ORIGINAL RESEARCH ARTICLE

Better Together: Long-term Behaviors and Perspectives after a Practitioner–Family Writing Intervention in Clinical Practice

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ABSTRACT

Background: An expressive writing intervention, the Three-minute Mental Makeover (3MMM), was previously associated with reduced stress for practitioners, patients, and families. The goal of this follow-up study was to evaluate long-term use of writing and perspectives after participation in the 3MMM.

Methods: The original study involved patients and families in the neonatal and pediatric Intensive Care Units, inpatient units, and outpatient clinics of a children's hospital. Health-care practitioners led the intervention, writing concurrently with patients and families using the 3MMM intervention. Follow-up contact by phone was attempted for all original patient/family participants 12 to 18 months after completing the exercise. Practitioners were contacted via email 24 months after the original study. Participants were surveyed about the 3MMM and continued use of writing to cope with stressful situations. Original and follow-up survey responses were compared using the Mann-Whitney test.

Results: Of the 96 original patient/family members, 61 individuals were reached, remembered the 3MMM, and agreed to participate in the follow-up study. Among the 61 participants, 52 (85%) agreed that the 3MMM had been helpful. Thirty-six (59%) reported using writing to help cope with stress at follow-up, compared to only 23 (38%) at baseline ($P = 0.005$). The majority of clinicians (87%) also continued to use the 3MMM in clinical practice following the original 3MMM study period and ranked it as both feasible (75%) and worth the time investment (75%).

Conclusion: The 3MMM demonstrated long-term perceived benefits and behavior changes. Findings provide preliminary support for using the 3MMM in routine clinical practice.

INTRODUCTION

The medical environment features many stressors for patients, their families, and health-care practitioners. Excessive stress has been shown to be detrimental to human health in many ways.[1] Therefore, interventions that either reduce stress or improve coping are of considerable interest. One method used to help cope with stress is expressive writing (EW), defined as therapeutic writing that involves disclosure of personal information, thoughts, or feelings.[2] EW has been associated with reduced stress, improved health, increased disease-related quality-of-life scores, and reductions in physical symptoms in a variety of patient populations.[3-16] EW interventions also have the potential to be low-cost, low-risk, and are generally well-accepted by patients.[9,10,13-15,17-21]

Although many EW interventions have been associated with short-term health benefits,[7,9-12,14,15,22] few studies have examined the long-term effects of EW.[23-25] One EW intervention was associated with long-term benefits and behavior changes in resident physicians who participated in a 2-day writing workshop.[25] To our knowledge, there are no studies showing long-term behavior changes in patients or family members following a brief EW intervention in clinical practice.

We recently described a brief, novel, EW intervention for use in routine clinical practice, titled the Three-minute Mental Makeover (3MMM), during which the practitioner and patient/family members write and share together. The 3MMM intervention was shown to be associated with reduced stress for patient/family members and practitioners immediately after completing the intervention.[26] This follow-up study examines long-term practitioner and patient/family member perspectives regarding the 3MMM intervention, as well as the long-term use of writing to cope with stress. The 3MMM intervention prompts are presented in Figure 1.

METHODS

This follow-up study evaluated long-term perspectives related to the 3MMM intervention and writing behavior changes in patient/family members and practitioners after participation in the original 3MMM study.

Patients and family participants from the original study were recruited using convenience sampling. These patients and family members were cared for in clinical settings by 1 of the 8 participating practitioners, who sensed the patient/family members were experiencing stress and therefore were invited to complete the 3MMM activity. Health-care practitioners included 2 pediatric residents, 3 pediatric nurses [1 neonatal Intensive Care Unit (ICU), 1 pediatric ICU, and 1 general inpatient pediatric unit], a developmental psychologist, a developmental educator, and a pediatric cardiologist. Patient/

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3MMM INTERVENTION PROMPT
1. Three things you are grateful for (be specific; for clinicians- make one of them about the patient).
2. The story of your life in 6 words (example: Born, school, work, work, work, work).
3. Three wishes -pretend you rub a magic lamp (for clinicians- make one of them about the patient).

Figure 1. Three-minute Mental Makeover (3MMM) writing prompts.

family members were recruited from the neonatal ICU, pediatric ICU, inpatient pediatric unit, and outpatient pediatric clinics at a Chicago-area children's hospital. Clinicians selected patient/family participants who they determined subjectively to be experiencing emotional stress.

