

TRANSFORMATIONAL EFFECTS OF HOLOTROPIC BREATHWORK® IN
PRACTITIONERS' ORIENTATION AND MENTAL WELL-BEING:
CORRELATIONAL STUDY

by

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Abstract

Transformational Effects of Holotropic Breathwork® in Practitioners' Orientation and Mental Well-Being: Correlational Study

by

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This study explored the transformational aspects of Non-Ordinary States of Consciousness (NOSC) induced through Holotropic Breathwork® (HB) practice by examining the correlations between *number* and *period* of HB practice and scores on mental health and self-actualization levels, measured by the Personal Orientation Inventory (POI); meaning and purposefulness in life, measured by the Purpose in Life test (PIL); and quality of life, measured by the Quality of Life Scale (QOLS), respectively. The *number* of HB practice represents how many HB sessions a practitioner has experienced; *period* of HB practice indicates how long a practitioner has been practicing HB. The study employed a quantitative correlative method to address the research problem and discover the usefulness of the intervention and associated factors. Correlations were assessed using a Pearson product-moment correlation coefficient ($N = 119$). Results showed that both independent variables, *period* and *number* of HB practice, were significantly positively correlated with all dependent variables (PIL, QOLS, and POI), with the exception of 2 out of 12 POI subscales. The correlation between *number* of practice and the scales signified positive correlation of PIL ($r = .362, p \leq .0036$) and QOLS ($r = .388, p \leq .0036$). Out of 12 POI subscales' correlation, 11 ranged from .244 to .415. Similarly, *period* of practice and scales were significantly positively correlated. Both PIL and QOLS were significant at the .0036 level with a positive correlation of .330 and .342. For POI, one of 2 major subscales, IDS (Inner Directed; $r = .376, p \leq .0036$) was shown to be significantly positively correlated.

Dedication

To my parents

who have supported me with their endless love and patience.

To my beloved wife and daughter

who have always blessed and graced my spiritual journey and academic endeavor with their
warm and loving hearts.

To my inner wisdom

which has guided me through the journey of spiritual development and this dissertation process.

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professor and practical expertise as an experienced practitioner/facilitator of Holotropic Breathwork® practice, he provided me with delicate and detailed guidance and advice throughout the whole process. It is hard for me to express my gratitude enough for his generous encouragement and genuine help.

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Chapter 1: Introduction

Overview

Breathwork is a technique of conscious breathing that is meant to promote healing of physical, mental, or emotional states (Young, Cashwell, & Giordano, 2010). In human history, various types of breathwork have been found in many different cultures and diverse wisdom traditions, including practices associated with yoga, Zen, the Tibetan Vajrayana, Buddhism, Taoism, Sufism, and shamanic ritual. As such, breathwork has been used as a way of inducing Non-Ordinary States of Consciousness (NOSC) for practitioners to heal their injured psyches, experience higher states of mind, and arrive at a sense of wholeness (Grof, 1988a; Grof & Grof, 2010; K. Taylor, 1994). NOSC, or altered states of consciousness, are characterized by dramatic and intense alteration in perceptual, emotional, cognitive, or a variety of psychosomatic states (Grof, 1998b).

Holotropic Breathwork® (HB), the practice that is the focus of this study, was first developed by Stanislav Grof and Christina Grof in the mid 1970s (Grof & Grof, 2010). It is a potent therapeutic technique that involves voluntary, prolonged, mindful, and hyperventilative breathing facilitated with evocative music and elective bodywork (Grof, 1988a; Grof & Grof, 2010; Miller & Nielsen, 2015). The NOSC derived from HB may play a significant role in helping practitioners experience, and in some cases, relive traumatic memories, contributing to the resolution of associated anxieties. They often serve as a catalyst for transpersonal experiences that bring self-healing effects. Included in these experiences are the integration of mind and body, furthering of a sense of wholeness. HB does not only provide practitioners with “significant benefits in terms of emotional catharsis and internal spiritual exploration” (Eyerman,

2013, p. 26) but also enables the practitioner to feel a greater release of unresolved somatic tension or distress.

Furthermore, Grof (1985, 1995, 1998a, 2000, 2019) described HB as a means of fostering transformational growth to promote an individual's wholeness and natural healing. The intent of the practice is to enable practitioners to reexperience events in order to reveal their deeper spiritual or transpersonal meaning. Transpersonal phenomena that can be experienced in HB can include the transcendence of linear time and the physical "skin-encapsulated egos" (Grof, 2013, p. 139), as described by British philosopher and writer Alan Watts.

This process of delving deeper into the psyche can evoke an experience of transformation in the practitioners' meaning system or worldview and can sometimes even elicit the transcendence of normal awareness, revealing a broader realm of consciousness. Maslow (1969) described transcendence as "the highest and most inclusive or holistic levels of human consciousness, behaving and relating, as ends rather than as means, to oneself, to significant others, to human beings in general, to other species, to nature, and to the cosmos" (p. 66).

Problem Statement

Humans have long attempted to describe the nature of mind through philosophy, religion, and wisdom traditions. More recently, psychology has examined mental process and behavior through scientific inquiry. Although the psychological and spiritual dimensions of transpersonal practices are hardly proved in a conventionally scientific way, there have been several studies of transpersonal phenomena, such as mindfulness, which have been empirically conducted (Greeson, 2009).

Due in part to the empirical validations, mindfulness meditation practice is becoming more and more prevalent in the modern Western world (Ridderinkhof, Bruin, Brummelman, &

Bögels, 2017). It has been shown to enhance and nurture mental assets such as empathy, compassion, or loving-kindness, and foster transformation. There is a plethora of studies regarding mindfulness, and mindfulness research has spread in clinical settings as well (Nilsson, 2016). Moreover, modern neuroscience has revealed that meditation reduces blood pressure, lowers stress levels, and increases brain gray matter density (e.g., Beddoe & Murphy, 2004; Hölzel et al., 2011; Mascaro, Rilling, Negi, & Raison, 2012).

To date, HB has not been investigated as thoroughly as meditation; even though there are many shards of anecdotal and phenomenological evidence on the therapeutic and transformational efficacy of HB, there is no empirical study that defines its value as a life practice. Further, most previous empirical studies have focused on comparing various measures immediately prior to and following HB sessions. Because HB was developed from psychedelic therapy, many persons may approach it as a sort of psychotherapeutic technique in which they can be aided in a single session.

However, HB may also be regarded as an ongoing process or practice that facilitates wholeness by fully surrendering to inner wisdom and to a natural healing process system (Rock, Denning, Harris, Clark, & Misso, 2015; Ryan, 2009). Bohm (2005) defined wholeness as “an absolute necessity to make life worth living” (p. 4). Wholeness can be attained “through the transformation of the inauthentic into the authentic self . . . as described in Taoism and the psychologies of Jung, Erikson, and Maslow” (Rosen & Crouse, 2000, p. 95). According to Taoism, in particular, spiritual wholeness involves the ultimate attainment of psychological health and life satisfaction (Rosen & Crouse, 2000). In this context, HB, in a sense, shares many similar attributes with meditation practices. It “has been referred to as ‘meditation on a freight train’ or ‘meditation on steroids’” (Sparks, 2019, para. 6). The dynamic transformational process

can involve either a gradual shifting of self-concept and subjective perception of the world and life, or a sudden and dramatic transformative moment (Schlitz, Vieten, & Amorok, 2007; Schlitz, Vieten, & Miller, 2010). Practitioners may experience the transformation by going through the gradual and persistent process of self-exploration and discovery. Repetition, persistence, or sustainability are key attributes of transpersonal practice (Schlitz et al., 2007).

The ultimate aspiration in this study was to integrate the findings from the research into everyday life. Hart, Nelson, and Puhakka (2000) noted that the most urgent task of modern transpersonal psychology is the integration of transpersonal phenomena or spiritual opening into everyday life. Thus, the problem to be addressed by this study was (a) whether the psychotherapeutic catalyst, HB, can serve as a transpersonal or spiritual practice that nurtures practitioners to gradually transform their orientation to life and enhance their perception of the quality of their lives; and (b) whether the transformational and healing effects of HB can be affected by the degree of commitment to the practice.

Purpose Statement

The primary purpose of this study was to explore whether NOSC that is induced by HB is associated with fostering transformational growth to promote an individual's mental well-being and transformation in their attitude toward their life. Specifically, the present study aimed to delve into the transformational aspects of HB practice by explicitly examining the correlations between the *number* and *period of practice* of HB and the *scores* on the Personal Orientation Inventory (POI), Purpose in Life (PIL) test, and Quality of Life Scale (QOLS). The *number* indicates the number of HB sessions that a practitioner has experienced, and the *period* denotes how long a practitioner has practiced HB (i.e., months in practice, from the first breathing session to the most recent session). Finding correlations may serve to open the door to verify the

efficacy and value of HB as an ongoing process or lifetime transpersonal practice for an individual's psychological health, self-healing, transformation, and self-actualization. The outcome that the study anticipated was to discover whether independent and dependent variables were correlated, and whether there was a magnitude of correlation.

Research Hypotheses and Question

The main research question of this study was: Is there an association between the *number* and *period* of HB practice and the scores on POI, PIL, and QOLS? The research question was initially inspired and developed by Grof's (1995) note that studies on effects of HB and the methodological development, using questionnaires like Shostrom's (1964) POI, are suggested to investigate profound changes in HB practitioners. Along with the main research question, there were two hypotheses in the present study:

- Hypothesis 1: There is a positive relationship between *period* of HB practice and scores on the POI, PIL, and QOLS.
- Hypothesis 2: There is a positive relationship between *number* of HB sessions and scores on the POI, PIL, and QOLS.

Theoretical Foundation of the Study

“Contemporary transpersonal psychology is usually traced to Abraham Maslow’s investigations of peak experiences and of self-actualized individuals in the 1960s; to investigations of non-ordinary states of consciousness by Stanislav Grof and others in the same period” (Ryan, 2008, p. 21). The present study concerned both these progenitors of transpersonal psychology, since it mainly inquired into the correlation between one of Stanislav Grof’s findings (NOSC induced by HB) and Abraham Maslow’s self-actualization of individuals (the score of POI) along with some other psychological measurement scales. The theoretical support

for this study was the psychedelic therapeutic theory and consciousness research that has been conducted and developed by one of the founders of transpersonal psychology, transpersonal psychiatrist Grof (e.g., 1985, 1988a, 1995, 1998a, 2000, 2019); it was used to study how the persistent practice of HB can affect transformation of practitioners in their purpose in life, life satisfaction, and personal orientation toward their lives.

This theory indicates that breathwork technique can break through defenses and reduce psychological distresses due to the powerful heuristic nature of the experiences (Grof, 1985). Grof coined and used the term *holotropic* to explain the nonpathological and non-ordinary experiences, suggesting that in holotropic states of consciousness, “deep unconscious and superconscious levels of the human psyche” (Grof, 1988, p. 1) are activated, and one can even “transcend the narrow boundaries of the body ego and encounter a rich spectrum of transpersonal experiences” (Grof, 2008, p. 48). “In holotropic states, consciousness is [also] changed qualitatively in a very profound and fundamental way, but it is not grossly impaired as in organic psychoses or trivial deliria” (Grof, 2003, p. 51). In other words, holotropic states are not only associated with *healing*, which etymologically “means to make whole, to bring something that is fragmented and impaired back to a state of wholeness” (Grof & Grof, 2010, p. 160), but also involve “dramatic perceptual changes in all sensory areas, intense and often unusual emotions, and profound alterations in the thought processes” (Grof, 1998b, p. 334). HB experiences are also usually accompanied by a variety of intense psychosomatic manifestations and unconventional forms of behavior (Grof, 1998a). As applied to the study, this theory holds that the researcher would expect two independent variables, the HB practitioner’s *number* and the *period* of the HB practice, to be associated with the dependent variables: personal orientation, quality of life, and purpose in life.

Research Design and Methodology

The study design was nonexperimental and correlational to uncover the associations between *number* and *period* of HB practice and scores on the POI, PIL, QOLS, by measuring the potency and degree to which independent variables and dependent variables were related in the participants' group (Creswell & Creswell, 2018; Field, 2018; Jackson, 2016). Participants were asked to self-report the *number* of their HB sessions and *period* of HB as measured in months. Demographic variables, age, gender, ethnicity, education, and religion were obtained (Schwarz, 1999). The questions about the *number* and *period of practice* were included in the Personal Information Form (PIF), along with other demographic information. The dependent variables (personal orientation, purpose in life, and life satisfaction) were assessed using valid and reliable surveys: the POI, PIL, and QOLS.

With respect to the target population for the study, participants were recruited via invitation and volunteering among the certified facilitators and HB practitioners who had ever joined week-long HB training modules or 1-day workshops. No ethnographical, cultural, religious, or geographical aspects were considered in the sampling process. The primary method of recruiting participants was to utilize a database of the central facilitator training institution, the researcher's contacts in the HB community, and other diverse ways. For data analyses, the collected data were downloaded into SPSS, and Pearson product-moment correlation coefficient (Pearson *r*) was assessed between the independent and dependent variables. Bonferroni correction was applied to correct for multiple dependent variables.

Study Significance

The study was intended for three types of readers: (a) people who are interested in practicing HB for their spiritual transformation through the process of persistent self-exploration

or self-discovery, (b) practitioners who seek academic underpinnings for their practice, and (c) scholars who have engaged or would engage in similar or further studies of examining the transformational effects of HB. The study aimed to examine, with significant statistical power, the correlation between a degree of engagement in HB practice given by the *number* and *period* of HB practices and a change in the practitioner's psychological orientation or mental health.

The findings provide suggestive implications for psychological interventions and may benefit both scholars and practitioners. Based on this study, other researchers may have an opportunity and motivation to advance their quantitative studies with further attempts to examine cause and effect by expanding the profundity and solidity of the research questions. The study may also offer practitioners a different angle from which to see the intervention from long-term perspectives, and provide both current and prospective practitioners interested in HB practice for their spiritual and mental growth with empirically evidenced information about the usefulness of persistent practice in their journey toward wholeness. The outcome may be contributory not only to the academic community but also to HB communities. More significantly, the study was an initial empirical investigation about HB using a correlative quantitative method. The findings from this study may serve as a launching pad for further studies seeking to demonstrate causation.

Chapter 2: Literature Review

This chapter will explore Grof's (e.g., 1985, 1995, 1998a, 2000) psychedelic and therapeutic theory and consciousness research, with a particular emphasis on Holotropic Breathwork® (HB) and its healing and transformational potential, which are uncovered in various works of literature and empirical studies. Although Grof's work and theory have been recognized as one of the theoretical frameworks for understanding human consciousness and have disputed "Western beliefs about the psyche and its relationship to physical reality" (Yensen & Dryer, 1996, p. 1), his theory has not been conclusively proved in the dominant "scientific epistemology" (Yensen & Dryer, 1996, p. 15) outside the field of transpersonal study.

This chapter will include a summary of Grof's new approach and addition to traditional psychology, definitions of critical elements and terminologies that Grof has coined, and the meanings of significant concepts of his theories. This section will also delve into how Grof's theory has been implemented by providing a historical account of HB and psychedelic therapy. Next, Grof's cartography of the human psyche will be delineated. The philosophical underpinnings from perennial philosophy and participatory perspectives will also be examined. Lastly, the transformational and healing effects of each component of HB and a critical overview of several empirical studies will be presented.

Newer Expanded Approach to Human Consciousness

Grof's (2013) primary research interest has been to "explore the healing, transformative, and evolutionary potential of non-ordinary states of consciousness and their great value as a source of new revolutionary data about consciousness, the human psyche, and the nature of reality" (p. 138). To begin with, the term *altered states of consciousness* (ASC) has been more commonly used to represent "any mental state induced by various physiological, psychological,

or pharmacological manoeuvres or agents, which can be recognized subjectively” (Garcia-Romeu & Tart, 2013, p. 129).

The details of ASC have been investigated “in numerous fields including history, archaeology, cultural anthropology, religious studies, philosophy, psychology, and neuroscience, to name some of the most prominent” (Grof, 2013, p. 121). Various techniques of inducing ASC in healing rituals have been used since early human history; for example, ingesting psychoactive materials, playing musical instruments (rattle, drumming), dancing, and so forth (Cardeña & Winkelman, 2011). Most cultures have their own customary types of ASC and consider it as a sort of sacred state (Walsh, 1989). These states are found both across cultures and in various religions. In Grof’s (2019) words,

Procedures inducing these states (“technologies of the sacred”) were developed and used in the context of the great religions of the world—Hinduism, Buddhism, Jainism, Taoism, Islam, Judaism, and Christianity. They involve meditation, movement meditation, breathing exercises, prayers, fasting, sleep deprivation, and even the use of physical pain. (p. 4)

Grof (2013), however, preferred to use the term *Non-Ordinary States of Consciousness* (NOSC) to ASC, as ASC may imply the meaning of “distortion or impairment of the correct way of experiencing oneself and the world” (p. 138). As a matter of fact, ASC has been misunderstood or misdiagnosed as a pathological syndrome, psychotic state, or psychospiritual crisis (Grof & Grof, 2010; Lukoff, 1985), but has also been “voluntarily used as strategies for producing transformation and therapeutic changes” (Brouillette, 1997, p. 19).

Grof (1998b) noted that conscious experience could change in very basic and meaningful ways; however, the psyche of the individual does not come under any impairment. Despite the sensation of these unknown and profound shifts in awareness, practitioners can maintain their senses of self. The therapeutic potentials of HB are based on NOSC, which is induced during a

breathwork session and “changes the relationship between the unconscious and conscious dynamics of the psyche. It lowers an individual’s psychological defenses and decreases the resistance against facing memories of painful events from the past” (Grof & Grof, 2010, p. 148).

