

The Effect of Expressive Writing on Psychological Distress in Patients with Vitiligo: A Randomized Clinical Trial

Leili Borimnejad^{1*}, Alireza Firooz², Hossein Mortazavi³, Nessa Aghazadeh³, Zahra Halaji³

1. Center for Nursing Care Research, School of Nursing and Midwifery, Iran University of Medical Sciences, Tehran, Iran.

2. Center for Research & Training in Skin Diseases & Leprosy, Tehran University of Medical Sciences, Tehran, Iran.

3. Department of Dermatology, Razi Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Article info:

Received: 10 Apr. 2014

Accepted: 11 Sept. 2014

Keywords:

Vitiligo, Psychological distress, Expressive writing

ABSTRACT

Background: In this clinical trial, we examined whether or not expressive writing as a psychological intervention reduces psychological distress in vitiligo patients receiving phototherapy.

Methods: A total of 139 adult vitiligo patients were asked to complete the GHQ-28 in order to identify their psychiatric disturbances. The GHQ-28 scores showed that 78 patients (56.5%) had psychiatric distress. They were later enrolled in this randomized controlled clinical trial conducted during June 2009 until Dec. 2009 at Razi Hospital in Tehran. Patients were randomly divided into 2 groups. Group A underwent the routine treatment protocol. Group B did the same, but they were also instructed to practice 'expressive writing'. The intervention continued 4 weeks. After 4 weeks, patients in both groups were re-evaluated using the GHQ-28.

Results: The overall GHQ-28 scores and sub-scores were significantly reduced in both groups A (47.9+/-11.71, P=0.000) and B (48.94+/-10.69, P=0.000) after 4 weeks of intervention. However, no statistically significance difference was found between the two groups in terms of their overall scores (P=0.7) and their sub-scores.

Conclusion: The effect of expressive writing on reducing psychological distress in patients with vitiligo remains equivocal. Nonetheless, further studies with larger sample sizes and of longer duration especially in non-western cultural contexts are recommended.

1. Background

Vitiligo is an idiopathic and chronic dermatologic disorder characterized by depigmented macules and patches. Affecting approximately 0.5–2% of the general population worldwide, it is probably one of the most common causes of disfigurement caused by skin diseases. The natural course of the disease is unpredictable. However, it will often progress to involve large areas of skin including all exposed parts of the body (Ortonne 2006; Whitton et al. 2010). Therefore, it considerably alters one's appearance. Patients with vitiligo often experience psychological distress and social stigma (Ongena et al. 2006). Studies have shown that the quality of life in vitiligo patients is significantly impaired. That is

to say, many vitiligo patients are especially distressed by the way their illness has affected their social relationships and they often feel embarrassed (Ongena et al. 2006; Borimnejad et al. 2006; Wang et al. 2011).

One of the goals of optimal patient care is to reduce the psychosocial burden and the quality of life impairment caused by a disease. Addressing psychological problems may also enhance treatment adherence and improve patient satisfaction (Renzi et al. 2002). To date, few studies have assessed the impacts of different treatments on psychological outcomes in vitiligo. Recent investigations suggest that writing about emotionally traumatic experiences (i.e. expressive writing) has a beneficial effect on reported symptoms, physical outcomes, and general well-being of both healthy individuals and pa-

* Corresponding Author:

Leili Borimnejad

Address: Center for Nursing Care Research, School of Nursing and Midwifery, Yasemi St., Vanak Sq., Tehran, Iran.

Email: L.borimnejad@gmail.com

tients with chronic illnesses (Baikie & Wilhelm 2005; Lepore & Smyth 2002). In a typical expressive writing experience, participants are often asked to write about traumatic, stressful or emotional events for a minimum of 15–20 minutes. In the present clinical trial, we examined whether or not expressive writing as a psychological intervention reduces psychological distress in vitiligo patients receiving phototherapy.

2. Materials & Methods

This study was conducted on patients who referred to the phototherapy unit of Razi Hospital in Tehran, Iran, between June 2009 and Dec 2009, in strict accordance with the guidelines issued by the Institutional Review Board (IRB) of Tehran University of Medical Sciences. Participants were fully informed about the procedures and written consents were obtained.

A total of 139 adult vitiligo patients, referred by dermatologists to receive phototherapy treatments, were selected. The inclusion criteria were as follows: (a) age > 18 years, (b) the definite diagnosis of vitiligo confirmed by a dermatologist with onset of symptoms at least 6 months prior to the study, (b) the ability to read and write, and (c) the presence of psychiatric distress measured by the General Health Questionnaire – 28 (GHQ-28).

