Report

A COMPARISON OF HUMAN ENERGY FIELDS AMONG CHILDREN, YOUTH, ADULTS & DAHN MASTERS

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ABSTRACT

While concepts and investigations of human energy fields have been developed for centuries, there has been little systematic work comparing the fields of children, adolescents, and adults. In addition, general fields have had little comparison between average adults and those participating in an intense practice that may affect the field. Using the GDV machine, this research compared small groups of children, adolescents, average adults, and Dahn Hak Masters on measures of 20 basic aspects of the human energy fields, including the seven chakras. Differences were found in seven of the 13 field parameters as well as all seven measures of the chakras. The largest fields occurred with the Dahn Masters while children had the highest entropy (communication with the environment). Difference on chakras showed children to be the most open while adults were the most shut down. The means for Dahn Masters were more consistent with those for children and adolescents than other adults, suggesting that changes in the field with age may be different when people do extensive work that affects the field. Further research is required to verify these preliminary results and test additional questions raised by this study.

KEYWORDS: Human energy fields, development, children, adolescents, adults, Dahn Hak, GDV, chakras

REVIEW OF LITERATURE

The concept of energy fields has a long history in Eastern cultures, where health, medicine, self-defense, and life are defined in relation to the flow of energy.[1,2] More recently, such concepts have begun to be incorporated in Western cultures into theories of health and healing within medicine as well as broader approaches to maintaining health and healing influences.[3-9] Human energy fields exist within the body as well as around the body, with specific energy centers usually referred to as chakras.[10] Some have described several layers of energy beyond the physical body, sometimes labeled the etheric (or vital), the emotional (or astral), and the mental field. Sherwood talks about a fourth, or causal, and suggests "that the physical body is the outward manifestation of a series of subtler bodies. These subtler bodies, together with the energy of the physical body, make up a person's personal energy field."[8(p.103)] While all three (or four) fields are interpenetrating and synchronized such that no "physical experience is unaccompanied by emotional response and mental interpretation," it is the etheric level which serves as the connection between the physical and other fields.[10(p.25)] This is the field one often sees when people begin to observe the aura around the physical body. It also is the etheric field that contains what is described as the "etheric double" or counterpart to the physical particles and elements, such as organs and other body parts. While the systems are similar across traditions, names and ways of categorizing information change from one system to another.[2,11]

Besides the energy field around the body, there are chakra centers that function to transform energy, and there are a system of meridians within the body that are a key aspect of health.[12] While traditions may vary in the exact number and functions of the major and minor chakras, at least seven major chakras have been identified, each associated with a corresponding layer of the auric field, a major nerve plexus of the physical body, and an endocrine gland.[6,14] Both physical and psychological health are said to be associated with open chakras that increase energy flow. As Brennan states, chakras absorb universal energy (Prana, Qi) and send it along energy "rivers."[14(p. 48)] Related to these "rivers," the meridian system is the foundation for the Eastern approach to medicine and health, which involves acupuncture and acupressure as the means to health, prevention, and intervention when problems occur. These energy meridians play an important role that Western medicine is just beginning to

understand and incorporate into a medical assessment and treatment of disease.[2-4,13]

While Western science and medicine is just discovering chakra centers and meridians, the interest and investigation into human energy fields around the body began over 5,000 years ago. Auras and halos are mentioned as "fields of light," and coronas were an obvious way to refer to those of a higher consciousness.[14] Spiritual traditions from India, for example, speak of a universal energy called Prana, which is defined as the basic source of all life.[12,15,16] Prana is a part of a psycho-physical system, which consists of a dynamic network of subtle channels, "winds," inner air, or essences.[12,15,17] The Chinese, since 3000 B.C., have spoken of a vital energy, which they called Qi that is thought to be present in all matter.[18] Attempts to manipulate this energy have been practiced by yogis for centuries.

Within Western traditions, the Greek healer, Pythagoras, identified vital energy as a luminous body that could produce cures.[16,19] Other European countries had their own concepts of energy and named energy according to their own traditions. For example, in the Middle Ages, Paracelsus named the healing force of spiritual work *illiaster*.[20] He considered this a vital force and vital matter. Until that time, energy systems were acknowledged by many, but not studied systematically as other aspects of life and the environment. These historical references to a universal energy field, however, infer the existence of such an energy field or life field that could be felt but could be surmised to exist only through deductive reasoning and personal experience.[21]

Through the 1800s, there was an increase in the systematic study of energy fields, with increasing reliance on the scientific approach. During the nineteenth century, Mesmer, von Leibnitz and von Reichenbach named this invisible life force. Mesmer used the term magnetic fluid, defining it as a fluid that could charge animate and inanimate objects. His work included hypnosis and ways of influencing fields from a distance.[16] Leibnitz called these force centers essential elements, which contained their own wellspring of motion. The odic force, which is how Reichenbach described this energy, has more recently been compared to the human energy electromagnetic field.[16]

Although nonscientific methods normally were used to verify existence of the energy fields in humans, there also were many twentieth century scientists who laid the foundation for some of the more current research. These scientists used several ways to observe and measure the human energy fields. Kilner was an early observer, who described three layers of the aura (human atmosphere), using colored screens and filters.[22] He then correlated auric configuration with the presence of disease. Similarly, De La Warr also attempted to link aspects of the aura with disease.[23] He observed what he described as emanations. He developed radionics instruments to detect, diagnosis, and treat disease from a distance by measuring radiation from living tissues. In addition, Reich and others worked judiciously from 1930 through 1950 on what he called orgone, another term for the energy of the human body.[24] He also studied energy fields and built instruments to distinguish and collect orgone.

