

Reported paranormal experiences associated with improved outcomes of personal development workshops

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Abstract

We explored personal development workshops' transformative effects by evaluating participants' transformative, noetic, transpersonal, and relational experiences during workshops and their association with interconnectedness, well-being, and extended perception measure changes in a prospective, uncontrolled, within-participant design study. Participants reported positive changes that a majority felt would affect their behavior and relationships. Perceived contact with the dead was associated with an increased interconnectedness, as was a meaningful experience with wildlife or animals. A meaningful experience with a person, place, or thing was associated with increased well-being. These analyses support the idea that engaging in personal development workshops is positively transformative.

Introduction

The global personal growth market was valued at \$38.28 billion in 2019. It is expected to grow an additional 5% from 2020 to 2027 (Grand View Research, Inc., 2020). Online programs were already on the rise, but with COVID-19 causing people to shelter in place at home, virtual personal development programs have become ubiquitous. People seek personal growth opportunities for many reasons, such as improving well-being, enhancing their sense of connection to themselves and others, and experiencing transpersonal or transcendent states.

As people find themselves increasingly isolated during the COVID-19 pandemic lockdowns, understanding the value of the relational aspects of human experience becomes all the more critical. The recent relational emphasis in clinical psychology stresses how pivotal relationships are for human development and healing.

Transformation is described as "a discontinuous leap forward in consciousness, a paradigm shift, wherein the person is significantly changed in terms of world view, behavior and attitude" (Neal et al., 1999). Transformative practices can be defined as "...any set of internal or external activities you engage in with the intention of fostering long-lasting shifts in the way you experience and relate to yourself and others" (Schlitz et al., 2008 p. 93). Based on in-depth interviews with representatives from spiritual and secular transformative traditions, researchers identified six factors that facilitate translating short-term experience into long-term changes:

(1) being a part of a like-minded social network or community, (2) having a language and context for the experience, (3) continuing to access new information or teachings, (4) a daily mind-body practice to both reinforce/ reconnect with the experience and condition the mind and body to tolerate the cognitive and behavioral changes, (5) engaging in ways of creatively expressing or manifesting the experience through action, and (6) daily reminders such as wearing a cross or mala beads or intentionally placing symbols in one's environment" (Vieten et al., 2006, p. 928).

Transformational festivals, such as Burning Man, which has grown from a handful of people in 1986 to over 78,850 in 2019 (Burning Man Timeline – 2019, 2021), help satisfy relational, creative, and

transpersonal needs in our transmodern era (Bottorff, 2015). Most participants return year after year. A growing number of people find meaningful connections at personal development workshops, incorporating some of the impetus to visit sacred places and engage in symbolic rituals, with professional development, mind-body, or psychotherapeutic curricula. While some evidence and anecdotal reports support personal development workshops' transformational aspects, little formal research has been conducted to evaluate these anecdotal knowings' validity and nuances.

The parent study in which the data presented here was collected evaluated 1) the relationship between the subjective sense of interconnectedness, extended perceptions, and well-being, 2) changes in these factors from before to after personal development workshops, and 3) whether workshop and individual characteristics predicted changes in outcomes (Wahbeh et al., 2021). The data were collected before and after 33 workshops representing the content categories of meditation (n = 17), positive psychology (n = 17), spirituality (n = 13), health and healing (n = 12), intention (n = 12), intuition (n = 11), nature practices (n = 10), embodied practices (n = 9), art (n = 7), death and dying (n = 5), sound healing (n = 5), parapsychology (n = 4), technology tools (n = 4), altered states of consciousness (n = 1), and dreamwork (n = 1). The average time between the pre and post-surveys completion was 34.0 ± 45.5 days (range 0.08 to 319.8 days), which reflected the varying lengths of the workshops (from as short as two hours to as long as ten months). That study found that the subjective sense of interconnectedness and well-being were significantly correlated to one another, but not to extended perception task performance. Overall, personal development workshops improved subjective interconnectedness, well-being, positive emotion, compassion, and reduced sleep disturbances, negative emotion, and pain. The workshop formats of lecture, small groups, pairs, and discussion were significant predictors of well-being outcomes. The workshop content categories of meditation and technology tools were also predictive of well-being outcomes, with meditation being the most consistent predictor of positive well-being changes. The personality trait of conscientiousness was the only significant individual characteristic predictor, although it was associated with increases in some well-being measures and decreases in others.

