

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/232713706>

# Healing With Bach(R) Flower Essences: Testing a Complementary Therapy

Article in Evidence-based Complementary and Alternative Medicine · January 2007

DOI: 10.1177/1533210107300705

---

CITATIONS

22

---

READS

2,301

5 authors, including:



Robert A Halberstein

University of Miami

51 PUBLICATIONS 773 CITATIONS

SEE PROFILE



Maria M. Ojeda

Walden University

19 PUBLICATIONS 57 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Perinatal STEPS Program at University of Miami [View project](#)



Impact of Hypoglycemia [View project](#)

# Healing With Bach® Flower Essences: Testing a Complementary Therapy

**Robert Halberstein, PhD**

**Lydia DeSantis, PhD, RN, MPH, FAAN**

**Alicia Sirkin, RDH, BFRP**

**Vivian Padron-Fajardo, PhD, ARNP, FNP**

**Maria Ojeda-Vaz, MPH, MSN**

Bach® Original Flower Essence (BFE) Rescue® Remedy, a modality used since 1930 but not yet thoroughly investigated scientifically, was evaluated for the reduction of acute situational stress. A double-blind clinical trial comparing a standard dosage of BFE Rescue Remedy against a placebo of identical appearance was conducted in a sample of 111 individuals aged 18 to 49, randomized into treatment ( $n = 53$ ) and control ( $n = 58$ ) groups. The Spielberger State-Trait Anxiety Inventory (STAI) was administered before and after the use of Rescue Remedy or placebo. Downward trends in anxiety level measurements were discovered in both the treatment (Rescue Remedy) and control (placebo) groups. Statistical analyses indicated that only the high-state anxiety treatment subgroup demonstrated a statistically significant difference between pretest and posttest scores. The results suggest that BFE Rescue Remedy may be effective in reducing high levels of situational anxiety.

**Keywords:** flower essences; double-blind; stress management

Bach® Original Flower Essence (BFE) therapy is a widely used complementary modality that deserves further scientific investigation. Because few research studies have been conducted on this intervention, the purpose of the present study is to provide a scientific analysis of the BFE combination formula Rescue® Remedy, an over-the-counter complementary and alternative medicine (CAM) therapy that is prescribed for the relief of emotional stress such as “state anxiety.”

BFE therapy is a prominent self-care healing remedy system that has been extensively applied for stress relief since its initial formulation in 1930. Lindquist, Tracy, Savik, and Watanuki (2005) investigated the use of alternative and complementary therapies in critical care settings for five regional divisions in the United States and concluded that CAM modalities were effective strategies for both patients and nurses in managing moderate to high stress. The authors found that BFE therapy was ranked 15th among the top CAM therapies cited. Cassileth (1998), describing the usefulness of BFEs, states that “the remedies seem to function to stabilize emotions and promote a general sense of well-being, stimulating

an internal healing process” (p. 83). BFEs are believed to assist the body in healing itself by providing a positive emotional state that is conducive to the restoration of a healthy equilibrium and by acting to catalyze an individual’s own internal resources for maintaining balance (Barnard, 2001; Chancellor, 2000; Sirkin, 2001, 2002).

## **HISTORICAL BACKGROUND OF BFEs**

BFEs represent an illustrative example of a longstanding complementary self-help system that has only recently been the focus of scientific scrutiny. BFEs are homeopathic-like plant products first developed in the early 20th century for treating various illnesses by restoring emotional balance in persons suffering from stress related to disease or injury. The BFE concept was developed by British homeopath and physician Edward Bach, who believed that illness stems mainly from physical and mental disharmonies caused by negative states of mind (Bach & Wheeler, 1925). Vlamis (1990) points out that Bach was convinced that “deep disharmony within the sufferer, such as worry, anxiety, and impatience so depleted the individual’s vitality that the body lost its natural resistance and became vulnerable to infections and other illnesses” (p. 12).

Bach experimented with the derivatives of 37 species of wildflowers and natural spring water. He theorized that the diluted botanical preparations could assist in the rebalancing of an individual experiencing emotional distress, such as anxiety, grief, fear, depression, or loneliness. Bach believed that capturing the “essence” of a flower in a nontoxic liquid form could harness its innate healing energy and thus be safer and more effective than the biodynamic chemical components of the plant (Ball, 2000; Barnard, 2001; Chancellor, 2000). Rescue Remedy is a blend of five BFEs that Bach practitioners state is specifically indicated for the management of acute stress and emotional imbalance (Dr. Edward Bach Centre, 2007).