Furthermore, Grof (1998a, 2000, 2013) particularly created the concept of holotropic states of consciousness to uniquely label “a large subgroup” (Grof, 2013, p. 138) of nonpathological, non-ordinary states, and to distinguish from the narrow conceptual framework of Western psychiatry that is limited to the Freudian individual unconsciousness and postnatal biography (Grof, 2003, 2013; Rock et al., 2015). Grof, Grof, and Bravo (2008) stated that holotropic states of consciousness imply “healing, heuristic, and transformative potential” (p. 158). Unlike the other “experiential therapies of humanistic psychology such as Gestalt practice and the neo-Reichian approaches which emphasize direct emotional expression and work with body” (Grof, 2019, p. 356), HB distinctively uses the therapeutic potential of holotropic states of consciousness.

In addition, holotropic states can be juxtaposed with hylotropic states, a term derived from the Greek word *hyle* (matter). Hylotropic states indicate the states of consciousness that can only be experienced in ordinary life and have been regarded as the only normal states of mind by traditional Western psychology and psychiatry (Grof & Grof, 2010). Tart (1976) also explained that from the materialistic point of view, the ordinary state of consciousness is normal and optimal, and ASC was regarded as rather inferior to it.

Grof (2013) summarized his discovery and exploration of holotropic states of consciousness, half a century of his work, by comparing them with the scientific and materialistic worldview, Freudian psychoanalysis, hierarchical classification of consciousness, and astrology. He also explained how the study could be applied to the field of psychotherapy.

For the sake of articulating the concept, Grof first coined the term *holotropic* (H. Bennett & Grof, 1993; Brewerton, Eyerman, Cappetta, & Mithoefer, 2012; Grof, 2008), which stems from the Greek *holos* (whole) and *trepo* or *trepein* (moving toward or in the direction of something) and means “oriented toward wholeness” or “moving in the direction of wholeness” (Grof, 2000, p. 2). Holotropic states involve “transformation in consciousness” (Rock et al., 2015, p. 3).

Theory Into Practice: Origin and Development of HB

Grof (2000) started to research consciousness and the healing effects of psychedelics in Prague in 1956. He voluntarily joined an experiment using Lysergic Acid Diethylamide (LSD). He reported that his first LSD experience was not only powerful and profound, changing his personal and professional life, but it was also an overwhelming, indescribable experience of cosmic consciousness, awakening in him an intense lifelong interest in NOSC. Grof’s early research was conducted at the Psychiatric Research Institute (PRI) in Prague, where he explored the heuristic and therapeutic potential of LSD and other psychedelic substances (Grof, Grof, & Bravo, 2008). After immigration to the United States from Czechoslovakia in 1967, Grof continued psychedelic research into non-ordinary consciousness as a Chief of Psychiatric Research at the Maryland Psychiatric Research Center. In 1973, when LSD clinical sessions and research were forbidden by the government (Yensen & Dryer, 1996), Grof left academic posts to become scholar-in-residence at the Esalen Institute in Big Sur, California, where HB was developed. He had been involved for 19 years (1954–1973) with clinical research into LSD’s healing effects. The findings from the research were based on a variety of experiences with NOSC.

When Grof could no longer conduct clinical LSD sessions legally, he developed HB as an experiential psychotherapeutic technique or approach to induce NOSC, or *holotropic states of*

consciousness, without using psychoactive entheogen or pharmacological substances (Grof & Grof, 2010; Holmes, Morris, Clance, & Putney, 1996; Levee, 2015; Miller & Nielsen, 2015; Rock et al., 2015). The HB sessions, the powerful drug-free psychotherapeutic practice to access NOSC, were conducted over scores of thousands of hours. Stan and Christina Grof began facilitating workshops in the mid 1970s and offered their first structured training programs in the late 1980s. Together they facilitated HB sessions for more than 25,000 people from 1987–1994 (Grof et al., 2008).

HB practice was developed mainly to comprise three phases regarding working with practitioners in enhanced states of awareness: Preparation, Session (Experience), and Integration. It is explicitly composed of a number of essential elements: setting up intentions and didactic (Preparation); music and breathing (Session); and artwork, such as mandala drawing, SoulCollage® (Frost, 2010), or sandplay (Kalff, 2004) and elective bodywork (Integration; Rhinewine & Williams, 2007).

From the consciousness research on LSD therapeutic sessions and HB sessions, Grof (1988a) elucidated the three domains of the human psyche: postnatal, perinatal, and transpersonal. He further asserted that they are correlated through a system of Condensed Experience (COEX). The COEX system involves an active set of suppressed memories of experiences and many “different layers of unconscious material that share similar emotions, behavioral pattern or physical sensations” (Grof, 2013, p. 150) from different periods of the individual's life and distinctive levels of human psyche (Grof, 2013, 2017; Yensen & Dryer, 1996). “The memories belonging to a particular COEX system have a similar basic theme or contain similar elements and are associated with strong emotional charge” (Grof, 2017).

Grof and Grof (2010) explained that the COEX system is connected not only to the biographical domain but also the perinatal and transpersonal. The following example will demonstrate how COEX systems are related to the different domains of the human psyche.

A person suffering from psychogenic asthma might discover in serial breathwork sessions a powerful COEX system underlying this disorder. The biographical part of this constellation might consist of a memory of near drowning at the age of seven, memories of being repeatedly strangled by an older brother between the ages of three and four, and a memory of severe whooping cough or diphtheria at the age of two. The perinatal contribution to this COEX would be, for example, suffocation experienced during birth because of strangulation by the umbilical cord twisted around the neck. A typical transpersonal root of this breathing disorder would be an experience of being hanged or strangled in what seems to a previous lifetime. (Grof & Grof, 2010, pp. 15-16)

As such, the practitioners' experiences of radical empowerment and self-exploration through reliving the traumatic events in HB sessions can be explained "in terms of dynamic interplay of unconscious constellations" (Grof & Grof, 2010, p. 152), COEX systems. When this COEX system is triggered in HB sessions, significant dynamic change and improvement happen by opening the possibility of shifting a negative COEX system with traumatic experiences to a positive COEX. This process of COEX *transmodulation* involves shifting "the dominance from one governing system to another" (Grof & Grof, 2010, p. 152) and can happen in different domains of the human psyche. Thus,

Such a system continues to shape the everyday experience of the breathers in the post-session period. It colors their perception of themselves and of the world, their emotional and psychosomatic condition, system of values, and attitudes. A general strategy in Holotropic Breathwork sessions is therefore to make the negative systems conscious, reduce their emotional charge, work through and integrate their content, and facilitate experiential access to positive COEX systems. (Grof & Grof, 2010, p. 153)

The Cartography of the Human Psyche

According to Grof (2000), the experience in NOSC cannot be explained by the traditional model of academic psychiatry, that is, limited to postnatal biography and the Freudian individual unconscious. Grof (2000) stated that "we need a model with an incomparably larger and more

encompassing image of the human psyche and a radically different understanding of consciousness” (p. 20). After Grof’s (1985) observation of many LSD sessions, he described cartography of the human psyche, which consists of (a) a biographical level, (b) a perinatal domain, and (c) a transpersonal domain. The map of inner space, which includes the three categories, throws an appealing light on present explanations in the world of depth and other forms of psychotherapy and their conflicting views.

As such, the theoretical basis of HB corresponds with transpersonal psychology, which is an “extended model of human psyche including the sensory barrier, remembrance and biographic aspects, perinatal area connected with experience concerning birth and death, and transpersonal area” (Binarová, 2003, pp. 410-411). Grof (1996) claimed that reliving earlier or past-life experiences is also an important phenomenon that HB practitioners go through during breathwork sessions. There is no conclusive evidence for the concrete existence of past-life experiences; neither is it possible to affirm that there is no reincarnation (Slavoutski, 2012). Thus, past-life phenomena in HB sessions do not necessarily indicate factual past life. Past-life reports, however, can be one of Grof’s main types of spiritual phenomena, and he imbued the phenomenon with significance and credence (Viggiano & Krippner, 2010; Yensen & Dryer, 1999). It is powerful in that practitioners are reexperiencing biographical and perinatal traumatic events, revealing the deeper transpersonal reality. They also have opportunities of being aware of their subconscious patterns and tendencies of thoughts and actions. It seems to be very like the yogic ideal, which is not suppression of unacceptable tendencies but transmutation of negative action and thought into positive action and thought (Frager & Fadiman, 2013).

According to Levee (2015), the biographical (or postnatal level) of the psyche is the “foundational platform recognized by traditional academic psychiatry and psychology” (p. 27).

He further explained that unlike Freud's assertion, which overstresses only biographical influence in human behavior and psychology, Grof's completion of newer cartography of human psyche challenged "the framework of traditional psychology and required a radical revision of the existing theories in order to account for the new information discovered through holotropic states" (Levee, 2015, p. 27).

Biographical (postnatal) domain. The first level of the human psyche is the biographical domain. Grof (2000) explained that "the biographical domain of the psyche consists of our memories from infancy, childhood, and later life" (p. 21). It is related to consciousness and unconsciousness, which is described by Freud and used by many forms of conventional mainstream psychiatry and psychotherapy. "It consists mostly of postnatal biographical material that has been forgotten or actively repressed. However, the description of the biographical level of the psyche in the new cartography is not identical with the traditional one" (Grof, 2000, p. 21).

Biographical material that emerges in NOSC is the reliving of unconscious cognitive, physical, emotional, or cellular memories of past traumatic events, not just remembering or recalling them (Holmes et al., 1996). Grof also discovered that emotionally relevant memories were not stored in the unconscious as a mosaic of isolated imprints, but in the form of complex dynamic constellations, the COEX system. Unfinished and repressed biographical trauma can be even more effectively healed in NOSC experiences through reliving them, as compared to remembering and talking about them.

Perinatal domain. The second domain is the perinatal. Grof (2000) has made a major theoretical contribution to understanding the perinatal experience of the birth process. The term perinatal is a combination of roots from Greek and Latin where the prefix *peri-* means "near" or "around" and the root *natalis* signifies "pertaining to childbirth" (Grof, 2000, p. 29). Grof (1985)

found that psychological problems or psychiatric disorders did not happen only in the biographical level, but also around the birth process.

This category is concerned with the trauma that happens to be related to the biological birth process of conception, gestation, and delivery. “More superficial layers contain memories of emotional or physical traumas from infancy, childhood, and later life. On a deeper level, each COEX system is typically connected to a certain aspect of the memory of the birth” (Grof & Grof, 2010, p. 15). The theory specifies that it is possible to relive those traumatic events around the birth process in NOSC induced by HB experience. Grof (2000) underlined the importance of the experiences in this domain by stating his belief that “the amount of emotional and physical stress involved in childbirth [often] surpasses that of any postnatal trauma in infancy and childhood discussed in psychodynamic literature” (p. 31). Reliving or reexperiencing biological birth in diverse aspects evokes very authentic and substantial transformation and often replays this process in intense vividness and liveliness.

Grof (2000) further categorized the experiences into four stages and referred to them as Basic Perinatal Matrices (BPM), which respectively have particular physical or psychological elements. To summarize, BPM I is the stage of intrauterine existence before labor begins. According to Grof, the fetus is not aware of boundaries and not able to distinguish the difference between the internal and the external world. The experience is analogous to the “*amniotic universe* . . . floating in the sea, identifying with various aquatic animals, or even becoming the ocean” (Grof, 2000, p. 37).

Grof (2000) also asserted that “when we are reliving episodes of intrauterine disturbances, memories of the ‘bad womb,’ we have a sense of dark and ominous threat and often feel that we are being poisoned” (p. 37). In an abnormal pregnancy, prenatal life may be a

toxic, survivalist experience—the mother may be an alcoholic, or there may be toxemia in the pregnancy. There may be an imminent miscarriage or even an attempted abortion. There may be violence in the environment, or the mother may be experiencing fear from war or other situational stresses that communicate themselves to the fetus. There is still much that is not known about this BPM I experience, but sometimes HB participants report helpful understandings about their lives after relived prenatal experiences.

BPM II is the stage of the beginning of labor, when there still is no dilation of the cervix. The experience of the second matrix is “the theme of descending into the depths of the underworld, the realm of death, or hell. . . . As Joseph Campbell (1968) so eloquently described, this is a universal motif in the mythologies of the hero’s journey” (Grof, 2000, p. 41).

Practitioners who experience this second matrix have a sense of timelessness mingled with helplessness, hopelessness, despair, guilt, loneliness or betrayal, and entrapment. “On a subtler level, the second matrix can also involve memories of severe psychological frustrations, particularly abandonment, rejection, deprivation, emotionally threatening events, and confining or oppressive situations in the nuclear family and later in life” (H. Bennett & Grof, 1993, p. 55).

In Grof’s (2000) description, BPM III starts as the cervix opens, contractions of the uterus deepen, and the fetus starts down the birth canal, experiencing pressure, pains, anoxia, and suffocation. This stage retains the most extended and convoluted experiential pattern as well as the genuine experience of reliving of diverse kinds of struggle in the process of going through the birth canal; for example, multifarious imageries “drawn from history, nature, and archetypal realms” (Grof, 2000, p. 46). It entails an “atmosphere of titanic fight, aggressive and sadomasochistic sequences, experiences of deviant sexuality, demonic episodes, scatological involvement and encounter with fire” (p. 46).

While this stage shares specific essential characteristics with the previous matrix on the biological level, particularly the continuation of uterine contractions and the overall sense of confinement, constriction, pressure, pains, anoxia, and suffocation, there are also distinguishing differences in that the cervix is open, allowing the fetus to move through the birth canal. The situation seems to be challenging and complicated, and a fierce struggle for survival intensifies, but there is often a feeling of hope and a belief that there will be an end to the struggle and that the suffering has a definite direction, goal, and meaning (H. Bennett & Grof, 1993; Grof, 2000).

The last stage of perinatal domain, BPM IV, is a phase of birthing, the death/rebirth experience, combined memories of the most basic birth-related events and the spiritual, mythological parallels. The biological basis for this stage is the culmination of the struggle in the birth canal, the moment of birth itself, and the situation immediately following delivery (H. Bennett & Grof, 1993). Experiencing a reliving of biological birth is common. Psychospiritual death and rebirth is not just a simple mechanical replay of the original biological events (Grof, 1985, 1988b).

The suffering faced in the previous matrices now culminates with “ego death” (H. Bennett & Grof, 1993, pp. 73-74; Grof, 2009, p. 57), a dramatic and catastrophic psychospiritual experience of total annihilation on all physical, emotional, intellectual, and spiritual levels, followed by the experience of feeling redeemed and blessed; experiencing ecstatic rapture; cosmic status; and being overcome by a surge of positive emotions toward ourselves, other people, nature, and existence in general (Grof, 2000).

Transpersonal domain. The last domain is the transpersonal. Humans are beyond being just biological entities, as seen from the etymological definition of *transpersonal*. Transpersonal theorists believe that humans have potentials that transcend the conscious egoic perception and

allow the experience of broader and higher states of reality. Snow (2014) explained that “*Trans* means beyond or through, and *personal* refers to the mask or façade presented to the world” (p. 246). In Grof’s (2000) words, the term transpersonal literally means “reaching beyond the personal” (p. 56) or “transcending the personal” (p. 56), and transpersonal experience is “experiential expansion or extension of consciousness beyond the usual boundaries of the body ego and beyond the limitation of time and space” (Grof, 1988a, p. 38).

As such, the experiences that originate on this level involve transcendence of our usual boundaries (our body and ego) and of the limitation of three-dimensional space and linear time that restrict our perception of the world in the ordinary state of consciousness. Therefore, it is essential to honor the full measure and depth of human experiences to understand the transpersonal phenomena and the inexplicable spiritual dimension of human nature (Braud & Anderson, 1998).

Thus, in spite of theoretical challenges, spiritual experiences can be seen as a developmental or remodeling momentum for the transformation of self, and transpersonal experiences encountered during HB session have therapeutic potential (Grof, 2000; Grof & Grof, 1989). Further, the transpersonal phenomena that are experienced in Grof’s (2000) NOSC through HB include, but are not limited to, (a) transcendence of linear time and the physical ego; (b) past life experiences; (c) contact with archetypes, other life forms, the mythological realm, and so forth; and (d) many other rich NOSC spectrum experiences beyond identification with normal egoic consciousness. Grof (1985) posited that many psychological problems, such as death anxiety or low self-esteem, may be resolved through experiencing the transpersonal domain of the human psyche (as cited in Holmes et al., 1996).

Philosophical Underpinnings—Perennialism and Participatory Perspectives

With regard to philosophical foundations, elements of HB, the technique to induce NOSC, have been adopted in diverse wisdom traditions and spiritual practices like shamanism's rites of passage and other kinds of rituals and ceremonies (Grof, 1996). In Grof's (2008) words, "many of its elements can be found in Eastern spiritual philosophy, various mystical traditions, shamanism, and in the history of psychoanalysis" (p. 173). Induction of NOSC in HB is linked to these technologies of the sacred—to the "pre-Western psychological framework of native and ancient rituals" (K. Taylor, 2011, p. 110)—with their theoretical contexts and lineages in both ancient and modern times (Grof, 1985, 2000).

Thus, Grof's (1985, 2000, 2012) discovery of NOSC and his development of HB contributed a great deal to his consciousness research, modern science, the evolution of Western psychology, and people's enhanced understanding of perennial philosophy and ancient wisdom. Grof's research and discoveries have been central to the development of transpersonal psychology (Ferrer, 2018), and were philosophically underpinned by perennialism (Ferrer, 2018; Grof, 1998a; S. Taylor, 2016). "In 1945, Aldous Huxley had practically reinvented the ancient phrase (*philosophia perennis*) to refer to a set of basic themes he had discovered at the root of all religions" (Combs, 2013, pp. 168-169). All the different wisdom traditions have authentic essences in common. There will be universal principles in aspects of spiritual reality. The perennial wisdom has gained validity through these commonalities that come from various religions (S. Taylor, 2012).