The analyses presented here build on this previous work to explore the transformative effects of personal development workshops in more detail. These analyses' objectives were to 1) evaluate self-report items on transformation and 2) explore the association of noetic, transpersonal, and relational experiences during the workshops with outcomes of interconnectedness, well-being, and performance on an extended perception task.

Methods

Participants

Inclusion criteria: Participants aged 18 years or older who could read and understand the consent form and complete the survey and tasks, and who had access to the survey online. Exclusion criteria: People younger than 18 years of age, inability to understand the consent form, or acute or chronic illness that precluded completion of measurements.

Recruitment

Participants were recruited through the Institute of Noetic Sciences (IONS) webpage dedicated to the IONS Discovery Laboratory (IDL) research program, where potential workshop leaders learned about the opportunity. In addition, workshop leaders and individuals visiting the IONS EarthRise Learning Center learned about the program from the reservations department. Postcards, flyers, the IONS blog, and newsletters were also distributed to community networks, previous workshop leaders, and conferences and meetings.

All study activities were approved by the IONS Institutional Review Board (approval designation WAHH_2018_01).

Study Procedures

Volunteers received a survey web link to complete before their workshop or course. The survey could be completed on any computer with access to the internet. They entered their first name and date of birth, which generated an anonymized ID.

Volunteers acknowledged that they had read and understood the consent form and agreed to participate before continuing with the survey.

Then they completed a series of online tasks and self-report questionnaires measuring interconnectedness, well-being, and extended perceptions (see measure descriptions below).

After completing the pre-survey, participants engaged in their event. These events varied in duration and content (e.g., meditation retreats, sound healing, energy medicine sessions). Participants completed the post-survey after their event was complete (online via computers at the BLINDED or their personal computer). Participants were advised to complete the survey as close as possible to the event's beginning and ending.

Outcome Measures

Three outcomes that demonstrated significant changes from pre- to post-workshop from the original dataset were selected for these exploratory analyses: interconnectedness - Cloninger Self-Transcendence Scale, well-being – Arizona Integrative Outcomes Scale, and extended perception – Quick Remote Viewing. These were selected because they captured that factor's overall sense and showed significant pre-post changes in the parent study analyses.

Interconnectedness.

The Cloninger Self-Transcendence Scale (Cloninger et al., 1994) is the 15-item subscale of the Cloninger 125-item Temperament and Character Inventory. Cloninger et al. (1993) defined self-transcendence as “the extent to which a person identifies the self as...an integral part of the universe as a whole” (p. 975). This definition of self-transcendence overlaps with our conceptualization of interconnectedness. Thus, this questionnaire was designated as the primary measure of interconnectedness. A person high on self-

transcendence or interconnectedness is keenly aware of being part of a larger whole—being in a spiritual union with God or nature. Participants answer each item on a slider ranging from Definitely False (0) to Definitely True (10). The scale is scored by summing all 15 items and dividing by 10, with total scores ranging from 0–15.

Well-being.

The Arizona Integrative Outcomes Scale (AIOS) is a single, visual-analog scale that evaluates the overall subjective sense of well-being (Bell et al., 2004). Participants are asked, “Please reflect on your sense of well-being, taking into account your physical, mental, emotional, social, and spiritual condition over the past 24 hours. Please move the slider below to a point that summarizes your overall sense of well-being for the past 24 hours.” The slider ranges from ‘Worst you’ve ever been’ (0) to ‘Best you’ve ever been’ (100). The scale results in one value with larger values indicating greater well-being.

Extended perception.

These abilities range from commonly experienced intuitions or hunches to more unique experiences like remote viewing, the ability to know something about a place, object, or person that is inaccessible to the ordinary senses (Cardeña, 2018; Targ, 2019). The Quick Remote Viewing Task is a forced-choice task where five images are presented in a horizontal row with a grey box above them. The five images and target image are randomly selected simultaneously by the `Math.random()` pseudorandom Javascript command for each trial from a repository of 218 images. Images were portrait-mode professional photographs of natural scenes, landmarks, and one or more individuals performing an activity (no portraits) from the Corel Graphic Suite. The participant is instructed to “Click on the picture below that you think will appear in the box” with no time constraints for their choice. After the participant selects the image, the target image appears above the 5-image row (about 200% magnified compared to the image to selected). Also, if the participant selected correctly, their selected image border becomes green, and “This is a hit!” is displayed. If the participant did not select correctly, their selected image border becomes red, and “Try again” is displayed. The participant completes 20 such trials, after which the number of hits and misses is displayed. The percentage of “hits” is the task score included in the analyses presented here.