During this same period, other researchers provided alternative perspectives of how this energy field actually was defined, or at least how it was related to an organism. Burr and Northrop found properties of what they called the life field (LF), which they believed directed the organization of the organism.[25] These two researchers concurrently developed the idea of circadian rhythms. Familiar with the work of Burr and Northrop, Ravitz postulated that thought field (TF) interfered with the LF to produce psychosomatic symptoms. After several decades of research by Ravitz, Burr and Northrop, and Burr, electro-dynamic theory was utilized to encapsulate this summative and creative work on human energy fields (HEF).[21,25-30] Brennan agrees with the basic conclusions of this work, arguing that the field is the vehicle for all psychosomatic reactions and is important in maintaining health.[16]

More recent research studies were conducted by Becker, who measured direct electrical current control systems on the human body, correlating his results with health and disease.[31] Becker found relationships between pattern shapes and strengths of the complex electrical field of the body that fluctuate with physiological and psychological exchanges, interchanges, and shifts.[21,31,32]

Since 1970, others, such as Pierrakos, Dobrin, and Brennan have worked in the area of HEF. Within a low-light-level darkroom atmosphere, the group found that there was a correlation between human energy fields and emotional response.[16] Brennan, along with Gestla and Frost, continued this research,

combining the above emotional response observations with laser bending and HEF.[16]

A few studies have included observations of the actual field corresponding to other sources of information or physical stimulation. For example, Karagulla & Kunz worked together to test the relationships between diagnosed illness and that which was observed in the HEF of adults.[10] Kunz also saw problematic areas before diagnosis, but kept the observation data collected separate from the medical information until diagnosis was complete. The information then was correlated and significant correlations were found. When discrepancies did occur, the more accurate prediction at times in terms of developing disease was the information from the energy field rather than the medical assessment.

Grundling had an observer look at the effects on the field and the body of different musical note vibrations being played.[33,34] In this case, the researchers were more interested in how the musical vibrations from the instrument influenced the energy field. The only way to measure such impacts at the time was through a systematic observation of the effects in the field. Instrumentation was not very helpful in this case.

Hunt, in a similar methodology to Karagulla and Kunz, used an observer combined with frequency data collection instrumentation that gave her information concerning disease and emotional state of being, including colors and frequencies of these data.[35] The correlation between the modalities seen of the HEF was consistent with the frequency data of sound and color that she measured using hard-wired equipment designed to assess human energy fields. Hunt's data were used to define more closely the correlation between sound, color, energy field frequency, and aura information described by the observers.

While much of the information about energy fields was developed and utilized over centuries of work, only a small portion of the conceptual work is based on systematic empirical research. In addition, ideas were developed much later in the West, although some important research has taken place in this century in both Europe and the United States. The early work by Burr, Northrup, Ravitz, Kirlian, and others based on documented findings are even more impressive given the basic instruments that were far more simplistic and more difficult than current measurement devices.[17,35-39]

Even earlier than the work by Burr and colleagues, concepts and research around human energy fields was developing in Russia by Nardkevitch-Jodko and Pogorelsky during the late 19th Century. Although the work was stopped with the First World War and Russian Revolution, similar work was developed in the 1940's by Semion and Valentine Kirlian, who developed a series of devices that lead to what became know as Kirlian photography.[36,40] This technique stimulated interesting developments and research around the world, with increasing interest in the aura and energy fields that were possible to measure in different ways.

This empirical work has led to the development of instruments to measure aspects of the field and energy flow, such as the AMI, the BodyTalker, the Biomeridian MV-21, Aura Imaging, and the GDV technique. Each instrument has its advantages, but most measuring devices are not well known and well integrated into either the research or clinical domain.

One such device, based on the work of Kirlian and Kirlian, is the Gas Discharge Visualization technique (GDV), which is currently available and being used by researchers and clinicians in many different countries.[37,38] This device provides an image of the Kirlian aura along with computerized analysis capabilities that make it a very useful device for research and for clinical assessment. In fact, this instrument recently has been approved as part of the medical assessment used by physicians in Russia.

The development of such devices now makes it possible to assess more systematically and precisely aspects and changes in HEF. Rather than rely on conceptual work alone or trying to identify precise changes through observation, scientists now can determine occurrences and changes in the field that heretofore have been unable to be measured in precise ways.

With respect to the substantive focus of this work, like early research in many other areas, almost all of the work on HEF has been conducted with adults. There have been a few hypothesized changes in energy fields as children develop, but with no empirical support of investigation. For example, White outlined some developmental issues corresponding to the seven chakras, identifying ages and developmental processes as children mature from birth through early adulthood with the first through fifth chakra.[9] She did not focus on the development of the field, and she conducted no empirical studies to support

her conclusions. Kunz also discusses aspects of children's development in terms of energy fields, focusing more directly on the field itself.[41] Her emphasis, however, was more on colors and the overall shape of the field, areas that were more difficult to find reliability with observers. She describes and illustrates different shapes in the fields, but again she has no accompanying data to support her important descriptive ideas.