Because the healing power of flower essences is said to be ultimately released by the energy of the sun in natural spring water, BFEs are sometimes compared with other solar-influenced energy medicines. For example, healing with gem essences involves the exposure of precious stones, including opals, emeralds, and amethysts, in distilled water to direct sunlight. Bach practitioners believe that the water then retains the essence—also called the “vibratory imprint” or “memory”—of the individual plant or gemstone, which then serves as the active medicinal agent (Nauman, 2000). Natural spring water by itself (“rock water” essence) is also considered by BFE specialists to be imbued with healing qualities when placed in the sun for a 3-hr period (Scheffer, 2001).

The original BFE concentrates continue to be prepared by the Bach Centre of Sotwell, Oxfordshire, England and commercially bottled and distributed by the Nelson Company in London. Other similar flower essence remedies are available; however, they are not officially authorized or endorsed by the Bach Centre (Nauman, 2000). One example is the product line of the Flower Essence Service based in the United States ([www.fesflowers.com](http://www.fesflowers.com)). Another is Healing Herbs, Ltd. in Hereford, England ([www.healingherbs.co.uk](http://www.healingherbs.co.uk)). Vlamis (1990) provides guidelines for distinguishing authentic, original BFEs from competing brands.

## **PREPARATION, APPLICATION, AND USES OF BFEs**

BFEs are derived by two methods from specially collected and prepared individual flowers selected from the 37 species in the Bach “pharmacopoeia.” In the “sun method,” the entire heads of selected flowers are placed in a glass or crystal bowl containing pure spring water and exposed to direct sunlight for 3 hr, during which time the water is said to

become “impregnated” with the healing vibrational energy of the plant (Howard, 1997; Weeks & Bullen, 1990). Bach recommended that the flowers be harvested in the morning and handled in a specific manner prior to processing (Scheffer, 2001). In the “boiling method,” flowers are obtained from mature trees, shrubs, and bushes. Flower heads, twigs, leaves, and other parts of a single plant species are all boiled in spring water for 30 min. The resulting concentrated mixture from both methods of preparation, called the *mother tincture*, is filtered multiple times to remove plant residues. According to Bach, both the sun method and the boiling method release a flower’s essence into the water and “potentize” it. BFEs are produced as soon as possible after picking the selected flowers to minimize the possible loss of their healing energies (Howard, 1997; U. Jonsson, personal communication, September 2, 2003; Scheffer, 2001). To create “stock concentrate” bottles for consumers, two drops of the mother tincture are added to 30 ml of a solution of 27% grape alcohol. The alcohol is an inert ingredient for preservative purposes as per label of Rescue Remedy (Bach Shop Original Flower Remedies, 2005). The stock concentrate essences may then be combined after they are produced, when a particular treatment plan is established.

Stock concentrate BFE liquids are administered orally in drop form or applied topically to pulse points, including at the wrists, temples, and behind the ears. Dosage variations correspond to particular conditions under treatment. BFEs are also further diluted with spring water to create compresses for skin irritations, and the diluted solutions can also be put into baths to relieve fatigue and exhaustion (Scheffer, 1988; Weeks & Bullen, 1990).

The manufacturing of BFEs is supervised by the Medicines and Healthcare Products Regulatory Agency in the United Kingdom. The marketing of BFE products in the United States is regulated by the United States Food and Drug Administration (FDA). Individual BFE monographs are listed in the *Homeopathic Pharmacopoeia of the United States* (American Institute of Homeopathy, 1979) and the *British Homeopathic Pharmacopoeia* (British Association of Homeopathic Manufacturers Scientific Committee, 1999).

BFEs are generally recommended for the relief of emotional distress such as panic and depression, although Bach specialists emphasize that the resulting restoration of emotional harmony can also assist in the reduction or elimination of the symptoms of physical disorders, especially those related to the individual’s mental state (Sirkin, 2002). Evidence from case studies has been cited by a number of authors and suggests that BFEs are effective in the treatment and management of emotional disharmonies that may affect conditions such as asthma, eating and sleep disorders, hypertension, migraines and other types of headaches, gastrointestinal problems, temporal mandibular joint dysfunction, eczema, allergies, dyslexia, and various types of pain (Chancellor, 2000; Scheffer, 1988, 2001; Vlamis, 1990).

Bach practitioners indicate that BFEs do not lose their potency or interact with foods or other medications, and they are suitable for use with infants, children, animals, and plants that have been traumatized, injured, or otherwise depleted of energy (Howard, 1994; Masi, 2003; Scheffer, 1988; Vlamis, 1990). According to a representative of the Nelson Company, BFE products have no reported adverse side effects. He stated,

Based on records extending back to 1970 by The Medicines Control Agency of the United Kingdom and from 1993 by A. Nelson & Company, there have been no reports of serious adverse effects directly related to BFEs or Rescue Remedy or negative interactions with other medicinal products. (U. Jonsson, personal communication, June 1, 2001)