Potential Predictors

Noetic Experiences.

The experience items (see Table 3 for specific items) of the Noetic Experience and Belief Scale (NEBS) were administered after the workshop (Wahbeh, Yount, et al., 2020). Noetic comes from the Greek noesis and means inner wisdom, direct knowing, intuition, or implicit understanding. The NEBS contains ten statements about noetic experiences ranging from intuition or gut hunches to perceived contact with the dead. Participants checked if any of these experiences occurred during their workshop resulting in a binary variable for each item.

Transpersonal and Relational Aspects.

These items encompassed the participants' perceptions of their connection to the teacher, their fellow participants, wildlife and animals, and other relevant workshop aspects (see Table 4 for specific items). The research team created the transpersonal and relational items based on commonly reported workshop experiences. Participants checked if any of these experiences occurred during their workshop resulting in a binary variable for each item.

History of Transformative Experiences and Transformative Experiences During Workshops. Participants' attitudes and beliefs about transformation were evaluated before and after their workshop. Before the workshop, participants rated four questions about their history with transformative experiences and how they affected their lives. After their workshop, participants rated three investigator-developed items to capture their perceived workshop transformative experiences. Please see Table 2 for specific transformation items. All items were rated on a sliding scale from 'Not true for me' (0) to 'Definitely true for me' (100) except for "I experienced a moment of clarity or profound insight during my workshop," which had a yes or no response option.

Statistical Analysis

Categorical variables are described with counts and percentages, continuous variables with means and standard deviations. Participants were not required to complete every item in the survey. Thus, participant numbers are not equal for each variable and are listed with relevant analyses in the results section. Change scores for the interconnectedness, well-being, and extended perception measures were calculated by subtracting the pre-score from the post-score. A Kruskal-Wallis nonparametric analysis of variance tests were conducted to evaluate associations between the noetic, transpersonal, and relational binary variables and interconnectedness, well-being, and extended perception change variables. Three nonparametric regression models were used to evaluate associations between the transformation continuous variables and interconnectedness, well-being, and extended perception change variables. The Stata 15.0 (StataCorp, LLC, Texas) *npregress* function was used with kernel-epanechnikov and bootstrap replications for estimation parameters options.

Nonparametric analyses were used because a Shapiro-Wilk test indicated that the interconnectedness and well-being variables were not normally distributed. Even though the extended perception variable passed the normal distribution test, the nonparametric analyses were still used to keep the methods consistent for all three variables. Multiple comparison corrections were conducted with the False Discovery Rate to establish a cut-off p -value for significance (with alpha set to $p < 0.05$; Benjamini & Hochberg, 1995). The p -values displayed in the tables are original values (i.e., not FDR corrected values). Statistical analyses were conducted using Stata 15.0 (StataCorp, LLC, Texas).

Results

Five hundred and thirty-four paired pre-post records were collected from March 17, 2018, to November 4, 2020, with 11 people taking more than one workshop (10 completed two, and one person completed three). Of the 33 different workshops, 17 were held at the BLINDED, and 19 were held elsewhere. Participant demographics are displayed in Table 1. Participants hailed mostly from the United States ($n=475$, 89%), followed by Canada ($n=24$, 5%), Australia ($n=7$, 1%), and United Kingdom ($n=6$, 1%), and the remaining countries with less than 1% each: Austria, China, Dominican Republic, France, Germany, Ireland, Israel, Jordan, Mexico, South Africa, Spain, Switzerland, Turkey, and United Arab Emirates.

Transformation

Most participants reported that they experienced an important event that negatively affected their lives and that the experience affected their behavior or relationships before the workshop, with average values being around 70 (Table 2). They also noted having a moment of clarity or profound insight that changed their lives and subsequently their behavior and relationships before the workshop, with values being around 80 (Table 2).

Most participants also said they positively changed because of the workshop and believed their behavior or relationships would change as a result, with values being around 80 (Table 2). More than three-quarters of the participants said they had a moment of clarity or profound insight during the workshop and felt that that experience would change their behavior and relationships after the workshop, with values being around 80 (Table 2).

None of the transformation variables in Table 2 were significantly associated with a change in interconnectedness, well-being, and extended perception variables (all variables in the three models had p 's >0.07).