Developed in 1970s, the GHQ is used to detect psychiatric disorders in the general population and within community or in non-psychiatric clinical settings such as primary care or general medical out-patients (Goldberg 1978). The GHQ-28 or the 'scaled' version, developed by Goldberg in 1978, is the most well-known and the most popular version. The GHQ assesses whether the respondent has experienced a particular symptom or behavior recently. Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual). The four sub-scales, each containing seven items, are as follows (Goldberg & Hillier 1979):

A – somatic symptoms (items 1-7)

B – anxiety/insomnia (items 8-14)

C – social dysfunction (items 15-21)

D – severe depression (items 22-28)

The GHQ-28 has so far been translated into 36 languages. It has been shown that the Persian version of the

12-item GHQ is “a reliable and valid instrument” and it “has a good factor structure” (Montazeri et al. 2003).

All patients (n=139) with vitiligo who were consecutively selected were asked to complete the GHQ-28 in order to identify their psychiatric disturbances. Judged to have psychiatric disorders on the basis of their responses to the GHQ-28, 78 patients (56.5%) enrolled in this randomized controlled trial. Then, they were randomly assigned to two treatment groups following the routine randomization process. According to the standard phototherapy protocol, group A received narrowband ultraviolet B (NB-UVB) phototherapy 3 times per week. Similarly, group B received narrowband UVB phototherapy following the same protocol, but they were also instructed to practice ‘expressive writing’.

In the face-to-face therapy sessions, instructions for expressive writing were given by a trained nurse. Specifically, participants were asked to write for at least 20 minutes per day, expressing their “deepest thoughts and feelings on the most traumatic experience of their entire life or an extremely important emotional issue that has affected them”. They were also instructed “not to worry about spelling, grammar or sentence structure”. It was pointed out that “the only rule is that once they begin writing, they should continue until the time is up”.

The intervention lasted 4 weeks. After 4 weeks, patients in both groups were re-evaluated using the GHQ-28. All patients in group A completed the entire clinical trail. However, 10 patients (25%) in group B decided not to continue the expressive writing practice after a few sessions. A per-protocol analysis was performed. Analyses both with and without replaced samples were run and the results were the same. Data were expressed as mean and standard deviation. Comparisons were made using Student's t-tests, and the level of significance was set at $P < 0.05$. The current research has been registered in Iranian Registry Clinical Trial by the number: IRCT138801161788N1 through following link: <http://www.irct.ir/searchresult.php?id=1788&number=1> IRCT138801161788N1. Also, it has been registered in the university ethical committee by 1156087 (February 17, 2009).

3. Results

A total of 78 vitiligo patients participated in the study. They were divided into two groups: a control group of 38 patients and an intervention group of 40 patients. Table 1 below shows the demographic and clinical characteristics of patients including their sex, age, marital status,

Table 1. Demographic and clinical characteristics of patients (n=78).

		Control group Frequency (%)	Intervention group Frequency (%)	P-value
Sex	Male	7(35)	13(65)	0.19
	Female	31(53.4)	27(46.6)	
Marital status	Married	17(44.1)	23(57.5)	0.36
	Single	20(52.6)	17(42.5)	
Age	<20 yrs	5(13.2)	4(10.3)	0.66
	20-40 yrs	31(81.6)	31(79.5)	
	>40 yrs	2(5.3)	4(10.3)	
Site of involvement	Face / hands	7(20.6)	5(13.2)	0.48
	Trunk	2(5.9)	5(13.2)	
	Legs/feet	1(2.9)	3(7.9)	
	the whole body	24(70.6)	25(65.8)	
Severity of disease	Mild	3(8.1)	5(12.8)	0.69
	Moderate	22(69.5)	24(61.5)	
	severe	12(32.4)	10(25.6)	

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disease severity as reported by dermatologists based on the extent of cutaneous involvement and the anatomic area of body affected by vitiligo in each group. Regarding demographic and clinical characteristic, no statistically significant differences were found between the two groups.

Also, as shown in Table 2, there was no statistically significant difference between groups A and B as the overall GHQ-28 scores (59.65 ± 13.94 and 60.37 ± 13.57 , respectively) and sub-scores before intervention.

It appears that after a 4-weeks intervention the overall GHQ-28 scores and sub-scores have significantly reduced in both groups A (47.9 ± 11.71 , $P=0.000$) and B (48.94 ± 10.69 , $P=0.000$). However, no statistically significant difference was observed between the two groups in terms of their overall scores ($P=0.7$) and sub-scores of psychiatric distress after intervention.

4. Discussion

A growing body of evidence suggests that impaired appearance caused by vitiligo profoundly affects a patient's personal and social life, his/her daily functioning and his/her psychological status. However, a limited number of studies have paid attention to the psychosocial status of patients affected by vitiligo. For example, a study in India (Mattoo et al. 2002) on outpatient vitiligo samples revealed a high prevalence of psychiatric comorbidity

(16%–34%) using the GHQ as a screening device. Due to the high prevalence of psychiatric comorbidity, some studies suggest that a psychiatric evaluation is necessary in chronic and stigmatizing dermatological conditions such as vitiligo (Ongena et al. 2006; Thompson et al. 2002).