Similarly, Grof's consciousness research suggests that "traditional spiritual experiences, symbolism, and even ultimate principles can allegedly become available during special states of consciousness such as those facilitated by entheogens, breathwork, or other technologies of

consciousness” (Ferrer, 2018, p. 185). Grof (1998a) also noted that the holotropic experiences and the different dimensions of human psyche encountered in his consciousness research have not only been found in various spiritual and mystical contexts (viz., Vedanta, Hinayana and Mahayana Buddhism, Taoism, Sufism, Gnosticism, Christian mysticism, Kabbalah, etc.), but holotropic experiences can also be prompted by “technology of the sacred” (p. 7), which involves many early indigenous techniques, inclusive of drumming, rattling, bell or gong, chanting, dancing, breathing, and so forth.

According to Ferrer’s (2009, 2011, 2018) participatory perspective, there is a more recent perspective in transpersonal psychology. “The participatory perspective stresses the co-created nature of spiritual knowledge, the centrality of ‘emancipation from self-centeredness’ as criterion for making qualitative distinctions in spiritual matters, and respect for the irreducible diversity of spiritual traditions and individual spiritual paths” (as cited in Washburn, 2003, p. 2). “The participatory spirituality seeks to foster the harmonious engagement of all human attributes in the spiritual path without tensions or dissociations” (Ferrer, 2011, p. 8). In relation to Grof’s work, Ferrer (2018) specifically stated that Grof’s findings were not only grounded on “neo-Advaitin, monistic, esotericist-perspectival version of the perennial philosophy” (p. 181), but his “experiential data” (p. 181) could also correspond to the participatory perspectives that highlight the limitations of perennialism.

Transformational and Healing Potential of Each Component of HB

As previously stated, each constituent of HB, such as breathing technique, evocative music, artwork, and bodywork, as well as the structural format like dyad (sitter-breather relationship) and the framework of process (preparation-session-integration), have respectively transformative and healing power and are combined in order to induce holotropic states of

consciousness (Grof, 2019; Grof & Grof, 2010). The combination of these components enables practitioners to go through the process of self-exploration and self-empowerment naturally (Cervelli, 2009). Employing these combined resources, HB makes it possible to contact the domains of the human psyche (biographical, perinatal, and transpersonal), and further “to utilize the powerful mechanisms of healing and personality transformation that operate on these levels of the psyche” (Cervelli, 2009, p. 29). Thus, in this study, investigating the lineage and transformative and healing aspects of each component, which originated from sacred indigenous cultures of ancient times and spiritual wisdom traditions, will be significant in examining HB as an integrated therapeutic intervention.

Breath. In many cultures and traditions, “the act of breathing provides the foundation for spiritual self” (Young et al., 2010), and breathing technique has been an essential part of spiritual practices as a means of inducing NOSC with healing and religious purpose (Grof, 2014; Lee & Speier, 1996). The breath has been a crucial element to various shamanic cultures, including Native North and South American and African tribes; shamans “used alterations in breathing to guide them in diagnosis and healing of illness” (Lee & Speier, 1996, p. 367). Additionally, for the purpose of mindfulness cultivation and mind-body integration, both the conscious alteration of breathing and the natural rhythm of breathing are found in many spiritual traditions, such as Zen and other Buddhist practices (mindfulness of breathing), Taoist tradition (qigong or tai chi chuan; Lee & Speier, 1996), and Indo-Tibetan yoga and meditation (Brown & Gerbarg, 2009). Terms in different cultures for breath include *prana* (the sacred essence of life) in ancient India, *chi* (the cosmic essence and the energy of life) in traditional Chinese medicine, *ki* in Japanese spiritual practice and martial arts, *pneuma* (spirit or breath) in ancient Greece, *ruach* in old Hebrew tradition, to name a few (Grof & Grof, 2010; Lee & Speier, 1996).

Moreover, “since earliest history, virtually every major psychospiritual system seeking to comprehend human nature has viewed breath as a crucial link between the material world, the human body, the psyche, and the spirit” (Grof & Grof, 2010, p. 30). Grof and Grof (2010) mentioned that “profound changes in consciousness can be induced by both extremes in the breathing rate, hyperventilation and prolonged withholding of breath, as well as by using them in an alternating fashion” (p. 31). The continuous and deep breathing in prolonged HB sessions produces “oxygen and subtle energy to flood the body, often causing therapeutic experiences” (Esser, 2013, p.106). Although accelerated breathing or hyperventilation is regarded as a pathological syndrome in the modern materialistic world, breathing had revered value in preindustrial times; it was believed that breath was linked with the human psyche and spirit, and could induce the change of human consciousness (Grof, 2014; Grof & Grof, 2010).

Hyperventilation can serve to lower psychological defenses and discharge unconscious tensions, with accompanying psychological and psychosomatic transformation (Grof, 1988a; Grof & Grof, 2010). Thus, on the basis of these understandings, “Western therapists rediscovered the healing potential of breath and developed techniques that utilize it” (Grof & Grof, 2010, p. 32): for example, the ancient pranayama technique of Shabad or Sudarshan Kriya yoga, which was reintroduced in modern times; practices of meditation techniques such as “transcendental meditation (TM), mindfulness meditation (or Vipassana, which is the basic technique in the mindfulness-based stress reduction program), and Herbert Benson’s relaxation response technique” (Khalsa, 2007, p. 451).

Grof (1988a) explained that holotropic breathing technique was developed by experimenting with both ancient spiritual practices and methods used by Western therapists. HB does not involve a detailed breathing technique. Rather, it is somewhat dependent upon

practitioners' own rhythm of breath, requiring only circular and connected breathing (continuing circle of inhalation and exhalation) and a slightly deeper and faster than usual breathing. That alone helps practitioners focus on their inner process and trust themselves in the process. Grof and Grof (2010) specifically noted,

We have been able to confirm repeatedly Wilhelm Reich's observation that psychological resistances and defenses are associated with restricted breathing (Reich 1949, 1961). Respiration is an autonomous function, but it can also be influenced by volition. Deliberate increase of the pace of breathing typically loosens psychological defenses and leads to a release and emergence of unconscious (and superconscious) material. Unless one has witnessed this process or experienced it personally, it is difficult to believe on theoretical grounds alone the power and efficacy of this approach. (p. 32)

Music. According to Grof and Grof (2010), the effect of breathing in HB is intensified by evocative music. "The combination of music with faster breathing has remarkable activating effect on the psyche and consciousness-expanding power" (p. 35). The rhythmic and melodic flow of music, which is spontaneously attuned with the breathing pattern, facilitates practitioners' full and rich experiences and "creates a carrying wave that helps the subject move through difficult experiences and impasses, overcome psychological defenses, surrender, and let go" (Grof, 1988a, p. 185). Furthermore, Grof (1988a, 2019) emphasized the importance of surrendering to music flow and allowing resonance in the body with letting go of any logical thought process.

Across cultures and regions, music has been utilized as a means to induce trance in the settings of rituals and ceremonies for healing, usually being combined with percussion, vocals, and bodily movement. A music set for HB sessions has a particular structure and flow associated with the different emotional and rhythmic intensity along the phase and wave of sound. Thus, a music set for HB sessions essentially includes percussion rhythm, emotional melody, and meditative or contemplative composition with sacred music or natural sound. The general

structure of the musical progression and its extraordinary potential for psychotherapy was discovered during the research with LSD and in the program of psychedelic therapy at the Maryland Psychiatric Research Center in Baltimore, Maryland (Grof & Grof, 2010). Such a structural principle and choice of music is originated from native cultures and practices of various religions and has been developed in a heuristic and experiential way in modern practice. For example, electronic music and songs with understandable verbal content are not generally recommended because they may keep practitioners from concentrating on their inner work.

Music plays a crucial role in HB by (a) supporting and driving breath; (b) entrancing; (c) mobilizing emotions associated with repressed memories, bringing to surface and uplifting or externalizing emotions; (d) accessing the unconscious; (e) relaxation or facilitating to surrender; and (f) fostering the healing process (Grof & Grof, 2010). In HB practice, music is indispensable to help practitioners surrender and naturally and spontaneously resonate with it in their body.

The process is well described below:

In Holotropic Breathwork, one has to give full expression to whatever the music is bringing out, whether it is loud screaming or laughing, baby talk, animal noises, shamanic chanting, or talking in tongues. It is also important not to control any physical impulses, such as bizarre grimacing, sensual movements of the pelvis, violent shaking, or intense contortions of the entire body. (Grof & Grof, 2010, p. 34)

Artwork (mandala drawing). The Sanskrit word *mandala* means circle, or completion, implying the whole, the universe, or the central point to which everything is related and surrounded (Grof, 1993; Grof & Grof, 2010; Jung, 1959/1972; Quinn, 2014). Mandala drawing in the context of HB is not subject to analysis or diagnosis, but only utilized as a means of subjective reflection of the inner self (Grof & Grof, 2010). “A mandala is the container for psychological meanings and images projected into it, and it is the basis of the religious mandalas used in Tibetan Buddhism, Hinduism, and Native American cultures” (Quinn, 2014, p. 3).

Mandala originated in India, spread into Tibetan practice (Tucci, 2001) and Shingon Buddhist tradition in Japan, and is found in Buddhist and Hindu practice and Jain ritual cultures (Cort, 2010). “Mandalas in Buddhism are particularly associated with the Tantric or Vajrayana Buddhist schools of central and east Asia” (Cort, 2010, p. 75). Mandala has its ontological roots in esoteric Buddhist or Hindu nondualism, and yet, its “symbolism is found in a wide array of exoteric contexts” (Cort, 2010, p. 77). Jung (1959/1968, 1959/1972) emphasized the role of the mandala as inner spiritual transformation and defined it as the psychologically represented archetypal form of the unconscious self. Jung also stated that “the severe pattern imposed by a circular image of this kind compensates the disorder and confusion of the psychic state—namely, through the construction of a central point to which everything is related” (Jung, 1959, as cited in Grof, 2019, p. 373).

In HB context, as the first part of the integration process after a breathing session, the practitioners are ushered into the mandala room, which is furnished with various art supplies. No specific guidelines are given for drawing a mandala (Grof, 2019). Practitioners are presented simply with an empty circle on a drawing paper, which they are invited to complete in any way inspired by their experience in the session; for example, “some people simply produce color combinations, others construct geometric mandalas or figurative drawings and paintings” (Grof, 2019, p. 377). Other than mandala drawing, practitioners can even choose the different forms of artwork, such as SoulCollage® (Frost, 2010), sandplay (Kalff, 2004), and writing a poem. In the later part of the day, the participants’ unique mandalas or the other forms of artwork are brought to the circle of sharing session and shared to externalize and reveal their experiences. Unlike most other psychotherapeutic practices, however, facilitators do not directly engage in this process but only encourage mutual respect, decency, deep listening, confidentiality, or trust in

the group, and refrain from interpreting the participants' experiences. The experienter is the only "ultimate expert as far as his or her experience is concerned" (Grof, 2019, p. 378). "Across time and culture, the arts urge to enter the transpersonal and redefine conception of who we are and who we can be" (Herman, 2013, p. 653). Mandala drawing is the most essential and integral part in the integration process of HB practice by serving as a means of expressing in-depth HB experience and accessing NOSC (Cervelli, 2009; Grof, 1988a).

Bodywork. Bodywork, as practiced in HB, is a process in which trained facilitators help practitioners to release residual emotional and physical distress and discomfort only when requested by practitioners (Brouillette, 1997; Grof, 1988a). Grof and Grof (2010) claimed that even though faster and deeper breathing has the possibility of causing intense psychosomatic and psychological responses in HB sessions, bodywork is noncompulsory and optional because not all practitioners necessarily require bodywork. Individuals have their own different physical reactions to the sessions and distinctive interpretations of the psychological meaning of the reactions.

Nevertheless, Grof and Grof (2010) explained the importance of bodywork by stating that the repetitive experiences of HB sessions over a long period of time result in the chemical change of the organism and diminish the emotional intensity and bodily tensions because the practices promote the release of the blockage of both physical and emotional energies that are closely linked to a variety of catastrophic or traumatic memories. The release (i.e., abreaction or catharsis) involves physical and mental senses of liberation, cleansing, or resolving of chronically inherent tensions (Grof, 1988a).

Thus, this elective bodywork helps practitioners to complete the release of the unresolved physical tensions and discomfort that are associated with residual yet unexpressed emotional

repression. However, the application of bodywork is not just an external intervention using particular therapeutic techniques; rather, it is following the breather's unconscious processes without the facilitator's or the breather's conscious choice (Grof & Grof, 2010). In HB sessions, breathers have full control of their own process and the right to ask for or stop any engagement of bodywork.

Therapeutic Potential of Psychedelics

Even though the psychological effect of psychedelics is not a focus of this study, a brief review of it may help in understanding HB, insomuch as the birth and development of HB is ascribed to the discovery of the therapeutic potential of psychedelics, specifically LSD. The discovery of LSD triggered the increase of psychedelic research from 1938 until its use was banned. Even professional scientific investigations and clinical applications were at a "stand-still due to the souring of public sentiment" (Moreton, Szalla, Menzies, & Arena, 2020, p. 22) and illegalized in the late 1960s (Friedman, 2006). Tupper, Wood, Yensen, and Johnson (2015) commented that since then,

Most psychedelic substances have been classified as "drugs of abuse" with no recognized medical value. However, controlled clinical studies have recently been conducted to assess the basic psychopharmacological properties and therapeutic efficacy of these drugs as adjuncts to existing psychotherapeutic approaches. (p. 1054)

Psychedelic substances "includes a range of substances with varying pharmacological profiles that all have strong effects on conscious experience" (Tupper et al., 2015, p. 1054) and "can produce a broad range of effects in perception, emotion, cognition, and sense of self (Swanson, 2018, p. 172). Aaronson and Osmond (1970) stated,

The technology of drugs is one of the oldest technologies and probably began when our ancestors browsed their way through the forests and found that, among the foods they sampled, some produced interesting changes in how they felt, how they perceived, and how they could accommodate themselves to the world. Substances that alter consciousness are found in use among probably all the peoples of the world. (p. 4)

As such, these substances have long been used for ceremonial, therapeutic, and cultural purposes in human history (Tupper et al., 2015), but the term *psychedelic* was coined in 1957 by Humphry Osmond to describe mind-expanding drugs (Aaronson & Osmond, 1970) and to “define a group of substances with potent psychoactive properties that had previously been called by more pejorative names, such as hallucinogenics (i.e., causing hallucinations) and psychotomimetics (i.e., mimicking psychoses)” (Williams, as cited in Friedman, 2006, p. 39). *Psychedelic* etymologically means mind-manifesting (Friedman, 2006), and stems from the Greek words *psyche* (mind) and *delos* (clear or brought to light; Moreton et al., 2020).

Despite many different and ambiguous classifications for psychedelics, it is broadly accepted that *classic* psychedelics include “psychoactive drugs that exert their psychedelic or consciousness-altering effects” (Ross, 2018, p. 317) such as psilocybin (mushroom) and LSD (synthesized agent) and naturally occurring compounds such as mescaline (found in peyote) and DMT (dimethyltryptamine, found in ayahuasca), but exclude the entactogens such as amphetamine and cocaine (Friedman, 2006; Swanson, 2018; Tupper et al., 2015). Grinspoon and Bakalar (1979) defined psychedelics as nonaddictive substances that produce a cognitive or perceptual change similar to dreams, memory flashbacks, psychoses, and religious ecstasy, without causing physical or psychological addiction.

As Freud regarded dreams as a *royal road* to the unconscious, Pollan (2018) suggested psychedelics as a *superhighway* (Moreton et al., 2020). “Numerous studies also emphasized psychedelics’ tremendous potential for exploring ordinarily inaccessible inner psychological states” (Friedman, 2006). In that context, despite the uncertainty of clinical utility or psychological mechanism of the effect of psychedelics, a large number of studies have found that the therapeutic approach using psychedelics produces sustained improvement on psychological

well-being (Tupper et al., 2015) in terms of connectedness, meaning, and death transcendence from transpersonal or existential-humanistic perspectives (Moreton et al., 2020). Moreton et al. (2020) also suggested that “the ability of psychedelics to help resolve mortality concerns may be an important mechanism involved in many of their therapeutic effects, even in individuals without life-threatening illness” (p. 28). Furthermore, the use of psychedelics also increases spirituality with enhanced emotion regulation and mental health in situations involving anxiety, depression, addiction, Posttraumatic Stress Disorder (PTSD), or eating disorder.

Despite the methodological concern with psychedelic study and political challenges, the scientific interest in the therapeutic paradigm of psychedelic medicine is reemerging, prompting a search to find scientific evidence of its psychological and clinical effects in the treatment of mental illness (Tupper et al., 2015). Further studies on psychedelic effects from diverse perspectives and methodological approaches, including pharmaceutical, neuroscientific, humanistic, or transpersonal psychology, will not only promote a better understanding of the transformational or psychological effect of NOSC but also suggest a newer therapeutic possibility for mental well-being.

Studies on Psychological Effects of HB

On the basis of the aforementioned historical background and theoretical and practical fundamentals, the transformational effects of HB have been empirically studied in different contexts. Following are descriptions of studies by Binarová (2003), Brouillette (1997), Hanratty (2002), Holmes et al. (1996), Miller and Nielsen (2015), Puente (2014), and Pressman (1993).

