

Can you reduce pain online?

Measuring the Effectiveness Of an online Bön Buddhist Workshop for Healing Physical and Emotional Pain

Tenzin Wangyal Rinpoche, Barbara Stefik, Mark Stefik, Alejandro Chaoul, & Claire Clark & Yue Tang

Abstract

In the summer of 2016, Tenzin Wangyal Rinpoche offered a 3-week online workshop together with Glide Wing Online Workshops. It offered Bön Buddhist teachings and practices for reducing physical and emotional pain. A research study was conducted to determine the effects of the workshop. The findings showed that the participants' physical and emotional pain was reduced by more than a third after three weeks and that the effects persisted after the workshop. There was a very strong correlation between worst daily levels of pain and levels of draining or wasted energy for participants on the days of the workshop. The research also investigated the relative and combined effectiveness of the teachings and practices offered at the workshop.

Overview of the Workshop and Study

An online workshop is a convenient and low-cost way to provide teachings. But does it provide healing benefits, such as a reduction in physical and emotional pain?

In the fall of 2015, Tenzin Wangyal Rinpoche together with Glide Wing Online Workshops offered a three-week online workshop of Bön Buddhist teachings for reducing physical and emotional pain. With the permission of 19 workshop participants, an exploratory research study investigated whether the online course was effective in reducing pain.

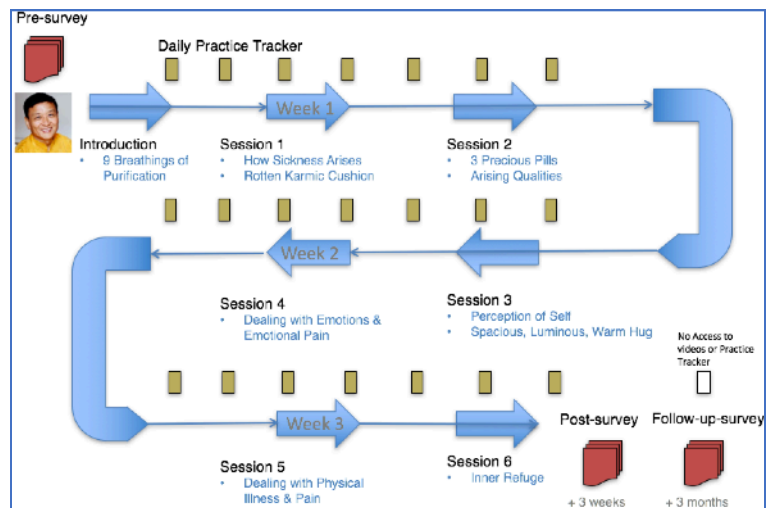


Figure 1. Overview of the 3-week online workshop and study.

The results were sufficiently promising that Tenzin Rinpoche suggested offering a much larger workshop with Glide Wing in the summer of 2016 and carrying out a more comprehensive research study. This article is about that “Main” study and gives a preliminary report of its findings.

Figure 1 gives an overview of the workshop. Twice a week throughout the workshop, a new session of videos, including teachings and supportive guided meditations, was made available for participants to work with according to their own schedules. Participants were encouraged to allocate about 20 minutes twice a day for the formal meditation practices as well as time for watching the teaching videos.

The overall daily time requirement for participants was to

- Watch the teaching sessions (20-50 minutes)
- Do the formal meditation sessions (40-50 minutes)
- Do informal meditation practices 5 times throughout the day (5-10 minutes)
- Check in with the Daily Practice Tracker (5 minutes)

Data were collected using three anonymous online surveys. A pre-survey was given ahead of the workshop. A post-survey was given immediately after the workshop. A follow-up survey was given three months after the end of the workshop. The surveys included two validated scales: the Global Pain Scale (GPS) and the Self-Compassion Scale (SCS). The Global Pain Scale is a valid and comprehensive assessment of pain evaluating pain, emotions, clinical outcomes, and daily activities by Dr. Ronald Melzack and Dr. Warren Torgerson. The Self-Compassion Scale is a valid and theoretically coherent measure of Self-Compassion by Dr. Kristin D. Neff. In addition, some teaching-inspired scales were administered.

In addition to the longer surveys, participants were given access to a “Daily Practice Tracker” app that ran on iPhones, androids, and a web browser as shown in Figure 2. It was suggested that participants check in every day to answer questions about which teachings and practices they did that day as well as provide an assessment of their physical and emotional pain and events of the day.

