

Expressive writing. A tool to help health workers. Research project on the benefits of expressive writing

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Abstract. *Background and Aims:* Numerous studies in the international literature hold that expressive writing is a useful tool to take care of the person as a whole. It gives voice to emotions, moods and intimate thoughts of patients, as well as caregivers and family members. The reference model is based on Pennebaker's theory (2004), which posits that expressing our deeper thoughts and feelings can result in significant health benefits in the short and long term. Studies over the past 25 years have shown that expressive writing, that is, simple writing on deeper thoughts and emotional sensations, is a useful tool to alleviate both physical and psychological symptoms. This research seeks to ascertain whether and how expressive writing has an impact on work satisfaction, coping strategies, and relational communication satisfaction of health practitioners. *Methods:* a comparison was made between the expressive writing and neutral writing of two randomized groups of health care professionals. A group of 66 healthcare professionals participated in this study. They were evaluated pre- and post-intervention using several scales and an ad hoc questionnaire, with one-month follow-up. *Results:* After analyzing the texts, as in Pennebaker's studies, there was a reduction of words with negative emotion in the course of writing sessions. *Discussion:* Expressive writing has a positive impact on adaptive coping strategies and work relational communication satisfaction. It also can facilitate the clarification and solution of various problems, increase cognitive abilities, and promote social interactions.

Key words: coping, emotions, expressive writing, working satisfaction

Background

The approach of narrative support has recently been introduced in the health care field. It does not reduce to a mere recounting of a disease history because it requires "interpretative" skills, that is, the ability to attribute meaning and respond narratively to patient histories (1). A key aspect of this framework are stories that shape reality, through a process in which those

who tell and those who listen are of equal importance. Narration, in fact, is never the product merely of the narrator. In terms of reciprocity, it translates into a co-construction of the story between the teller and, as well, the listener.

Today, more than ever, given the complexity of health care, the need to use not only quantitative but also qualitative methodology is of considerable importance. Qualitative methods can address and deepen the

dimensions of understanding, knowledge, participation, and meaning building, with the intent of deriving an integrated approach to the person (2,3).

One of the main authors who used the qualitative approach in his studies is Pennebaker (2004). He writes that exposing our deeper thoughts and feelings can have significant health benefits in the short and long term. Studies of the last 25 years have shown that expressive writing, that is, simple writing on deeper thoughts and sensations related to emotional events, is a useful tool to alleviate both physical and psychological symptoms (4, 5). A literature review indicates that in chronic patients, expressive writing is very effective. It reduces pain and fatigue and improves well-being in fibromyalgia, reduces viral load in HIV patients (6, 7), relieves low intensity pain in patients with chronic pain, and promotes health in breast cancer patients (8, 9). In addition, expressive writing is a useful tool even when applied to the surrounding context of the sick person. It helps reinforce adaptive coping strategies, aids in time management, assists in the developing of relationships, and improves overall well-being and quality of life.

Persons working in the field of health care are subjected to many stressful events (e.g. negative communications, death, accountability, verbal or physical abuse, prolonged working hours). Stress-related situations are most present in critical areas and in palliative care. In this framework the stress of death can be related to the intensity of contact with human suffering, and the overwhelming emotional toll for both patient and family members (10). Taking care of sick individuals and their families thus can be an extremely significant, important and rewarding experience. At the same time, it is so engaging that nurses often call themselves "emptied". Cure with Compassion requires nurses to reserve a space for each patient and maintain an emotional balance between fear and despair on the one hand, and hope for their condition, on the other (11).

There are several studies that have highlighted a significant relationship between coping and emotional response strategies on the one hand, and work satisfaction, on the other (12). From this research, expressive writing has been found to be a valuable tool for relationships. It helps the professional reflect on patient histories, improves empathy, and increases work gratification (13-16).

Aim

Based on the literature, the overall aim of this research is to evaluate the impact of an expressive writing protocol on coping strategies, emotions and relationships, and on work satisfaction of health care professionals. In particular, the hypotheses are that:

- Expressive writing improves job satisfaction, encourages the use of adaptive coping strategies, and reduces emotions and negative relationships;
- Benefits, coping strategies, emotions, relationships, and job satisfaction are greater in subjects who use expressive writing than those who use neutral writing;
- The use of expressive writing increases the number of positive words, reducing the presence of negative affectivity. In the texts derived in this study, this was noted at the beginning and end of the expressive writing sessions. According to the Pennebaker model, during writing sessions there is a reduction in words with negative emotional significance and an increase in those with positive meaning.