Rescue Remedy is the BFE combination formula that is most frequently prescribed for relief from the acute stress of emergencies, shock, and anxiety. This single preparation consists of the essences of five separate flower species that, together, are said to provide

an immediate calming effect—Cherry Plum (*Prunus cerasifera*), Clematis (*Clematis vitalba*), Impatiens (*Impatiens glandulifera*), Star of Bethlehem (*Ornithogalum umbellatum*), and Rock Rose (*Helianthemum nummularium*) (Vlamiš, 1990). Rescue Remedy liquid is repeatedly ingested orally or applied topically to pulse points until the stress is reduced and brought under control. Rescue® Remedy cream is also placed on pulse points for the management of severe emotional stresses and crises. It can also be applied directly on the skin to promote the healing of irritations, bruises, sprains, scratches, burns, insect bites, rashes, and sore or stiff muscles (Vlamiš, 1990).

Beyond anecdotal reports, the validity and consequent utility of BFEs will ultimately be determined by scientific evaluation. However, few experimental studies have been conducted, and their outcomes are different and equivocal. Two treatment/control trials have recently been published which showed a lack of significant differences between BFE remedies and placebos with respect to stress and anxiety reduction (Armstrong & Ernst, 1999; Walach, Rilling, & Engelke, 2001). Both of these studies are characterized by small sample sizes, low rates of participant compliance, and lack of conformity to the official guidelines and protocols for BFE formulations and usage recommended by the Bach Centre. It could not be determined whether the effects from the intervention used in these studies resulted from placebo responses or homeopathically induced endogenous physiological responses. The flower essence mixtures for both studies were different from the official Rescue Remedy formula, which may have contributed to their nonsignificant results. Bach practitioners emphasize that Rescue Remedy must follow exact protocols for preparation and combination to determine the potential benefits when used as an alternate strategy to improve patient outcomes for altered physiological and psychosocial states.

To date, there are no scientific investigations demonstrating the biochemical or physiological modes of action of BFE remedies. Therefore, the research goal in this study is to investigate the effects of Rescue Remedy on levels of acute state anxiety. The main research question is whether or not Rescue Remedy is effective in reducing various levels of acute situational stress.

## RESEARCH DESIGN

The present study is a double-blind clinical trial of a convenience sample of 111 student nurses who volunteered and were randomized into a control group (placebo,  $n = 58$ ) and a treatment group (Rescue Remedy,  $n = 53$ ). The research was approved by the University of Miami Institutional Review Board. Informed written consent was obtained from each participant.

### Sample and Setting

The flow diagram in Figure 1 outlines the screening process. The sample included undergraduate student nurse volunteers enrolled in four courses at the University of Miami School of Nursing and Health Studies. Volunteers were excluded from participating if they had taken or were taking an interdisciplinary course on alternative healing in which BFEs and Rescue Remedy were discussed. Because of the 27% grape alcohol preservative contained in Rescue Remedy and the placebo preparation, potential participants were also screened out if they were pregnant, taking Antabuse® for alcoholism, or overly sensitive to alcohol ingestion. The Bach Centre in England indicates that the total alcohol content of the typical Rescue Remedy dosage (four drops) is low and highly diluted, rendering the alcohol portion an “inactive” ingredient according to BFE product manufacturers (Dr. Edward Bach Centre, 2007; Bach Shop Original Flower Remedies, 2005). In addition, participants were allowed to exclude themselves from the study to control for concurrent emotional stressors.