Brennan argues that the "field of the child is entirely *open* and *vulnerable* to the atmosphere in which he lives."[14(p. 64, emphasis added)] The child is not only constantly influenced by the energetic environment but is also constantly reacting to it. Brennan continues that the child's chakras are all *open.* This model that children are born with open chakras and open and vulnerable human energy fields points to greater physical and psychological energy and health of children. On the other hand, it also underscores children's vulnerability, as openness to one's environment would include vulnerability to harm from family members and other outside influences. Indeed, Brennan, Lowen and many others argue that much of our work as adults, energetically and psychologically, involves healing the physical and emotional wounds and resulting energetic blocks incurred as children.[16,42]

Related to this model, there has been one recent study of HEF in infants and young children, establishing a foundation for changes during the first few years of life.[43] Because of the awkwardness of most instruments when trying to apply them to children, this initial short-term longitudinal project was based, like many others with adults, on a systematic observational method. In the initial results of the study, Leigh et al. found that younger children had fields that were not as dense and had greater translucency in the field than older children.[43] These younger children also had a narrower or shorter field, with more frequent square openings, more observed rings, and generally a more dynamic field overall. These findings were supported in the two-year follow-up with the same small group of children.[44] Informatively, finding that the fields of the youngest children are smaller, not as dense and more dynamic are consistent with the model of children's fields as more fully open but also more vulnerable.

While White and Kunz have described changes they believe occur in energy fields as children mature into adults, no previous work has tried systematically

to investigate such changes.[9,41] This, in part, becomes difficult research to conduct because like other developmental questions, it is best answered with longitudinal data. Such data takes time with large samples to adequately address such questions. On the other hand, it is not even known whether such an investigation might be worthy of the time and expense it would take to conduct. Thus, some preliminary cross-sectional data involving comparisons of individual ages may give us some indication as to whether differences even exist. At the same time, like many developmental concepts, it often can be assumed that any changes taking place with development are "natural" or even inevitable. For this reason some comparison can be useful to identify whether adults who take alternative approaches to something like energy fields may influence their own field in some particular manner.

The purpose of the current research was to utilize one of the current instruments to measure aspects of the HEF to assess the energy fields of people at different ages. In particular, the investigators were interested in comparing the energy fields of three groups of people: children, youth, and adults. In addition, a fourth group of adults was added to the study to see if when people do things to try to influence their energy field there was any difference compared to adults who do very little to nothing in their life to influence their own HEF.

If one takes a traditional "Western" developmental perspective on this research question, such a model comparing children and adults typically would assume a "natural," linear and hierarchical development. As such, compared to children and teens, adults would be expected to have energy fields that were stronger, more open and interactive with their environment, and chakras more fully open. Some would even suggest greater development and therefore greater energy in adults compared to children.[9,41] Thus, no difference would be expected between the two adult groups or the Dahn Masters would just be more extreme in the same direction as the other adults.

On the other hand, if one takes a more "Eastern" energetic perspective, the model does not assume linearity. Instead, this model posits that children are born with fully open chakras and energy fields. As such, compared to teens and adults, children would be expected to have the most open chakras and to have human energy fields that are the most interactive with their environment,

most open to outside influences, and most vulnerable or "weakest." Also, the concept of childhood (and subsequent) trauma and energy blocks would lead us to expect that the energy fields of adults, on average, would be significantly shut down, so age would be associated with decreased energy and less openness.[13,42] If this is the case, it will be most important to see if the data suggest that the work of the Dahn Masters represents at least one vehicle for adults to return to openness and related health.

METHODS

The sample for this study was a volunteer sample of 56 people in four different groups. The groups were identified by ages or by systematic energy activity. For this study, a group of eight children ages 2-12 were used. A second group of 16 adolescents ages 13-19 also were included. A third group of 16 adults ages 21-54 were included to see how their fields compared to the two younger groups. In addition, a fourth group of 16 adults who participate almost daily in exercises and activities related to the opening of the meridian system and the focusing of subtle energies was added because of their intensity and commitment to this area. This allowed us to compare the energy fields of people who work daily in the area of human energy fields with those who do little or nothing in this area.

This fourth group of adults were unique in that they were active masters within a practice called Dahn Hak. This practice is a method of stretching, meditation, energy releasing and focusing with postures and movement that was founded by Dr. Lee in 1985 in Korea.[45-47] It is a powerful technique to energize the body and mind by opening the meridian system, developing correct breathing, becoming more sensitized to the energy of the mind and body, and learning to focus that energy intentionally. While this approach has a long Korean tradition, Dr. Lee has modernized it and made it both enjoyable and vigorous for the body and mind. This group was chosen over masters of other Eastern practices because of the strong focus in opening the meridian system and the active focusing of energy. In addition, the investigators had access to a sufficiently large numbers of senior masters to make the comparison worthwhile.

All of the participants were people interested or willing when requested to have their energy field assessed using the GDV instrument. All of the children and general adults were from the general population and had no apparent abnormality that might affect the energy field. In each case, the results of the assessment were shared afterwards and copies of printouts given to the participants as an inducement for them to participate. The sample clearly is biased towards people who are more interested in investigating or working in this area, although it is not clear that such an interest alone would produce differences in one's energy field. Because there was not previous research to rely on or justify large expense in this area, the volunteer sample was utilized as an initial investigation in this area.

