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How effective are expressive writing interventions for adolescents? A meta-analytic review

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HIGHLIGHTS

- A meta-analysis of expressive writing (EW) among adolescents was conducted.
- EW produced small improvements in well-being across multiple domains.
- Increasing the number of sessions and spacing between sessions enhanced the EW effect on physical health.
- EW produced larger effects on school achievement for youth with emotional problems than for those without emotional problems.

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ABSTRACT

This meta-analysis evaluated the effects of the expressive writing intervention (EW; Pennebaker & Beall, 1986) among adolescents. Twenty-one independent studies that assessed the efficacy of expressive writing on youth samples aged 10–18 years were collected and analyzed. Results indicated an overall mean *g*-effect size that was positive in direction but relatively small (0.127), as well as significant *g*-effect sizes ranging from 0.107 to 0.246 for the outcome domains of Emotional Distress, Problem Behavior, Social Adjustment, and School Participation. Few significant effects were found within specific outcome domains for putative moderator variables that included characteristics of the participants, intervention instructions, or research design. Studies involving adolescents with high levels of emotional problems at baseline reported larger effects on school performance. Studies that implemented a higher dosage intervention (i.e., greater number and, to some extent, greater spacing of sessions) reported larger effects on somatic complaints. Overall, the findings suggest that expressive writing tends to produce small yet significant improvements on adolescents' well-being. The findings highlight the importance of modifying the traditional expressive writing protocol to enhance its efficacy and reduce potential detrimental effects. At this stage of research the evidence on expressive writing as a viable intervention for adolescents is promising but not decisive.

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1. Introduction

Nearly a quarter-century of research has suggested that attempts to think about negative life experiences in a reflective way, in a written format, may result in enhanced psychological adjustment (e.g., Klein & Boals, 2010; Pennebaker & Seagal, 1999). Based on these findings, a brief psychosocial intervention called *expressive writing* (EW), also known as written emotional disclosure, was developed (Pennebaker & Beall, 1986). EW is an individually focused intervention designed to improve emotional expression and processing during adaptation to stressful situations and, as a consequence, improve psychological and physical health (Pennebaker, 2004). In the standard EW intervention protocol (Pennebaker, 1997), participants are randomly assigned either to an EW group, where they write for 15–20 min for several sessions spaced over a few days focusing on their "deepest thoughts and feelings" about a negative life experience of their own choosing, or to a control group, where they write factually about a non-emotional topic. Pre- and post-writing assessments are obtained and the group comparison of change aims to isolate the effect of writing about emotions from that of writing per se.

Since the first study by Pennebaker and Beall (1986) was conducted with a sample of university students, hundreds of studies have implemented the EW intervention. This research has been synthesized in several meta-analyses (Frattaroli, 2006; Frisina, Borod, & Lepore, 2004, 2005; Harris, 2006; Meads & Nouwen, 2005; Smyth, 1998). Several of the meta-analyses review the same studies, whereas others focus on particular populations (e.g., those with chronic illness) or outcomes (e.g., health care utilization). Although the evidence is not consistent, findings suggest that EW may slightly improve participants' physical and psychological health.

The earliest meta-analysis (Smyth, 1998) included 14 studies of healthy university students and community samples and showed significant effects for self-reported physical health, psychological well-being, physiological functioning, and general functioning, with an average effect size of $d = 0.47$. Frisina et al. (2004) partially corroborated and extended these findings in a meta-analysis of nine studies of people who had physical or psychiatric disorders. They reported a smaller, yet significant, effect size of $d = 0.21$ for physical health outcomes. The effect size for psychological health outcomes was inconsistent, perhaps because of the inclusion of studies with participants suffering from serious disordered cognition (e.g., posttraumatic stress disorder, severe depression, suicidal ideation). However, in updating their meta-analysis, the authors warned that many of the studies included were small pilot studies and that the findings should be considered as preliminary (Frisina et al., 2005). In contrast, in an analysis of 61 studies, including most of the studies meta-analyzed in the two previous reviews, Meads and Nouwen (2005) did not find a significant effect of EW on physical health compared to the control condition, both for healthy and at-risk samples. Summarizing the results of 30 randomized trials with samples defined by different inclusion criteria (medical conditions vs. psychological criteria vs. healthy participants), Harris (2006) showed that EW significantly reduced health care utilization among healthy people, with an effect size of $d = 0.16$, but did not do so in samples with preexisting medical conditions or stress- and psychological-related problems.

The largest and most recent meta-analysis by Frattaroli (2006) included 146 studies of EW trials with community, clinical, and medical samples. The overall effect size of $d = 0.15$ was small yet statistically significant, with valuable effects for a number of subsets of outcomes, including psychological problems (e.g., distress, depression, anxiety), immune parameters (e.g., Interleukin 8, CD-8 cells) and immune-related variables (e.g., HIV viral load, liver function, dopamine), self-reported physical health (e.g., reported disease and illness behaviors), and general functioning (e.g., work- and school-related outcomes, social adjustment). Further, this meta-analysis demonstrated that particular subgroups experienced greater benefits of EW, with larger effects among those who had higher stress, poorer physical health, and lower optimism before writing. Interpreting these results, Frattaroli suggested that improvements in emotional health and positive changes in immune system, perceived health and general functioning were evident