Noetic Experiences

Sixty-five percent of the participant (350 out of 534) checked at least one noetic experience. Because participants could check more than one, 1045 noetic experiences were endorsed (Table 3). The top three experiences during the workshop were of nonlocal consciousness ($n=247$), gaining information without the use of traditional five senses ($n=162$), and intuitive hunches ($n=147$). On average, people who checked at least one item also checked 3.0 ± 2.0 items (range 1-10). One of the noetic experiences, perceiving "contact with the dead" during the workshop, was significantly associated with increased interconnectedness after multiple comparison corrections. Other items had p -values less than 0.05 but did not survive multiple comparison correction (see Table 3 for values).

Transpersonal and Relational Experiences

Eighty-four percent of participants (450 out of 534) checked at least one transpersonal and relational item for a total of 1633 endorsements (Table 4). The top three items endorsed were meaningful experiences with a person, place, or thing, a strong connection with the teacher, and other participants. On average, people who checked at least one item, checked a total of 3.6 ± 2.1 items (range 1-8). A meaningful experience with wildlife or animals was significantly associated with increased interconnectedness, and a meaningful experience with a person, place, or thing was significantly associated with increased well-being.

Discussion

In summary, these analyses found that most participants engaged in personal development workshops reported experiences that they felt would result in positive changes in their behavior and relationships. Perceiving contact with the dead during the workshop, or having a meaningful experience with wildlife or animals, were both significantly associated with feelings of increased interconnectedness. Having a meaningful experience with a person, place, or thing was significantly associated with increased well-being.

Most participants reported previously experiencing an adverse event that affected their lives, most of whom said they changed their behavior or relationships because of it. Most also said that they had experienced a moment of clarity or profound insight that changed their lives, including their behavior or relationships. History of transformative experience was not significantly associated with interconnectedness, well-being, or extended perception task outcomes.

After the workshop, people felt that they were, in general, positively changed by the workshops. More than three-quarters of them reported experiencing a moment of clarity or profound insight. This moment of clarity of insight may have represented a leap in awareness of themselves or their life. They also anticipated that this experience would change their behaviors and relationships. Vieten et al. (2006) defined transformation as a profound shift in one's experience of consciousness resulting in long-lasting shifts in worldview or ways of being and changes in the general pattern of the way one experiences and relates to oneself, others, and the world (Vieten et al., 2006, p. 920). Future studies should engage in long-term follow-up to investigate whether changes people anticipate from personal development workshops come to fruition.

More than half of the workshop attendees indicated that at least one noetic experience occurred during the workshop. Nonlocal consciousness experiences, where the physical brain or body did not apparently limit their awareness, was the highest-rated item, with 46% of participants endorsing it. The subjective experience of the consciousness expanding beyond our physical brain and body, such as through out-of-body experiences, shamanic journeys, and transcendent states, has been documented throughout human history (Wahbeh, Sagher, et al., 2018). Gaining information in a way that does not depend on rational prediction or normal sensory channels and verifiable hunches were the second and third highest

endorsed. While often not talked about because of taboos, these experiences are actually quite common (Wahbeh, Radin, et al., 2018; Wahbeh, Yount, et al., 2020).

The most interesting finding for the noetic experiences was the contact with the dead item. While only 34 people endorsed this item (6%), its impact on the participants' interconnectedness and well-being scores was nevertheless statistically significant. These 34 participants came from 15 different workshops with varying content. Thus, the workshop content likely did not determine this item's endorsement. Perception of contact with the dead is common worldwide, with prevalence ranging from 25–66% of people surveyed (Wahbeh, Radin, et al., 2018). Many people positively benefit from these experiences (Moreira-Almeida & Cardena, 2011; Wahbeh & Radin, 2018; Wahbeh et al., 2019; Wahbeh & Butzer, 2020). For example, contact with the dead through mediumship sessions has supported the grief process and grief resolution (Beischel, 2019, 2014; Beischel et al., 2015). Moreover, the growing de-pathologizing of communication with the dead as hallucinations enable people to share their experiences and feel a sense of understanding community (Kwilecki, 2009).

Many more people checked that they had a transpersonal or relational experience during their workshop.

Meaningful connection with a person, place, or thing was the highest endorsed, with more than half of the participants checking it.

This variable also had a significant association with increased well-being. A strong connection with the teacher was the second most endorsed, although this variable was not significantly associated with outcome changes.

Similarly, the strong connection with other participants was the next most endorsed.