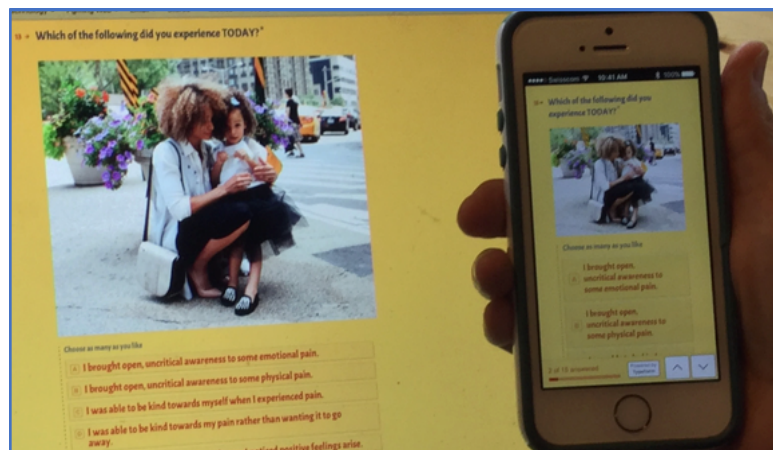


Figure 2. Daily Practice Tracker

Of the 1200 that registered, 198 people fully participated by taking the pre-, post-, and follow-up surveys and using the Daily Practice Tracker at least 15 times. The findings reported below are based on these participants, for whom we have the most complete data.

Unless otherwise stated, all reported findings have less than .1 percent chance of being the null hypothesis that is, being the result of chance.

Assessing Physical and Emotional Pain

A primary question that we wanted to investigate was whether participants would experience a reduction in physical and emotional pain. To assess this, we used a validated 20-question scale. The Global Pain Scale has four 5-question parts: physical pain, feelings (emotional pain), clinical outcomes and interference with normal activities.

Figure 3 graphs the assessments for the four factors, and an “aggregate” score combines them. The baseline is the assessment at the pre-survey. As shown in the figure, participants improved in all four factors, with a reduction in aggregate pain of 34.4 percent in three weeks as measured by the post-survey. Three months later the scale showed that participants mainly maintained their gains. Physical pain kept improving 3 months after the workshop was finished.

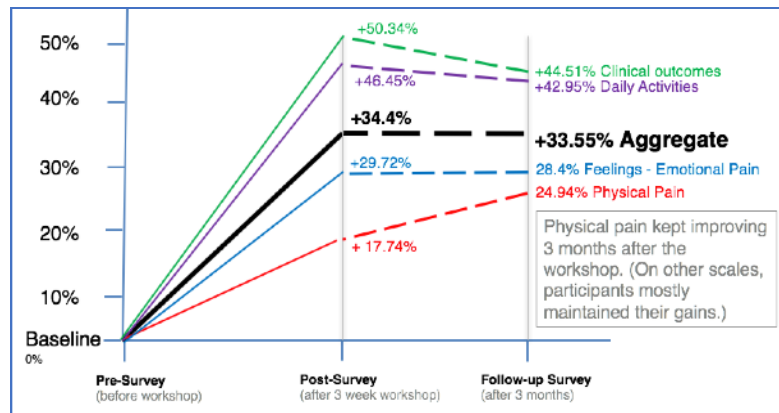


Figure 3 Improvements measured using the Global Pain Scale.

One hypothesis for the main study was that improvements in pain might correlate with improvements in self-compassion. To test this the three surveys included an assessment of self-compassion. The findings showed that participants did improve in self-compassion by 12.83 percent by the post-survey rising to 16.63 percent in the follow-up survey three months later. So, participants had more self-compassion and less pain after the workshop. A question is whether their improvements in self-compassion strongly related to their improvements in pain.

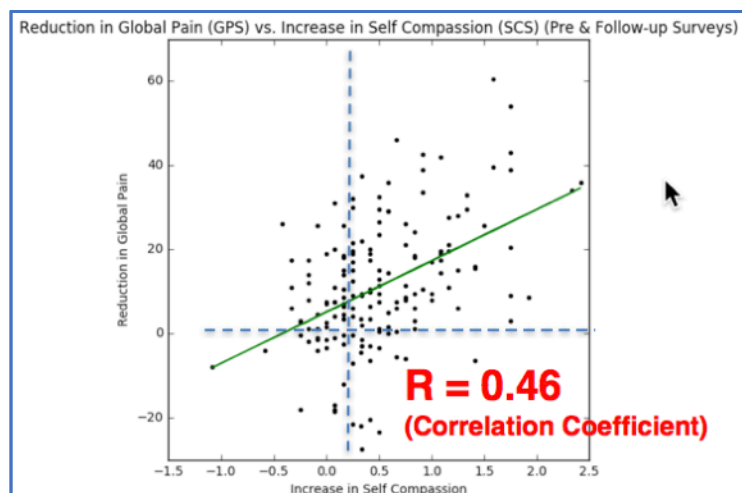


Figure 4. Correlating improvements in self-compassion with improvements in the Global Pain Scale.