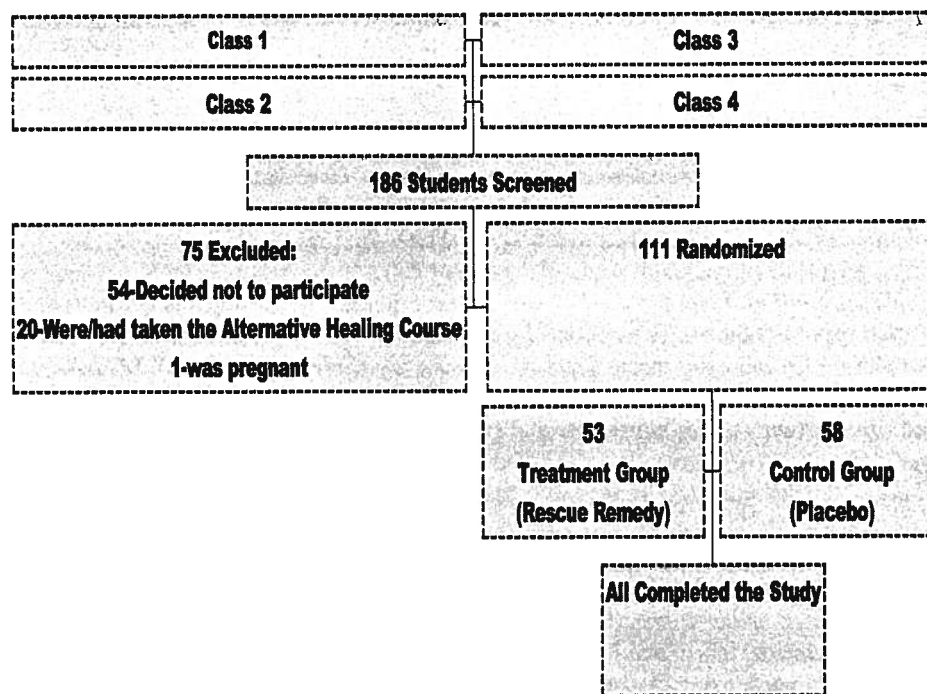


Figure 1. Participant Enrollment Flow Diagram

Data were collected during a period of two semesters in four classes with similar physical environments, under similar circumstances, and when no other tests, assignments, or other in-class exercises were scheduled. Participants received an overview of the study purpose and data collection process, as well as an explanation of potential risks and benefits and exclusion criteria.

The average age of participants was 25.6 years with a range of 18 to 49 years. As would be expected of a sample of undergraduate student nurses in the USA, the majority (91%) were female. Of the participants, 75% were single, 20% were married, and 5% were divorced. In regard to race/ethnicity, 34% were Hispanic, 32% White non-Hispanic, 19% Caribbean, 7% African American, 5% Asian-Pacific, and 3% other. The most frequently reported religion was Catholic (49%), followed by 31% Protestant, 10% Christian, 2% Jewish, and 8% “other” or “none.”

**METHOD**

**Preparation of Materials**

The Nelson Company donated the Rescue Remedy and placebo liquid used in the study. The grape alcohol placebo was identical to Rescue Remedy in appearance, smell, and taste. Both were manufactured in a facility licensed by the Medicines Control Agency of the United Kingdom. The Rescue Remedy used is the same as that available over the counter in the United States.

Computer-generated random numbers were affixed to 66 amber colored glass dropper bottles containing 10 ml of Rescue Remedy and to 66 identical bottles of placebo liquid.

The bottles were repackaged together in sequential order and kept in a secure place away from direct sunlight and heat until used. Each bottle was weighed at labeling and before and after use to help assess dosage compliance by participants.

### **Instrumentation**

Participants were administered two questionnaires. One was a six-item sociodemographic survey designed to elicit baseline information on age, gender, marital status, race/ethnicity, and religion. The other was the State-Anxiety (S-Anxiety) subscale of the Spielberger (1983) State-Trait Anxiety Inventory (STAI) for Adults. The S-Anxiety subscale was used to measure the level of anxiety experienced by participants before (pretest) and after (posttest) the administration of Rescue Remedy or placebo. Established reliability ( $\alpha = .93$ ) indicates strong internal consistency (Spielberger, 1983). Mean anxiety scores for both males and females have demonstrated high construct validity when compared across groups under high stress and groups experiencing essentially normal or non-stressful situations (Spielberger, 1983). Recent studies have provided positive evidence in support of the reliability, validity, and internal consistency of the Spielberger instrument (Tsai et al., 2003).

### **Data Collection**

When informed consent was received, course faculty administered a deception designed to increase the participants' level of anxiety. Students were told that there would be a surprise test at the end of the class period because of their poor performance on previous course assignments. After the deception, participants completed the sociodemographic and S-Anxiety self-evaluation (pretest) questionnaires. They were then given a bottle of Rescue Remedy (treatment group) or a placebo mixture (control group). Neither the participants nor the study personnel distributing the bottles knew which was Rescue Remedy or placebo. Every 20 min thereafter, participants were instructed to place four drops of the solution from their bottles onto their tongues. A total of five doses was administered and monitored by study personnel during the 3-hr class period. Participants completed the same S-Anxiety self-evaluation questionnaire 20 min after the final dose (posttest). They were then informed of the deception and exhibited considerable vocal and behavioral signs of relief that there would be no surprise test. Participants reported no adverse reactions to either Rescue Remedy or placebo.

### **Statistical Methods**

Sociodemographic data and S-Anxiety pretest and posttest responses were entered into the SPSS version 10.0 for Windows<sup>®</sup>. An audit of data records confirmed a 100% accuracy rate for data entry. Statistical analyses included ANOVA, *t* tests, and ANCOVA to determine both group variances and differences across state anxiety levels. All test results were assessed at the .05 significance level. No adjustments were made for multiple subgroup comparisons (testing within anxiety levels).

## **FINDINGS**

Independent samples *t* tests showed no significant differences ( $p < .05$ ) between the control and treatment groups on any demographic variable. The use of randomization in this double-blind design allowed for multiple comparisons.