The assessments were conducted in a variety of settings because of the ease of doing so and the convenience to the participants. The investigators shared responsibility in gathering the data. Some of the assessments occurred in homes while others occurred in small meeting rooms or larger rooms as part of a class. All of the assessments were done individually, although in a few cases others watched the measurement taking place without getting overly close to the instrument itself.

Assessment of the human energy field was conducted for each participant using the GDV instrument developed by Korotkov. GDV information is based on a small electrical impulse that stimulates the biological subject and generates a response in the form of electron and photon emission. Due to the short electrical impulse used, subject responses occur in a wide band of frequencies. Simultaneously, at the expense of superficial and volume heterogeneity of the object, space-time modulation of the applied electromagnetic field (EMF) takes place. Weak emission and photon radiation of the object increases at the expense of the gas discharge, generating an EMF. The glow of this discharge is transformed by the optical and CCD system into a computer file. On the basis of the calculated parameters and diagnostic hypothesis, a certain conclusion or diagnosis is made. The picture, formed after processing and transformations, reveals a two-dimensional amplitude-modulated fractal image. To study this image, the methods of fractal, matrix, and probability analysis are used.

After the assessments were conducted, 13 parameters thought to be key in understanding possible differences and available for analysis with the GDV

programs were chosen for comparison. The 13 parameters chosen are as follows: the total area of the aura, the symmetry of the aura, the area of the GDV gram normalized, the BEα, average brightness, spectrum width, density total, form coefficient, fractal dimension, brightness entropy, geometrical entropy, and fracticality. While in previous research area, entropy, and fractality were the most informative parameters, others were added to make broader comparisons of the fields among the four groups.[38]

The definitions for each of these characteristics are identified briefly below:

Area: the total area of GDV-aura in pixels. This is an indicator of the power of the energy field and one of the most important parameters.

Symmetry: the balance between the area of the aura on the left and the right side of the body.

Area normalized: the area of the aura around the finger in proportion to the area within the inner oval.

BEα: area of removed "noise" in pixels or the power of the scattered noise. This is a measure of the background scattered optical radiation.

Average brightness (I_{cp}): average brightness of the image/sector from 0 to 255.

Spectrum width: width of image/sector's brightness spectrum from 0 to 255

Density total: density for the whole GDV-gram.

Form coefficient: reflects the edge of the GDV-gram outer contour.

Fractal dimension: fractal coefficient, reflecting the GDV-gram outer contour. Less sensitive to the GDV-gram form changes. Form and fractal coefficients show the degree of irregularity of the GDV-gram external contour.

Entropy of brightness: a measure of diversity in biophysics and informational theory. Also, a measure of the information accepted by the system as well as a response by the energy system; thus a measure of exchange of information with the environment in terms of brightness.

Entropy of geometry: a measure of exchange of information with the environment in terms of its geometrical shape.

Fractal brightness: Uniformity of the energy field brightness.

Fractal geometry: uniformity of the energy field shape. When the field is smooth, fractality is low.

In examining differences on these measures, particular attention was paid to those dimensions that have implications for functioning. Those would include

size of aura, which Korotkov says points to strength vs. fragility of one's field, entropy, which indicates openness to communication with the outside environment, vulnerability to influence, and uniformity of the field in terms of brightness and shape.[38]

In addition, assessments of the seven major chakras of the body were available in these programs. Given the importance open chakras are thought to have for physical and psychological health, measures of openness of all seven chakras were included for comparisons of all four groups, making a total of 20 parameters included for analysis.

The data were entered into an SPSS file for analysis. A one-way analysis of variance was used with group membership defined as the independent variable. Post-hoc assessments were done using the Tukey-b method. In addition, *t*-tests were run to investigate whether there were any differences in the 20 dimensions of the HEF based on gender of the participants.

RESULTS

The results of the one-way ANOVA for the four groups (children, adolescents, adults, and Dahn Masters) are presented in the Table I. Of the 13 GDV parameters included in this analysis, seven had significant differences between the groups at $p < 0.05$, most at $p < 0.01$. These parameters included the aura, the normalized area, the form, the entropy of brightness, entropy of geometry, fractal brightness, and fractal geometry. In addition, all seven chakras identified a significant difference ($p < 0.05$) between the groups, except for the fifth chakra, which was significant at the 0.078 level and showed significant differences in the post-hoc test. A Tukey post-hoc analysis was conducted to identify where differences occurred between groups. The results of that analysis are included in Table II.