The interpersonal aspects of group work are well-established positive attributes and one of the many reasons people seek out group processes. In group therapy, the relationship itself is fundamental to the healing process, not the relationship to the group leader alone, but also with other participants (Brabender, 2002; Rutan et al., 2014).

While endorsed by fewer people (35%), meaningful connection with wildlife and animals had a significant association with increased interconnectedness. The positive impact of being in nature and connecting with the natural world may seem like common sense to nature lovers, and there is limited but growing evidence that this is true (Brymer et al., 2020; Schertz and Berman, 2019; Schultz, 2002; Schultz et al., 2004). Ecopsychology, a growing field of psychology, emphasizes interconnectedness between people, land, and space and points to health and well-being as inseparable components of an awareness of a larger whole (Conn, 1998). Connection to nature is essential in our modern and increasingly urban world, where many people do not have a direct relationship with the natural world around them or are separated from it due to limited access. After experiencing a sense of wonder in a tide pool, William Stapp, former UNESCO director of environmental education, created the Global Rivers Environmental Education Network that trained thousands of young people worldwide to monitor water quality (Stapp, 1996). Dowdall interviewed 126 people who had some extraordinary experience with nature as children or adults, 68% of whom felt this experience was an integral root of their being and a reason why they retreated to nature to

heal (as cited in Swan, 2010). Other researchers have traced conservationists' dedication to exceptional emotional experiences in nature (Swan, 2010). Further research is encouraged to evaluate the nuances of these results. In the meantime, workshop leaders could consider including nature interactions in their workshops, if they are not already included, to observe any increased participant improvements.

Several limitations of this study should be considered when reviewing the results. The primary limitation is that the analyses presented here are exploratory, and thus, no definitive conclusions should be assumed from the results. Workshop types and lengths were highly variable, ranging from a few hours to 10 months. There were not enough participants to evaluate the influence of transformative, noetic, transpersonal, and relationship variables on the outcome measures by workshop type. Our dataset also had missing data because participants could skip a question. Methods to deal with missing data such as multiple imputation were not used to complete missing data.

Conclusions

These analyses support the idea that engaging in personal development workshops is positively transformative and that workshops where participants experience contact with the dead, meaningful experiences with a person, place, thing, wildlife, or animals improve feelings of interconnectedness and well-being. Future studies should continue to evaluate the interactions among these variables in the context of personal development workshops.

References

- Beischel J (2014) Assisted after-death communication: A self-prescribed treatment for grief. *Journal of Near-Death Studies* 32: 161–165.
- Beischel J (2019) Spontaneous, Facilitated, Assisted, and Requested After-Death Communication Experiences and their Impact on Grief. *Threshold: Journal of Interdisciplinary Consciousness Studies* 3: 1–32.
- Beischel J, Mosher C, Boccuzzi M (2015) The possible effects on bereavement of assisted after-death communication during readings with psychic mediums: A continuing bonds perspective. *Omega: Journal of Death and Dying* 70: 169–194.
- Bell IR, Cunningham V, Caspi O, Meek P, Ferro L (2004) Development and validation of a new global well-being outcomes rating scale for integrative medicine research. *BMC Complement Altern Med* 4: 1.
- Benjamini Y, Hochberg Y (1995) Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society Series B (Methodological)* 57: 289–300.
- Bottorff DL (2015) Emerging influence of transmodernism and transpersonal psychology reflected in rising popularity of transformational festivals. *Journal of Spirituality in Mental Health* 17: 50–74.

Brabender V (2002) *Introduction to Group Therapy*. John Wiley & Sons Incorporated.

Brymer E, Crabtree J, King R (2020) Exploring perceptions of how nature recreation benefits mental wellbeing: a qualitative enquiry. *Annals of Leisure Research* 1–20.

Burning Man Timeline - 2019 (2021). <https://burningman.org/timeline/2019/> (last accessed 7 January 2021).

Cardeña E (2018) The experimental evidence for parapsychological phenomena: A review. *Am Psychol* 73: 663–677.

Cloninger CR, Przybeck TR, Svrakic DM, Wetzel RD (1994) *The Temperament and Character Inventory (TCI): A Guide to Its Development and Use*. St. Louis, MO: Center for Psychobiology of Personality, Washington University.

Conn SA (1998) Living in the earth: Ecopsychology, health and psychotherapy. *The Humanistic Psychologist* 26: 179–198.