Figure 4 graphs the correlation of improvement in self-compassion and improvement in global pain. The correlation coefficient $R=0.46$ indicates a moderate but not strong relation. In usual statistical practice, a correlation of 0.70 is considered strong. This finding of a *moderate correlation* suggests that there must be other factors besides an increase in self-compassion that are contributing to the reduction in pain.

Relationship to Draining: “More Drain = More Pain”

In addition to the findings from the validated and teaching-inspired scales, the research included data collected from the Daily Practice Tracker. One of the main teachings of the workshop concerned draining, defined as the “habitual wasting of energy.” Participants using the daily practice tracker assessed their daily worst level of draining every time they used the tracker and also their daily worst level of physical and emotional pain.

Figure 5 graphs the correlation of the daily-worst level of draining with the daily-worst level of physical pain. It shows that there was a very strong correlation between their level of draining and their level of physical pain. A similar correlation was computed for level of emotional pain yielding a high correlation of 0.65. These correlations are strong enough to reliably predict a level of pain from a level of drain.

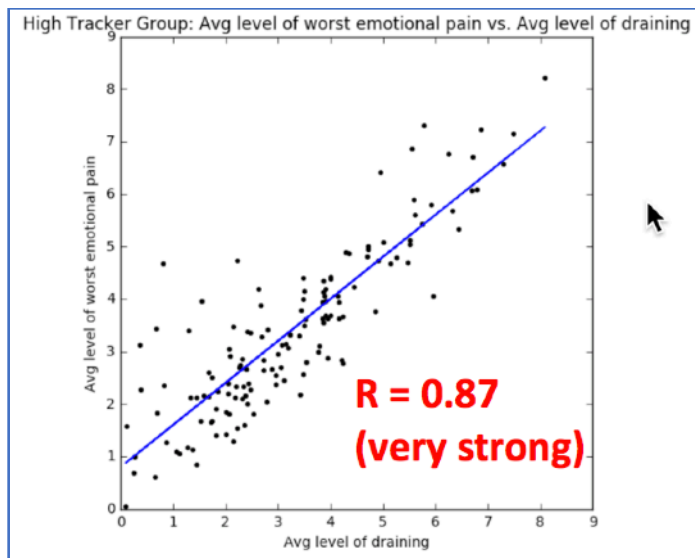


Figure 5. Correlating Average Daily-Worst Level of Draining with Average Daily-Worst Level of Physical Pain.

These results were consistent with the teachings in the workshop, which said that the energy saved by reducing draining goes toward healing, and that improvements in healing lead to reductions in pain.

The data from the Daily Practice Tracker enabled us to take a more detailed look at movements between levels of draining and levels of pain, on a daily basis. Figure 6 divides the population of participants into quartiles. The upper “quartile” shows a sample graph for a representative participant where the correlation was 0.70 or greater, as was true for 35 percent of the participants. For this participant and others in the quartile, the drain and pain assessments essentially move in lockstep every single day. The second quadrant shows a representative participant where the correlation was between 0.50 and 0.70. Again, the nearly lockstep movement is

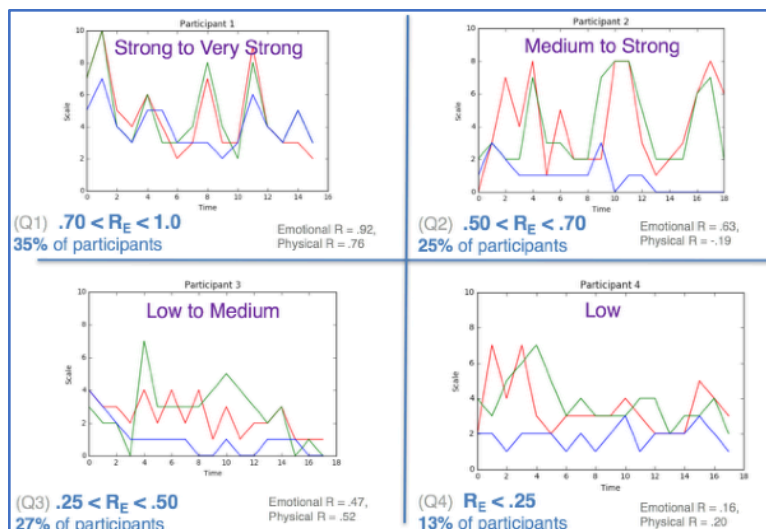


Figure 6. Figure 6. Daily Movement and Correlations by Quartile for Physical and Emotional Levels of Pain with Draining. Red lines show level of **Draining**, Green lines show **Emotional Pain**, and Blue lines show **Physical Pain**.

evident over the days of the workshop. The lockstep phenomenon was less evident in the lower two quadrants. In summary, this very tight correlated movement of level of draining and level of pain held for 60 percent of the participants.