TABLE 1. Mean Pretest and Posttest S-Anxiety Scores

	Mean Score ( <i>SD</i> )					
	Treatment ( <i>n</i> = 53)	Control ( <i>n</i> = 58)	Group 1 ( <i>n</i> = 9)	Group 2 ( <i>n</i> = 21)	Group 3 ( <i>n</i> = 35)	Group 4 ( <i>n</i> = 46)
Pretest S-Anxiety	2.2094 (.6960)	2.3370 (.5813)	1.9556 (.5752)	2.4643 (.6142)	2.4229 (.6316)	2.1412 (.6304)
Posttest S-Anxiety	1.7661 (.4508)	1.9556 (.5752)	1.8722 (.5118)	1.9000 (.4108)	1.9657 (.5959)	1.7132 (.5535)

### Dosage Ingested

Each bottle weighed 23 gm prior to the intervention. Postintervention bottle weights showed that 91% (*n* = 48 out of 53) of the treatment group (Rescue Remedy) and 72% (*n* = 42 out of 58) of the control group (placebo) bottles weighed 22 gm, indicating that 81% of participants (90 out of 111) ingested the equivalent of four drops each of the five times they were requested to dose. The remaining bottles weighed 21 gm, indicating that 21 (19%) participants (16 control and 5 treatment) ingested more than the dosage requested. However, the effect of the dosage variations on the posttest S-Anxiety scores was probably negligible. According to BFE practitioners, taking a dosage greater than that prescribed (e.g., more than four drops) does not potentiate or negate the therapeutic effects of Rescue Remedy or other BFEs (Hasnas, 1997; Howard, 1997; Nauman, 2000).

### Effect of Test Date

A one-way ANOVA was conducted to determine if the test date had an effect on the pretest and posttest S-Anxiety scores, because data were collected in four different classes during a period of two semesters. A statistically significant difference ( $p < .05$ ) was found between test dates of the classes ( $F = 2.792$ ,  $df = 3$ ,  $p = .044$ ). However, a comparison of pretest mean scores for each of the four classes sampled, shown in Table 1, indicates that the difference is likely attributed to the pretest S-Anxiety score of Group 1 (the first class from which data were collected), which had the lowest S-Anxiety mean score (1.96) of all groups. Groups 2, 3, and 4 (the second, third, and fourth sampled class sections) had higher pretest S-Anxiety mean scores—2.46, 2.42, and 2.14, respectively. The increase in S-anxiety mean scores from each subsequent sampled group would indicate that there was no communication between groups about the study or the deception.

### Pretest and Posttest S-Anxiety Scores

Table 1 shows the mean and standard deviation on pretest and posttest S-Anxiety scores for the treatment and control groups, as well as for the four individual data collection groups. Despite the downward trend, an ANOVA for comparison of treatment and control group means pre- and postintervention revealed that the mean differences (2.21 vs. 2.34) for pretest scores were not statistically significant between the two groups,  $F(1,109) = 1.105$ ,  $p > .05$ . No statistically significant difference was found in mean S-Anxiety scores postintervention between the treatment group (1.77) and the control group (1.96),  $F(1,109) = 1.930$ ,  $p > .10$ .



TABLE 2. *t*-Test Analyses for Categorized Pre- and Posttest State-Anxiety Levels

Category	<i>n</i>	Mean	<i>t</i>	<i>df</i>	<i>p</i>
<i>High S-Anxiety</i>					
Control	22	2.93			
Treatment	17	3.02	-.77	37	.44
<i>Medium S-Anxiety</i>					
Control	34	2.02			
Treatment	32	1.91	1.25	64	.22
<i>Low S-Anxiety</i>					
Control	2	1.20			
Treatment	4	1.19	1.27	4	.91

TABLE 3. ANOVA Analysis of Categorized Pre- Versus Posttest State-Anxiety Levels

Category	<i>n</i>	Mean	<i>SD</i>	<i>F</i>	<i>p</i>	<i>es</i>
<i>High S-Anxiety</i>						
Control	22	2.38	.59			
Treatment	17	1.99	.49	4.98	.03*	.12
<i>Medium S-Anxiety</i>						
Control	34	1.65	.42			
Treatment	32	1.71	.38	0.41	.53	.01
<i>Low S-Anxiety</i>						
Control	2	1.15	.21			
Treatment	4	1.26	.29	0.23	.66	.06

\**p* < .05.

### State of Anxiety

To determine if the level of pretest anxiety affected the posttest S-Anxiety scores, the treatment and control groups were each categorized into high, medium, and low states of anxiety based on pretest S-Anxiety scores. The categories were derived from the mean scores of college students tested by Spielberger. Participants with a pretest S-Anxiety score at least 1 standard deviation above the mean were categorized as "high anxiety," those at least 1 standard deviation below the mean were categorized as "low anxiety," and the remaining were categorized as "medium anxiety."