Method

Study design

This research is quantitative, multicentre, prospective with almost experimental 2x3 design with two groups (experimental group expressive writing/neutral control group) and three measurements (pre/post/follow up at one month from writing intervention).

Participants

Participants were selected through a balanced sampling for setting and years of professional experience. Nurses, psychologists, doctors and other health-care professionals who work in the Reggio Emilia Operational Units and the Home Care and Residential Care Centre of Bologna, Italy, have been included. The professionals in the study group worked at least 24 hours a week continuously for at least six months in

the same structure. All professionals working in operating units for short periods of time (i.e. less than six months) were excluded.

Participants who expressed a desire to participate in the study, after signing the informed consent, were assigned by randomization to the experimental or control group.

Instruments and procedure

The intervention procedure in the experimental group was an expressive writing protocol, while the control group was given a neutral writing protocol (Figure 1).

Expressive writing is a tool through which the subject describes his/her most profound thoughts and feelings about emotional events. In contrast, neutral writing is a comparison tool, through which the participant describes in a more objective way an event that is devoid of emotions, thoughts or feelings.

Experimental sessions were divided into three days:

Day 1: Socio-Demographic Questionnaire (sex, age, level of education, years of practice, Role currently held), Pre-Intervention, Sheet with Code Instructions, expressive writing , Evaluation

Day 2: paper with Code Instructions; writing mandate, with sheets to write

Day 3: paper with Code Instructions; writing mandate with writing sheets, post-intervention.

After one month: follow-up evaluation.

During the writing and compilation of the tests, the participants were in a room alone, with phones turned off. For the collection of questionnaires and scripts, a box was used which was opened at the end of the three days.

The evaluation of the two groups (expressive writing vs. neutral writing) in pre / post-intervention and follow-up was performed by administering the following scales:

1. Coping strategies (COPE-NVI-25). These are 25 items that measure five coping strategies: social support, orientation, avoidance strategies, positive attitude, problem solving, and turning to religion (17).
2. Working Satisfaction (McCloskey Mueller's Scale of Satisfaction) . These are 31 items divided into eight subscales that measure the satisfaction of: wages, professional enrichment, involvement, rewards, working conditions, relationship with colleagues, superiors and executives, and tasks and communication (18).

Expressive writing instructions

*Over the next three days, we would like you to write about your most profound thoughts and feelings about an important traumatic, emotional or stressful event that has affected your life. Write for 20 consecutive minutes. Do not worry about the grammar, spelling or structure of the writing. We would like, in your text, for you to examine your moods and deeper thoughts about this experience. It can be about any topic. But whatever it is, it should be something that struck you very deeply. It could be something about the past, the present or the future. The ideal would be if you choose something you did not talk about, in detail, with anyone. It is essential that you let yourself go and come into contact with your emotions and deeper thoughts. In other words, write what happened, how then did the episode feel, and what it means to you now. You can write about different experiences during each session, or about the same experience for all three days. At each session, the choice of the subject is entirely up to you. All your writing will be completely confidential and anonymous. The only rule is that once you start writing, you continue **until the end of 20 minutes for 3 consecutive days.***

Neutral writing instructions

*We would like you to write for the next 3 days for 20 minutes continuously, without interruption, about how you use your time. In this writing we would like you to be as objective as possible. We are not interested in your emotions or opinions. We want you to be completely objective. Feel free to be as detailed as possible. In today's writing we would like to describe what you did yesterday since you got up, until you went to bed. For example, it might start when the alarm clock goes off and you get out of bed. It could include things you ate, where you went, what buildings or objects you saw. The most important thing in this writing is to describe your days as accurately and objectively as possible. All the writings will be completely confidential. Do not worry about spelling, grammar, or sentence structure. The only rule is that once you start writing, continue **until the end of 20 minutes for 3 consecutive days.***

Figure 1. Mandatory expressive writing and neutral writing

3. Questionnaire on relational communication satisfaction. It was built ad hoc, based on an adaptation of the Questionnaire on General Wellbeing Piccinelli. It consists of 11 items that measure the presence of four stress-related elements: anxiety, depression, social deterioration, and hypochondria.