Puente’s study. Puente (2014) conducted the pilot study with a similar topic as the present study. The study aimed to investigate the effects of HB in personal orientation, meaning of life, and death anxiety using six “psychometric measures” (Puente, 2014, p. 52): the Brief

Symptom Inventory (BSI), PIL, the Death Anxiety Scale (DAS), POI, the States of Consciousness Questionnaire (SCQ), and the Brief Persisting Effects Questionnaire (BPEQ), before and after a week-long workshop. The design employed for the study was single-group pre-post measurements; a convenience-based sampling method was used by recruiting participants from a week-long HB and Vipassana meditation program. Pretest (tested on the first day of the week-long workshop, $N = 29$) was completed before HB sessions, Post1 and Post2 test ($N = 16$) were conducted respectively after 1 month (Post1) and 6 months (Post2) after the workshop, and BPEQ was measured 12 months after the workshop ($N = 10$). The mean, standard deviations, and the paired *t*-test comparison were measured for Pretest, Post1, and Post2, and the mean score and standard deviations of the SCQ were probed during the workshop. The findings presented that the practice was possibly useful in initial therapeutic aspects; some meaningful changes on measures, especially in subscale *Time Competence (TC)* of *POI* (a measurement of self-actualization level), were found, even though the significant changes in overall measurements across time were not found. The study also suggested that “mystical-type or peak experiences” (Puente, 2014, p. 59) can intermittently be induced by HB practice.

Puente’s (2014) pilot study was meaningful in attempting to substantiate the effects of HB empirically using quantitative research methods. However, the statistical power of the study is not only limited, with relatively small numbers of 16 participants, inconsistency, and high attrition across the time of tests, but the statistical analysis method also seems to have improperly been applied. The *t*-test used in the study is not appropriate for single-group comparison. The repeated measures ANOVA (Analysis of Variance) is considered to be more suitable. Moreover, there was a validity issue in that the workshop was not composed of only HB sessions but mixed

with Vipassana meditation. This may imply that the independent variable, HB practice, might not be guaranteed to directly relate to the dependent variables, the scales from questionnaires.

Binarová's study. Binarová (2003) also conducted an empirical study to investigate the effects of HB on personality. The study design and methodological approach are different from the present study, but it used the same scales, POD and PIL, which are a part of the measurement instruments of the present study, to examine the effect of HB. Eighty-one participants were divided into three different groups (*36 breathers*, *34 non-breathers*, and *11 first-breathers*) and measured using the scales such as PIL, Value-Belief Q-Sort, and Personal Orientation Dimensions (POD). The *breathers* group comprised practitioners who had had HB sessions at least four times, the group of *non-breathers* was composed of individuals who never had the practice, and the *first-breathers* group consisted of the participants who had been tested before and after their initial HB session for the study.

The test was also divided into two independent segments: (a) the comparison between two groups, *breather* and *non-breather*; and (b) comparison between pretest and posttest scores of first breathing. Additionally, the *first-breathers* were not only asked to fill in Ditman and Haymans' questionnaire to collect the subjective experiences of participants, but *breathers* were also asked to describe their experience in detail.

The result revealed that (a) *first-breathers* showed a significant improvement in PIL and noteworthy reduction of rigidity and dogmatism; (b) *breathers* were less rigid and dogmatic, but did not have significantly better satisfaction in PIL compared with the *non-breathers*; and (c) *non-breathers* exhibited positive change in their attitude towards unusual comprehension of reality with not only being more flexible, autarchic, independent of other people's attitudes,

sensitive to their feelings and needs, and spontaneous, but also more able to enjoy the present moment, a higher self-esteem, and warm interpersonal relations.

Even though Binarová's (2003) study suggested that HB turned out to be useful for its experiencers in their "personality properties, attitude, and value" (p. 413) orientation, the researcher pointed out that the study could not clearly validate whether the changes were caused by HB sessions or by the innate personality of the individuals who were drawn to join the session. Besides, despite the research attempt with the articulated and mixed methods of the study with many participants, it was limited in providing readers with enough information about the details of the study: demographic information, sampling technique, and data collection and analyses. For the qualitative parts of the study, five snippets of testimonies from participants were suggested, and no specific analyses with a certain qualitative approach were included.

Holmes et al.'s study. Another study by Holmes et al. (1996) examined the relationship between HB practice and therapeutic effects "in levels of distress associated with self-identified problems, death anxiety, self-esteem, and sense of affiliation with others" (p. 125) by comparing HB and experientially oriented therapy (EOT; Rock et al., 2015). Even if their study did not directly involve the same measurements of psychological well-being as the present study, it is relevant in terms of its empirical examination of the therapeutic efficacy of HB.

Forty-eight participants (all adult Caucasians) were recruited via referrals by clinicians who were practicing "experientially oriented verbal psychotherapy" (e.g., Gestalt Therapy, Dynamic Therapy; Holmes et al., 1996, p. 116). The study compared two groups, *breathwork group* ($N = 24$; 5 males, 19 females) and *therapy group* ($n = 24$; 8 males, 18 females), using measurement scales such as Death Anxiety Scale (DAS), the Affiliation subscale of the Personality Research Form-E (Aff. Scale), and the Abasement subscale of the PRF-E (SE Scale).

While the participants in the *breathwork group* participated in both weekly experientially oriented therapy and additional monthly HB sessions for 6 months, those in the therapy group participated only in ongoing weekly experientially oriented psychotherapy. *The breathwork group* had a mean of 82.7 months of psychotherapy and a mean of 7.6 sessions of breathing. The *therapy group* received a mean of 55 months of psychotherapy prior to the participation in the study.

Both groups of Holmes et al.'s (1996) study were administered tests with the scales three times: before the beginning of *breathwork group*'s 6 months of breathing sessions (pretest), after 3 months (posttest 1), and 6 months (posttest 2); however, the *therapy group* additionally completed the fourth test after having received 6 weeks of extra therapies to equalize the attentions with the *breathwork group*'s six breathing sessions.

The repeated analyses with Multivariate Analysis of Variance (MANOVA) disclosed that despite no significant differences between groups on self-identification and affiliation, the *breathwork group*'s reduction in death anxiety and increases in self-esteem, compared to the *therapy group*, implied the therapeutic usefulness of experientially oriented therapy and breathwork. Notwithstanding the meaningful endeavor of the study, the study design and its operationalization did not entirely assure the internal, external, and concurrent validity in the sense that the division criteria of participant groups were not consistent in the levels and intensities of their experiences, and randomization and control groups were not considered in the study.

Pressman's study. Pressman (1993) conducted a similar exploratory and experimental study to look into the psychological and spiritual effects of HB practice by specifically measuring Personal Orientation, Levels of Distress, Meaning of Life, and Death Anxiety from a

pretest-posttest comparison. Participants comprised 40 volunteers who were recruited via an advertisement at a counseling center. The participants were randomly assigned to two different groups, a *treatment group* and a *control group*, with a matched distribution of demographic variables (e.g., age, gender, race, and occupation) after a psychiatric screening of any problematic emotional stability.

The *treatment group* experienced six biweekly HB sessions with full essential elements of music, breathing session, integration through the artwork of mandala drawing, and elective bodywork, while the *control group* received six biweekly sessions with only the music of HB elements without using breathing technique and the other components of HB practice. In addition, in the way of complementing the quantitative approach, interviews for six participants (three randomly chosen from each group) were also conducted after each session.

The measurements of instruments for psychological and spiritual effects in Pressman's (1993) study were administered before and after the six sessions. The quantitative assessment using three questionnaires demonstrated a partial validation of the effects by showing a higher reduction in psychiatric symptoms and a significant difference in mood states in the *treatment group*. However, concerning validity and reliability issues, the researcher himself admitted that the sample size was not big enough to assure the statistical significance with the possible "Type-I error" (Field, 2018, p. 67; Jackson, 2016, p. 191). Likewise, the qualitative approach with the postinterviews of six participants, who were randomly selected, seems also to be limited in fully addressing and generalizing the claim of the study.

Brouillette's study. Another study that is closely related to the topic of the present study is Brouillette's (1997). Brouillette conducted a study to probe the transformational and healing effects of HB employing a mixed quantitative and qualitative research method. Qualitative

approach (i.e., interviews three times, group sharing, case studies, and self-evaluation) was applied to discover how participants perceived their experiences of HB sessions and whether those experiences were perceived as transformational or healing by themselves. In addition, quantitative research of using the Life Changes Questionnaire (LCQ; Ring, 1984) was administered to verify if the participants regarded the experiences as entailing any life changes, and whether the changes, if any, could be sustained over 6 months.

Participants comprised 34 practitioners (9 males, 25 females; average age 49; 17 from the U.S., 17 international) who joined the 2-week-long Certification Intensive training module to graduate as certified facilitators of HB practice. Therefore, they were all highly experienced practitioners who had already practiced at least 23 sessions of HB for 2 to 6 years (average 3 years).

Brouillette (1997) found through his qualitative content analysis that the practitioners' experiences were perceived as transformational and healing extensively at physical, intellectual, emotional, and spiritual levels, with self-reports inclusive of improved physical health, physical sense of embodiment, the development of observing self, diverse emotions, emotional release and integration, and psychospiritual or transpersonal changes of feeling: "more trust, power, confidence, acceptance, compassion, and integration" (Brouillette, 1997, p. 306). Further, the findings from quantitative data analysis with LCQ showed that HB practice facilitated the changes in their attitudes, especially in three domains of participants' interests: self-worth, sense of the sacredness of life and purpose, and compassion and love for others. In addition, most of the changes reported at the time were consistent over 6 months.

Brouillette's (1997) research covered and was presented from an extensive scope of data analysis. However, the study can be challenged by the following issues in terms of internal and

external validity. First, in the participant selection process, all the participants were highly experienced practitioners and, moreover, prospective facilitators who had gone through multiyear training. It would not be difficult to assume that they were very committed to the practice and might put full confidence and trust in the process. As such, their commitment might affect self-reported data. In particular, data from self-evaluation, which was “a requirement of the training program for their admission into the certification module” (Brouillette, 1997, p. 149) and submitted to the authority to issue the certifications, might not guarantee the validity. Second, since LCQ was designed for Near-Death Experiences (NDE), the comparison with the reports from NDE-ers without in-group comparison/analysis seemed not to be adequate for the study.

Hanratty's study. Hanratty's (2002) research examined the effects of HB in psychological distress, death anxiety, and repression by using the combined quantitative and qualitative research methods of single group pre- and posttest study design. Participants comprised 44 adults (32 females and 12 males; mean age 48.7 years; high level of education, 100% college level or higher).

The measurements of participants' personality and psychological distress were administered before and after a 1-week-long HB workshop using scales such as the Tellegen Absorption Scales (TAS [pretest only]; Tellegen & Atkinson, 1974), Marlowe-Crown Social Desirability Scale (Crowne & Marlowe, 1960), Positive and Negative Affect Schedule (PNAS; Watson, Clark, & Tellegen, 1988), Death Anxiety Scale (DAS; Templer, 1970), and the Brief Symptom Inventory (BSI; Derogatis & Spencer, 1987). A follow-up measurement ($N = 22$) was also administered after 6 months. The study implemented repeated measures ANOVA to analyze

the pretest and posttest scores on all the measures of the study except DAS (due to the problem of data missing).

According to the findings from the Hanratty's (2002) study, the participants showed (a) higher scores on the TAS and Marlowe-Crown Social Desirability Scale than average general population; (b) significant posttest reduction in Negative Affectivity (NA) and psychiatric symptoms; (c) at follow-up test after 6 months, the reduction in psychological distress and psychiatric symptoms were still sustained, but the reduction in NA (was not significant, and Positive Affectivity (PA) score significantly dropped; (d) no difference found in DAS; and (e) in subjective responses to questionnaires, many participants reported they felt calmness, peacefulness, relaxation, revitalization, or being "cleared out" (Hanratty, 2002, p. 95) after their HB sessions.

Hanratty (2002) concluded that HB had a positive and beneficial impact on practitioners' emotional and psychological state, and hence judged it to be an effective psychotherapeutic approach. Hanratty's study has strength in terms of its broad approaches and wide-ranging findings by employing relatively various scales and a questionnaire, as well as its attempts to investigate longer term effect of HB. However, the study was a bit unfocused by many research hypotheses and questions. The other weak points are that the study partially added correlational analyses, but the sample size for correlational statistics seems to be small, and the response rate at the follow-up test diminished to 50% ($N = 22$) of the original sample size ($N = 44$).

Miller and Nielsen's study. Miller and Nielsen's (2015) quasiexperimental pilot study scrutinized the therapeutic value and the significance of HB in developing self-awareness by employing pre-, during, and posttest design. Participants ($N = 20$; 11 females, 9 males; mean age 44.25 years; 9 new-breathers [0-HB group], 11 experiencers [Exp-HB group] with mean 6.5

sessions) were recruited by HB facilitators' referral and advertisement on their websites, excluding volunteers who had "previous HB experiences with the researcher or contraindications for HB as specified by the HB facilitators" (Miller & Nielsen, 2015, p. 797). Participants joined two weekend workshops. Each workshop had two HB sessions and was held with a 12-week interval. Thus, every participant involved had four HB sessions.

Three questionnaires, such as Temperament and Character Inventory (TCI-R), Inventory of Interpersonal Problems (IIP), and Symptom Checklist (SCL-90-R) were applied for the study. TCI-R was used for measurement of temperaments (i.e., novelty-seeking, harm avoidance, reward dependence, and persistence) and character scale (i.e., self-directedness, cooperativeness, and self-transcendence). IIP was chosen to assess levels of interpersonal mental distress. SCL-90-R was applied to evaluate the extent of symptoms (i.e., somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism).

The analyses using "the nonparametric Wilcoxon T test" (Miller & Nielsen, 2015, p. 797) showed that interpersonal problems measured by TCI-R and interpersonal mental distress measured by IIP were significantly reduced. While the 0-HB group showed a significantly high reduction in temperament score on novelty-seeking, which indicates "a lower risk of immaturity" (Miller & Nielsen, 2015, p. 802), the Exp-HB group showed a significant increase in self-transcendence (higher self-awareness). The 0-HB group showed high persistent temperament scale, which implies that "HB can induce significantly large beneficial temperament changes" (Miller & Nielsen, 2015, p. 802).

Miller and Nielsen (2015) summarized the respective validity issues by mentioning low external validity and high internal validity in their study. They claimed that the research was

weakened by a relatively small sample size in spite of multiple comparisons between groups, and strengthened by using validated sources of questionnaires and statistical methods.

Summary of empirical studies. Seven empirical studies that were considered to be relevant to the present study were reviewed. All the aforementioned studies were comparable with this study in that they focused on the therapeutic and transformative effects of HB using either a quantitative research approach or mixed methods. Hanratty's (2002) study partially included correlational study design for a correlational matrix of only pretest scores. Four studies (Brouillette, 1997; Hanratty, 2002; Pressman, 1993; Puente, 2014) employed single-group, pre/posttest-type design; two studies (Binarová, 2003; Holmes et al., 1996) used comparison between groups; and one study (Miller & Nielsen, 2015) used both pre/posttest and comparison between groups. The main scale used in the present study, POI, was chosen in two studies (Binarová, 2003; Puente, 2014) as an instrument of their measurement; PIL was also selected in one study (Binarová, 2003), but QOLS was not found in any studies reviewed.

However, the studies summarized here were dissimilar to the present study in that they failed to substantiate the correlation between the committed intimacy of HB practice and indicators of positive psychological transformation and orientation. The studies summarized did not represent the entire research on the topic of this present study or all relevant ones because the studies on the effect in the treatment settings for psychological or psychiatric mental illnesses were excluded. Despite the academic endeavors thus far by the researchers as specified above, the empirical study on HB is still in the incipient phase. Among seven studies, three were dissertations for a doctoral degree and two were pilot studies. Further academic inquiries are anticipated, insomuch as the population of HB practitioners and facilitators is increasing

worldwide. The increase in numbers of facilitators may accelerate HB's universality and accessibility to the wider population.

Summary

HB involves the practice and process of looking into a deeper dimension of the inner self across the different domains of the human psyche. Even if transpersonal experiences are mostly subjective, ineffable, indescribable, interpretive, complex, and experiential, transpersonal psychology has been employing not only the methods of the descriptive, the exploratory, the phenomenological, and the like, but also the standardized conventional psychological measurements and certain therapeutic methods that conventional science advocates.

Many scientific and empirical approaches have provided the answers to inquiries related to the interventions using the spiritual dimension of human nature or NOSC, and moreover, corroborating their efficacy and usefulness in psychological well-being, spiritual growth, and therapeutic aspects. Furthermore, academic endeavors to substantiate NOSC play an indispensable role as a foundation upon which future studies may be built and gain full acceptance. Indebted to these efforts and accomplishments, HB, as a means of the radical self-empowerment and self-discovery, deserves to be investigated as a technique that facilitates healing and the processing of unsurfaced experiences.

Chapter 3: Research Methods

General Study Design

The central purpose of the study was to examine the relationship between (a) *period* and *number* of HB practice, given by participants' self-reports; and (b) psychological well-being, given by scales for measurement of quality of life, self-actualization, and meaning of life. The study employed a nonexperimental, correlational research design (Creswell & Creswell, 2018; Field, 2018; Mertens, 2010), which was suited for examining the associations between independent variables (i.e., *number* and *period* of HB practice) and dependent variables (i.e., the scores on the POI [Shostrom, 1964], PIL [Crumbaugh & Maholick, 1964], and QOLS [Flanagan, 1978]).

The reason the study employed a quantitative correlative method was that there have not been many quantitative studies to examine therapeutic or transformational effects, let alone to measure the long-term effects of HB as a transpersonal practice. Furthermore, given that no correlational study on this topic has been found, the first academic attempt to corroborate the relationship between the variables can be a fundamental research task in progressing future consequential studies to prove causality between them.