Table 2 illustrates the categorization of study participants into high, medium, and low S-Anxiety states. Independent samples *t* tests indicated no statistically significant difference (*p* < .05) between the treatment and control groups by anxiety state on the pretest and posttest S-Anxiety scores.

An ANOVA performed on the treatment and control groups for each anxiety state (high, medium, low) revealed that only the high-state anxiety group showed a statistically significant difference in posttest scores along with a moderate effect size at *p* < .03, *t* = 2.23, *df* = 37, *es* = .12 (see Table 3). Based on the level of anxiety, our results suggest that Rescue Remedy was effective in relieving high-anxiety states but had a relatively limited effect on medium and low states of anxiety. The ANCOVA analysis revealed statistical

significance in the treatment group using the pretest anxiety scores as the covariate,  $F(2,107) = 40.73$ ,  $df = 2$ ,  $p < .000$ , alpha coefficient  $\leq .05$ .

## DISCUSSION

The present study provides some research-based evidence in support of the recommendation of Rescue Remedy for the relief of acute situational stress for those with high degrees of anxiety. The findings have broader implications for the general practice of CAM by nurses and other health care providers. However, further scientific investigations are necessary to test the possible effectiveness of BFEs for different levels of emotional stress in a variety of settings.

To assess true situational anxiety, baseline state-anxiety levels were obtained postdeception. Scores on anxiety-level indicators in the present study exhibit downward trends throughout the testing period in both treatment and control groups. A question thus arises regarding the effectiveness of BFEs as compared with the placebo.

Recent literature reviews suggest that an average of 30% to 40% of placebo administrations are reported as efficacious in biomedical applications, and up to 70% of patients express satisfaction with such inert “medications” (Barnes, Powell-Griner, McFann, & Nahin, 2004; Cassileth, 1998; Rodgers, 2001). Past studies have already shown that gender, age, and ethnicity influence the placebo effect and the success of treatments in both traditional ethnomedical systems and biomedical settings (Halberstein, 2000; Kirsch, 2002; Moerman, 2000). Our findings suggest that BFEs may exert a therapeutic effect independent of placebo in individuals experiencing high levels of state anxiety. These findings are congruent with the specifically intended application of the Rescue Remedy formulation—the reduction and/or resolution of severe anxiety.

BFE Rescue Remedy may also be effective as an adjuvant therapy in other stress-producing clinical settings. Further research investigations should be conducted in acute care settings, such as emergency departments and outpatient psychiatric clinics. Research on the potential efficacy of BFEs, under the supervision of registered Bach Foundation practitioners, in managing high-anxiety states in major stress-producing areas would further scientific knowledge and enhance education among health care providers and consumers of available CAM modalities.

The present study has several limitations affecting its generalizability. The possibility of a Type II error cannot be ruled out because of the small sample size. The participants were overwhelmingly female, as were the participants in the Armstrong and Ernst (1999) and Walach et al. (2001) studies. There is no research-based evidence that the efficacy of Rescue Remedy varies depending on gender, but Armstrong and Ernst (1999) stated that male participants may have been slower than female participants to respond to heightened feelings of test anxiety. Participants in the present study and those in the study by Armstrong and Ernst (1999) and Walach et al. (2001) were young adult university students. The effects of Rescue Remedy on different age groups should be studied to help determine if its effects in stressful situations vary by age. The period of time over which the dosage was administered may not have been sufficient to verify the overall effects of Rescue Remedy on the treatment and control groups. BFE practitioners and others believe that the emotional rebalancing that results in the lowering of anxiety states likely occurs at different rates in different people (Ernst, 2001; Scheffer, 1988). Further research is therefore recommended to reevaluate the present finding of a consistent downward trend in the level of anxiety between treatment and control groups.

It is worth noting that other competing preparations marketed as “flower essences” may not conform to the precise Bach Centre formulas or preparation guidelines. Differences in

products tested and marketed as variations of BFE Rescue Remedy are subject to the same potential problems as herbal and other botanical preparations that do not adhere to a standard growing, harvesting, and manufacturing process. Because of these variations, consumers cannot be sure that the product taken contains a standardized amount of raw plant material per unit of dosage. The purity, chemical quality, and potency of botanical products can be affected by processing methods, storage conditions, soil composition, time harvested, climate where grown, and part of the plant used (Huebscher, 2004; Micozzi & Meserole, 2006; Rotblatt & Ziment, 2002).

## CONCLUSIONS AND RECOMMENDATIONS

Additional double-blind studies in other acute stress situations are recommended for further verification of the effectiveness of BFEs. The present study provides evidence in support of the potential biodynamic action of BFE remedies, particularly for the management of high levels of psychosocial stress.