Data analysis

Quantitative results were analyzed using SPSS 20. A descriptive analysis of all variables and non-parametric statistical analysis was performed for intra- and between-group comparison (expressive writing vs. neutral writing). The expressive writing samples were analyzed using the paper and pencil method through a coding of positive and negative emotions.

Results

As stated, there were 66 health care professionals who participated in the study. Average age was 45.47 (D.S.=9,052; minimum age=21 years; maximum age=60 years). The respondent group was composed mostly of females (N=64, 97%; male N=2, 3%). Of these, 60.6% were nurses (N=40); 18, 2% by health care assistance (N=12); 6.1% were physiotherapists (N=4); 3% were doctors (N=2; N=1 hematologist, N=1 surgeon); 3% were psychologists (N=2); and there was one occupational therapist. In N=5 they wrote "other" to the question about the profession by specifying that N=4 are "responsible for care activities" and N=1 animators. Of the group, 84.4% (N=54) did not have previous writing experience before attending the study; 15.6% (N=10) wrote in the past: personal diary, letters, old tales, and creative writing.

Finally, N=35 (53.0%) recruited employees were tasked with neutral writing, while N=32 (47.0%) employees received the expressive writing task.

Comparison within the expressive writing group

Friedman's non-parametric test for related samples was used for the analysis within the experimental group in the 3-stroke (pre/post/follow up) (Table 1).

The test did not show any significance below $p < .05$, but the presence of values tending to significance in Avoidance and Emotions has led to deepening post hoc analysis using the Wilcoxon test for comparison of related pairs (Tables 2 and 3).

In the experimental group a quantitative analysis was also carried out on the content of the writings (Figure 2). Resuming the Pennebaker model, the occurrence of words about emotions and positive and negative feelings in 3-day writings by coding and categorizing the type of emotion, was expressed in the model of Niedenthal and Ric (19).

Although no significant differences were noted, there was an interesting trend from the comparison of

Table 1. Friedman test of differences among repeated measures

Scale	Chi2	Sig. (2-way)
Cope_Avoidance	4.72	.094
Cope_Trascendence	3.37	.185
Cope_Positive Attitude	.5	.779
Cope_SocialSupport	.133	.936
Cope_Problem Oriented	.238	.888
WS_Explicit Reward	1.4	.495
WS_Work/family Balance	.574	.750
WS_Working time	1.67	.434
WS_Coworkers	31.2	.526
WS_Social Interaction	3.1	.211
WS_Professional Opportunities	2.4	.289
WS_Verbal Rewards	1.9	.256
WS_Control/Responsibility	1.9	.385
Work Responsibility	.96	.617
Communication	.463	.793
Emotions	4.6	.099

Table 2. Wilcoxon signed ranks test for avoidance

Avoidance	Test Statistic (Z)	Sig. (2-way)	Median Value (Mdn1)/(Mdn2)
Pre/Post	105	.322	(2.125)/(2)
Post/Follow Up	64	.014	(2)/(2.25)
Pre/Follow Up	214	.326	(2.125)/(2.25)

Table 3. Wilcoxon signed ranks test for emotions

Emotion	Test Statistic (Z)	Sig. (2-way)	Median Value (Mdn1)/(Mdn2)
Pre/Post	179	.406	(2.800)/(2.800)
Post/Follow Up	222	.104	(2.800)/(3)
Pre/Follow Up	94	.023	(2.800)/(3)