In order to see clearly the differences, a graph was made for each of the variables where a significant difference was found (see Figures 1-14). Interestingly, a pattern occurred in identifying the differences that was consistent in 11 of the 14 significant parameters in the analysis. Other than the differences found for the overall aura (where Dahn Masters were largest) and entropy (where children were most open to communication with the environment), the mean

Table I

One-Way ANOVA Results for Groups

	Sum of Squares	df	Mean Square	F	Sig.
AURA					
Between Groups	289240762.545	3	96413587.515	10.362	.000
Within Groups	483842174.313	52	9304657.198		
Total	773082936.857	55			
SYMMETRY					
Between Groups	53.804	3	17.935	1.113	.352
Within Groups	838.125	52	16.118		
Total	891.929	55			
AREA NORM					
Between Groups	158.476	3	52.825	3.845	.015
Within Groups	714.390	52	13.738		
Total	872.865	55			
BEα					
Between Groups	.007	3	.002	.772	.515
Within Groups	.147	52	.003		
Total	.153	55			
BRIGHTNESS					
Between Groups	259.826	3	86.609	.568	.639
Within Groups	7929.638	52	152.493		
Total	8189.464	55			
WIDTH					
Between Groups	2286.875	3	762.292	2.162	.104
Within Groups	18337.125	52	352.637		
Total	20624.000	55			
DENSITY					
Between Groups	.030	3	.010	1.538	.216
Within Groups	.334	52	.006		
Total	.364	55			
FORM					
Between Groups	12.542	3	4.181	5.892	.002
Within Groups	36.899	52	.710		
Total	49.441	55			
FRACT. DIMEN.					
Between Groups	.043	3	.014	.376	.771
Within Groups	2.002	52	.038		
Total	2.045	55			
ENTROPY of BRIGHTNESS					
Between Groups	2.703	3	.901	34.937	.000
Within Groups	1.341	52	.026		
Total	4.044	55			

Table I (cont.)

	Sum of Squares	df	Mean Square	F	Sig.
ENTROPY of GEOMETRY					
Between Groups	9.249	3	3.083	39.005	.000
Within Groups	4.110	52	.079		
Total	13.359	55			
FRACTAL BRIGHTNESS					
Between Groups	26.635	3	8.878	56.903	.000
Within Groups	8.113	52	.156		
Total	34.749	55			
FRACTAL GEOMETRY					
Between Groups	59.070	3	19.690	70.081	.000
Within Groups	14.610	52	.281		
Total	73.680	55			
FIRST					
Between Groups	1.035	3	.345	3.612	.019
Within Groups	4.871	51	.096		
Total	5.906	54			
SECOND					
Between Groups	1.924	3	.641	5.307	.003
Within Groups	6.163	51	.121		
Total	8.087	54			
THIRD					
Between Groups	1.584	3	.528	5.530	.002
Within Groups	4.870	51	.095		
Total	6.454	54			
FOURTH					
Between Groups	1.447	3	.482	4.352	.008
Within Groups	5.654	51	.111		
Total	7.101	54			
FIFTH					
Between Groups	.918	3	.306	2.402	.078
Within Groups	6.497	51	.127		
Total	7.415	54			
SIXTH					
Between Groups	1.495	3	.498	3.107	.034
Within Groups	8.177	51	.160		
Total	9.672	54			
SEVENTH					
Between Groups	2.638	3	.879	5.135	.004
Within Groups	8.734	51	.171		
Total	11.372	54			

for the Dahn Masters was much more consistent with the means for the children and youth than for the other adults. The adults tended to be more

Table II

Post-Hoc Comparisons for Selected Variables (Tukey HSD[a,b])*

AURA

GROUP	N	1	2	3
1	8	10646.88		
2	16		14632.38	
3	16		15140.38	15140.38
4	16			17919.56
Sig.		1.000	.975	.110

AREA

GROUP	N	1	2
3	16	3.6075	
4	16	5.5738	5.5738
2	16	5.9713	5.9713
1	8		9.0050
Sig.		.380	.102

FORM

GROUP	N	1	2
1	8	3.3763	
4	16	4.1781	4.1781
2	16		4.3650
3	16		4.8825
Sig.		.088	.162

ENTROPY of BRIGHTNESS

GROUP	N	1	2
2	16	6.1144	
3	16	6.1919	
4	16	6.2556	
1	8		6.7963
Sig.		.130	1.000

ENTROPY of GEOMETRY

GROUP	N	1	2
2	16	2.7594	
3	16	2.8369	
4	16	2.8381	
1	8		3.9688
Sig.		.893	1.000

* Subset for alpha = .05

Means for groups in homogeneous subsets are displayed.

a. Harmonic Mean Sample Size = 12.800

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

unique from all others in their energy fields, while the energy fields of the Dahn Masters was sometimes consistent with adolescents, and in other cases more consistent to the children (2nd chakra), or between the two groups. This was true whether looking at the form, fractals or chakras of the field. With the chakras in particular, Dahn Masters often have much more open chakras similar to the children, especially with the second and fifth chakras, where

Table II (cont.)
Post-Hoc Comparisons for Selected Variables (Tukey HSD[a,b])*

FRACTAL BRIGHTNESS

GROUP	N	1	2	3	4
1	8	1.3075			
2	16		2.1913		
4	16			2.7869	
3	16				3.3931
Sig.		1.000	1.000	1.000	1.000

FRACTAL GEOMETRY

GROUP	N	1	2	3	4
1	8	1.2788			
2	16		2.5656		
4	16			3.5800	
3	16				4.3406
Sig.		1.000	1.000	1.000	1.000

FIRST

GROUP	N	1	2
3	16	.1506	
2	16	.3656	.3656
4	16	.4431	.4431
1	7		.5414
Sig.		.105	.505

SECOND

GROUP	N	1	2
3	16	.0894	
2	16	.2575	.2575
4	16		.5050
1	7		.5771
Sig.		.636	.121

THIRD

GROUP	N	1	2
3	16	.0169	
4	16	.2800	.2800
2	16	.2850	.2850
1	7		.5629
Sig.		.156	.123

FOURTH

GROUP	N	1	2
3	16	.2556	
2	16	.5806	.5806
4	16		.6181
1	7		.6543
Sig.		.090	.948

* Subset for alpha = .05
Means for groups in homogeneous subsets are displayed.
a. Harmonic Mean Sample Size = 12.800
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

adolescents were more like adults. With the fourth (heart) chakra, all three groups were more open than the general adults who were significantly lower.