According to Anderson and Braud (2013), the primary concern in transpersonal research has been to look into transpersonal experiences and the effect of the experiences on human development. In addition, Anderson and Braud claimed that quantitative research methods are appropriate for exploring the process or outcome of transpersonal experiences, and specifically, useful for examining the emergence, development, attributes/quality, catalyst, impedance, or effect of the transpersonal experiences. They further suggested that among many quantitative approaches using accredited psychometric assessments, correlational designs are especially

efficient for determining “which factors might covary with or set the stage for transpersonal experiences, and which types of persons or types of preparations tend to foster or interfere with certain experiences” (Anderson & Braud, 2013, pp. 242-243).

From that perspective, this study specifically measured “correlational statistics” (Creswell & Creswell, 2018, p. 12), or Pearson product-moment correlation coefficient (Pearson’s r), to investigate how independent variables (i.e., explanatory or predictor variable) and dependent variables (i.e., outcome or criterion variable) were associated with and related within participants’ groups (Creswell & Creswell, 2018; Field, 2018; Jackson, 2016). This measurement of correlation presents the degree of linear dependence between the independent variables and dependent variables (Snow, 2009). Results from correlative method only demonstrate correlational tendency with “the magnitude or strength of a relationship” (Jackson, 2016, p. 149) between the variables and do not necessarily establish causality (Creswell & Creswell, 2018; Field, 2018; Jackson, 2016; Pyrczak & Oh, 2018).

According to Mertens (2010), “correlational studies can be either prediction studies or relationship studies” (p. 161). As such, this present study focused on finding prediction as well as an association or relationship. In correlational research, the causality from correlational data is not able to be presumed, and only aimed to establish “the relationships between measures of different variables obtained from the same individuals at approximately the same time to gain better understanding of factors that contribute to a more complex characteristic” (Mertens, 2010, p. 161).

Furthermore, correlation coefficients also make it possible to make predictions from one variable to another (Jackson, 2016). “Correlations between variables indicate that when one variable is present at a certain level, the other also *tends to* be present at a certain level” (Jackson,

2016, p. 158). However, it does not mean a guaranteed prediction nor a causal relationship; it only suggests tendency with a certain degree of accuracy in accordance with the magnitude of relationship.

Participants

Grof Transpersonal Training (GTT) publishes an international database of 1,225 certified HB facilitators, with names, postal and email addresses, and certification date. However, the accurate number of practitioners can hardly be presumed because GTT only maintains and manages the list of certified facilitators, and those facilitators run their own workshops on their authority. Thus, the sample of 119 participants was not representative of the whole population.

With respect to the sampling of participants, “convenience sampling” (Etikan, Musa, & Alkassim, 2016, p. 1) and “purposive sampling” (p. 2) methods were used to recruit participants. Convenience sampling involves recruiting participants who are easily accessible with spatiotemporal proximity; purposive sampling (i.e., judgment or subjective sampling) is another nonrandom sampling technique that recruits participants based on their willingness, knowledge, or experiences about the study (Bernard, 2002). No particular exclusion or screening process was applied to this study. Any practitioners who had ever partaken in HB practice at least one time were eligible for participating in this study. Because the population of the present study comprised HB practitioners, the chosen nonrandom samplings for this study might be more pertinent than random sampling methods, in spite of the possible threat of selection bias.

Participants were primarily recruited from the certified facilitators and HB practitioners who had ever participated in week-long HB training modules or 1-day workshops. The other ways of recruiting participants included using the researcher’s personal contacts and database of

certified facilitators, posting on Facebook Community and website of the facilitator community, word of mouth, announcements in community newsletters, and referrals from practitioners.

Concerning sample size, Hill (1988) noted that in correlational research, at least 30 participants are required to establish a relationship. Mertens (2010) suggested that “the recommended number of participants per variable is 15 at a minimum” (p. 164). VanVoorhis and Morgan (2007) suggested that “the general rule of thumb is no less than 50 participants for a correlation” (p. 48). With more intricate detail of formulae, both Green (1991) and Harris (1985) similarly proposed that the minimum number of participants for correlational study should exceed 50. Thus, in reference to those studies and with consideration of the numbers of variables of this study and significant statistical power, the sample size was initially aimed to be 100 and final achievement was 119 participants.

The prospective participant list was gathered from the database of GTT, the researcher’s contacts who had attended HB training modules, and other online communities. For external validity, the participants were recruited from multiple locations: a balanced selection from facilitators, week-long retreat participants, and 1-day workshop participants. No ethnographical, cultural, religious, or geographical aspects were considered in the sampling process.

Procedure

First, the study was reviewed and approved by the Research Ethics Committee of Sofia University in Palo Alto, California. Next, prospective participants received an initial invitation email with solicitation notice. The initial email contained the Informed Consent for participants (see Appendix A), a flyer (see Appendix B), and a research summary (see Appendix C). Subsequently, participants who consented received a follow-up email with the link to a web-based survey software (e.g., SurveyMonkey for PIF, QOLS, and PIL; Educational & Industrial

Testing Service [EdITS] site for POI). For POI, participants were asked to create their sign-in credentials and passcode so that they could refer securely to their test result summary later.

The surveys and demographic questions were expected to take 60 minutes to complete. The largest component of the time was the POI, which was expected to take 30 minutes to finish. Although it was a considerable time investment, participants were rewarded with a gift card (see Appendix B) and a detailed individual summary of the POI from the test service institute, EdITS. As the POI assessment of EdITS was a charged web service, the institute provided the participants with information about the individual's level of mental health and self-actualization. The results summaries of the other two surveys, PIL and QOLS, were not provided.

The independent variables (*number* and *period* of HB practice) were included in a Personal Information Form (PIF) along with the other demographic information such as age, gender, ethnicity, education, and religion, and collected in numeric value (e.g., 25 months and 15 times; see Appendix D). For the dependent variables, the scales with acceptable validity (POI, PIL, and QOLS) were used so that the reliability and validity could be guaranteed to some degree, and the score on the survey scales were reported by participants' self-administered survey responses through online survey software. Absolute numbers or proportions for nominal variables were respectively exhibited.

After the data were collected, each participant was assigned a Personal Identifier number (PID; e.g., P001 ~ P100) upon signing the informed consent and filling out the PIF. Personal identifiable information (e.g., name and email address) to be subsequently used during the study was associated with the PID to minimize the risks to confidentiality. All data collected in this study were used by the researcher only, and the individuals' personal information of participation, results, and responses were preserved confidentially in a password-protected file.

Summarized data may be used in presentations or published in reports, but participants' personal information will not appear in any presentation of the data. All the data collected for this present study were stored separately in a secure location and identified by PID only. Only the researcher has access to identifying data. Lastly, even though there are no known physical or mental risks involved in this type of study, and the survey scales mostly involve measuring positive psychological aspects, the participants were provided with a mental health hotline number for any emotional impact that would benefit from mental health support.

Analyses

There was only one group in this study: HB practitioners. The demographic data of gender, age, education, ethnicity, and religion were computed and reported separately, along with the numbers of cases in each demographic item. Then a Pearson product-moment correlation coefficient (Pearson r) was computed for the relationship between scores on the scales used and two measures of independent variables (*number* of practice and *period* of practice).

The final number of participants was 119. The survey results that were automatically created by the survey tool and a testing service institute were transferred into SPSS with labeled PID for statistical analyses. Next, the mean (M) and standard deviation (SD) of the scales were checked and used for finding a correlation (Field, 2018; Jackson, 2016).

The mean value and standard deviation of three essential scales and subscales of POI were analyzed by the independent variables of the *number* and *period* of the practice respectively. POI subscales were composed of Acceptance of Aggression (A), Capacity for Intimate Contact (C), Existentiality (EX), Feeling Reactivity (FR), Inner Directed Support (IDS),

Nature of Man (NC), Spontaneity (S), Self-Acceptance (SA), Self-Actualizing Value (SAV), Self-Regard (SR), Synergy (SY), and Time Competence (TC).

To find a correlation between variables using statistical methods, Pearson r and Pearson r^2 (correlation coefficient squared or coefficient of determination) were used. Specifically, the primary statistical measurements were composed of the following analyses:

1. Pearson product-moment correlation coefficient (Pearson r) was measured to examine the relationship between the scores on each pair of measures: (a) *number* and POI, *period* and POI; (b) *number* and PIL, *period* and PIL; and (c) *number* and QOLS, *period* and QOLS. In the case of POI, all the subscales were examined to find relationship with dependent variables. Bonferroni's correction was applied due to multiple dependent variables, and the alpha level was set at the .0036 level (Field, 2018; Jackson, 2016; Pyrczak & Oh, 2018).
2. Pearson r^2 was also measured to find more accurate coefficient determination (r^2) of measuring the percentage of the variance in one variable accounted for by the variance in the other variable (Field, 2018; Jackson, 2016; Pyrczak & Oh, 2018). The measurement compared the variability of two independent variables (*number* and *period*).

Instruments for Measurement

Personal Orientation Inventory (POI). The POI (see Appendix E) was developed by Shostrom (1964, 1973, 1974) as a leading criterion instrument to measure positive mental health or level of self-actualization rather than psychopathology, as well as a standardized mechanism for measurement of self-actualization, which is based in Maslow's (1954, 1962) theory (Leak, 1984; McClain, 1970). Shostrom (1974) noted,

Maslow (1954, 1962, 1967) has developed the idea of the self-actualizing person—a person who is more fully functioning and lives a more enriched life than does the average person. Such an individual is seen as developing and utilizing all of his unique capabilities, or potentialities, free of the inhibitions and emotional turmoil of those less self-actualizing. (p. 4)

The POI is regarded as a promising technique for assessing psychological health (Ilard & May, 1967) and unreservedly corresponds with the intention to use the scale in this present study.

Conrad and McMahon (1974) noted that “items in the POI were designed to reflect value orientations which are commonly held and which are considered to be significant to a person’s approach to living” (p. 2). Shostrom (1973) also stressed that the POI is “well suited for research application in the study of theoretical constructs of self-actualization as well as for use in the clinical therapeutic situation” (p. 479). Thus, it has been used in many studies and is regarded as being appropriate for empirical researches and theoretical constructs of self-actualization (Shostrom, 1973, 1974).

The POI is composed of 150 paired-choice “comparative value and behavior judgments” (Shostrom, 1974, p. 4). “The items are stated both positively and negatively making explicit the particular continuum or end-poles of the dichotomy in question” (Foulds, 1971, p. 338). Participants (examinees) are to choose one of two paired statements that most consistently applies to them (e.g., a. I fear failure. b. I don’t fear failure; see Appendix E). The inventory has two main scales and 12 subscales. The two major scales are Time Competence (TC) and Inner-Directed Support (IDS), and the 10 subscales are Sav, Ex, Fr, S, Sr, C, Sa, Nc, Sy, and A (see Appendix E for the POI subscales). The items are scored twice: (a) two major scales of personal orientation—Time Competence (23 items) and Inner-Directed Support (127 items), and (b) 10 subscales—self-actualizing elements (Ilardi & May, 1968).

Regarding the validity and reliability of the instrument, Shostrom (1973) asserted, on the grounds of many published studies, that “the increasing professional interest in the POI is due to the fact that it has been shown to be a valuable diagnostic and research instrument as well as a useful therapeutic instrument” (p. 480). The reliability study by Ilardi and May (1968), in a sample of 64 entering female nursing students, suggested that the POI is breaking ground in a new area of assessment, and attested that “the range of product-moment correlations for the 12 subscales was from .32 to .71 (median $r = .58$), with the major scales of Time Competence (TC) and Inner-direction (I) yielding correlations of .55 and .71, respectively” (p. 70). Klavetter and Mogar’s (1967) study on test-retest reliability in a sample of 48 college students also affirmed that “stability coefficients are generally high, ranging from .71 to .85” (p. 423).

McClain (1970), in a sample of 30 National Defense Education Act Guidance Institute counselors, conducted a study to validate POI as “a means of differentiating levels of self-actualization among normal adults” (p. 21) by measuring correlations of participants’ POI scores with their composite ratings for self-actualization by staff members (three ratings for each counselor), with correlations ranging from .23 to .69. The study provided crucial evidence of the validity of POI, showing that the greatest magnitude of correlation, 0.69 ($p < .01$), was for the Inner-Directed scale, which comprises 127 items out of 150 total items of POI; 11 out of 14 scales (TC, I, and 12 subscales) showed significant correlation with composite ratings by reliable judges.

Purpose in Life (PIL) test. The PIL test (Crumbaugh & Maholick, 1964) was created based upon Frankl’s (1955, 1973) concept of existential philosophy and theoretical framework of logotherapy (Molasso, 2006; Schulenberg & Melton, 2010; Schulenberg, Schnetzer, & Buchanan, 2010). The test was designed to measure the degree of an individual’s perception of

meaning and purpose in life and well-being (Puente, 2014; Schulenberg et al., 2010). Zika and Chamberlain (1992) also asserted that both existential and religious dimensions are correlated positively with PIL and “there is a substantial and consistent relation between meaning in life and psychological well-being” (p. 142).

PIL has three parts (Part A, quantitative; Parts B and C, qualitative). Part A has 20 sentence items in a 5-point Likert-type scale format; Part B is composed of 13 sentence completion items; and Part C includes the writing of a paragraph on personal aims, ambitions, and goals. In this present quantitative study, only Part A was used because “Part A is often used in research and is easily quantified” (Schulenberg & Melton, 2010, p. 96), and it is also useful in comparing its scores among samples (Crumbaugh & Henrion, 1988; Hutzell, 1988). It was expected to take about 10 minutes to complete, and the total score ranges from 20 to 140 (20–90: lack of a meaningful life; 90–105: indifferentiation area; 105–140: a meaningful life and purpose in life; Buros, 1972; Puente, 2014; Schulenberg & Melton, 2010). See Appendixes F and G for the PIL items and questionnaire.

With regard to reliability and validity, scores of PIL are reliable and favorable with internal consistency (i.e., split-half reliability) and test-retest (i.e., temporal stability) reliability, reported to range from the higher 0.70s to the lower 0.90s (Reker, 2000; Schulenberg & Melton, 2010), “as presented in the manual (Crumbaugh & Maholick, 1969) and in a large number of research studies conducted across a variety of settings and among diverse populations” (Reker, 2000, p. 45). The PIL has also been attaining support in its validity from many studies and reviews (Chamberlain & Zika, 1988; Crumbaugh & Henrion, 1988; Hutzell, 1988; Melton & Schulenberg, 2007, 2008; Reker, 2000; Reker & Cousins, 1979; Schulenberg & Melton, 2010).

Moreover, the construct and validity studies by Crumbaugh and Maholick (1969) and Zika and Chamberlain (1992) verified that the PIL is suitable for measuring meaning and purpose in life.

Quality of Life Scale (QOLS). Flanagan (1978) originally developed the QOLS using 6,500 critical incidents from the survey of nearly 3,000 men and women without reliability report (Burckhardt & Anderson, 2003; Burckhardt, Anderson, Archenholtz, & Hägg, 2003; Burckhardt, Woods, Schultz, & Ziebarth, 1989). Over decades, even though “the concept of quality of life is still a controversial subject” (Menekay & Celmece, 2017, p. 327), the QOLS has not only been adapted to appraise health outcome and determine the impact of health care but also to measure “a broad range of human experiences related to people’s overall well-being” (Revicki et al., 2000, p. 888). The scale consists of five conceptual categories with 16 items of the 7-point Likert-type scale, and the average score for a healthy population is approximately 90 (Burckhardt & Anderson, 2003; range of score: 16–112). The time required to complete the scales is approximately 10 minutes. (See Appendixes H and I for the QOLS items and questionnaire).

In terms of reliability and validity of the QOLS, Burckhardt et al. (1989) assessed its reliability and validity in a sample of 227 patients in four chronic illness groups (diabetes, osteoarthritis, rheumatoid arthritis, and postostomy surgery). Data were collected at three time-points 3 weeks apart. The study presented that the QOLS was internally reliable (Cronbach’s alpha, $\alpha = .82$ to $.92$, average = $.87$), showed high test-retest reliability ($r = .78$ to $r = .84$ for a 3-week interval), and had both convergent and discriminant construct validity. Burckhardt et al. (1989) concluded that “the QOLS is a conceptually clear, content-valid instrument with positive psychometric properties. . . . The items in it suggest several areas on which to focus therapeutic strategies” (p. 353).

A similar study in a sample of 100 Swedish women by Burckhardt, Archenholtz, and Bjelle (1992) also presented internal consistency reliability ($\alpha = .82$ at Time 1 and $.88$ at Time 2) and high test-retest reliability ($r = .84$ for a 4-week interval). Another study in a sample of 282 Norwegian psoriasis patients by Wahl, Burckhardt, Wiklund, and Hanestad (1998) also indicated internal consistency reliability ($\alpha = .86$) and fair test-retest reliability ($r = .83$). Consequently, the QOLS may be reliable and valid in measuring quality of life. As such, although Burckhardt et al. (2003) recommended that “QOLS is a reliable and valid instrument for measuring domains of quality of life important to patients across groups and cultures,” it was used to measure quality of life for the participants, or all level of HB practitioners, in this present study without taking the practitioners’ health states or chronic illness into consideration.

Limitations and Delimitations

Given that there have not been many studies to delve into the effects of HB, the attempt *per se* for the present study may be meaningful and contributory to further studies. This can be a launching point for future quantitative studies to examine causation on the basis of the result of the present study. It may also be important in expanding understanding of the effects of persistence of the practice and in possibly motivating the current and would-be practitioners in their tenacious practices.