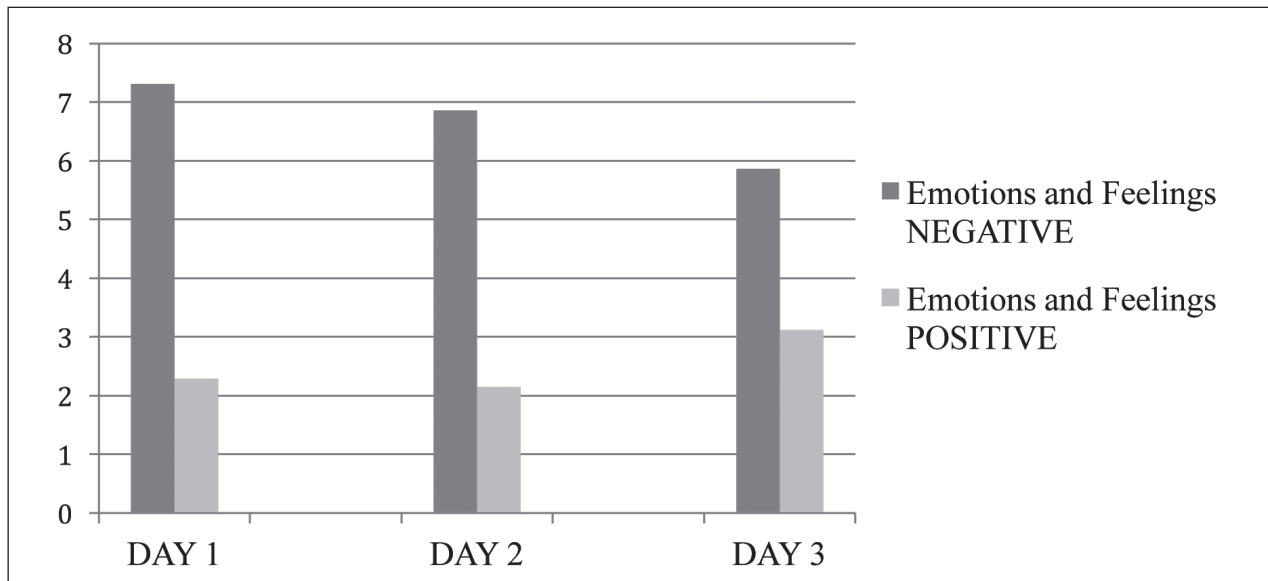


Figure 2. Average emotions and emotions negative and positive emotions in the 1-2-3 days

the three days. In particular, from the first to the third day words about negative emotions diminished, day 1 $M=7.31$ ($D.S.=5.35$); day 3 $M=5.86$ ($D.S.=4.98$). It is important to note that as early as the second day there was a reduction in the words about negative feelings $M=6.86$ ($D.S.=4.74$). Similarly, words containing positive emotions increased from the first to the third day: Day 1 $M=2.28$ ($D.S.=2.59$) day 3 $M=3.11$ ($D.S.=3.97$).

It is noted that on the second day there was a reduction in the words about emotions and positive feelings $M=2.14$ ($D.S.=3.39$).

Comparison between experimental and control group

Two samples were considered for each phase using the Mann Whitney U test. Compared to pre-intervention, there was a significant reduction in the use of avoidance strategies ($U=39$; $p<.05$) (Table 4).

Expressive write Group and Control group are comparisons in postoperative and follow up evaluation, shown in Table 5 and Table 6.

As for work satisfaction measured by the McCloskey Mueller Satisfaction Scale, it is interesting to note that there was a statistical significance ($U=699$; $p<.05$) in the post-intervention evaluation. In fact, there was a decrease in satisfaction in the control group (Median,

Mdn) to Phase 2= 3.75 (Mdn), which does not occur in the experimental group that returned in Phase 1= 4.25 (Mdn) and Phase 2= 4.75 (Mdn , generating therefore, the significant difference in Phase 2). In the follow-up phase, the difference is lost in significance and both groups are converging on satisfaction reduction towards Experimental Group working hours ($Mdn=3.75$) than in the Control group ($Mdn=3.25$).

Discussion

Expressive writing is an intervention developed to improve the level of psychophysical well-being through the enhancement of emotional and cognitive processing of events. During the writing of the negative event, the subject modifies the emotional perception related to the event, through a re-elaboration of cognitive and emotional reactions and recovery of one's identity. This allows an improvement in coping strategies and a reduction in emotional distress (20).