Table II (cont.)
Post-Hoc Comparisons for Selected Variables (Tukey HSD[a,b])*

FIFTH

GROUP	N	1	2
3	16	-.1775	
2	16	-.0075	-.0075
4	16	.0744	.0744
1	7		.2157
Sig.		.316	.422

SIXTH

GROUP	N	1	2
3	16	-.2012	
2	16	.1200	.1200
4	16	.1538	.1538
1	7		.2329
Sig.		.142	.899

SEVENTH

GROUP	N	1	2
3	16	-.0400	
4	16	.2894	.2894
2	16		.4300
1	7		.5829
Sig.		.217	.312

SEX

GROUP	N	1
3	16	1.25
2	16	1.31
4	16	131
1	8	1.63
Sig.		.203

* Subset for alpha = .05
Means for groups in homogeneous subsets are displayed.
a. Harmonic Mean Sample Size = 12.800
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

To test any significant differences that occurred for gender, *t*-tests were conducted across groups and for each of the 13 parameters and seven chakras by gender of participants. The only variable where there was a significant difference was for area of the aura at $p < .05$. Such a finding could occur by chance, given the large number of tests run. Finding that gender is not systematically related to these measures of chakras and energy fields may simply be due to the small number of cases in our study that work against finding significant differences between groups, or it may reflect the fact that for these particular measures, gender is not as salient as other variables.

DISCUSSION

Taken together, these results, while only suggestive, provide much more support for an alternative energetic model than a traditional developmental one. In

