowski, Ramati, Morton, Johnson, and Flanigan (2004) have shown that cancer patients with high levels of social constraints benefit more from ED.

The present study was limited in sample size, which may affect the generalizability of our findings. Nevertheless, pending replication, it appears that a subgroup of pain patients derives substantial benefit from disclosure.

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Table IDemographic and clinical characteristics by experimental condition (*M*, *SD*, or per cent)

	Emotional disclosure <i>N</i> = 31	Control groups <i>N</i> = 61
Age	51.6 (11.5)	48.8(11.8)
Years with symptoms	10.4(8.4)	7.8(5.6)
Years since diagnosis	5.5 (5.0)	4.7 (4.0)
Education (%)		
≤ HS graduate	23	34
1–4 years college	61	49
Graduate education	16	16
Race (white) (%)	87	93
Employed (%) *	36	61
Disabled (%)	23	20
Income (%)		
< \$20,000	21	19
\$20,000–49,999	28	28
> \$50,000	52	53
Living with partner (%)	71	72

*
 $p < .05$; all subsequent analyses controlled for employment status.