Regarding validity, as the sampling was dependent upon volunteering and convenient opportunity (Creswell & Creswell, 2018; Field, 2018; Pyrczak, 2018), the correct size of the population is not only unclear, but also the equal opportunity of participating from the population is not guaranteed by the method. Even if the researcher used a database of the central facilitator training institution, it was still challenged to assume the full size of the practitioner population, and the sampling method might imply the problem of volunteerism. Consequently, the

generalization of the outcome from the sample was limited. However, unlike other practices that have gained universality (e.g., mindfulness practice, yoga), the whole population of HB practitioners is relatively small and still limited, as its practice requires a specific set and setting.

Therefore, this study can be generally accepted inside the population of practitioners; consequently, there may not be critical concern about external validity that involves the degree to which the findings of an empirical study are applied to the general population. For the sake of ensuring the construct validity, which relates the degree of measuring instruments' relevancy to a study, this study adopted well-known and proven assessment tools for the idea of psychological well-being. Besides, it is intuitively alleged that HB practitioners usually engage in various other spiritual practices such as meditation, shamanic journey, active imagination, yoga, chanting (kirtan), and so forth, which could affect the dependent variables as well.

In terms of internal validity that involves the degree of accuracy in the measurement or inferences of a study, one possible threat in this study might be that the independent variables (*period* and *number* of HB practice) were only dependent upon participants' self-reports, which could not be verified through auditing the process of session participation. However, this was not so critical, because relatively more seasoned practitioners such as facilitators and week-long retreat participants usually track their record for themselves, and the institution also keeps records for future certification. Ethnographical, cultural, educational, religious, and geographical factors were not fully addressed in the present study. The study's findings, not only on the transformational effects of the intervention but also in terms of demographic diversity, will be useful for a more profound understanding of the nature of the intervention.

Chapter 4: Results

Quantitative analysis was conducted to measure the correlation between *number* and *period* of HB practice and the scales (PIL, QOLS, and POI) assessing practitioners' psychological well-being level. Data were collected for 4.5 months, but there was a pause for approximately 2 months during the 4.5-month window due to the COVID-19 pandemic crisis. First, solicitation emails for participation were sent to the researcher's personal contacts (157 prospects) and the message was posted in Facebook communities, such as HB facilitator and apprentice groups, school alumni, HB communities in Europe and the U.S., and related associations. Thanks to many HB facilitators and trainers, the posting was shared to the other HB-related communities and transmitted through the newsletters of local HB communities in many cities and countries (e.g., Austria, Canada, Finland, Greece, Houston, Los Angeles, New York, Seattle, etc.) as well. Participants were also recruited in three onsite HB workshops by the researcher, but direct onsite recruitment could not be continued until the finalization of data collection because of the severe COVID-19 outbreak worldwide.

Sample Demographics

The final sample size of the study was 119 participants who completed PIF and at least one scale. There were some missing data because some participants completed only a part of the scales (119 participants for PIF and PIL, 116 participants for QOLS, and 108 participants for POI). However, data were missing at random, and no response patterns that may have biased results were detected. The separate analysis revealed no more than 9.2% of data missing for any independent or dependent variables given the varying *N* size (varying completed data) by subscale. Little's Missing Completely at Random (MCAR) test, which was conducted to determine any research impact on the study, found that data were missing at random/ignorable

($p = .167$). Given the literature suggesting that missing data less than 10% may not bias subsequent statistical analyses (D. A. Bennett, 2001), combined with results of Little's MCAR, missing observations were ignored using available case analysis.

The number of cases and percentage of the total sample for each demographic category were calculated. Means and standard deviations could not be calculated for the demographic data as they are categorical and not continuous. The following tables (Tables 1, 2, 3, 4, and 5) describe the distribution of the study sample, including age range, gender, education, ethnicity, and religious background. There was no specific intention for the distribution of demographics in this study, and the results only present descriptive statistics for the reference of future research. As the demographic distributions of the total practitioners were not available, comparison with the target population was not made in this present study.

Table 1

Distribution of Age

Age range	Participants ($N = 119$)
	<i>n (%)</i>
20-29	9 (7.6)
30-39	33 (27.7)
40-49	23 (19.3)
50-59	26 (21.8)
60-69	22 (18.5)
70-79	6 (5.0)

Table 2

Gender of Participants

Gender	Participants (<i>N</i> = 119)
	<i>n</i> (%)
Male	70 (58.8)
Female	49 (41.2)

Table 3

Ethnicity Distribution of Participants

Ethnicity	Participants (<i>N</i> = 119)
	<i>n</i> (%)
White	108 (90.8)
Asian	6 (5.0)
Hispanic or Latino	1 (0.8)
Multiracial	4 (3.4)

Table 4

Religious Affiliation of Participants

Religion	Participants (<i>N</i> = 119)
	<i>n</i> (%)
Atheist	2 (1.7)
Buddhist	8 (6.7)
Catholic	10 (8.4)
Hindu	1 (0.8)
Jewish	2 (1.7)
Protestant	9 (7.6)
Spiritual but not religious	74 (62.2)
No particular religion	13 (10.9)

Table 5

Education Level Among Participants

Education	Participants (<i>N</i> = 119)	
	<i>n</i> (%)	
Less than high school degree	2	(1.7)
High school degree or equivalent	9	(7.6)
Associate degree	8	(6.7)
Bachelor's degree	38	(31.9)
Master's degree	51	(42.9)
Doctoral degree	11	(9.2)

Correlational Findings

Table 6 shows the mean and standard deviation of all dependent variables (PIL, QOLS, and all 12 POI subscales).

Table 6

Dependent Variables—Descriptive Statistics

Scale	Mean	SD
PIL	106.55	17.98
QOLS	84.67	13.68
Time Competence (TC)	15.56	3.51
Inner Directed (IDS)	88.42	13.83
Self-Actualizing Value (SAV)	21.56	3.19
Existentiality (EX)	21.29	5.20
Feeling Reactivity (FR)	15.63	3.55
Spontaneity (S)	13.17	2.92
Self-Regard (SR)	13.10	2.53
Self-Acceptance (SA)	15.76	3.65
Nature of Man (NC)	12.07	1.84
Synergy (SY)	7.54	1.40
Acceptance of Aggression (A)	15.92	3.65
Capacity for Intimate Contact (C)	18.60	4.71

Note. PIL ($n = 119$); QOLS ($n = 116$); POI subscales ($n = 108$).

Correlations—Period of practice. *Period of practice* was found to be significantly positively correlated with all dependent variables except NC and A. Table 7 shows correlations between *period of practice* and all dependent variables. By applying Bonferroni's correction, the

significance level of .05 changed to .0036. Therefore, the significance levels were denoted at the .05 level and the corrected .0036 level for each correlation.

Table 7

Correlations—Period of Practice/PIL, QOLS, POI Subscales

Variable	Period of practice	
	<i>r</i>	<i>r</i> ²
PIL	.330**	.109
QOLS	.342**	.117
Time Competence (TC)	.281*	.079
Inner Directed (IDS)	.376**	.141
Self-Actualizing Value (SAV)	.275*	.076
Existentiality (EX)	.346**	.120
Feeling Reactivity (FR)	.252*	.064
Spontaneity (S)	.241*	.058
Self-Regard (SR)	.317*	.100
Self-Acceptance (SA)	.363**	.132
Nature of Man (NC)	.168	.028
Synergy (SY)	.324*	.105
Acceptance of Aggression (A)	.200	.040
Capacity for Intimate Contact (C)	.279*	.078

Note. PIL (*n* = 119); QOLS (*n* = 116); POI subscales (*n* = 108).

p* ≤ .05, *p* ≤ .0036.

Correlations—Number of sessions. *Number of sessions* was found to be significantly positively correlated with all dependent variables except NC. Table 8 shows the correlations between *number of sessions* and all outcome variables.

Table 8

Correlations—Number of Sessions/PIL, QOLS, POI Subscales

Variable	Number of sessions	
	<i>r</i>	<i>r</i> ²
PIL	.362**	.131
QOLS	.388**	.151
Time Competence (TC)	.297**	.088
Inner Directed (IDS)	.393**	.154
Self-Actualizing Value (SAV)	.244**	.06
Existentiality (EX)	.382**	.146
Feeling Reactivity (FR)	.330**	.109
Spontaneity (S)	.254**	.065
Self-Regard (SR)	.279**	.078
Self-Acceptance (SA)	.415**	.172
Nature of Man (NC)	.072	.005
Synergy (SY)	.291**	.085
Acceptance of Aggression (A)	.328**	.108
Capacity for Intimate Contact (C)	.357**	.128

Note. PIL (*n* = 119); QOLS (*n* = 116); POI subscales (*n* = 108).

p* ≤ .05, *p* ≤ .0036.

Supplemental Qualitative Findings

A correlative quantitative method was employed as a primary methodological approach of the present study. A qualitative research method was not the focus of the study. Nonetheless, the research question and the study design were inspired by many anecdotal reports of the effects and precedent qualitative research results on HB. Therefore, for any possible accounting results, a brief qualitative narrative-based questionnaire was included in PIF (Appendix D) only as a supplement to the study.

The study collected 109 responses of qualitative data. The raw data were collected from the questionnaire, PIF (Appendix D), and analyzed by using narrative and thematic analysis as the main method (Creswell, 2018), insomuch as the method “conceptualizes human beings as meaning-makers who use narratives to interpret, direct and communicate life and to configure and constitute their experience and their sense of who they are” (Lyons, 2016, p. 204). Therefore, in this study, the narrative inquiry was employed as the central skill of the qualitative approach of the study to understand the experience as data, specifically in the sense that people use narratives in order to construct their personal story and experience and understand others’.

The analysis focused on the themes or meanings (implicated and explicated ideas) emerging from reflective journaling responses. The thematic analysis supported the narrative inquiry mentioned above by thematizing meanings from the responses to questions and focusing on unpacking meanings or themes without any initial expectations.

The two questions were as follows:

- Question 1 (Q1): How has HB practice impacted your life in general?—effect of HB practice.

- Question 2 (Q2): What aspect of HB makes you keep practicing? (What do you think the most significant benefit of HB practice is?)—the motive of HB practice.

Even if the questions are seemingly different, both ask participants the benefit and effect of the HB practice from a slightly divergent view. Prior to thematic analysis, the word cloud to show the frequency of words usage was created using a qualitative analysis tool, ATLAS.ti (Friese, 2019). The result is shown in Figure 1. The most frequent words include but are not limited to life, work, body, healing, awareness, spiritual, self, emotion, and trauma. This word cloud did not provide direct and accurate distribution of the meaning words or themes, but it exhibited an overall picture for the further thematic analysis by suggesting how many times the words were used in the participants' responses.

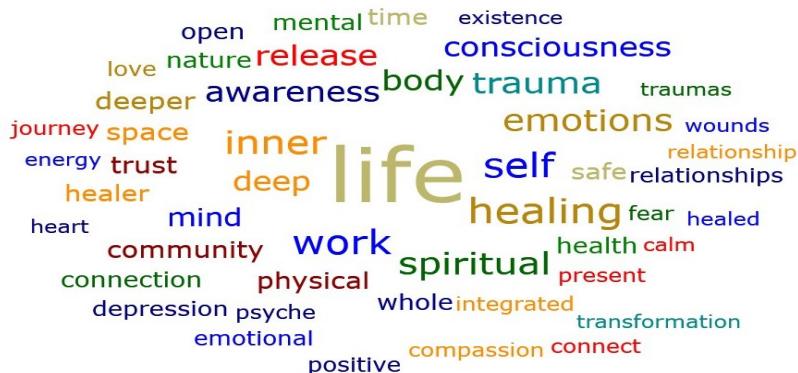


Figure 1. Word cloud using ATLAS.ti. Adapted from “Qualitative Data Analysis With ATLAS.ti,” by S. Friese. Copyright 2019 by Sage.

The further succeeding analyses validated that the word cloud was fairly aligned with the meta-themes (see Table 9).

Table 9

Meta-Theme: Major Organizing Domains

Core category	Meta-theme	Meaning-making words (themes) in participants' responses
Transformational process	Change of mindset (Affective)	Positivity, optimistic, appreciation, acceptance, self-empowerment, happiness, generosity to self, self-trust, courage, openness, gratitude, curiosity, surrendering, letting go, centering, surrendering, letting go
	Relationship	Altruistic, intention to help others, compassion, empathy, connection, interconnectedness, parenting, growth, connection to others
	Transformation	Life-changing, consciousness change, worldview change, new perspectives, life-purpose, renewal, reason for being, alchemy
	Wholeness	Feeling completion, embodiment, integration, self-actualization
	Healing	Past trauma, cure of body or mind, physical, mental, emotional suffering, cleansing of soul, claustrophobia
	Release	Liberation, freedom, physical pain, trauma, buried feeling, suicidal impulses, despair, self-talk, pain relief
Therapeutic improvement	Mental and physical health	Energy shift, somatic response, cleansing, grounded, resilient, self-confident, connection with body, psychological recovery, well-being, calmness, peace, balance
	Direct (inner transpersonal) knowing	Past life recollection, mystical experiences, inner knowing, meditative, inspiration, connection with the deceased, awakening experience, connection to spiritual realm, spiritual growth, connection with soul, connection with spirituality, holotropic states, transpersonal opening, deepening spiritual life, transcendence, higher meaning of life
NOSC-related-experiences		

(continued)

Core category	Meta-theme	Meaning-making words (themes) in participants' responses
	Access to inner self (self-understanding)	Self-discovery, self-exploration, insight, clarity, clear mind, getting answers, connection with inner healing system, better contact with inner emotion, creativity, access to inner-material, inner healing, access to beingness
	Awareness	Expanded (increased) awareness, gaining insight, presence, universal consciousness, authenticity, mindfulness
	Set & settings	Safety, comfort, relaxation, safe container, community

Text analysis for the participants' journaling responses was conducted using text analysis software, LIWC2015 (Pennebaker, Booth, Boyd, & Francis, 2015). Figure 2 depicts only the affective processes of target text words among 32 word-categories of psychological constructs. The participants' journaling responses to the questions comprise highly positive emotional words with less negative categories of anxiety, anger, or sadness.

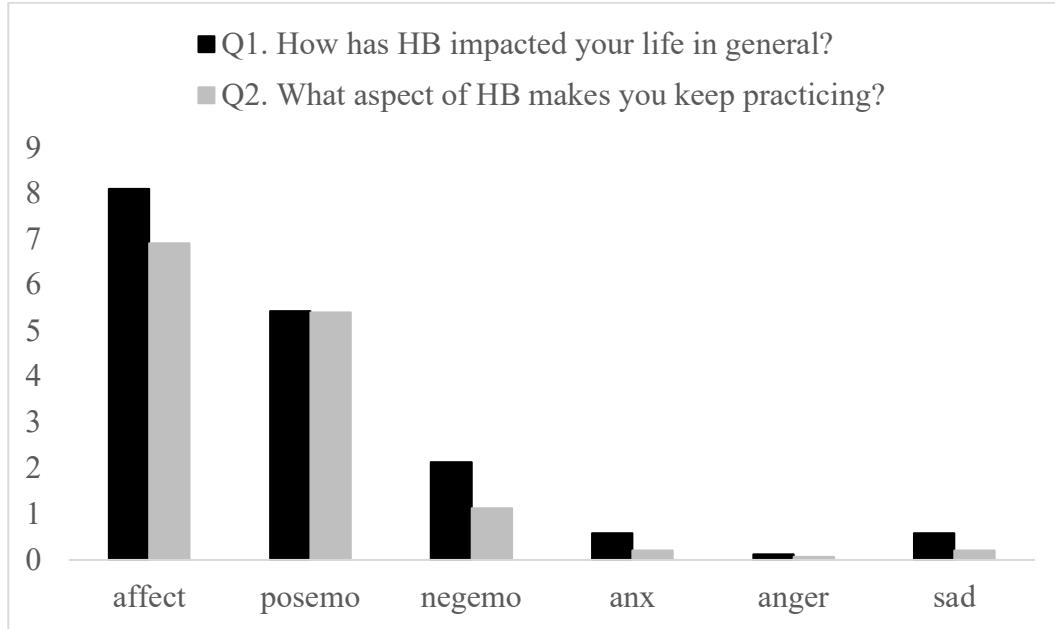


Figure 2. Text analysis using LIWC2015. Adapted from “Linguistic Inquiry and Word Count: LIWC 2015” [computer software], by J. W. Pennebaker, R. J. Booth, R. L. Boyd, and M. E. Francis. Copyright 2015 by Pennebaker Conglomerates.

With engagement with the data through the aforementioned analyses and familiarization with data while keeping the questions (benefit of the practice and motive of persistence) in mind, analytical process went through initial themes searching and generation. For the initial generation of themes, meaning-making units were first reviewed, highlighted, and confirmed. Then the themes were refined and articulated as potential candidates for meta-themes. Finally, the participants’ responses were sorted into 11 meta-themes. The taxonomy of meta-themes was created considering distinction and affiliation among themes (Table 10). Each response could have multiple meta-themes because there were responses that have manifold meanings. For example, the meaning-words for the following response were counted toward both *transformation* and *healing* meta-themes: “The huge transformational and healing aspects on all layers (emotional, physical, spiritual). It allows me to discover the whole universe.”

The created meta-themes were closely interrelated. Therefore, these meta-themes could be classified further into the three categories: transformational process, therapeutic improvement, and experiences related to NOSC (Table 10). This categorization was found to correspond with the primary purpose of the study, stated in Chapter 1: exploring transformational or therapeutic aspects of the NOSC induced by HB practice. Core categorization elucidates that NOSC can be regarded as a means or a catalyst for transformational effect or psychological therapeutic improvement. Whereas some study participants reported the outcome of the practice in response to the questions, which inquired about the benefit or motive of persistent practicing, the other participants straightforwardly elicited a variety of NOSC experiences *per se*. The motive for the practice was mainly ascribed to the NOSC-related experiences.