Few studies have demonstrated the psychosocial benefits of various treatment modalities for vitiligo patients. In a cohort study of vitiligo patient, Ongena et al, (2005) investigated the psychosocial benefit of the use of camouflage in vitiligo patient using the Dermatology Life Quality Index (DLQI) measures. They concluded that the use of camouflage is associated with improvement in the quality of life. Besides, according to Renzi et al, (2002), reducing the psychological burden of a disease and improving the quality of life are often associated with patients' satisfaction with care and may have a positive effect on treatment compliance and outcome.

The current study is the first randomized trial that is designed to evaluate the effect(s) of a psychological intervention such as 'expressive writing' along with 'dermatologic treatment' on the psychological status of vitiligo patients. A study has already shown that expressive writing is generally associated with physical and psychological benefits for normal healthy individuals (college students). That is to say, it brings about a decrease in the frequency of subsequent health center visits, improved subjective well-being of patients, and strengthened im-

Table 2. Mean scores for different dimensions of psychological distress among both groups after intervention (n=78).

Dimensions	Groups	Means	SD	P-value
General Health	Control	10.96	3.23	0.84
	Intervention	11.11	3.00	
Quality of Life	Control	12.68	4.3	0.69
	Intervention	13.11	4.5	
Anxiety	Control	14.31	4.66	0.73
	Intervention	14.71	4.77	
Depression	Control	11.93	4.04	0.43
	Intervention	12.88	5.05	
Total	Control	47.9	11.71	0.37
	Intervention	48.92	12.88	

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immune function (Baikie & Wilhelm 2005). Another study (Smyth et al. 1999) has demonstrated that “patients with mild to moderately severe asthma or rheumatoid arthritis who wrote about stressful life experiences” (those assigned to the experimental group) “had clinically relevant changes in health status 4 months after writing, compared with those in the control group” (p. 1305).

In this study, using the GHQ-28 as a screening device, we observed that 56.6% of 139 vitiligo patients who received phototherapy had psychological distress. This shows even a higher prevalence of psychiatric comorbidity compared to previous studies. Nonetheless, this may be due to the fact that usually patients with more extensive and longstanding disease are recommended by dermatologists to receive phototherapy services.

We also observed a statistically significant reduction in the GHQ-28 scores in both control (A) and intervention (B) groups. This suggests that narrow band UVB phototherapy alone is associated with reduced psychological distress in vitiligo patients as a result of a 4-weeks intervention. However, we failed to demonstrate any additional benefits of expressive writing in reducing psychological distress. Besides, a number of patients in the intervention group (n=10, 25%) discontinued writing, simply because they thought “it didn’t work for them” and one patient even stated that “it increased his anxiety”.

A review article about the benefits of expressive writing revealed that the immediate impact of expressive writ-

ing is usually a short-term increase in distress, negative mood and physical symptoms, and a decrease in positive mood. Yet, at the longer-term follow-up, many studies have found some supportive evidence of additional health benefits, i.e., an improvement in both objective and self-reported physical and emotional outcomes (Baikie & Wilhelm 2005). Therefore, the discontinuation of practice by some patients in this study after merely a few sessions of expressive writing may be attributed to the short-lived increase in anxiety, distress and negative feelings.

Finally, the results of a meta-analysis of 13 studies investigating the effects of expressive writing on the health outcomes of ‘healthy individuals’ have essentially pointed to a significant overall improvement ($P < 0.0001$) in their physical health and psychological well-being. Also, the outcomes of another meta-analysis of nine studies exploring the impacts of expressive writing on patients with chronic illnesses in a ‘clinical setting’ have revealed that expressive writing has significant health benefits (Frisina et al. 2004). Nonetheless, the effect of expressive writing on psychological outcomes in a clinical setting has yet remained controversial and relevant studies have apparently produced mixed results. In this study, nevertheless, we observed that expressive writing had no psychological benefits for patients with vitiligo.

A final note of caution is in order here. Although anonymity and confidentiality of patients were ensured, most participants in this study preferred not to hand in their

writings. In other words, rather than sharing them with the researcher, they preferred to keep their writings to themselves or dispose of them. Since this research is the first step that is taken to investigate expressive writing in a non-western cultural context, psychosocial and cultural differences between study populations should be taken into account when interpreting the results of this study.

We conclude here that further studies addressing the psychological benefits of different treatment modalities and interventions for vitiligo patients are essential. It appears that the effect of expressive writing on reducing psychological distress in patients with vitiligo in clinical settings still remains equivocal. Therefore, more studies with larger sample sizes and of longer duration, especially in non-western cultural contexts are recommended. It is also concluded that phototherapy treatment might be associated with decreased psychological distress in vitiligo patients.

Conflict of interest

The authors declare that they have no conflict of interest.

Acknowledgements

Many thanks go to the Deputy Director for Research at Tehran University of Medical Sciences who provided financial support for this project. Our thanks also go to the patients who keenly participated in this study.

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