Grand View Research, Inc. (2020) Personal Development Market Size Report, 2020-2027. <https://www.grandviewresearch.com/industry-analysis/personal-development-market> (last accessed 3 December 2020).

Kwilecki S (2009) Twenty-first-century American ghosts: The after-death communication—Therapy and revelation from beyond the grave. *Religion and American Culture* 19: 101–133.

Moreira-Almeida A, Cardeña E (2011) Differential diagnosis between non-pathological psychotic and spiritual experiences and mental disorders: a contribution from Latin American studies to the ICD-11. *Rev Bras Psiquiatr* 33: S29–S36.

Neal JA, Bergmann Lichtenstein BM, Banner D (1999) Spiritual perspectives on individual, organizational and societal transformation. *Journal of organizational change management* 12: 175–186.

Rutan JS, Stone WN, Shay JJ (2014) *Psychodynamic Group Psychotherapy, Fifth Edition*. Guilford Publications.

Schertz KE, Berman MG (2019) Understanding nature and its cognitive benefits. *Current Directions in Psychological Science* 28: 496–502.

Schlitz M, Vieten C, Amorok T (2008) *Living Deeply: The Art & Science of Transformation in Everyday Life*. New Harbinger Publications.

Schultz PW (2002) Inclusion with nature: The psychology of human-nature relations. *Psychology of Sustainable Development* (pp 61–78). Springer.

Schultz PW, Shriver C, Tabanico JJ, Khazian AM (2004) Implicit connections with nature. *Journal of Environmental Psychology* 24: 31–42.

Stapp WB (1996) *Environmental Education for Empowerment: Action Research and Community Problem Solving*. ERIC.

Swan JA (2010) Transpersonal psychology and the ecological conscience. *Journal of Transpersonal Psychology* 42.

Targ R (2019) What Do We Know about Psi? The First Decade of Remote-Viewing Research and Operations at Stanford Research Institute. *Journal of Scientific Exploration* 33: 569–592.

Vieten C, Amorok T, Schlitz MM (2006) I to we: The role of consciousness transformation in compassion and altruism. *Zygon®* 41: 915–932.

Wahbeh H, Butzer B (2020) Characteristics of English-speaking trance channelers. *EXPLORE* 16: 304–309.

Wahbeh H, Cannard C, Okonsky J, Delorme A (2019) A physiological examination of perceived incorporation during trance [version 2; peer review: 2 approved]. *F1000Research* 8.
doi:<https://doi.org/10.12688/f1000research.17157.2>

Wahbeh H, Radin D (2018) People reporting experiences of mediumship have higher dissociation symptom scores than non-mediums, but below thresholds for pathological dissociation [version 3; referees: 2 approved, 1 not approved]. *F1000Research* 6.

Wahbeh H, Radin D, Mossbridge J, Vieten C, Delorme A (2018a) Exceptional experiences reported by scientists and engineers. *Explore* 14: 329–341.

Wahbeh H, Sagher A, Back W, Pundhir P, Travis F (2018b) A Systematic Review of Transcendent States Across Meditation and Contemplative Traditions. *Explore (NY)* 14: 19–35.

Wahbeh H, Yount G, Vieten C, Radin D, Delorme A (2020) Measuring extraordinary experiences and beliefs: A validation and reliability study [version 3; peer review: 3 approved]. *F1000Research* 8: 29.

Wahbeh H, Yount G, Vieten C, Radin D, Delorme A (2021) Exploring Personal Development Workshops' Effect on Well-being and Interconnectedness: A Pilot Study. *In Review*.

Tables

Table 1
Participant demographics

Measure	Category	N	Avg \pm SD	%
			N	
Age	Years	521	55.2 \pm 13.0	
Education	Years	514	17.0 \pm 2.8	
Gender	Male	521	402	77.2
	Female		117	22.5
	Other		2	0.4
Race	American Indian	513	5	1.0
	Asian/Pacific Islander		30	5.8
	Black or African American		8	1.6
	Hispanic		21	4.1
	White/Caucasian		432	84.2
	Other		17	3.3
Relationship	In a relationship	503	303	39.8
	Not in a relationship		200	60.2
Income	\$150K and above	462	104	22.5
	\$75K to under \$150K		186	40.3
	0 to under \$75K		172	37.2
Household Number		506	2.2 \pm 1.3	
Setting	Rural	509	116	22.8
	Suburban		246	48.3
	Urban		147	28.9
Overall Health	Poor	511	0	0
	Fair		72	14.1
	Good		168	32.9
	Very good		221	43.3
	Excellent		50	9.8
Spiritual affiliation childhood	Not religious or spiritual	513	89	17.4
	Non-practicing religious		20	3.9