Further research would help clarify the possible physiological effects of BFEs when used in conjunction with biomedical prescriptions and treatments. The potential synergistic interactions of BFEs with pharmaceutical drugs, for example, should be investigated by comparing the outcomes of standard prescription medications taken with and without BFEs. Additional studies are also recommended to compare the official Nelson BFEs against similar flower essence products with respect to differences in plants and specific parts used, types of soils involved, climatic variations, preparation procedures, equivalency in final ingredients, and dosage instructions.

The therapeutic application of diluted botanical products is conceptually rooted in a dual historical foundation of herbal medicine and homeopathy, both of which antedate BFEs. In contrast to magical, mystical, or religion-centered alternative healing methods, the BFE system is traditionally based on repeated observation and involves specific preparation procedures, combination formulas, and dosage schedules. In theory, BFEs serve to generate energy that restores a healthy balance and harmony when emotions are either blocked or overly stimulated, and further research is warranted to verify this concept.

BFEs, including Rescue Remedy, may represent a useful nontoxic approach in the management of situational anxiety experienced by patients in high-stress areas, such as critical care and in community-based health care settings. With additional analyses of the histories, methods, theoretical bases, potential side effects, and outcomes of alternative healing techniques, increased educational resources would become available to allow more accurate and efficient choices in health care.

## REFERENCES

- American Institute of Homeopathy. (1979). *The homeopathic pharmacopoeia of the United States*. Falls Church, VA: Author.
- Armstrong, N. C., & Ernst, E. (1999). A randomised, double-blind, placebo-controlled trial of a Bach flower remedy. *Perfusion*, 12, 440-446.
- Bach, E., & Wheeler, C. W. (1925). *Chronic disease: A working hypothesis*. London: H. K. Lewis.
- Bach Shop Original Flower Remedies. (2005). *Where do the original Bach flower remedies come from?* Retrieved January 28, 2007, from <http://www.bachshop.co.uk/catalog/index.php/cPath/35>
- Ball, S. (2000). *Bach flower remedies*. Lincolnwood, IL: NTC/Contemporary Publishers.

- Barnard, J. (2001). *A guide to Bach flower remedies*. Saffron Walden, Essex, UK: C. W. Daniel.
- Barnes, P., Powell-Griner, E., McFann, K., & Nahin, R. (2004). Complementary and alternative medicine use among adults: United States, 2002. *Seminars in Integrative Medicine*, 2, 54-71.
- British Association of Homeopathic Manufacturers Scientific Committee. (1999). *British homeopathic pharmacopoeia*. Rutland, UK: Author.
- Cassileth, B. R. (1998). *The alternative medicine handbook*. New York: Norton.
- Chancellor, P. M. (2000). *Illustrated handbook of the Bach flower remedies*. Saffron Walden, Essex, UK: C. W. Daniel.
- Dr. Edward Bach Centre. (2007). *Frequently-asked questions*. Retrieved January 28, 2007, from <http://www.bachcentre.com/centre/faq.htm>.
- Ernst, E. (Ed.). (2001). *The desktop guide to complementary and alternative medicine: An evidence-based approach*. St. Louis, MO: C. V. Mosby.
- Halberstein, R. A. (2000). Gender differences in herbal practices related to blood pressure: Some examples from the Caribbean. *Journal of Caribbean Studies*, 15, 39-60.
- Hasnas, R. (1997). *Pocket guide to Bach flower essences*. Freedom, CA: Crossing.
- Howard, J. (1994). *Bach flower remedies for women*. Saffron Walden, Essex, UK: C. W. Daniel.
- Howard, J. (1997). *The Bach flower remedies step by step*. Saffron Walden, Essex, UK: C. W. Daniel.
- Huebscher, R. (2004). Biologic-based therapies. In R. Huebscher & P. A. Shuler (Eds.), *Natural, alternative, and complementary healthcare practices* (pp. 788-803). St. Louis, MO: C. V. Mosby.
- Kirsch, I. (2002). The placebo effect in complementary medicine. In G. Lewith, W. Jonas, & H. Walach (Eds.), *Clinical research in complementary therapies* (pp. 129-138). New York: Churchill Livingstone.
- Lindquist, R., Tracy, M. F., Savik, K., & Watanuki, S. (2005). Regional use of complementary and alternative therapies by critical care nurses. *Critical Care Nurse*, 25(2), 63-75.
- Masi, M. P. (2003). Bach flower therapy in the treatment of chronic major depressive disorder. *Alternative Therapies*, 9, 108-112.
- Micozzi, M. S., & Meserole, L. (2006). Herbal medicine. In M. S. Micozzi (Ed.), *Fundamentals of complementary and integrative medicine* (3rd ed., pp. 164-180). St. Louis, MO: Saunders.
- Moerman, D. E. (2000). Cultural variations in the placebo effect: Ulcers, anxiety, and blood pressure. *Medical Anthropology Quarterly*, 14, 51-72.
- Nauman, E. (2000). Flower essences. In D. W. Novey (Ed.), *Clinician's complete reference to complementary and alternative medicine* (pp. 535-544). St. Louis, MO: C. V. Mosby.
- Rodgers, D. (2001). Mind-body interventions. In M. S. Micozzi (Ed.), *Fundamentals of complementary and alternative medicine* (2nd ed., pp. 215-229). New York: Churchill Livingstone.
- Rotblatt, M., & Ziment, I. (2002). *Evidence-based herbal medicine*. Philadelphia: Hanley & Belfus.
- Scheffer, M. (1988). *Bach flower therapy: Theory and practice*. Rochester, VT: Healing Arts Press.
- Scheffer, M. (2001). *The encyclopedia of Bach flower therapy* (2nd ed.). Rochester, VT: Healing Arts Press.
- Sirkin, A. (2001). Fibromyalgia falls to flowers. *Alternative Medicine*, 39, 76-85.
- Sirkin, A. (2002). Flower essences. In L. Trivieri & J. Anderson (Eds.), *Alternative medicine: The definitive guide* (pp. 237-244). Berkeley, CA: Celestial Arts Publishers.