Teachings and Practices for Behaviors that Reduce Draining

What teachings and practices from the workshop are intended to reduce draining? Figure 7 shows nine teaching-inspired questions from the scales that relate in some way to draining. They are organized in the figure in four groups. One question is an assessment of draining itself, as asked in the pre- and post- surveys. The next group of three questions correspond to the Three Doors – Stillness, Silence, and Spaciousness. Another group of two questions relates to kindness toward self and kindness toward pain. The last group assesses participants’ relationship to pain – hosting it, leaving it alone, or noticing arising qualities.

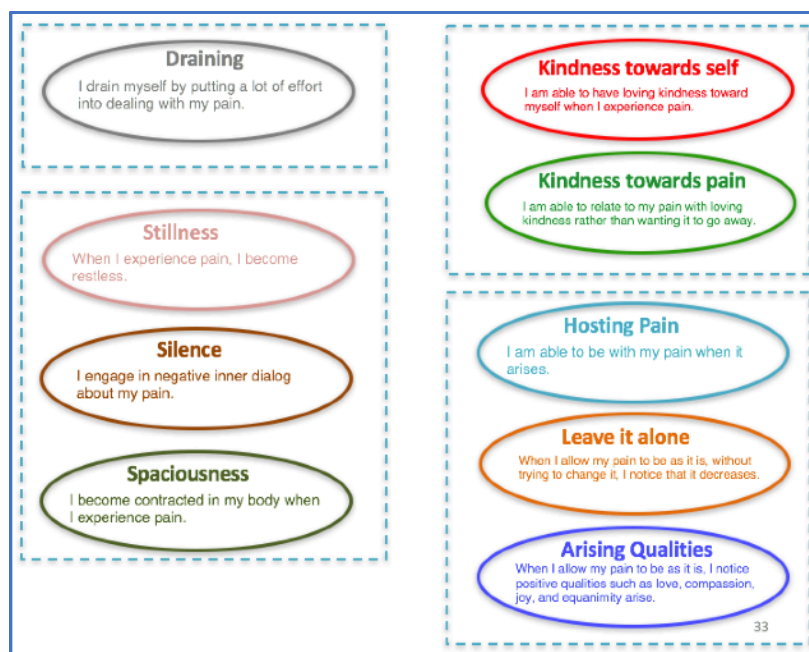


Figure 7. Teachings that relate to draining.

Figure 8 shows that by and large participants’ behaviors for the nine teachings led to increases in the corresponding behaviors for physical pain. In most cases, participants experienced a 12 percent to 20 percent increase in the behaviors advocated by the teachings. Kindness toward physical pain stood out as having about a 25 percent improvement three weeks after the workshop. A similar set of findings was found for behaviors related to emotional pain.

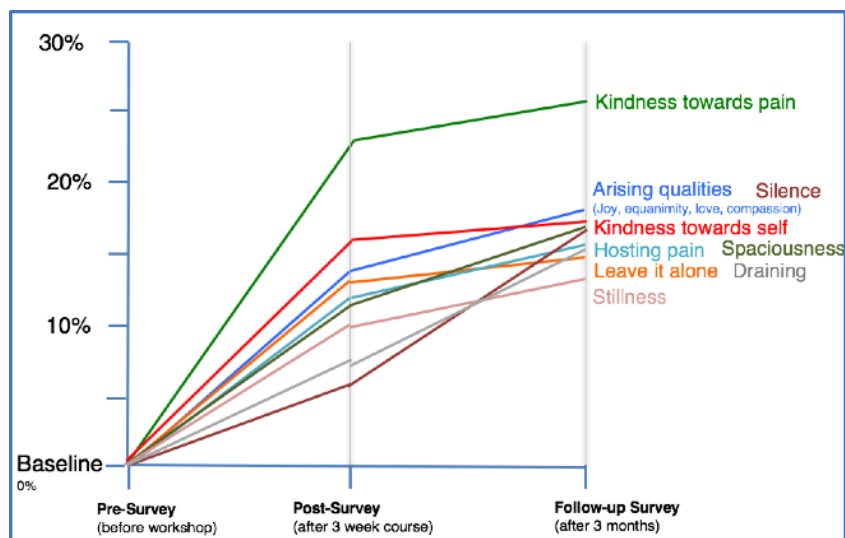


Figure 8. Improvements in Draining Behaviors related to Physical Pain.