Table 10

Counts by Three Categories of Meta-Themes

Core category	Question 1	Question 2
	Effect of practice	Motive of practice
Transformational process	59 (34.3%)	32 (23.7%)
Therapeutic improvement	59 (34.3%)	34 (25.2%)
NOSC-related experiences	54 (31.4%)	69 (51.1%)

To specifically illustrate some responses for some obvious meta-themes, *access to inner self* was found the most in participants' responses (Q1: 25 participants; Q2: 37):

- It provides an entry point to my subconscious mind and helps get me in touch with the deeper/higher parts of my Self without the use of entheogens.
- This is a tool for deep inner work and discovery. Those discoveries give me information and images that I can use in my own daily journaling, meditation and art

practices, as well as become fodder for sessions with a therapist I work with for deep inner transformation work.

- I think what keeps me coming back is the exploration into my own consciousness and the nature of consciousness itself. The whole thing is a great mystery.
- HB has granted me the space to understand the collaboration between my physical world and my inner world, allowing me to gain trust in self.
- It has facilitated finding deep connection to my own intuition (“Inner Healer”). It has enabled a deep healing process of much complex trauma through corrective experiences with other humans.

The meta-themes, *healing* and *release*, included in the category of *Therapeutic* aspect of the practice, were indirectly or explicitly found in many responses. The participants used the words *healing* or *release* most frequently in their responses to the reflective journaling questions. With regard to *healing*, 24 and 16 participants reported the experience for the respective questions. As to *release*, 21 participants stated that experience in responses to Question 1, and 14 participants reported it for Question 2. The following illustrate some of the reflections the participants shared:

- Way better and faster results than talking to a therapist.
- Holotropic breathwork is a powerful and effective modality for uprooting old trauma and eliminating the limiting “self-talk” that develops in response to trauma.
- To move energy and bring up suppressed emotions.
- I have a greater sense of relaxation, release from anxiety and am more optimistic. I've also become more interested in somatic practices.
- Taken a “load off my chest” and released me from somatic stress.
- Overwhelming sense of release from depression held in the body. It creates space in my mind and body to process current emotions.

Among meta-themes for *NOSC-Related Experiences*, the most prominent one was *direct knowing*, since it not only has multiple meanings but also epistemological elements of participants' subjective mystical experiences from HB.

- Due to what I perceive as being very powerful, non-ordinary states of consciousness allow people to access parts of their "beingness" that are generally not possible in the ordinary waking state. The persons "inner healer" is allowed to determine the most beneficial path, be it biographical, perinatal or transpersonal in nature, to their overall health—physical, emotional, mental or spiritual. Non-ordinary states of consciousness allow the breather a far greater understanding of him/herself and the world in which they live.
- HB sessions prepared me to experience my darkest darkness as a hero and at the same time to come to terms with what I have no influence over. It acted as a catalyst for changes. One of the HB sessions (the first) met my expectations of "being born again" and in the sense of going beyond the ego, taking distance to opinions, schemes etc. As a whole, all HB sessions gave me enough inspiration, motivation and hope to realize my own problems and take action to repair.
- My ancestry came up and that was profound. I was also moved by an experience I had with coming into contact with my father, who passed away when I was a baby.

Lastly, the significant part of participants' reflections on both questions concerned transformation. There were many responders who directly mentioned transformation or life changing. However, many implied the shift of their mindset in a constructive way. Some instances of the meta-theme *change of mindset* among many related meta-themes in the core category *Transformational Process* (Table 11) are as follows:

- Can better improve the positive outlook on life.
- Self-acceptance, more compassion for self and others, wider understanding of feelings and emotions.
- "Take it to the mat!" has become my mantra. That's where I come to re-establish my awareness of the love in the cosmos. It's where I become love again. It's where I re-establish my self-compassion and compassion for others. Another thing that draws me back to HB is the loving world-wide community that is building within its ranks. That is huge! HB has given me clarity and courage.

- I am more open to life. I am able to trust life without being anxious about the future and about things I cannot control.

Table 11

Count of Meta-Themes

Meta-theme	Question 1	Question 2
Access to inner self	25 (14.5%)	37 (27.4%)
Healing	24 (14%)	16 (11.9%)
Change of mindset	21 (12.2%)	15 (11.1%)
Release	21 (12.2%)	14 (10.4%)
Transformation	18 (10.5%)	13 (9.6%)
Relationship	15 (8.7%)	9 (6.7%)
Direct knowing	14 (8.1%)	8 (5.9%)
Mental & physical health	14 (8.1%)	8 (5.9%)
Awareness	9 (5.2%)	5 (3.7%)
Set & setting	6 (3.5%)	5 (3.7%)
Wholeness	5 (2.9%)	5 (3.7%)

As previously stated, Question 1 inquired about the *result* of the HB practice. On the other hand, Question 2 probed the *motive* by which practitioners are driven to continue the HB practice persistently. The most frequently mentioned theme in responses to both questions was *access to inner self* (Q1: 14.5%; Q2: 27.4%). This theme includes the meanings of self-understanding, self-discovery, self-exploration, insight, clarity, clear mind, getting answers, connection with inner healing system, better contact with inner emotion, creativity, access to inner material, inner healing, access to beingness, and so on. Many participants stated their

mystical experiences during HB sessions and confirmed that NOSC or holotropic states of consciousness induced by HB aided them to access the deep inner world and brought the clarity of the reality or themselves, which cannot be accessible in ordinary states of mind.

The next themes that were revealed numerously were *healing* (Q1: 14%; Q2: 11.9%) and *release* (Q1: 12.2%; Q2: 10.4%). Many participants directly affirmed the therapeutic effect of HB. They detailed their healing experiences from past trauma and physical/mental/emotional suffering and release or liberation from physical pain, trauma, buried feeling, suicidal impulses, despair, self-talk, and so forth.

The other prominent meta-theme that emerged from the participants' responses was *change of mindset* (Q1: 12.2%; Q2: 11.2%). It was labeled to include many affective responses such as positivity, optimism, appreciation, acceptance, self-empowerment, happiness, generosity to self, self-trust, courage, openness, gratitude, curiosity, surrendering, letting go, centering, surrendering. Participants mentioned the change in their attitudinal orientation toward life and their mindset transformation in a constructive way. Besides, considering the other meta-themes in the same category of *Transformational Process* (*relation*, *wholeness*, and *transformation* that were more straightly declared by participants), the transformational effect of the practice is not less significant than the other themes. The theme *Transformation* directly elucidated the enhanced psychological health: life-changing, consciousness change, worldview change, new perspectives, life-purpose, renewal, the reason for being, or alchemy.

In conclusion, this supplemental qualitative finding corresponded, in a greater degree, to the benefit of HB that was previously mentioned in Chapter 1. The analysis suggested that HB is a practice that facilitates its practitioners' inner transpersonal discovery and release in their emotional and physical states, and further fosters their lifelong transformation. The findings also

supported the research questions and purpose of the study, which was to explore whether NOSC induced by HB is associated with fostering transformational growth to promote mental well-being and transformation in an individual's attitude toward life.

Chapter 5: Discussion

This quantitative study intended to quantify how much the *frequency* of the practice and the *period* of the practice are related to the practitioners' personal orientation toward life and psychological and mental health. For this measurement, three scales were employed: Purpose in Life (PIL), Personal Orientation Inventory (POI), and Quality of Life Scale (QOLS). The size of the targeted study sample was 100, but 119 practitioners responded to the request for participation in the study. There are no publicized population statistics for the total of HB practitioners. The 119 study participants comprised 58.8% male and 41.2% female practitioners. Educational level was high, with 84% of participants holding a bachelor's, master's, or doctoral degree. The age range of 30 to 69 comprised 87.3% of the participants, evenly distributed within the range. In terms of ethnicity distribution, the most considerable portion was White (90.8%), which is a high rate in comparison with the general population of the U.S. (60.1%) according to the Census Bureau (2020). Most noteworthy is that 73.1% of the study sample identified themselves as *spiritual but not religious* or not religiously affiliated. According to Sorajjakool, Carr, and Bursey (2017) and *Religion and Public Life* (Pew Research Center, 2020), the percentage of Americans claiming no religious affiliation is 23% and is noticeably increasing. More specifically, Sorajjakool et al. (2017) noted that "seven percent of the population are not affiliated with a specific religion but believe a religious or spiritual perspective to be important" (p. 9). Considering the religious landscape in the U.S., the religious distribution of the study displays an even higher rate than the general population.

Quantitative Outcome

Concerning the central emphasis of the study, correlation, as shown in Tables 7 and 8, both *number* of HB sessions and *period* of HB practice were found to be significantly correlated

with all outcome variables (three scales: PIL, QOLS, and POI), except for the minor parts of POI's subscales: NC for *number* of sessions, and NC and A for *period* of HB practice, respectively. The mean score of PIL was 106.55. When the score stands between 105 and 140, it indicates a meaningful life and purpose in life (Buros, 1972; Puente, 2014; Schulenberg & Melton, 2010). Therefore, the overall study participants' level of PIL was proven to be relatively high. On the other hand, the average QOLS score of the study sample was 84.67, a little lower than the average score of a healthy population, which stands around 90 (Burckhardt & Anderson, 2003).

The first hypothesis of the study was that there is a positive relationship between *period* of HB sessions and scores on the POI, PIL, and QOLS. The results disclosed that the *period* of practice was positively correlated with significance. Both PIL ($r = .330, p \leq .0036, R^2 = .109$) and QOLS ($r = .342, p \leq .0036, R^2 = .117$) were positively related with the *period* of practice. For POI's subscales, one of two major subscales, IDS ($r = .376, p \leq .0036, R^2 = .141$) was shown to be significantly positive correlated. The other major subscale, TC ($r = .281, p \leq .05, R^2 = .079$) was positively related only at .05 level. Two out of 12 POI subscales did not reveal a significant correlation: NC and A. Among POI subscales, the strongest correlation was IDS, and the weakest correlation was NC. The subscale NC implicates the degree that humankind is seen as essentially good or evil, and the subscale A denotes the level of acceptance for anger or aggression. Consequently, *period* of practice might not be closely associated with the practitioners' perspectives on humankind and the acceptance level for anger or aggression.

The second hypothesis was that there is a positive relationship between *number* of HB sessions and scores on the POI, PIL, and QOLS. Similarly, the results from the Pearson product-moment correlation signified positive correlation of PIL ($r = .362, p \leq .0036, R^2 = .131$) and

QOLS ($r = .388, p \leq .0036, R^2 = .151$). Most of the POI subscales showed significantly positive correlation; respectively, TC ($r = .297, p \leq .0036, R^2 = .088$) and IDS ($r = .393, p \leq .0036, R^2 = .154$). All correlations were significant at the specific initial lower threshold .05 and the more stringent and corrected threshold of .0036, except for NC. That is, all those correlations remained significant even after Bonferroni's correction, except for NC. The *number* of practice was positively correlated with all the dependent variables (three main scales), except for the POI subscale NC. The other POI subscales (11 out of 12 subscales) correlations ranged from .244 to .415 and significantly positively correlated at the level of .0036. This suggests that *number* of sessions is interrelated with all the dependent variables with positive linear dependence but might not affect only the practitioners' view on the nature of humankind as being good or evil. Nonetheless, the study results attested that the independent variable, the *number* of HB practice (how many sessions practitioners have practiced HB), is significantly correlated with psychological and mental states. Further, as shown by the data, the magnitude of correlation of the *number* of practice is slightly larger than the *period* of practice, except for SAV and NC. This finding may suggest that *number* of HB practice is a slightly stronger relationship with personal orientation and psychological and mental well-being than *period* of practice. However, the difference may be regarded as being inconsequential.

Besides, POI's main subscale, IDS ($r = .376, p \leq .0036, R^2 = .141$) was the most strongly positively correlated with *period* of practice. For *number* of sessions, IDS ($r = .393, p \leq .0036, R^2 = .154$) was also more strongly linked than PIL, QOLS, and the other POI's main subscale, TC. IDS score reports the degree of being independent and self-supportive. The transformative and therapeutic process of HB mainly depends upon practitioners' access to their inner healing systems that are self-empowered through NOSC induced using their own breaths with least

external interventions (K. Taylor & Macy, 2007). Thus, the significantly positive correlation of IDS with both independent variables might be connected to the essential quality of HB, self-empowerment.

The quantitative outcome of this study revealed that practitioners who have practiced HB for a lengthier period or more times showed higher scores on the scales that measure practitioners' mental and psychological health. The only exceptions were POI's subscales, NC and A. Considering the HB paradigm that involves perceiving reality from a holistic view, reluctance to judge or choose from binary options of viewing humankind as a good or evil might affect the score of NC. The POI subscale A, which measures aggression, was also not correlated with length of practice. One possible explanation for this outcome is that HB encourages practitioners to express their anger and aggression in order to release physical and emotional blockages. To conclude, practitioners' degree of engagement, given by the *period* and *number* of HB practices, was significantly positively correlated with practitioners' psychological orientation, self-actualization, life purpose, and quality of life.

Further Considerations for Outcome

In deliberating upon the direct feedback from some participants during the data collection phase, there were two other important facets to take into account apart from the quantitative outcomes of the study: (a) COVID-19, and (b) criticism of POI scale. The data were collected amid the COVID-19 pandemic, which might have impacted many aspects of contemporaries' lives in the world. There is no substantiating the degree of the stimulus of the pandemic to the study. However, because the measurement in the study was related to psychological well-being such as life purpose, quality of life, and personal orientation, it is possible that the participants' survey responses could have been affected by the COVID-19 outbreak to some degree.

Concerning COVID-19, some participants gave feedback that they might be more positive in their responses to the questionnaires if they were not in such times of uncertainty, the pandemic.

The following are comments from several participants:

- I answered the questions, though I am overwhelmed and a bit depressed with the current world situation, so it does affect my perception and I feel it.
- I have to say that my answers might have been a bit more positive if it weren't COVID-19 time.
- People are so distracted right now with the uncertainty of the situation and their livelihood that most will not have the grounded capacity to focus on the research questions.

Second, there were some subjective critical comments in response to the surveys. Several participants openly pleaded their embarrassment when responding to the POI. Some participating practitioners thought that the HB paradigm involved holistic, nondual, or creative perspectives, whereas the POI probed only comparative value and behavior judgments with binary options (choice between pairs of statements). Some direct feedback from several participants is summarized below:

- I do not like that test much since the statements seem very limited and logical especially with wording like "must" and "should." I know I am supposed to pick the answer that is mostly true but again I find that choice very limited and not so black and white to answer.
- With the conceptualization some of the frustration I had choosing between two statements, some of which didn't make much sense to me, I see it a little more openly and broader. Yet still wondering how much it reflects cultural context and values of independence versus interdependence, but it seems in the explanation that it somewhat a middle path of these values.
- I must say that the assessment doesn't match the complexity of the human person with only two choices. It is a difficult choice. I want to frequently put in something in the middle.
- Regarding the POI, I know this is a standardized survey instrument, but I must say I cannot see what relevance it has for HB or other wholistic or spiritually oriented modalities.

- I think differently and for many of the POI items I wanted to pick both answers, and neither. Holotropic thinking is non-dualistic and open.

No particular feedback on the instruments was anticipated. Moreover, the feedback from the participants does not involve any empirical substantiation; however, it seems to be meaningful and worthwhile to consider. Through the proactive and candid comments from some study participants, the diverse and pragmatic information could be gathered as illustrated above, and the notions from those valuable discernments and constructive criticism provide the possibility to be more profoundly examined and reflected in future studies.

Areas for Further Research

The present study is the first correlative quantitative research about HB. The study disclosed that both *number* of sessions and *period* of the practice were significantly positively correlated with all dependent variables except two subscales of POI (NC for *number*; NC and A for *period*). Initially, the study was inspired by the expectation that if results were found to be significant, this might lead to other studies exploring whether HB is an effective tool to transform personal orientation toward life, strengthen meaning and purpose in life, and enhance the quality of life. An additional objective was that the study's research method and outcomes might provide future researchers with a better understanding of the relationships of the basic measures of HB practice and help them to articulate their examinations on the basis of the findings of this study.

It was also anticipated that the study would be reviewed with criticism and replicated with different samples (cultural, ethnographical, geographical, etc.) and diverse research approaches. Specifically, as this present study was conducted using a correlational study design, it may also be one of the significant initiations for future empirical studies investigating cause

and effect, as well as the enduring effects of HB, with a variety of exquisite study designs and methodological attempts.