Twelve to 18 months after completing the original study, follow-up contact was attempted for all 96 original patient/family members. Participants were called and asked to complete a 9-question survey (Table 1) as a phone interview. Calls were conducted by a medical student researcher not involved in facilitating the initial writing exercise. The phone survey took less than 10 minutes to complete. Patient/family members were also given the option to complete the survey electronically using the Google Forms online survey platform. If participants were unable to be contacted by phone, they were mailed a paper copy of the survey with a return addressed envelope.

The 8 practitioners who participated in the original 3MMM research study were contacted by email at least 2 years after the initial study was completed. Practitioners were sent a 14-question online Google Forms survey (Table 2). Up to 3 email/text reminders were sent to practitioners to complete the survey. The online survey was managed by a medical student researcher not involved in the initial study.

Data were summarized in counts and percentages. Likert-type survey responses, from the original and follow-up surveys, were compared within individual respondents using the Mann-Whitney test. Dichotomous response categories, when available from both time points, were compared using McNemar change tests. Data were analyzed using SPSS (version 25.0 for Windows; IBM Corp, Armonk, NY). Statistical significance was determined by a *P* value of less than 0.05.

This research study was approved by the facility's institutional review board.

RESULTS

Of the 96 patient/family member participants enrolled in the original study, 65 were reached for follow-up (68%). Sixty-one of these participants remembered completing the 3MMM intervention and agreed to respond to the follow-up survey. Two participants of the original study did not recall doing the activity and 2 declined survey participation. All participants who agreed to respond to the follow-up survey completed it (N = 61). Among the 8 practitioners who participated in the original study, all responded to the follow-up survey. Table 3 presents participant demographics as well as physical location of clinical contact.

Table 1. Three-minute Mental Makeover follow-up survey for patients and family members

1. Do you remember doing the 3MMM writing activity?	
□ Yes (if yes, proceed to question 2)	□ No
2. We are doing a short follow-up survey that will take approximately 10 minutes. Would you be willing to answer a few questions about the 3MMM?	
□ Yes (if yes, proceed to question 3)	□ No
3. Thinking back to when you originally participated in the 3MMM activity, which statement would best describe your experience:	
a) I agree the 3MMM was helpful in reducing stress at the time.	
b) I disagree that participating in the 3MMM was helpful in reducing stress at the time.	
c) I neither agree nor disagree that the 3MMM was helpful in reducing stress at the time.	
4. Was it important that you and your provider completed the activity at the same time?	
□ Yes	□ No
5. Was it important that you both shared your responses with one another?	
□ Yes	□ No
6. Have you experienced similar stressful times since you were here last year and completed the 3MMM activity?	
□ Yes	□ No
7. How often have you used writing to help cope with stress?	
a) Never (proceed to question 8)	
b) Occasionally (< 1× per month) (proceed to question 7)	
c) Often (> 1× per month) (proceed to question 7)	
8. Which writing technique have you used?	
a) 3MMM	
b) Writing/journaling	
c) Both	
9. What about the writing exercise did you find useful? What was not useful? (open ended)	

3MMM = Three-minute Mental Makeover.

Patient/Family Findings

First, we asked a few questions about patient/family participant perspectives related to the design of the 3MMM intervention. Of the 61 participants, 52 (85%) agreed that the 3MMM had been helpful. Fifty-four (89%) agreed it was important that practitioners and participants wrote together, and 56 (92%) indicated that it was important that both practitioner and patient shared what they wrote. Thirty-five (57%) reported experiencing similar stressful events since the hospitalization or outpatient visit during which the 3MMM intervention was completed. The change perceived helpfulness of the intervention was similar across all subgroups regardless of unit or relationship to the patient.