In summary so far, these graphs illustrate that the workshop taught about behaviors that could reduce draining, and that participants improved in these behaviors.

The question arises about which of these behavior improvements strongly and individually relate to reductions in pain. Figure 9 shows how these behavior improvements correlate to improvements in emotional and physical pain as measured by the Global Pain Scale.

The top behavioral correlates for reduction in emotional pain were behaviors for kindness toward self, stillness, draining itself, and kindness toward pain. The top correlations for reduction in physical pain were behaviors for spaciousness and draining. The individual correlation coefficients themselves were similar to those for self-compassion; that is, they are moderate but not strong correlations.

An interpretation of these findings is that no teaching or single behavioral change by itself seems to drive the improvement in pain. Multiple teachings and practices from the course seem to work in combination to yield the behavior changes, reductions in draining, and improvements in physical and emotional pain.

The correlation coefficients for the “draining questions” on the teaching inspired survey scale were only 0.35 as compared to 0.86 in the analysis of practiced tracker data. The two instruments measure significantly different things.

- The Practice Tracker question asks about the worst daily level of *any* source of draining. The survey question asks about the level of effort (draining) in dealing with pain.
- The Practice Tracker collects data every day the survey instrument collects data only three times, and relies more memory and subjective aggregation of experience.
- The Practice Tracker reviews worst level of daily physical and emotional pain during the day. The survey instrument uses the GPS (Global Pain Scale) aggregate pain assessment.

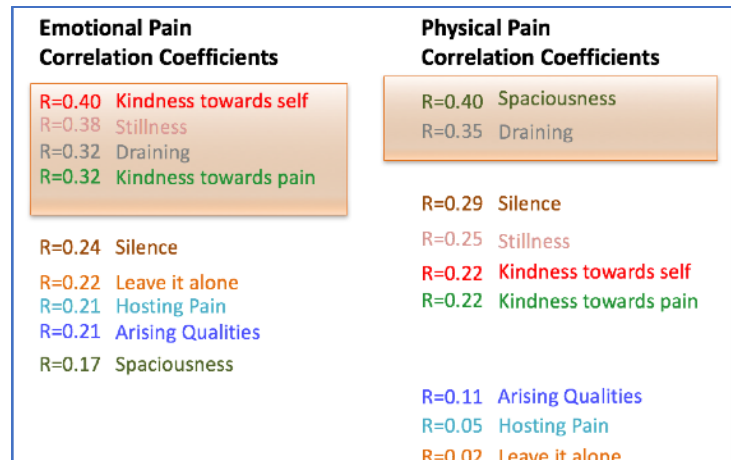


Figure 9. Teaching-Inspired Questions and their correlation to Draining.

Summary and Open Questions

In summary, here are the main findings from our research study.

- GPS *aggregate pain* improved by about a third over the workshop.
- This improvement was mostly maintained three months later.
- Participants' ability to *be with their pain* also improved by about a third (survey data).
- *Self-compassion* (SCS scale) improved by 16 percent and has a moderate correlation with improvement in pain.
- The ***average worst-daily-level of draining*** strongly correlates with the ***average worst-daily-level of emotional pain*** (.87) and ***physical pain*** (.65).
- For most participants, Daily Practice Tracker data shows that *draining* typically goes **up and** down every day (in lockstep) with emotional pain (not just up and down on average for participants over the workshop).
- This study identifies nine teachings that are intended to foster behavioral changes that can reduce draining. Across the top two to four correlates of reported behavioral change had *moderate correlations* with improvements in pain as measured by the Global Pain scale (GPS). This suggests that the improvements measured by the instruments are the result of either synergistic influences or possibly that different behavior changes work better for different individuals.

Research typically sheds light on some questions and introduces more questions for further research. The following research questions are on our minds at the end of this study.

- Would participant's reductions in pain continue to improve if the workshop ran longer (e.g., six weeks or several months)?
- It was encouraging that reducing draining seems to quickly affect level of pain as per the lockstep nature of results from the Practice Tracker. This suggests that physiological measurements might be practical, relating the draining practices to physiological evidence. What physiological mechanisms correlating to draining could be identified?
- What practices alone or in combination have the greatest power for reducing draining?

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