In fact, as evidenced by the results, the avoidance coping strategy was reduced, albeit not significantly from the phase preceding the post-intervention phase of expressive writing. On the other hand, there was a rebound effect in the follow up. The avoidance strategy

Table 4. Mann Whitney test between EWgroup and Cgroup in baseline

Scale	EWgroup (Mdn)	Cgroup (Mdn)	U	Sig. (2-way)
Cope_Avoidance	1.5	2.25	39	.049
Cope_Trascendence	3	2	603	.427
Cope_Positive Attitude	4.25	4.25	524	.816
Cope_SocialSupport	4.4	4	632	.248
Cope_Problem Oriented	4.5	4.5	592	.522
WS_Explicit Reward	3	3.25	1.4	.495
WS_Work/family Balance	4.3	3.33	.574	.750
WS_Working time	4.25	4	1.67	.434
WS_Coworkers	4	3.5	31.2	.526
WS_Social Interaction	3.75	3.75	3.1	.211
WS_Professional Opportunities	3.25	2.5	2.4	.289
WS_Verbal Rewards	3	3	1.9	.256
WS_Control/Responsibility	3.4	3.4	1.9	.385
Work Responsibility	3	3	.96	.617
Communication	3	3	.463	.793
Emotions	3	2.8	4.6	.099

Table 5. Mann Whitney test between EWgroup and Cgroup in post treatment

Scale	EWgroup (Mdn)	Cgroup (Mdn)	U	Sig. (2-way)
Cope_Avoidance	1.75	2	380	.035
Cope_Trascendence	3	2	647	.171
Cope_Positive Attitude	4.25	4.25	585	.579
Cope_SocialSupport	4.2	4	576	.666
Cope_Problem Oriented	4.75	4.5	608	.397
WS_Explicit Reward	2.75	3.25	517	.747
WS_Work/family Balance	3.83	3	582	.448
WS_Working time	4.75	3.75	699	.044
WS_Coworkers	4	3.5	621	.309
WS_Social Interaction	3.75	3.75	499	.574
WS_Professional Opportunities	3	2.75	561	.807
WS_Verbal Rewards	3	3.2	567	.748
WS_Control/Responsibility	3.4	3.4	522	.792
Work Responsibility	3	3	521	.960
Communication	3	3	551	.714
Emotions	3	2.6	670	.054

was more widely used after one month of treatment (follow up), so much that it was significantly higher in the follow up than in the post test. This confirms Pennebaker's model, which suggests the act of confronting directly, and not "escaping" or "avoiding" a traumatic or stressful situation, reduces the physiological inhibition of work and biological stress. Facing trauma helps people understand and assimilate the event. Through writing, people translate into language

the experiences that, in this manner, can be better understood (21).

Respondents who did not deal with their trauma after a month of expressive intervention did not keep the positive effects seen in post-intervention Phase 2. We can hypothesize that there has been a paradoxical effect in which approaching one's own emotions and self-awareness, not backed up until follow-up, has led to a more massive use of the avoidance strategy. This

Table 6. Mann Whitney test between EWgroup and Cgroup in Follow up

Scale	EWgroup (Mdn)	Cgroup (Mdn)	U	Sig. (2-way)
Cope_Avoidance	2.25	3	89	.002
Cope_Trascendence	2.25	2	217	.821
Cope_Positive Attitude	4	4.37	178	.423
Cope_SocialSupport	4	4.3	199	.793
Cope_Problem Oriented	4.75	4.5	215	.864
WS_Explicit Reward	2.5	3	170	.310
WS_Work/family Balance	3.6	3	247	.311
WS_Working time	3.75	3.25	271	.104
WS_Coworkers	4	3.5	261	.168
WS_Social Interaction	3.25	3.125	235	.486
WS_Professional Opportunities	2.5	2.75	178	.423
WS_Verbal Rewards	3.2	2.9	212	.937
WS_Control/Responsibility	3.4	3.1	208	.990
Work Responsibility	3	3	261	.133
Communication	3	3	234	.392
Emotions	3	2.9	236	.479

hypothesis is confirmed by the theory of emotional exposure, which states that not addressing the emotion of the trauma can cause addiction or avoidance (22). This is because once it becomes a habit, the person does not take notice of the incident and does not restructure it but it simply avoids it. Expressive writing is a useful tool to mitigate this effect.