Table 2. Three-minute Mental Makeover follow-up survey for practitioners
1. Do you think it was important that you and the patient/family member completed the 3MMM activity at the same time? (yes/no)
2. Do you think it was important that you both shared your responses with one another after completing the 3MMM activity? (yes/no)
Personal use of journaling/writing
3. Before doing the 3MMM study, I used writing or journaling to help cope with difficult situations in my own life. (yes/no)
4. As a result of participating in the 3MMM study, I have used writing or journaling to help cope with difficult situations in my own life. (yes/no)
5. In the past year, how often have you used writing to help cope with stress in your own life? (Never; Occasionally, < 1× per month; Often, >1× per month; Very often, > 1× per week)
6. If you have used writing in the past year to cope with stress, which writing technique(s) have you used? (3MMM, Writing/journaling, Both, I have not used writing to cope with stress)
Clinical use and feasibility
7. *Prior* to participating in 3MMM research, did you use any type of writing intervention to help reduce stress patients/family member? (yes/no)
8. *Since* participating in the original 3MMM study, have you used the 3MMM activity with patients/families? (yes/no)
9. In the past year, approximately how frequently have you used the 3MMM activity with patients/families? (Never or rarely; Occasionally, < 1× per month; Often, > 1× per month; Very often, > 1× per week)
10. Weighing benefits vs barriers of utilizing the 3MMM activity with patient/family members, is the time investment justified? (Strongly agree, Agree, Neutral, Disagree, Strongly disagree)
11. How feasible would you rank the 3MMM activity for completion with patients as a regular part of clinical practice? (Very feasible, Somewhat feasible, Neutral, Somewhat unfeasible, Very unfeasible)
Overall practitioner perspectives on use of 3MMM and writing
12. Doing the 3MMM is beneficial to the practitioner facilitating the activity. (Strongly agree, Agree, Neutral, Disagree, Strongly disagree)
13. In your experience completing the 3MMM with patients, what do you think is helpful to practitioners about the activity? (choose all that apply)
Improves patient communication
Reduces practitioner stress
Saves time during patient/family interactions
Increases trust in patient–practitioner relationship
Helps the patient and practitioner get to know one another better
Allows one to feel closer/more connected to patients
Helps the patient see the practitioner as a person
Helps the practitioner to understand the patient better
Helps the practitioner focus on overall well-being of patient and family
Other _____
None. I do not think the 3MMM was helpful to patients.
14. What are barriers to completing the 3MMM activity for practitioners? (choose all that apply)
Takes too much time
Seems unrelated to the purpose of the visit
Discomfort with sharing feelings
Practitioner does not like writing
Other _____.
None. I do not think there are any barriers to completing the 3MMM.

3MMM = Three-minute Mental Makeover.

Table 3. Demographics of survey participants	
Patient/family member participants	**n=61**
Patient	**12 (20%)**
Family	**49 (80%)**
Mother	37
Father	10
Other Relative	2
Practitioner Participants	**n=8**
Clinical location	
Outpatient	**24**
Pediatric Developmental Clinic	5 (21%)
Pediatric Cardiology Clinic	19 (79%)
Inpatient	**37**
NICU	23 (62%)
PICU	8 (22%)
General Pediatrics	6 (16%)

We then investigated patient/family participants' personal use of writing to cope with difficult situations after their participation in the 3MMM study. At follow-up, 36 (59%) reported using writing to help cope with stress, compared to 23 (38%) at baseline ($P = 0.005$) (Figure 2). Of the 61 participants, 25 (41%) reported using writing/journaling, 2 (3%) reported using only the 3MMM, and 10 (16%) reported using both writing/journaling and the 3MMM. The change of use in writing was similar across all subgroups regardless of unit or relationship to the patient.

Patient/family participants also responded qualitatively regarding what they found useful about the 3MMM intervention itself, the impact of self-reflection, and the interaction with the practitioner or family members. A summary of the responses is presented in Table 4.

Practitioner Findings

Follow-up survey results are described for the 8 practitioners who facilitated the 3MMM intervention during the original study. A series of questions was asked related to practitioner perspectives.

First, related to the design of the 3MMM intervention, all 8 agreed it was important that practitioners and participants wrote together, and all indicated it was important that both parties shared what they wrote.

Next, practitioners reported personal use of writing to cope with difficult situations after their participation in the original study. Prior to participating, 3 of the 8 practitioners reported the use of journaling or writing to cope with difficult situations in their own life. These practitioners reported continued use of writing at follow-up and 2 additional practitioners began using writing to cope with stress after participation in the original study (Figure 2).

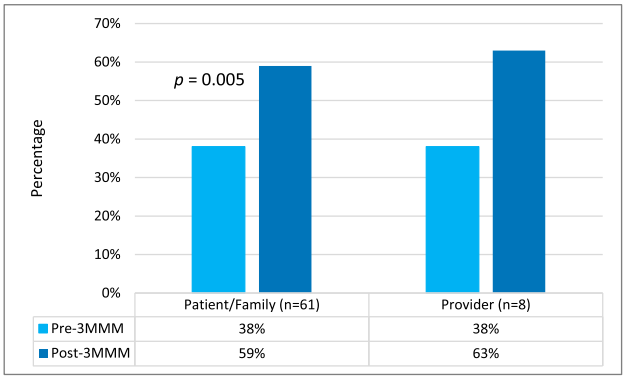

Figure 2. Participant use of writing to cope with stress. 3MMM = Three-minute Mental Makeover.

