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Does emotional disclosure about stress improve health in rheumatoid arthritis? Randomized, controlled trials of written and spoken disclosure

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ABSTRACT

Studies of the effects of disclosing stressful experiences among patients with rheumatoid arthritis (RA) have yielded inconsistent findings, perhaps due to different disclosure methods – writing or speaking – and various methodological limitations. We randomized adults with RA to a writing (n = 88) or speaking (to a recorder) sample (n = 93), and within each sample, to either disclosure or 1 of 2 control groups (positive or neutral events), which conducted four 20-minute, at-home sessions. Follow-up evaluations at 1, 3, and 6 months included self-reported, behavioral, physiological, and blinded physician-assessed outcomes. In both writing and speaking samples, the disclosure and control groups were comparably credible, and the linguistic content differed as expected. Covariance analyses at each follow-up point indicated that written disclosure had minimal effects compared with combined controls – only pain was reduced at 1 and 6 months, but no other outcomes improved. Spoken disclosure led to faster walking speed at 3 months, and reduced pain, swollen joints, and physician-rated disease activity at 6 months, but there were no effects on other outcomes. Latent growth curve modeling examined differences in the trajectory of change over follow-up. Written disclosure improved affective pain and walking speed; spoken disclosure showed only a marginal benefit on sensory pain. In both analyses, the few benefits of disclosure occurred relative to both positive and neutral control groups. We conclude that both written and spoken disclosure have modest benefits for patients with RA, particularly at 6 months, but these effects are limited in scope and consistency.

1. Introduction

Stressful experiences influence pain and adjustment [7,24,33], and awareness and expression of emotions, rather than avoidance or inhibition, is thought to be adaptive [10,14]. To test this, Pennebaker and Beall [25] developed a paradigm in which participants are randomized to write for several 20-minute sessions about stressors and feelings (ie, written emotional disclosure, or expressive writing) or about nonstressful control topics, and changes in health over subsequent months are examined. An early meta-analysis of healthy samples found a moderate benefit of disclosure [30], although recent meta-analyses of clinical samples [9] or those that included more studies [8,11,19] revealed weaker effects.

Seven published studies have examined emotional disclosure in patients with rheumatoid arthritis (RA). The study by Smyth et al. [31] was most supportive, finding that disclosure improved physician-rated disease status; however, other studies have been less supportive. Danoff-Burg et al. [6] found that fatigue – but not pain, disability, or psychological functioning – improved after disclosure. Kelley et al. [13] reported improved affective and physical functioning, but no change in pain, joint condition, or behavior. Broderick et al. [5] found little or no benefit when disclosure occurred as a

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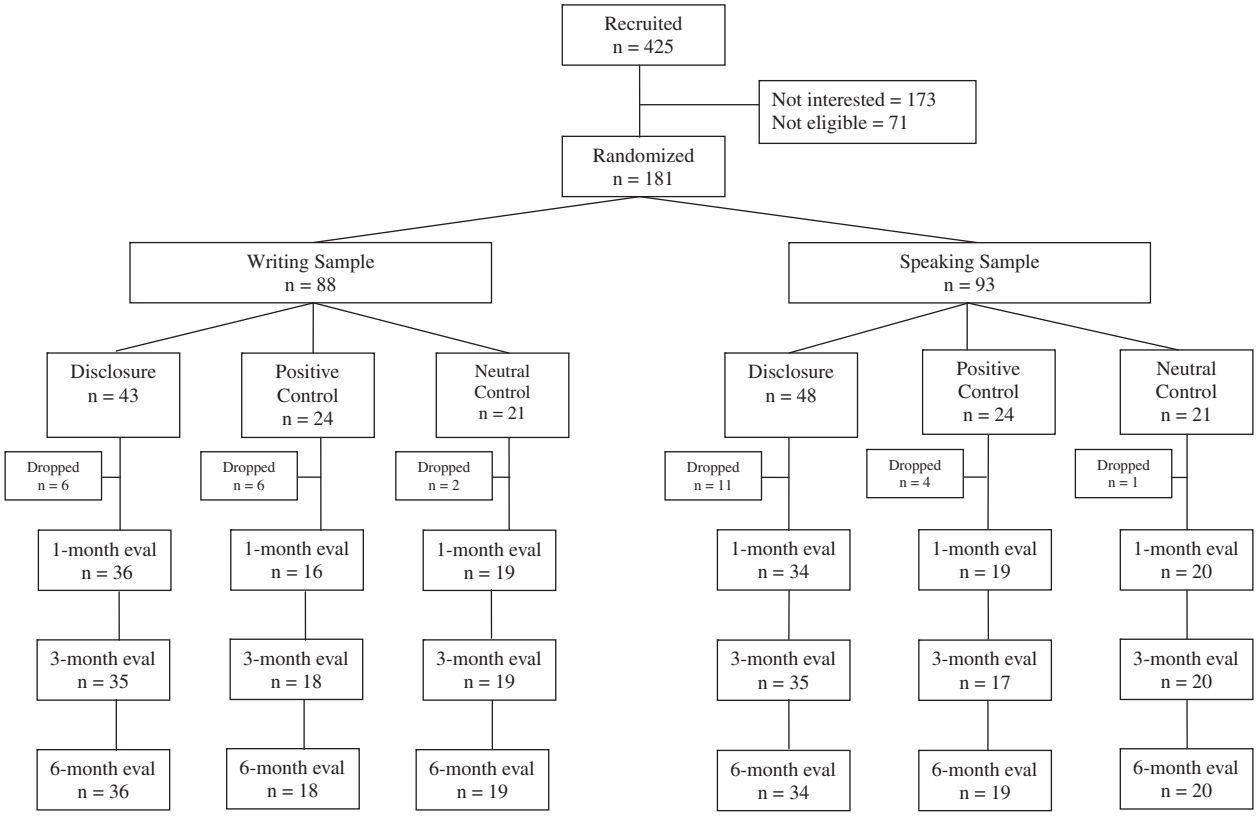