	Minimally practicing religious		153	29.8
	Practicing religious		224	43.7
	Spiritual but not religious		27	5.3
Spiritual affiliation current	Not religious or spiritual	510	22	4.3
	Non-practicing religious		20	3.9
	Minimally practicing religious		29	5.7
	Practicing religious		32	6.3
	Spiritual but not religious		407	79.8
Meditators	Yes	510	382	74.9

Notes. N - number of participants who answered the question. Avg - Average, SD - Standard Deviation.

Table 2

Transformative experience items.

Question	N	Mean ± SD
<i>History of Transformative Experiences</i>		
I have experienced an important event(s) that has negatively affected my life.	522	72.1 ± 28.1
If so, my behavior or relationships have changed as a result of this experience(s)	501	72.5 ± 25.9
I have experienced a moment of clarity or profound insight that changed my life.	518	80.5 ± 23.3
If so, my behavior or relationships have changed as a result of this experience(s).	496	81.9 ± 20.3
<i>Workshop Transformative Experiences</i>		
I feel like I have positively changed as a result of this workshop	500	79.0 ± 20.3
I experienced a moment of clarity or profound insight during my workshop, answered as Yes or No. Results listed as # Yes's	512	395, 77.2%
If so, I feel that my behavior and relationships will change as a result of this experience.	364	79.1 ± 17.8

Notes. Unless otherwise noted, items are rated on a scale from Not true for me (0) to Definitely true for me (100). N - number of participants who answered the question. SD - standard deviation

Table 3

Noetic Experiences

Item	Int Δ			AIOS Δ			RV Δ			
	Yes	0	1	X^2 p	0	1	X^2 p	0	1	X^2 p
PE2. An experience that my consciousness is not limited by my physical brain or body.	247	0.5 (1.9)	0.5 (1.5)	0.07 0.79	5.6 (19.5)	7.5 (21.6)	1.36 0.24	-0.03 (0.16)	-0.02 (0.18)	0.61 0.43
PE7. Gaining information about the thoughts, feelings or circumstances of another person, in a way that does not depend on rational prediction or normal sensory channels.	162	0.4 (1.7)	0.7 (1.8)	1.95 0.16	5.9 (20.1)	7.8 (21.6)	0.56 0.46	-0.02 (0.16)	-0.04 (0.18)	0.79 0.37
PE1. A hunch that turned out to be correct not just by coincidence.	147	0.5 (1.8)	0.5 (1.5)	0.32 0.57	5.6 (20.7)	8.6 (20.2)	1.56 0.21	-0.03 (0.16)	-0.02 (0.19)	.58 0.45
PE4. Gaining information about the future in ways that do not depend on inference or	107	0.5 (1.8)	0.7 (1.5)	2.72 0.10	5.9 (20.5)	8.6 (20.7)	0.83 .36	-0.02 (0.17)	-0.02 (0.18)	0.03 0.87

rational
prediction.

PE5. An	94	0.4	0.9	2.81	5.6	10.4	4.22	-0.02	-0.03	0.28
experience that I		(1.7)	(1.9)	0.09	(20.2)	(21.8)	0.04	(0.17)	(0.18)	0.60
interpreted as a										
proof that										
consciousness										
survives the										
physical body.										

PE9. Sent a	92	0.5	0.8	4.06	5.5	11.2	3.45	-0.02	-0.04	1.12
“mental message”		(1.8)	(1.6)	0.04	(20.2)	(21.8)	0.06	(0.17)	(0.18)	0.28
to another										
person, or in										
some way										
influence them at										
a distance, by										
means other than										
the normal										
channels of										
communication.										

PE8. Direct	82	0.5	0.5	0.61	6.4	6.9	0.13	-0.02	-0.03	0.17
influence of mind		(1.7)	(2.1)	0.44	(20.2)	(22.3)	0.72	(0.17)	(0.17)	0.68
on a physical										
system, without										
the mediation of										
any known										
physical energy.										

PE10. Accessed	73	0.5	0.5	0.002	6.5	6.2	0.06	-0.03	0.01	2.74
information from		(1.8)	(1.3)	0.96	(20.6)	(20.6)	0.81	(0.17)	(0.16)	0.10
other dimensions										

or non-physical
beings that is
“channeled”
through them.