In addition, practitioners reported their use of the 3MMM intervention with patients/families following the original study. Prior to participation, 2 of 8 practitioners reported using a writing intervention to help reduce stress in patients/family members. Subsequently, the 2 practitioners continued to use writing in their practice and an additional 5 practitioners adopted use of the 3MMM with patients/families (Figure 3).

Last, we investigated practitioner perspectives regarding barriers and benefits related to using the 3MMM intervention with patients/families and the feasibility of its use in a clinical setting. The top barrier identified to completing the 3MMM activity with patients/families was the time required. However, the majority of practitioners endorsed that the benefits of doing the activity with patients/families justified the time investment. In addition, 7 of the 8 practitioners agreed that the 3MMM activity is beneficial to the facilitator. Top benefits reported included reduced stress and improved communication, understanding, and trust in practitioner–patient or practitioner–family relationships. Seventy-five percent of practitioners also endorsed the feasibility of the 3MMM intervention for use as a regular part of clinical practice.

DISCUSSION

The 3MMM intervention demonstrated long-term perceived benefits and was associated with lasting behavior changes in both patient/family participants and practitioners. Both groups reported increased personal use of writing to cope with stress after participating in the 3MMM intervention. In addition, there was a trend toward increased and sustained practitioner use of writing as a therapeutic tool with patients/families. Compared to the current literature, both our intervention design and the study structure feature unique aspects.

One unique feature is the facilitated format of the 3MMM intervention. A recent systematic review of EW

Table 4. Selected family/patient participant written comments

The 3MMM exercise itself
"With the 3MMM, what I liked about it in particular were the 3 prompts. The story of your life in 6 words was a clever way to force us to really think in order to limit it to 6, but also to reflect on our life story, which was kind of fun and helped shift the focus from some stressors to a little lighter fare."
"When I'm really down, I do the 3MMM and it refreshes me."
"I enjoyed the entire writing activity. It was a reminder to continue to use the activity more often."
Impact of self-reflection and expression through writing
"[The 3MMM was] reflective, helped remind you of what to be thankful for, reminds you what good things occurred that you may have forgot happened."
"[The 3MMM] helped me work through and talk about my emotions, and most importantly to look forward to the future."
"It was useful to get your thoughts on the page and share how you feel."
"It was nice to take a few minutes to focus on better things and not stress."
"Putting thoughts down on paper helped destress."
Interaction with the practitioner or family members
"It was the verbal sharing that relieved the stress. . . . [My physician] modeling helped me do the activity with my family and was very important."
"It was useful because it made sure my wife and I were on the same page in terms of our stress level."
"I enjoyed the group aspect of the activity and thought it was most useful and beneficial because it deepens the sense of connection within the group."
"I'm not a big writer, but the sharing part was helpful."
"I liked sharing my feelings with my family."

3MMM = Three-minute Mental Makeover.

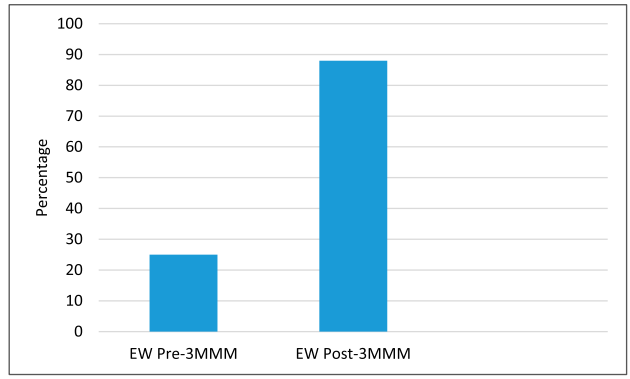

Figure 3. Practitioner use of the Three-minute Mental Makeover with patients/families. EW = expressive writing; 3MMM = Three-minute Mental Makeover.

interventions by Nyssen et al[23] found that most are nonfacilitated, where a written prompt is suggested and participants are instructed to write independently. Facilitated interventions involve direct interaction with a clinician and appear to hold more therapeutic potential. The authors of the review suggested that the interpersonal component may be an important contributor to perceived benefits related to the intervention.[23]

EW is a form of writing characterized by self-disclosure, and this self-disclosure appears to be an important mechanism of benefit related to EW use.[27-29] Practitioner self-disclosure has been associated with increased perceived trust, rapport, and satisfaction in patient–practitioner relationships.[30-33] With the 3MMM, the practitioner participates in and models completion of the exercise. This method of engagement appears beneficial not only for patients and families, but also for practitioners. 3MMM participants consistently agreed it was important to write together with their practitioner and share what they wrote. Many 3MMM participants also shared comments endorsing the importance of emotional expression as a helpful aspect of the 3MMM activity (Table 4).

