

AN EXPLORATION OF THE EFFECTS OF TONING AND QUARTZ CRYSTAL BOWLS ON THE ENERGETIC BALANCE IN THE BODY AS MEASURED ELECTRICALLY THROUGH THE ACUPUNCTURE MERIDIANS

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He who knows the secret of the sounds knows the mystery of the whole universe.
—Hazrat Inayat Khan

This study explored the effects of toning with a Marcel Vogel crystal and the playing of a quartz crystal bowl on the energetic balance in the body, as measured electrically through the acupuncture meridians. Forty-two subjects were told they were participating in a study of the effects of sound on the body, as measured on the Asyra, a computerized electronic electrodermal instrument measuring the subjects' energetic reading of the acupuncture meridians under exposure to low voltage electric frequencies. Readings were taken at 40 access points for acupuncture meridians on the fingers and toes. Two readings were taken at five-minute intervals prior to the two interventions to establish an average baseline and a control for each subject. A third and fourth reading were taken after each subject experienced both conditions: A) Toning by the Principal Investigator holding a Marcel Vogel Crystal to chakra points on the subject's back; B) The playing of a quartz crystal bowl tuned to the musical note "F," corresponding metaphysically to the heart chakra. Results indicate that listening to both toning and the playing of the quartz crystal bowl produce changes in the energetic patterns as measured on the Asyra. Analysis of means for all subjects across time indicate a significant increase in energetic readings on the left hand after toning with $p < .05$, and a significant decrease in energetic readings of the right foot following crystal bowl sounds, $p < .01$. Analysis of variance comparing interaction of order effect indicates a significant effect of the order of sequence of conditions in the left hand meridians with toning first and crystal bowl sounds second, $p < .05$.

The *Review of Literature* explores five topics related to sound. The historical, spiritual, and therapeutic roots of sound are founded in ancient cultures, providing a rich tapestry confirming the spiritual and social validity of sound and its curative effects. The scientific basis of sound examines philosophies from the early Greeks to quantum physics and emphasizes research theorizing the creative principle of sound and vibration

as part of the harmonic interrelatedness of the universe. Principles of sound and their effects in the body reviews recent research results and current applications of sound therapy. Self-produced sounds, such as toning, humming, and chanting and their effects in the body are reviewed, as well as methods of toning. Acupuncture meridians and chakras and their correlations in the body and relationship to sound conclude the literature review chapter. The electrical or energetic response of the body to sound is explored through measurements in the twelve major meridian terminal or access points located on the fingers and toes, and described in the research methods chapter.

In *Research Methods*, the methods, study design, materials and measurements, and subject demographic information are described. Changes in the mean readings are analyzed based on an increase or decrease in energetic readings after the conditions as compared to baseline readings, and compared to the balanced range of 45 to 55 for meridians. The comparison is presented in Table V, the Analysis of Means for All Subjects Across Time. Table VI presents the Analysis of Variance Comparing Interaction of Order Effect, alternating the treatment conditions. The *Results* chapter presents an analysis of statistics comparing posttest means to baseline readings on subjects. The results of the study are reviewed in the *Discussion* and the *Conclusions and Recommendations* chapters. Significant differences are presented in bold print. Space in this abstract does not permit reproduction of graphs illustrating measurements.

The data in this study suggests that listening to the sound of crystal bowls and toning with a Marcel Vogel crystal can influence energetic patterns in the body. The increase in the mean energetic readings compared to the baseline after toning and the decrease in mean energetic readings after listening to crystal bowl sounds support the hypothesis that these therapies can change the energetic balance of the body, as measured through the acupuncture meridians by the Asyra. Interestingly, the effects of toning were greatest in the non-dominant hand and non-dominant foot. Ninety percent of people are right hand dominant. Well-coordinated right-handed people have a dominant left foot. Significant effects correlate with the parts of the body affected by the right temporal gyrus of the brain, a major area affecting creativity. This area of the brain has been found to be larger in musicians.¹ In a study conducted at Newcastle University Medical School in England, researchers found that spectrally matched sounds that produce no pitch, fixed pitch, or melody were all found to activate Heschl's gyrus (HG) and planum temporale areas of the brain.² The possibility of the toning or even the crystal bowl sounds activating the HG sector of the brain was not known or considered at the beginning of this study, so this presents interesting possibilities for future studies.