Consequently, some further investigation with diversified methodological approaches to the research question may be recommended as follows:

1. First, the study can be replicated with different study designs or sampling methods from the present study. This study did not consider demographic distribution or a targeted group for sampling. Therefore, correlational research with dissimilar research designs, methodological variations (sampling methods), or idiosyncratic samples of a participant group may bring meaningful outcomes in substantiating further correlations.
2. Another possibility would be to find the correlations for more detailed categories of mental health or therapeutic effect using different scales, such as Beck's Anxiety Inventory, Beck Depression Inventory, spirituality scales, or Death Anxiety Scale.
3. One of the most essential options for a future study would be further investigation to quantify the causation and efficacy of the practice with the detailed study designs and statistical analyses of a regression.
4. Another prospective research would be a comparison with the other consciousness-altering interventions (e.g., psychedelic, fasting, sweat lodge, etc.) with controlled different participant groups.
5. Integration: The study's finding uncovered that there was positive linear dependence between *period* of HB practice and *number* of session and scores on psychological health-related scales, with statistical significance. That is, how long and how many times the practitioners have been practicing were associated with their psychological

well-being. This may create another research question: *Which elements of the integration process affect the practitioners' transformation? What components of HB or NOSC foster practitioners' mental well-being?*

6. Other options would be the investigation of the expandability and applicability of HB effects on other specific psychological or mental symptoms. To name a few:

- PTSD involves a common mental health condition that is mainly diagnosed in veterans and people who sustained traumatic events during military service, childhood, or civilian adult life. Its symptoms involve many enervating mental health problems such as depression, severe anxiety, sleep disorder, anger, flashbacks, chronic pain, nightmare, and so forth (Owens, Walter, Chard, & Davis, 2012). Specific possibilities would be an investigation of the relationship between the practice and PTSD, or discovery of the efficacy of the intervention on PTSD. The comparison of the effect of the practice among the treatment-as-usual (TAU) group and control group (HB practitioners) would be possible with the measurement using the varied scales such as Clinician-Administered PTSD Scale (CAPS), Posttraumatic Cognitions Inventory (PTSI), Beck Depression Inventory (BDI-II), or Essen Trauma Inventory (ETI).
- Culturally bound illnesses: For example, a mental illness called *Hwa-byung* is a syndrome triggered by suppressed anger that is unique to Koreans and strongly correlates with the cultural particularity of Korean people influenced by the Confucian culture (You, 2010). There are many theories and abundant phenomenological evidence on *Hwa-byung*. Still, it is hard to make a clear diagnosis, much less help all the diagnosed and undiagnosed cases. It may be

worthwhile to deeply examine the possibility of utilizing the nature of the radical self-empowerment of HB in healing this syndrome.

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Appendix A: Informed Consent

To the Participant in This Research:

You are invited to participate in a study to explore the transformational effects of Holotropic Breathwork® (HB) practice. The study is being conducted to partially fulfill the requirements for the degree of Doctor of Philosophy in Transpersonal Psychology from Sofia University in Palo Alto, CA. The study aims to increase the understanding of how the persistent practice of HB is related to the practitioner's orientation toward life and psychological well-being such as quality of life and meaning or purposefulness in life. Your participation will entail individual contact with the researcher (Seok Hyeon Geum), in person, through email. By participating in this study, you will be adding to the current literature on HB and its transformational and healing effects.

You will be asked to take part in online surveys hosted by Surveymonkey (a secure online survey host website) and EdITS (a secure Testing Service Institution). The surveys should take approximately 60 minutes. Your participation in the study will involve the following: 1) an introduction to and overview of the nature of the study, 2) an explanation of and signature of the consent form upon your agreement to participate in the study, and 3) completion of personal information (self-reported demographic and experience) and Likert-scale of questionnaires. You will be rewarded for participation with an Amazon.com eGift card (\$25). If you submit all the online surveys, an eGift card will be delivered via email within a month. You will also be provided with the test result summary of POI Scales that you will respond so that you can securely refer your level of mental health and self-actualization using your own created sign-in credentials and passcode after the POI test.

For the protection of your privacy, all information received from you will be strictly kept confidential as to source, and your identity will be protected. The original data will only be seen by the researcher (Seok Hyeon Geum). Each participant will be assigned Personal Identifier number (PID; e.g., P001 ~ P100), and Personal Identifiable information (e.g., name, email address, or demographic information) to be subsequently used during the study will only be associated with PID to minimize the risks to confidentiality. The digital data will be saved to an external hard drive and password protected. The data (a hard drive of the digital files and any paper copies) from the research study will be kept in a locked cabinet in the researcher's home when not in use. Only the researcher will have access to the locked cabinet in the researcher's home. In reporting the findings from this study, any information that might identify you will be altered to ensure your anonymity. Although every possible measure will be taken to ensure confidentiality, no online data collection and transmission is 100% secure.

This study is designed to investigate the correlation between *number / period* of the HB practice and a change in psychological orientation and spiritual well-being. There are no known psychological or physical risks involved in participating in this type of study. However, it is also possible that you may experience an emotional impact that would benefit from mental health support. If so, you will be given the Mental Health Hotline number, which is xxx-xxx-xxxx. If at any time you have any concerns or questions, I, the researcher (Seok Hyeon Geum), will make every effort to discuss them with you and inform you of options for resolving your concerns. If you experience mental distress as a result of this survey, I will make a referral to a mental health professional.

Statement of the Research Participant:

I attest that I have read and understood this form. The research was explained to me, and I had all my questions about this research answered to my satisfaction. I understand that my participation in this research is entirely voluntary; no pressure has been applied to encourage my participation. I also understand that I may withdraw my consent and discontinue my participation at any time during the data collection and for any reason without penalty or prejudice. My signature indicates my willingness to be a participant in this research.

Participant's Name (Please type your full legal name)

Participant's Signature

Date

If you have any questions or concerns, you may call or email:

Seok Hyeon (Scott) Geum (Researcher)
Sofia University
(xxx) xxx-xxxx
s.geum@sofia.edu

Renée M. Snow, Ph.D.
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(xxx) xxx-xxxx
renée.snow@sofia.edu

Dr. Frederic Luskin, Ph.D.
Chairperson, Sofia University Research Ethics Committee
(xxx) xxx-xxxx
fred.luskin@sofia.edu

You may request a summary of the research findings by providing an email address in the location provided below.

Please send me a written summary of the study's pertinent findings: yes no

Contact Information (Please Print):

Name: _____

Address: _____

Phone: _____

Email: _____

Appendix B: Flyer for Participant Recruitment

Have you ever experienced Holotropic Breathwork®?

Please Help Research!

**RESEARCH:
TRANSFORMATIONAL EFFECT
OF HOLOTROPIC BREATHWORK**

To Participate,
Contact Scott Geum,
Ph.D. (c), Transpersonal Psychology
ITP of Sofia University
Email: scottgeum@gmail.com

If you have ever practiced HB and
decide to join,
You may be asked to fill out three
questionnaires



**Please Help & Get
Amazon.com eGift Card (\$25)**



Appendix C: Research Summary

Summary — Research

by Seok Hyeon (Scott) Geum / ITP of Sofia University, Palo Alto, CA

Welcoming to join the research!

Research Topic

Transformational Effects of Holotropic Breathwork® in Practitioners' Orientation and Mental Well-being: Correlational Study

Purpose of Research

Exploring the transformational aspects of Non-Ordinary States of Consciousness (NOSC) induced through Holotropic Breathwork™ practice by explicitly examining the correlations between *number* and *period of practice* of HB and scores on the POI (*Personal Orientation Inventory*), PIL (*Purpose In Life test*), and QOLS (*Quality of Life Scale*).

Research Question

Is there a relationship between the *period* and *number* of Holotropic Breathwork® sessions taken by individuals and their scores on the POI, PIL, and QOLS?

Research Methods

Correlational Study - a quantitative research method to address the research problem and to discover the usefulness of the intervention and the associated factors.

Number of Participants: One hundred of HB practitioners ($N = 119$)

Participation consists of:

- Reviewing and Signing the Informed Consent
- Filling in Personal Information Form (PIF) – 10 minutes (no time limit)
- Responding Surveys
 - POI (*Personal Orientation Inventory*) – 30 minutes (no time limit)
 - PIL (*Purpose In Life test*) – 10 minutes (no time limit)
 - QOLS (*Quality of Life Scale*) – 10 minutes (no time limit)

* Total estimated time of participation: approximately 60 minutes

Benefit

The result of this study will have implications for current and prospect HB practitioners and be envisioned to be useful and contributory to their understanding the transformational effects of HB practice in personal attitudes toward life as well as a basic understanding of the practice.

The study will contribute to offering the practitioners a different angle to see the intervention from long-term perspectives and providing current practitioners and prospective practitioners, who are interested in HB practice for their spiritual and mental growth, with the empirically evidenced information about the usefulness of persistent practice in their journey toward wholeness. The outcome is to be contributory not only to the academic community but also to HB communities.

Participants will also be rewarded with

- a gift card (\$25)
- a detailed individual summary of the POI from the test service institute, EdITS - the individual's level of mental health and self-actualization.

Questions or more information? you may call or email:

Seok Hyeon (Scott) Geum (Researcher)
Sofia University
(xxx) xxx-xxxx

Appendix D: Personal Information Form (PIF)

The responses to the following questions will be used only for the research to examine the transformational effects of Holotropic Breathwork® in practitioners' orientation and mental well-being (Correlational Study) by the Institute of Transpersonal Psychology (ITP) at Sofia University researcher (Seok Hyeon Geum), and the data will be kept confidential. Please answer all questions as completely as possible.

GENERAL INFORMATION (Please Print)

Participant Name (First Name / Last Name): _____ / _____
 Date of Birth (MM/DD/YY): ____ / ____ / ____ Gender: Female / Male / Non-binary
 Address: _____ City: _____ State: _____ ZIP: _____
 Email Address: _____ Phone Number: _____
 Ethnicity: White/Caucasian Asian American African American Latino Others _____
 Religion: Protestant Catholic Buddhist Hindu Muslim Jewish Atheist
 Spiritual but not religious Nothing in particular Others _____
 Education: High school Bachelor Master Doctoral Others _____

OTHER INFORMATION (Required)

- When was your first Holotropic Breathwork® session? (MM/YY) _____ / _____
- When was your most recent Holotropic Breathwork® session? (MM/YY) _____ / _____
- How many Holotropic Breathwork® sessions have you practiced so far? (#) _____ times *
- How long have you practiced the Holotropic Breathwork®? (e.g., 25 months) _____ months *

Self-Reflective Question (Required)

- How has Holotropic Breathwork® practice impacted your life in general?
-
-
-

- What aspect of Holotropic Breathwork® makes you keep practicing? (What do you think the most significant benefit of Holotropic Breathwork® practice is?)
-
-
-

PLEASE READ AND SIGN THE FOLLOWING STATEMENT:

I hereby confirm that I have read and understood the above information, and have answered all questions completely and honestly, and have not withheld any information. My general health, as far as I am aware, is good.

SignatureDate

Please print your name

Appendix E: POI Scales

	LOW SCORE (below a standard score of 20)	HIGH SCORE (from a standard score of 50 to 60)
TIME INCOMPETENT vs. TIME COMPETENT	TIME INCOMPETENT – Lives in the past or future.	TIME COMPETENT – Lives in the present.
OTHER DIRECTED vs. INNER DIRECTED	OTHER DIRECTED – Dependent, seeks support of others' views.	INNER DIRECTED – Independent, self-supportive.

In general, scores above the average on these scales, that is, above the mid-line shown by standard score of 50, but below a standard score of 60 are considered to be more characteristic of self-actualizing adults. The closer your scores are to this range, the more similar are your responses given by self-actualizing people.

The further below the score 50 your scores are, the more they represent areas in which your responses are not like those of self-actualizing people. If most of your scores on the profile are considerably above 60, you may be presenting a picture of yourself which is "too" healthy, or which overemphasizes your freedom and self-actualization.

<i>Valuing</i>	Self-Actualizing Value	Rejects values of self-actualizing people.	Holds values of self-actualizing people.
	Existentiality	Rigid in application of values	Flexible in application of values.
<i>Feeling</i>	Feeling Reactivity	Insensitive to own needs and feelings.	Sensitive to own needs and feelings.
	Spontaneity	Fearful of expressing feelings behaviorally.	Freely expresses feelings behaviorally.
<i>Self-Perception</i>	Self-Regard	Has low self-worth.	Has high self-worth.
	Self-Acceptance	Unable to accept self with weaknesses.	Accepting of self in spite of weaknesses.

<i>Synergistic Awareness</i>	Nature of Human, Constructive	Sees human as essentially evil.	Sees humankind as essentially good.
	Synergy	Sees opposites of life as antagonistic.	Sees opposites of life as meaningfully related.
<i>Interpersonal Sensitivity</i>	Acceptance of Aggression	Denies feelings of anger or aggression.	Accepts feelings of anger or aggression.
	Capacity for Intimate Contact	Has difficulty with warm interpersonal relations.	Has warm interpersonal relationships.

Note. (EdITS, 2019), <https://www.edits.net/products/poi/>.

A Sample Item of POI

Example 1:

I am bound to the principle of fairness.

I am not absolutely bound by the principle of fairness

Example 2:

I often make my decisions spontaneously.

I seldom make my decisions spontaneously.

Note. <https://eap.edits.net>

Appendix F: PIL Items

Enthusiasm	Having a reason for being alive
Excitement in living	World being meaningful
Presence of clear life goals	Individual responsibility
Life being meaningful	Freedom in making decisions
Newness of each day	Being prepared for death
Wishing more lives	Suicidal thoughts
Activity after retirement	Capacity to discover meaning
Life goal completion	Life internally / externally determined
Good things in life	Contentment in daily tasks
Life lived having been worthwhile	Presence of goals/life purpose

Note. Schulenberg, Schnetzer, & Buchanan, 2010, p. 862.

Appendix G: Questionnaire—PIL

Purpose In Life Test (Crumbaugh & Maholick, 1964)

1	I am usually:		1	2	3	4	5	6	7	
2	Life to me seems:	completely bored	1	2	3	4	5	6	7	exuberant, enthusiastic
3	In life, I have:	completely routine	1	2	3	4	5	6	7	always exciting
4	My personal existence is:	no goals or aims	1	2	3	4	5	6	7	clear goals and aims
5	Every day is:	utterly meaningless, without purpose	1	2	3	4	5	6	7	purposeful and meaningful
6	If I could choose, I would:	exactly the same	1	2	3	4	5	6	7	
7	After retiring, I would:	prefer never to have been born	1	2	3	4	5	6	7	want more lives just like this one
8	In achieving life goals, I've:	loaf completely the rest of my life	1	2	3	4	5	6	7	do some of excited things that I've always wanted to
9	My life is:	made no progress whatever	1	2	3	4	5	6	7	progressed to complete fulfillment
10	If I should die today, I'd feel that my life has been:	empty, filled with despair	1	2	3	4	5	6	7	running over with excited things
11	In thinking of my life, I:	completely worthless	1	2	3	4	5	6	7	very worthwhile
12	As I view the world in relation to my life, the world:	often wonder why I exist	1	2	3	4	5	6	7	always see reasons for being here
13	I am a:	Completely confuses me	1	2	3	4	5	6	7	fits meaningfully with my life
14	Concerning freedom to choose, I believe humans are:	very irresponsible person	1	2	3	4	5	6	7	very responsible person
15	With regard to death, I am:	completely bound by limitation of heredity and environment	1	2	3	4	5	6	7	totally free to make all life choices
16	Regarding suicide, I have:	unprepared and frightened	1	2	3	4	5	6	7	prepared and unafraid
17	I regard my ability to find purpose or mission in life as:	thought of it seriously as a way out	1	2	3	4	5	6	7	never given it a second thought
18	My life is:	practically none	1	2	3	4	5	6	7	very great
19	Facing my daily tasks is:	out of my hands and controlled by external factors	1	2	3	4	5	6	7	in my hands and I'm in control of it
20	I have discovered:	a painful and boring experience	1	2	3	4	5	6	7	a source of pleasure and satisfaction
		no mission or purpose in life	1	2	3	4	5	6	7	a satisfying life purpose

Appendix H: QOLS Items

Conceptual Category	Scale Item
Material and Physical Well-being	Material well-being and financial security: Having good food, home, possessions, comforts, expectation of these for the future, money and financial security
	Health and personal safety: freedom from sickness, physical and mental fitness, and avoidance of accidents and other health problems (incl. alcohol, drugs, death, and aging)
	Relation with parents, siblings, other relatives: Having and raising children
Relationship with other People	Relations with spouse or significant other Relations with Friends: including being accepted, visiting, giving and receiving help, love, trust, support, and guidance
Social, Community, and Civic Activities	Activities related to helping or encouraging others: working for the benefit of other people
	Activities related to local and national government
Personal Development and Fulfillment	Intellectual development: Learning, attending school, acquiring knowledge, graduating, problem solving, improving understanding or appreciation in an intellectual area
	Personal understanding and planning: Developing and gaining orientation, purpose, and guiding principles for one's life
	Occupational role: Having interesting challenging, rewarding, worthwhile work in a job or home
Recreation	Creativity and personal expression Socializing
	Passive and observational recreational activities: e.g., Watching television, listening to music, reading, going to movies, or going to sports events
	Active and participatory recreational activities: sports, hunting, fishing, boating, camping, vacation travel and so forth
Independence	Ability to do for oneself

Note. Flanagan, 1978; Burckhardt and Anderson, 2003

Appendix I: Questionnaire—QOLS

Quality of Life Scale (QOLS)

Instruction: Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

		Delighted	Pleased	Mostly Satisfied	Mixed	Mostly Unsatisfied	Unhappy	Terrible
1	Material comforts home, food, conveniences, financial security	7	6	5	4	3	2	1
2	Health – being physically fit and vigorous	7	6	5	4	3	2	1
3	Relationship with parents, siblings, & other relatives – communicating, visiting, helping	7	6	5	4	3	2	1
4	Having and rearing children	7	6	5	4	3	2	1
5	Close relationships with spouse or significant other	7	6	5	4	3	2	1
6	Close friends	7	6	5	4	3	2	1
7	Helping and encouraging others, volunteering, giving advice	7	6	5	4	3	2	1
8	Participating in organizations and public affairs	7	6	5	4	3	2	1
9	Learning – attending school, improving, understanding, getting additional knowledge	7	6	5	4	3	2	1
10	Understanding yourself – knowing your assets and limitations – knowing what life is about	7	6	5	4	3	2	1
11	Work – Job or in-home	7	6	5	4	3	2	1
12	Expressing yourself creatively	7	6	5	4	3	2	1
13	Socializing – meeting other people, doing things	7	6	5	4	3	2	1
14	Reading, listening to music, or observing entertainment	7	6	5	4	3	2	1
15	Participating in active recreation	7	6	5	4	3	2	1
16	Independence, doing for yourself	7	6	5	4	3	2	1