The 3MMM is the first writing intervention described in the literature for use in medical settings by nonbehavioral health professionals in a variety of clinical disciplines. Other EW interventions may be time prohibitive for on-the-spot use within the clinical environment. Although many of these tools are multisession in structure (eg, writing for 15 minutes on 3 or 4 consecutive days), the 3MMM is brief (< 10 minutes) and requires no formal writing or behavioral health training.[34-36]

The busy medical environment presents multiple barriers to successful implementation of an EW intervention as part of regular patient care. Despite the challenges of conducting a writing exercise in clinical practice, the 3MMM was ranked as both feasible and beneficial by the majority of practitioners, in addition to being a tool that they reported to continue to use with patients after the original study.

This study was conducted an extended period of time after the original 3MMM study, providing insight into possible long-term behavior changes. We are not aware of any prior EW studies involving patients with follow-up duration greater than 1 year. In addition, no previous research examines study participants' long-term changes in writing behaviors or practitioners' use of writing interventions.

Sustained behavior change may be an important metric. Although EW interventions have been associated with multiple benefits in the short-term, most effects faded after a few months,[13,28] or changed over time.[14,37-39] We, however, found that many of the original 3MMM study participants continued to use EW to deal with stress after this single intervention.

Limitations

EW appears to be potentially beneficial. However, there is no consensus regarding optimal use of it, including intervention design, dosing, frequency, and delivery method. There also appear to be multiple moderators of EW benefit, including gender, culture, personality, writing content, nature of trauma/stressor, health condition, disease severity, and level of available social support.[7,12,23,24,28,29,38,40-47] Research related to the 3MMM likely faces similar challenges, although the current study did not evaluate these factors.

It is possible that clinical outcomes may have influenced the perception of care and affected the findings of perceived benefits of the 3MMM. However, we are unable to explore this possibility because clinical outcomes were not evaluated in the initial or follow-up studies.

As with any study of this type, possible limitations include convenience sampling and response bias. We sought to minimize response bias by having all follow-up calls be conducted by a medical student researcher not involved in the care of the patient. Other limitations include lack of a control group and subjective measurement methods. It is possible that the findings for this sample may not be generalizable to other populations.

Future Directions

Based on the findings in this study, additional studies of the 3MMM are warranted. Future areas of research might include controlled studies comparing the 3MMM to other writing interventions. It may also be of interest to investigate the impact of 3MMM use on patient satisfaction, rapport, and trust in patient/family–practitioner relationships.

CONCLUSION

The 3MMM is a brief, guided EW intervention that appears to have short- and long-term benefits for patients, families, and practitioners. Additional studies may be helpful in determining how the 3MMM can best be used by practitioners with their patients. ❖

Disclosure Statement

The authors have no conflicts of interest to disclose.

Authors' Contributions

Madelaine Schaufel, MS, RD, and Douglass Moss, BS, assisted with study and survey design, collected data, and assisted with manuscript development. Romana Donovan, MS, RD, CCRC, assisted with study design and implementation, and contributed to manuscript development. Yi Li, MS, assisted with study design, guided statistical analysis, and contributed to manuscript development. David G Thoele, MD, conceptualized and developed the 3MMM writing tool, designed and implemented the study, and directed manuscript development. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