The result we have in Sperimental Group is a significant increase in emotional perception from pre-test to follow up. This may suggest that subjects who have tackled trauma through expressive writing may have initiated an emotional disclosure process still in place. However, it may be necessary to help and sustain this process over time, as it may not have a maintenance effect as for avoidance strategies (22).

Finally, from the analysis of the three days of the protocol, there was seen a change in the number of words with positive expression. This change, though still not statistically significant, has a strong clinical interest, since the use of more positive words would indicate an improvement in the general well-being of the person.

In Boals, Than, Banks, Hataway, Schuettler 's study (23), three factors emerged from their analysis of texts:

1. Positive emotional words indicate a health improvement (happy, good, nice)

2. Negative emotional vocabulary indicates a worse state of health (angry, wounded, ugly)
3. Cognitive, thinking thoughts (I understand, I know)

But the important aspect was not the actual level of their use; the people who had health improvements went from a scarce use of positive words to a much higher level on the last day. It was understood that the people who benefited from writing were building stories; the first day it was done in an unorganized and disorderly manner, then, day after day, the traumatic episode took shape as a coherent story. Once organized, the events are smaller and easier to deal with. Failing to talk or write about negative experiences can be unhealthy, resulting in inhibition: Holding and not solving one's traumas can result in continued coexistence with those traumas. A similar effect can occur if one uses nonproductive coping strategies such as avoidance strategies.

From the comparison between the two groups (experimental and control), there was a significant difference in working time satisfaction. The use of expressive writing, probably through the effects on emotional processing and the recognition of positive emotions, may have had a "buffer effect" with respect to working time satisfaction that does not shift from day 1 to day 2 in the experimental group. Conversely, Control

Group has a continuous reduction trend in the values of this variable. The difference, however, was reduced to almost disappearing in the follow up, suggesting a void of the positive effect of the expressive speech intervention over time. This result is well-aligned with recent results from the literature that present a new methodological model with respect to Pennebaker's classic writing sessions (one or two times) (24, 25) and the time interval between one session and another (minimum 24 hours/maximum 72 hours). This lends itself to more stable and lasting results over time.

Conclusions

Healthcare providers often experience difficult and stressful working conditions, as taking care of a person involves constant confrontation with disease, human suffering, pain, chronicity, and death. When emotional pain is not recognized, faced and elaborated, it can become chronic and cumulative, with important personal and professional implications. This is why expressive writing, as demonstrated by various studies described in the literature review, is a useful tool. It allows reflection upon stressful events and the elaboration of associated feelings that, in the long run, may overwhelm the person's ability to cope with emotional detachment from experience.

Expressive writing is an important strategy for preventing and managing the effects of compassion fatigue (10). It helps educate caregivers in recognizing these feelings and providing them with a "space" and a time for their reflection. This, in turn, results in significant positive repercussions on the quality of service, reducing burnout risk, implementing coping strategies, and increasing perceived work satisfaction. Reflecting occasionally in writing about ambiguous and emotionally charged situations helps in many ways: It facilitates clarification and problem-solving, and makes one more spontaneous and present in social situations, more in tune with others and available to interact. People begin to interact differently with others and see themselves in a new light after writing about an emotional subject.

Recounting the history of an experience is associated with an improvement in physical and mental

health: Creating a narrative allows one to rework the event. In this study, quantitative analysis made it possible to highlight the presence of some important effects that a single expressive writing session can bring to the health care professional.

There were some limitations. The relatively small number of participants makes it impossible to generalize the results, and also poses an important limit on the significances found. Many values, in fact, showed a tendency to significance that could become full and confirmed in a larger sample. The collected material also could be successfully subjected to a qualitative specific analysis to identify emotional changes, coping strategies used for the person's change, and analysis of the thematic content across the three days.

It would be equally desirable to replicate this study on a larger group of participants, and using the modifications to the Pennebaker protocol (24, 25). The in-depth studies in these directions (i.e. quantitative) could help to identify the intervention model that maximizes the internal resources of health professionals, by effectively improving their quality of life and, indirectly, patient outcomes. Such a model would help those undergoing an exhausting work schedule, remaining adherent to their work and personal needs.

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