The comparison of the effects on four of the forty-two subjects presented in this study subjects can tentatively be interpreted as a rebalancing of the energetic patterns in the

Table V
Analysis of Means for All Subjects Across Time Comparing Mean Baseline to Post-test Means for Toning & Crystal Bowl Sounds

Figure # for Graph	Dependent Variable	Plotting Means	Measured	DF	F	p Value
Figure 9	Right Hand			(3, 123)	0.953	.417
Figure 10	Left Hand			(3, 123)	2.926	.037
Figure 11	Right Foot			(3, 123)	4.043	.009
Figure 12	Left Foot			(3, 123)	1.818	.147

Figure 10: There is significant increase in means for toning, and then return to baseline means. Significant differences were between toning and other conditions.

Figure 11: There is decrease in means in toning, and a significant drop in means with the crystal bowl sounds. Significant differences were between bowl sounds and baseline means.

Table VI
Analysis of Variance Comparing Interaction of Order Effect Tests of Within Subject Effects

Figure # for Graph	Dependent Variable	Plotting Means	Measured	DF	F	p Value
Figure 13	Right Hand			(3, 123)	1.475	.225
Figure 14	Left Hand			(3, 123)	3.34	.018
Figure 15	Right Foot			(3, 123)	3.34	.022
Figure 16	Left Foot			(3, 123)	0.995	.396

Note: Statistically significant effects are noted in bold print.

Figure 13 — Right Hand. There are no significant differences or all subjects across time for the interaction of order effect on the right hand. There were no differences in the effects of toning or bowl first or second in order.

Figure 14 — Left Hand. There is a main effect for order effect in readings on the left hand. The variances between the bowl and toning are significantly different across all repeated measures. Toning first produced a significantly greater effect than bowl sounds first. the left hand = right brain.

Figure 15 — Right Foot. There is a main effect for order effect, with readings from toning significantly higher across time for all subject. There is no significant interaction effect between the two conditions. This is true across time for all repeated measures. As with Figure 14, there was a significantly greater order effect with toning first, bowl sounds second, as presented in Figure 14.

Figure 16 — Left Foot. There is no significant interaction effect, and there is no order effect.

body as demonstrated in post-test readings after both conditions. There appears to be consistency in the patterns of energetic change in specific meridians.

Possible problems of this study involve the evaluation of procedures over a short span of time. Subjects were tested and evaluated one time in the span of approximately one hour. The principal investigator performed the toning in this study, with the subjects listening. A more comprehensive study of the effects of toning would involve a longer term of evaluation and the effects of self-produced sound performed by the subjects.

It is difficult to measure the exact effects of the Marcel Vogel crystal used in this study unless it is evaluated in a side-by-side comparison of toning with no crystal. Researchers have attempted for some time to measure subtle energy and to quantify the effects of music and sound therapy on the body. Anecdotal and subjective evidence exists to support the usefulness of these therapies and explore the use of various tools for measurement. Perhaps the Asyra can be included as one of the reliable tools for such measurement; obviously, many more observations are needed. The Asyra can create a low voltage electro acupuncture. The effect on subjects and the effects on results in this study are not known.

There was no effective control group in this study. Subjects acted as their own control, with readings five to ten minutes apart. The numbers from the readings on each dependent variable were averaged, and the means used for comparison and analysis. A more comprehensive study would evaluate the energetic changes in each meridian measured, with repeated measures to ascertain trends in each subject, based on the therapy.

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REFERENCES & NOTES

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