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References

1. Yaribeygi H, Panahi Y, Sahraei H, Johnston TP, Sahebkar A. The impact of stress on body function: A review. EXCLI J 2017 Jul;16:1057–72. DOI: https://doi.org/10.17179/excli2017-480, PMID:28900385.
2. Lepore SJ, Kliewer W. Expressive writing and health. In: Encyclopedia of behavioral medicine. Gellman MD, Turner JR, editors. New York, NY: Springer; 2013; p 735–41.
3. Sayer NA, Noorbaloochi S, Frazier PA, et al. Randomized controlled trial of online expressive writing to address readjustment difficulties among U.S. Afghanistan and Iraq war veterans. J Trauma Stress 2015 Oct;28(5):381–90. DOI: https://doi.org/10.1002/jts.22047, PMID:26467326.
4. Milbury K, Spelman A, Wood C, et al. Randomized controlled trial of expressive writing for patients with renal cell carcinoma. J Clin Oncol 2014 Mar;32(7):663–70. DOI: https://doi.org/10.1200/jco.2013.50.3532
5. Hevey D, Wilczkiewicz E. Changes in language use mediate expressive writing's benefits on health-related quality of life following myocardial infarction. Health Psychol Behav Med 2014 Jan;2(1):1053–66. DOI: https://doi.org/10.1080/21642850.2014.971801, PMID:25750834.
6. Craft MA, Davis GC, Paulson RM. Expressive writing in early breast cancer survivors. J Adv Nurs 2013 Feb;69(2):305–15. DOI: https://doi.org/10.1111/j.1365-2648.2012.06008.x, PMID:22494086.
7. Lu Q, Zheng D, Young L, Kagawa-Singer M, Loh A. A pilot study of expressive writing intervention among Chinese-speaking breast cancer survivors. Health Psychol 2012 Sep;31(5):548–51. DOI: https://doi.org/10.1037/a0026834
8. Williamson TJ, Stanton AL, Austin JE, et al. Helping yourself by offering help: Mediators of expressive helping in survivors of hematopoietic stem cell transplant. Ann Behav Med 2017 Oct;51(5):683–93. DOI: https://doi.org/10.1007/s12160-017-9892-2
9. Ayers S, Crawley R, Button S, et al. Evaluation of expressive writing for postpartum health: A randomised controlled trial. J Behav Med 2018 Oct;41(5):614–26. DOI: https://doi.org/10.1007/s10865-018-9970-3, PMID:30291538.
10. Horsch A, Tolsa JF, Gilbert L, du Chêne LJ, Müller-Nix C, Bickle Graz M. Improving maternal mental health following preterm birth using an expressive writing intervention: A randomized controlled trial. Child Psychiatry Hum Dev 2016 Oct;47(5):780–91. DOI: https://doi.org/10.1007/s10578-015-0611-6, PMID:26659113.
11. Rini C, Austin J, Wu LM, et al. Harnessing benefits of helping others: A randomized controlled trial testing expressive helping to address survivorship problems after hematopoietic stem cell transplant. Health Psychol 2014 Dec;33(12):1541–51. DOI: https://doi.org/10.1037/hea0000024
12. Ironson G, O'Cleirigh C, Leserman J, et al. Gender-specific effects of an augmented written emotional disclosure intervention on posttraumatic, depressive, and HIV-disease-related outcomes: A randomized, controlled trial. J Consult Clin Psychol 2013 Apr;81(2):284–98. DOI: https://doi.org/10.1037/a0030814, PMID:23244367.
13. Henry EA, Schlegel RJ, Talley AE, Molix LA, Bettencourt BA. The feasibility and effectiveness of expressive writing for rural and urban breast cancer survivors. Oncol Nurs Forum 2010 Nov;37(6):749–57. DOI: https://doi.org/10.1188/10.ONF.749-757, PMID:21059586.
14. Carmack CL, Basen-Engquist K, Yuan Y, et al. Feasibility of an expressive-disclosure group intervention for post-treatment colorectal cancer patients: Results of the healthy expressions study. Cancer 2011 Nov;117(21):4993–5002. DOI: https://doi.org/10.1002/cncr.26110, PMID:21480203.
15. Willmott L, Harris P, Gellaitry G, Cooper V, Horne R. The effects of expressive writing following first myocardial infarction: A randomized controlled trial. Health Psychol 2011 Sep;30(5):642–50. DOI: https://doi.org/10.1037/a0023519