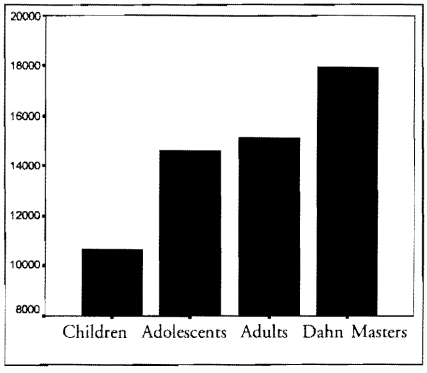

Figure 1. *Mean AURA.*

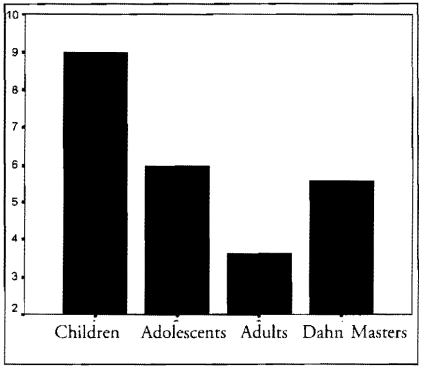

Figure 2. *Mean AREA.*

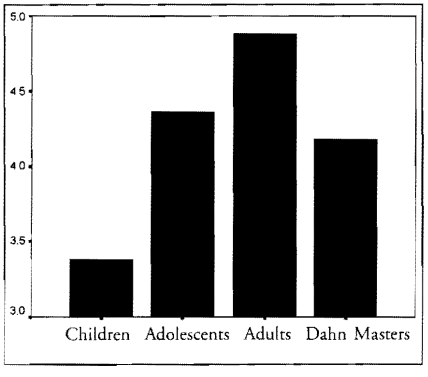

Figure 3. *Mean FORM.*

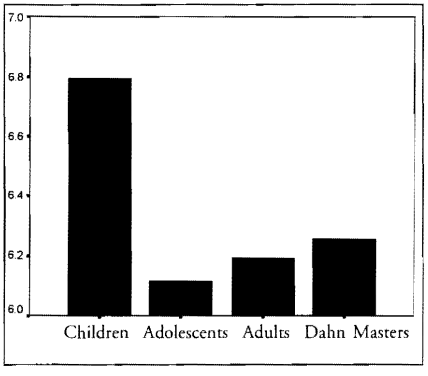

Figure 4. *Mean ENTROPY of BRIGHT.*

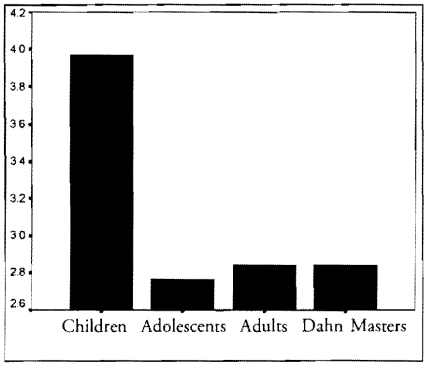

Figure 5. *Mean ENTROPY of GEOM.*

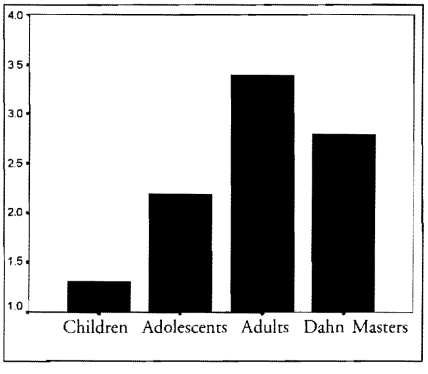

Figure 6. *Mean FRACTAL BRIGHT.*

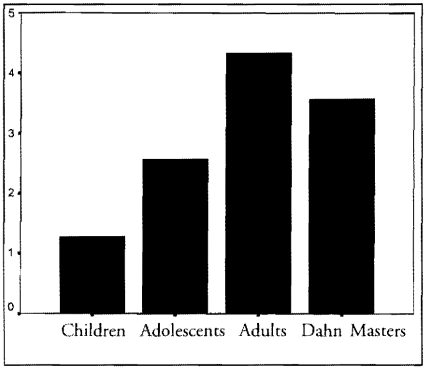

Figure 7. *Mean FRACTAL GEOM.*

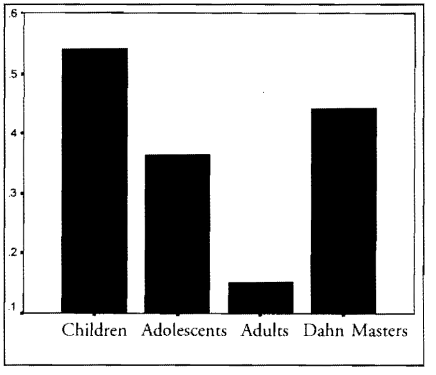

Figure 8. *Mean FIRST.*

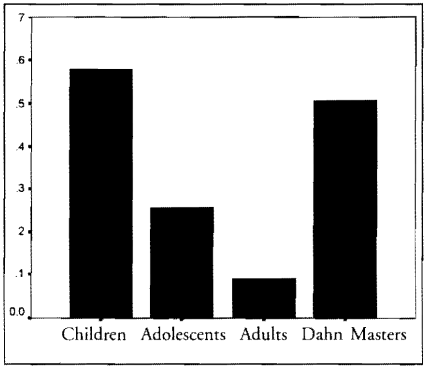

Figure 9. *Mean SECOND.*

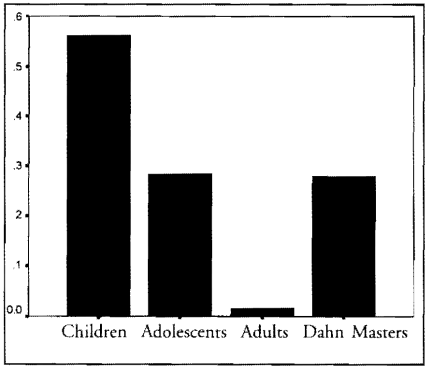

Figure 10. *Mean THIRD.*

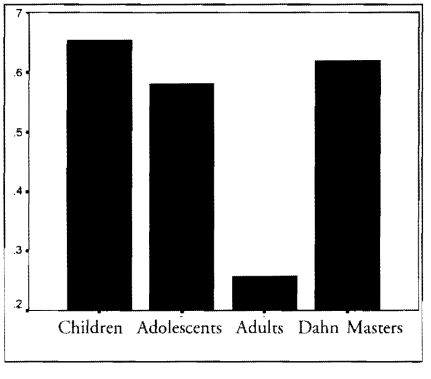

Figure 11. *Mean FOURTH.*

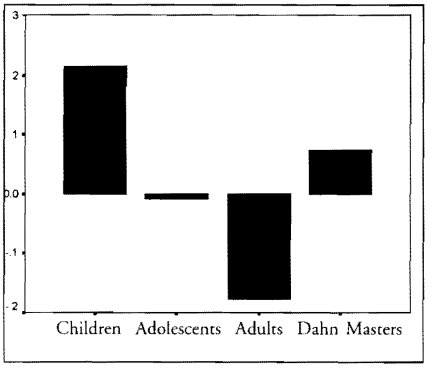

Figure 12. *Mean FIFTH.*

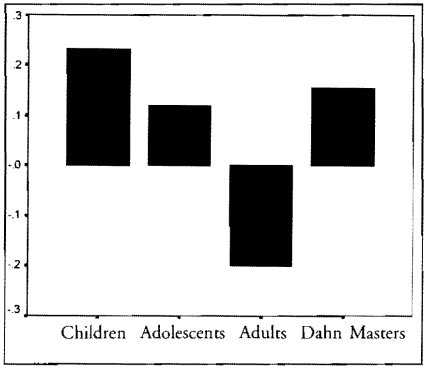

Figure 13. *Mean SIXTH.*

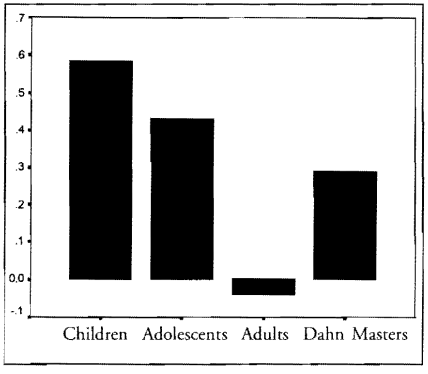

Figure 14. *Mean SEVENTH.*

the case of the overall size of the aura, children had the smallest or "least powerful" fields. However, adults did not differ from adolescents in the size of their aura; while Dahn Masters had the largest fields. It would appear that practices such as Dahn Hak have an impact on the size of the aura compared to children and adolescents that did not occur in the regular adults. Given that this is a measure of the "power" of the energy field, it appears that having a regular practice which includes activities to open the meridian field and work with energy has some impact on the field.