PE6. Contact with the dead.	34	0.5 (1.8)	1.2 (1.5)	9.44 <i>0.002</i>	5.7 (20.2)	17.3 (22.7)	6.89 0.009	-0.02 (0.17)	-0.01 (0.17)	0.05 0.82
PE3. An experience with an extraterrestrial being.	7	0.5 (1.8)	-0.1 (1.4)	1.04 0.31	6.3 (20.5)	16.9 (23.3)	1.5 0.22	-0.02 (0.17)	0.03 (0.2)	0.47 0.49

Notes: The items are displayed in column 1. Column 2 is the number of participants who endorsed that item during their workshop. 0 = the variables mean displayed above the standard deviation for people who did not endorse that time, and 1 is the variables mean displayed above the standard deviation for people who did. X^2 = the chi-square statistic for the Kruskal-Wallis nonparametric ANOVA displayed about the *p*-value. Bolded *p*-values are below 0.05. Bolded and italicized *p*-values are still significant with a False Discovery Rate correction for multiple comparisons. The correction was made at alpha 0.05 level for each variable's ten comparisons (Int, AIOS, RV). Int - Cloninger Self-Transcendence Scale, AIOS - Arizona Integrative Outcomes Scale, RV - Quick Remote Viewing Task.

Table 4.
Transpersonal and Relational Experiences

Item	Int Δ				AIOS Δ			RV Δ		
	Yes	0	1	X^2 p	0	1	X^2 p	0	1	X^2 p
Meaningful	319	0.3	0.7	5.94	2.8	8.8	9.08	-0.03	-0.02	0.26
Experience with a		(1.7)	(1.8)	0.02	(19.4)	(20.9)	0.003	(0.17)	(0.17)	0.61
Person, place or										
thing										
Strong connection	266	0.5	0.6	0.06	5.4	7.5	2.05	-0.02	-0.03	0.27
with your teacher		(1.7)	(1.8)	0.82	(20.3)	(20.8)	0.15	(0.16)	(0.18)	0.61
Workshop leader										
Strong connection	226	0.6	0.4	2.97	5.0	8.5	1.65	-0.03	-0.02	0.20
with other		(1.9)	(1.6)	0.59	(20.6)	(20.4)	0.20	(0.17)	(0.18)	0.66
Participants										
Mystical or	190	0.5	0.5	1.28	5.6	8.0	0.86	-0.02	-0.03	1.04
spiritual		(1.8)	(1.6)	0.26	(19.3)	(22.5)	0.35	(0.16)	(0.18)	0.31
experience										
Meaningful	188	0.4	0.8	8.35	4.9	9.4	4.70	-0.03	-0.02	0.35
connection with		(1.7)	(1.8)	0.004	(20.3)	(20.8)	0.03	(0.16)	(0.18)	0.55
Wildlife/animals										
Difficult or	170	0.4	0.7	1.39	5.4	9.0	2.93	-0.03	-0.01	3.01
challenging		(1.7)	(1.9)	0.24	(19.1)	(23.3)	0.09	(0.17)	(0.17)	0.08
Comments										
Deep connection	170	0.4	0.8	4.20	5.7	8.1	1.53	-0.03	-0.01	0.27
with nature		(1.7)	(1.7)	0.04	(19.2)	(23.1)	0.22	(0.16)	(0.18)	0.61
Meaningful	104	0.4	0.8	3.09	5.6	9.8	2.70	-0.02	-0.03	0.27
experience with		(1.7)	(2.0)	0.08	(19.9)	(22.8)	0.10	(0.17)	(0.17)	0.61
Object (e.g.,										
crystals on the										
road, art piece)										

Notes: The items are displayed in column 1. Column 2 is the number of participants who endorsed that item during their workshop. 0 = the variables mean displayed above the standard deviation for people who did not endorse that time, and 1 is the variables mean displayed above the standard deviation for people who did. X^2 = the chi-square statistic for the Kruskal-Wallis nonparametric ANOVA displayed about the *p*-value. Bolded *p*-values are below 0.05. Bolded and italicized *p*-values are still significant with a False Discovery Rate correction for multiple comparisons. The correction was made at alpha 0.05 level for the eight comparisons of each variable (Int, AIOS, RV). Int - Cloninger Self-Transcendence Scale, AIOS - Arizona Integrative Outcomes Scale, RV - Quick Remote Viewing Task.