16. Frisina PG, Borod JC, Lepore SJ. A meta-analysis of the effects of written emotional disclosure on the health outcomes of clinical populations. J Nerv Ment Dis 2004 Sep;192(9): 629–34. DOI: https://doi.org/10.1097/01.nmd.0000138317.30764.63, PMID:15348980.
17. Gellaitry G, Peters K, Bloomfield D, Horne R. Narrowing the gap: The effects of an expressive writing intervention on perceptions of actual and ideal emotional support in women who have completed treatment for early stage breast cancer. Psycho Oncol 2010 Jan;19(1):77–84. DOI: https://doi.org/10.1002/pon.1532
18. Meston CM, Lorenz TA, Stephenson KR. Effects of expressive writing on sexual dysfunction, depression, and PTSD in women with a history of childhood sexual abuse: Results from a randomized clinical trial. J Sex Med 2013 Sep;10(9):2177–89. DOI: https://doi.org/10.1111/jsm.12247, PMID:23875721.
19. Broderick JE, Stone AA, Smyth JM, Kaell AT. The feasibility and effectiveness of an expressive writing intervention for rheumatoid arthritis via home-based videotaped instructions. Ann Behav Med 2004 Feb;27(1):50–9. DOI: https://doi.org/10.1207/s15324796abm2701_7
20. Lepore SJ, Revenson TA, Roberts KJ, Pranikoff JR, Davey A. Randomised controlled trial of expressive writing and quality of life in men and women treated for colon or rectal cancer. Psychol Health 2015 Mar;30(3):284–300. DOI: https://doi.org/10.1080/08870446.2014.971798
21. Lepore SJ, Greenberg MA, Bruno M, et al. Expressive writing and health: Self-regulation of emotion-related experience, physiology, and behavior. In: Lepore, SJ, Smyth JM, eds. The writing cure: How expressive writing promotes health and emotional well-being (p. 99–117). American Psychological Association. 2002. p 99-117. DOI: https://doi.org/10.1037/10451-005.
22. Zhou C, Wu Y, An S, Li X. Effect of expressive writing intervention on health outcomes in breast cancer patients: A systematic review and meta-analysis of randomized controlled trials. PLoS One 2015 Jul;10(7):e0131802. DOI: https://doi.org/10.1371/journal.pone.0131802
23. Nyssen OP, Taylor SJ, Wong G, et al. Does therapeutic writing help people with long-term conditions? Systematic review, realist synthesis and economic considerations. Health Technol Assess 2016 Apr;20(27):17–192. DOI: https://doi.org/10.3310/hta20270
24. Smith HE, Jones CJ, Hankins M, et al. The effects of expressive writing on lung function, quality of life, medication use, and symptoms in adults with asthma: A randomized controlled trial. Psychosom Med 2015 May;77(4):429–37. DOI: https://doi.org/10.1097/PSY.0000000000000166, PMID:25939030.
25. Lemay M, Encandela J, Sanders L, Reisman A. Writing well: The long-term effect on empathy, observation, and physician writing through a residency writers' workshop. J Grad Med Educ 2017 Jun;9(3):357–60. DOI: https://doi.org/10.4300/JGME-D-16-00366.1, PMID:28638517.
26. Thoele DG, Gunalp C, Baran D, et al. Health care practitioners and families writing together: The Three-minute Mental Makeover. Perm J 2020 Nov;24:19.056. DOI: https://doi.org/10.7812/TPP/19.056, PMID:31852046.
27. Laccetti M. Expressive writing in women with advanced breast cancer. Oncol Nurs Forum 2007 Sep;34(5):1019–24. DOI: https://doi.org/10.1188/07.ONF.1019-1024, PMID:17878130.
28. Averill AJ, Kasarskis EJ, Segerstrom SC. Expressive disclosure to improve well-being in patients with amyotrophic lateral sclerosis: A randomised, controlled trial. Psychol Health 2013 Jun;28(6):701–13. DOI: https://doi.org/10.1080/08870446.2012.754891
29. Niles AN, Haltom KE, Mulvenna CM, Lieberman MD, Stanton AL. Randomized controlled trial of expressive writing for psychological and physical health: The moderating role of emotional expressivity. Hist Philos Logic 2014 Jan;27(1):1–17. DOI: https://doi.org/10.1080/10615806.2013.802308, PMID:23742666.
30. Unhjem JV, Vatne S, Hem MH. Transforming nurse–patient relationships: A qualitative study of nurse self-disclosure in mental health care. J Clin Nurs 2018 Mar;27(5–6): e798–807. DOI: https://doi.org/10.1111/jocn.14191, PMID:29193417.