- Spielberger, C. D. (1983). *State-trait anxiety inventory for adults*. Redwood City, CA: Mind Garden Press.
- Tsai, J., Wang, W., Chan, P., Lin, L., Wang, C., Thomlinson, B., et al. (2003). The beneficial effects of Tai Chi Chaun on blood pressure and lipid profile and anxiety status in a randomized control trial. *Journal of Alternative and Complementary Medicine*, 9, 747-754.
- Vlamiš, G. (1990). *Bach flower remedies to the rescue*. Rochester, VT: Healing Arts Press.
- Walach, H., Rilling, C., & Engelke, U. (2001). Efficacy of Bach flower remedies in test anxiety: A double-blind, placebo-controlled, randomized trial with partial crossover. *Journal of Anxiety Disorders*, 15, 359-366.
- Weeks, N., & Bullen, V. (1990). *The Bach flower remedies*. Saffron Walden, Essex, UK: C. W. Daniel.

---

*Acknowledgments.* We thank the student nurses who volunteered to be participants in the study and University of Miami faculty members Lois Marshall, PhD, RN, and Lee Schmidt, PhD, RN, for assisting with data collection. Dr. Harley Stock contributed valuable advice. The Nelson company provided materials for the clinical trial and guidance in labeling of the control and treatment bottles. We also thank Ulli Jonsson, Director of Global Regulatory Affairs, The Nelson Company, for providing information regarding the preparation, licensing, and safety of Bach Flower Essences, including Rescue Remedy, and for assisting us in obtaining study materials. We are grateful to Magaly Mauer, PhD, for her assistance with data analysis. Irene Weaver deserves many thanks for data processing assistance.

---

*Biographical Data.* Robert Halberstein, PhD, is an associate professor in the Department of Anthropology and holds a secondary appointment in the School of Nursing and Health Studies at the University of Miami. He is also a research associate in the Laboratory of Biological Anthropology at the University of Kansas. He has conducted field work on medical and biological anthropology in Mexico, the Caribbean, and the United States. He is a member of the Society of Medical Anthropology, the Human Biology Association, and the American Association of Physical Anthropologists. Lydia DeSantis, PhD, RN, MPH, FAAN, is a professor in the School of Nursing and Health Studies and holds a secondary appointment in the Department of Anthropology at the University of Miami. She is a fellow of the American Academy of Nursing, a fellow of the Society for Applied Anthropology, and a member of the Society of Medical Anthropology, American Public Health Association, and Florida Nursing Association. She is also a Certified Transcultural Nurse and a Transcultural Nursing Scholar. Dr. Halberstein and Dr. DeSantis jointly teach a course on complementary and alternative medicine. Alicia Sirkin, RDH, BFRP, is a registered practitioner of the Bach Foundation in England. She is the director of the Sirkin Creative Living Center in Miami, Florida. Vivian Padron-Fajardo, PhD, ARNP, FNP, is an assistant professor in the School of Nursing and Health Studies at the University of Miami. She is a member of the American Academy of Nurse Practitioners, National Association of Hispanic Nurses, and Florida Nursing Association. She is a certified child passenger safety technician with the National Highway Traffic Safety Administration. Maria Ojeda-Vaz, MPH, MSN, is a staff nurse and case manager at Mt. Sinai Medical Center in Miami, FL. She is a Certified Family Nurse Practitioner and is enrolled in the Nurse Anesthesia graduate program at Barry University in Miami.

---

*Address correspondence to:* Robert Halberstein, PhD, Department of Anthropology, University of Miami, Coral Gables, FL 33124-2005; e-mail: r.halberstein@miami.edu.