

## GRANTS AVAILABLE

### RESEARCHERS - WE WANT YOU!

Yes, it's well proven that stress is bad for us, and that a few deep breaths are helpful in reducing this stress. And yes, we know that people generally like butterflies. So... why do we want researchers? It's simple: we'd really be thrilled if a researcher interested in stress and any affected group would choose our little breathing butterfly as part of their research. It would help spread the word about this project, and it would increase our reach.

Credentialed researchers in association with accredited universities (or graduate students, under direction) only. Please contact us (using our contact page) for details.

### Why Contact Us

Researchers with a focus on stress effects and stress reduction will surely find our Breathing Butterfly resources to be useful, especially as they are offered in so many languages. We are very interested in supporting your efforts to shine a light on childhood stress, and we invite your partnership. What you may gain by partnering with us:

- Materials: High quality fee-free app plus video CDs of our visualizations, printouts or other Butterfly materials.
- Funding: Our grants can help you offset some or all of your costs.
- Partnership: Our expertise will be useful. And you'll have us in your corner, cheering you on.
- Reach: We'd love to share your findings in our circle of influence.

### Consider The Following

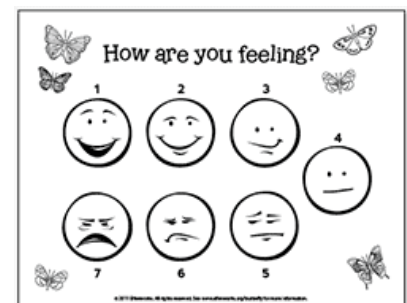
#### INDEPENDENT VARIABLE (Butterfly Visualization)

The independent variable, which you control, could be to show the Butterfly visualization and/or one or more of the stress-busting games. Possibilities include: randomly selecting half of your subjects to use The Breathing Butterfly and half to do something else, or else randomly selecting days in which the Butterfly resources will be shared and used.

We asked Dr. David Grusky, Director of The Center on Poverty and Inequality at Stanford University, to ring in with an opinion. He tells us “the gold standard would be to randomly select half the children to receive the meditation and half not to receive it.” The researcher would need some type of placebo for the control group. Because this may not always be feasible, and if a study can be run for a great many days and hence safely randomize against spurious day effects, such as the extra happiness to be found on the day before vacation, then alternating days can be acceptable as an alternative.

#### DEPENDENT VARIABLE (Stress Levels)

The dependent variable, which you test for, is the level of stress in the children. One very quick and easy way to tell is by asking the children to rate their own levels of stress, using a graphic image such as our “How Are You Feeling?”



Do this both before and after the viewing of the butterfly meditation or the control activity (if half the group participates in some other activity instead of the butterfly meditation). For professional researchers, a host of other stress scales are available online from universities including USF<sup>1</sup>.

In addition, room loudness levels both before and after a Breathing Butterfly visualization or game can give a quantitative measure of a change in the room environment. Loudness monitors are available at retailers at a variety of price points and should be considered as a line item in your grant proposal if you are using loudness as an indicator.

For professional researchers interested in the “gold standard” of stress testing, Professor David Grusky of The Stanford Center for the Study of Poverty and Inequality recommends measuring cortisol levels. However, without proper understanding, the measuring of cortisol can itself introduce stress into a child’s environment. Dr. Megan Gunnar<sup>2</sup> has developed a "tasting game" which can be used to check stress cortisol directly without introducing further stress. Because cortisol levels fluctuate during the day, the sample should be taken at the same time every day. Noon is a good, stable time for testing, but only if the child hasn't eaten within the last hour (otherwise, cortisol may be lowered by the food). Sample collection times should be noted by the researcher, the samples taken following the lab instructions, and the samples should be frozen within forty minutes of the test.

Stress cortisol testing is done with saliva kits, available at a number of CLIA certified labs. Cortisol saliva tests, using swabs, are available from a number of these labs, at a variety of prices, and turnaround times can average four weeks. *Labs generally supply a final report with one for each test, and a mean (average score) for the particular sample set.* Research costs include swabs, which are bought in packs of fifty and can range from twenty-five to fifty dollars a pack, and tubes, at about that same range. Quotes may vary substantially, so it is important to check with a lab for actual costs before submitting a grant proposal anywhere, or pursuing research. Labs generally supply a final report with one for each test, and a mean (average score) for the particular sample set. Expect an average turn-around time of four weeks, for a CLIA certified lab. You may also find it useful to understand the effects of the resources on one gender versus another, or on a certain age or demographic group. To do so, you would need to collect demographic information as well.

Note: Are you an undergraduate student? Is your study of a smaller scope? We’d still be interested to hear about it. If you have a question about your research - perhaps you're not sure whether your research would fit within the above framework, but think it could otherwise be useful in showing the efficacy of The Breathing Butterfly, we'd like to hear from you. From all of us at The Elfenworks Foundation, *thank you* for all you do, making a positive ripple.

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<sup>1</sup> [http://www.coedu.usf.edu/zalaquett/es/evaluating\\_stress.html](http://www.coedu.usf.edu/zalaquett/es/evaluating_stress.html)

<sup>2</sup> <http://www.cehd.umn.edu/icd/faculty/Gunnar.html>