31. Nazione S, Perrault EK, Keating DM. Finding common ground: Can provider–patient race concordance and self-disclosure bolster patient trust, perceptions, and intentions? J Racial Ethn Health Disparities 2019 Oct;6(5):962–72. DOI: https://doi.org/10.1007/s40615-019-00597-6, PMID:31119610.
32. Zink KL, Perry M, London K, et al. "Let me tell you about my . . .": Provider self-disclosure in the emergency department builds patient rapport. West J Emerg Med 2017 Jan;18(1): 43–9. DOI: https://doi.org/10.5811/westjem.2016.10.31014, PMID:28116007.
33. Hill CE, Knox S, Pinto-Coelho KG. Therapist self-disclosure and immediacy: A qualitative meta-analysis. Psychotherapy 2018 Dec;55(4):445–60. DOI: https://doi.org/10.1037/pst0000182
34. Pennebaker JW, Beall SK. Confronting a traumatic event: Toward an understanding of inhibition and disease. J Abnorm Psychol 1986 Aug;95(3):274–81. DOI: https://doi.org/10.1037//0021-843x.95.3.274, PMID:3745650.
35. Pennebaker JW, Kiecolt-Glaser JK, Glaser R. Disclosure of traumas and immune function: Health implications for psychotherapy. J Consult Clin Psychol 1988 Apr;56(2): 239–45. DOI: https://doi.org/10.1037//0022-006x.56.2.239, PMID:3372832.
36. Pennebaker JW, Seagal JD. Forming a story: The health benefits of narrative. J Clin Psychol 1999 Oct;55(10):1243–54. DOI: https://doi.org/10.1002/(sici)1097-4679(199910)55:10<1243::aid-jclp6>3.0.co;2-n, PMID:11045774.
37. McGuire KM, Greenberg MA, Gevirtz R. Autonomic effects of expressive writing in individuals with elevated blood pressure. J Health Psychol 2005 Mar;10(2):197–209. DOI: https://doi.org/10.1177/1359105305049767, PMID:15723890.
38. Baddeley JL, Pennebaker JW. A postdeployment expressive writing intervention for military couples: A randomized controlled trial. J Trauma Stress 2011 Oct;24(5):581–5. DOI: https://doi.org/10.1002/jts.20679, PMID:21887713.
39. Baikie KA, Geerligs L, Wilhelm K. Expressive writing and positive writing for participants with mood disorders: An online randomized controlled trial. J Affect Disord 2012 Feb;136(3):310–9. DOI: https://doi.org/10.1016/j.jad.2011.11.032, PMID:22209127.
40. Frederiksen Y, O'Toole MS, Mehlsen MY, et al. The effect of expressive writing intervention for infertile couples: A randomized controlled trial. Hum Reprod 2017 Feb; 32(2):391–402. DOI: https://doi.org/10.1093/humrep/dew320
41. Zakowski SG, Herzer M, Barrett SD, Milligan JG, Beckman N. Who benefits from emotional expression? An examination of personality differences among gynaecological cancer patients participating in a randomized controlled emotional disclosure intervention trial. Br J Psychol 2011 Aug;102(3):355–72. DOI: https://doi.org/10.1348/000712610X524949
42. Lu Q, Stanton AL. How benefits of expressive writing vary as a function of writing instructions, ethnicity and ambivalence over emotional expression. Psychol Health 2010 Jul;25(6):669–84. DOI: https://doi.org/10.1080/08870440902883196
43. Milbury K, Lopez G, Spelman A, et al. Examination of moderators of expressive writing in patients with renal cell carcinoma: The role of depression and social support. Psycho Oncol 2017 Sep;26(9):1361–8. DOI: https://doi.org/10.1002/pon.4148, PMID: 27145447.
44. Jensen-Johansen MB, O'Toole MS, Christensen S, et al. Expressive writing intervention and self-reported physical health outcomes: Results from a nationwide randomized controlled trial with breast cancer patients. PLoS One. 2018 Feb;13(2):e0192729. DOI: https://doi.org/10.1371/journal.pone.0192729, PMID:29474441.
45. Chu Q, Wong CCY, Lu Q. Acculturation moderates the effects of expressive writing on post-traumatic stress symptoms among Chinese American breast cancer survivors. Int J Behav Med 2019 Apr;26(2):185–94. DOI: https://doi.org/10.1007/s12529-019-09769-4, PMID:30656609.
46. Hoyt MA, Austenfeld J, Stanton AL. Processing coping methods in expressive essays about stressful experiences: Predictors of health benefit. J Health Psychol 2016 Jun;21(6):1183–93. DOI: https://doi.org/10.1177/1359105314550347, PMID: 25266296.
47. Schmidt S, Hahm S, Freitag S. Writing interventions in older adults and former children of the World War II: Impact on quality of life and depression. Aging Ment Health 2018 Aug; 22(8):1017–24. DOI: https://doi.org/10.1080/13607863.2017.1334036