Fig. 1. Flow of participants through the study.

Table 1
Demographic data for each experimental condition, for patients in the writing sample (top) and speaking sample (bottom).

Sample/variable	Full sample	Disclosure	Combined control	Positive control	Neutral control
Writing sample					
Female n (%)	74 (84%)	38 (88.4%)	36 (80%)	19 (79%)	17 (81%)
Male n (%)	14 (16%)	5 (11.6%)	9 (20%)	5 (21%)	4 (19%)
Ethnicity n (%)					
European American	46 (52%)	24 (55.8%)	22 (48.9%)	11 (45.8%)	11 (52.4%)
African American	41 (47%)	18 (41.9%)	23 (51.1%)	13 (54.2%)	10 (47.6%)
Hispanic American	1 (1%)	1 (2.3%)	0 (0%)	0 (%)	0 (0%)
Age mean (SD)	54.9 (10.8)	55.4 (11.7)	54.3 (10.0)	53.1 (10.0)	55.7 (10.0)
Education mean (SD)	13.6 (2.4)	13.4 (2.4)	13.8 (2.3)	14.0 (2.7)	13.6 (1.7)
RA duration mean (SD)	13.2 (11.3)	14.6 (11.4)	12.0 (11.1)	11.3 (9.3)	12.8 (13.1)
Speaking sample					
Female n (%)	78 (84%)	40 (83.3%)	38 (84.4%)	20 (83.3%)	18 (85.7%)
Male n (%)	15 (16%)	8 (16.7%)	7 (15.6%)	4 (16.7%)	3 (14.3%)
Ethnicity n (%)					
European American	54 (58%)	28 (58.3%)	26 (57.8%)	13 (54.2%)	13 (61.9%)
African American	38 (41%)	20 (41.7%)	18 (40%)	11 (45.8%)	7 (33.3%)
Hispanic American	1 (1%)	0 (0%)	1 (2.2%)	0 (0%)	1 (4.8%)
Age mean (SD)	54.3 (11.6)	53.1 (11.3)	55.5 (11.9)	58.0 (12.2)	52.6 (11.1)
Education mean (SD)	13.5 (2.6)	13.1 (2.4)	14.0 (2.7)	14.5 (3.1)	13.4 (2.1)
RA duration mean (SD)	9.3 (8.4)	9.0 (7.6)	9.6 (9.3)	10.2 (11.0)	8.9 (7.1)

part of routine clinical practice. Wetherell et al. [36] noted better mood and less disease activity after disclosure, but the effects were due to unexpected worsening among controls. Van Middendorp et al. [34] found no effect of disclosure on clinical outcomes, but some evidence of improved immune markers. Finally, Keefe et al. [12] reported no benefits after either private or nurse-facilitated disclosure.

The available literature on emotional disclosure among people with RA has many limitations. In particular, speaking rather than writing has often been conducted. The study that demonstrated the most positive effects [31] used writing, whereas 4 studies used speaking into a recorder [12,13,34] or to a nurse [12] or permitted patients to choose the method [36]. The other 2 studies had additional limitations, including not verifying or obtaining patient writings [5] or using a mixed-diagnosis sample (RA and lupus) [6]. Also, most of these studies have not conducted manipulation checks, verified credibility of control conditions, or examined the content of the disclosures. Samples have often been quite small, such as