Differences in entropy also do not support a traditional developmental model. Recall that Korotkov defines entropy in part as communication with the environment. Children had the greatest amount of entropy, both in terms of brightness and geometric form. This is consistent with Brennan's argument that the child's field is entirely open and vulnerable to the environment in which the child lives. What is curious is the absence of differences between the other 3 groups. The results do suggest that while children are born fully open to their environment, they are pushed at some point to narrow their field of acceptable input, to close connections and interactions.

Also consistent with the energetic model, it is children who are the most fully open in all 7 chakras—from survival (first), emotions/connections (second), personal power (third), heart (fourth), and even the spiritual (seventh). Adults are the most shut down in every chakra. Notably, the chakras of the Dahn

Masters are more similar to children and youth than to adults in every instance. Given that all of these individuals began the Dahn practice as adults, it seems unlikely that their energy fields simply remained like children or adolescents into adulthood. Rather, it is more likely that the energy fields changed through the Dahn practice, having a strong influence on the field itself.

The Dahn Masters included in this study were those who had been participating in this practice for years and are considered higher masters. The effects seen in this study probably do not have this effect over a short period of time, but rather occur most likely with sustained practice. It would be interesting to test those just beginning such a practice and follow them over time in contrast to those who are not involved in this or a similar energy practice. Such a comparison would provide clearer evidence of effect, especially when there is no difference between groups as people begin such training.

The fact that no pattern of significant differences emerged by gender can be seen as underscoring the importance of childhood and the experiences that lead both boys and girls to an overall shutting down of the energy field as adults. In addition, at least with respect to these measures, gender does not seem to play a role in changes that occur as adults, but rather impacts both males and females who engage in practices that influence the energy fields.

In interpreting these results, the findings simply are suggestive due to the limitations of this current study. One of the limitations, aside from the very small sample size, is that the groups are confounded by culture. While there are a small percentage of Asian-Americans, African-Americans, and Hispanics in the children, youth, and adult group, the Dahn Masters primarily are from the Korean culture. Given the dominance of one culture in the first three groups and another culture within the Dahn Masters group, there may be a cultural influence which affects the results in some way. What is needed is a similar study within one culture. Unfortunately, there are not enough senior Dahn Masters to test such a question within the United States. An easier and more useful solution would be to test the results within the Korean culture where there would be significant numbers for each group to address the issue.

It also is not known whether other intensive trainings that involve both stretching to open up the meridian system or energy utilization would have a

similar impact in terms of the energy fields. Approaches such as Yoga, Qigong, or Tai Chi, also may have similar impacts as Dahn Hak, or different approaches may have differentiating effects on the field. These questions are worth pursuing, especially given the differences here between Dahn Masters and regular adults in this study. Yet such questions are beyond the bounds of the present investigation.

Another issue has to do with the large number of non-independent analyses run that would increase the level of chance. While many of the differences are significant, which are impressive given the small samples, there are limitation in the overall findings with so many different analyses run without controlling for the others in a more sophisticated analysis. Thus, the findings must be taken with caution as a whole, although the consistent pattern of differences that we found are very impressive not only because the small sample size mitigates against finding significant differences, but also because the pattern found fits prior conceptual models. Nevertheless, replication would be important to verify and further the investigations beyond the scope of this exploratory study.

What is quite clear from the current study is that changes occur in many different aspects of human energy fields from younger children to adults. These changes seem to be fairly systematic across time. Compared to adults, children do appear to be born open, receptive and at the same time vulnerable. The fact that adolescents and especially adults are shut down in so many ways compared to children is suggestive at least in part of the harm that children sustain while growing up. This is not surprising, given how little power children have in our culture. Also, the fact that children's fields do indeed appear to be comparatively vulnerable supports the notion that harm done—emotional, sexual, physical—may be much more profound when done to children than to adults.

Yet, if the differences for Dahn Masters accurately reflect impacts because of intervention, such changes are not inevitable. In fact, some of the impacts seem to create fields in a couple of measures that were more similar to children than to adolescents. In almost all measures, however, the fields of Dahn Masters were significantly different from the regular adults and more similar to younger groups. In ways, the Dahn masters have the openness

of the fields like children while also having the strength of fields to protect their own health, unlike adolescents and children. Thus, these fields and what is expected to occur over the lifetime of most adults may be much more dynamic and able to be influenced than we might have believed previously. The things we do around energy are not without impacts in our lives, especially when people seem to practice such impacts on a regular basis and over a sustained period of time.

While the results for the Dahn Masters provide hope for reversing ill effects, perhaps an even more important issue is the need for adults to find ways to raise children that nurture their open, balanced and healthy functioning, and decrease the harm that we inflict on them which creates these energetic blocks. As we treat our children with the dignity and respect that all beings deserve, we lay the foundation for open, healthy, and vibrant adults which is maintained through practice rather than reversed through practice.

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