PERSPECTIVES ON THE MEANING AND SIGNIFICANCE OF IMAGERY: A SURVEY OF CLINICIANS, EDUCATORS, AND RESEARCHERS

A dissertation presented to

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in partial fulfillment of the requirements for the degree of

Doctor of Philosophy (Ph.D.) in Mind-Body Medicine

by

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Approval of the Dissertation

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This dissertation by Mary E. Singler has been approved by the committee members below, who recommend it be accepted by the faculty of Saybrook University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy (Ph.D.) in Mind-Body Medicine

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Abstract

PERSPECTIVES ON THE MEANING AND SIGNIFICANCE OF IMAGERY: A SURVEY OF CLINICIANS, RESEARCHERS, AND EDUCATORS

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The purpose of this qualitative descriptive research study was to delineate the perspectives held by medical experts on the meaning and significance of imagery. Thirteen doctorate-prepared experts, including clinicians, educators, and researchers, were surveyed via email and asked basic demographic information and their responses to five open-ended questions. The questions were designed to elicit the experts' perceptions regarding their definition of imagery; the significance of imagery to health; the role of imagery in the experts' professional practices; and the potential relationships that exist between imagery and psychoneuroimmunology (PNI), and imagery and the learning domains.

Literature from systems theory provided the conceptual framework for this study and a philosophical approach influenced the research design. The study utilized a manual content analysis to identify themes that best described the experts' perspectives. The following three themes emerged: (a) Imagery is a complex construct comprised of both structural and process components which are interconnected via a complex communication system, which responds, directs, and transmits the flow of information within the individual and also between the individual and the environment. (b) The

structural component of imagery is multisensorial, multifaceted, and it influences and is influenced by the learning and health domains resulting in the potential for both positive and adverse effects on health. (c) When imagery's process component is used and directed in a goal-oriented, purposeful, intention-driven way, desired outcomes can be achieved in the psychophysiological domains of health.

The purpose of seeking the experts' perspectives on the meaning and significance of imagery was to gain a better understanding of imagery's role in influencing health. Expanded perspectives were sought because health-risk behaviors are contributing to the rising prevalence of chronic disease in America, which in turn, supports a costly medical model of disease-management rather than one that promotes health. It was concluded that maximizing positive imagery could not only be a potential mechanism for addressing the issues related to chronic disease, but also an effective way to improve the health of the nation.

Dedication

This research project on imagery is dedicated to Constance (Connie) Corley, Ph.D., affectionately referred to as Professor Positive by myself and my fellow classmates. Dr. Corley was my initially assigned Saybrook Ph.D. program mentor. She also became my principal research instructor and the chair of my dissertation committee: a dream-team that also included Drs. Donald Moss and Eric Willmarth.

Dr. Corley was kind, patient, nonjudgmental, and was consistently supportive in guiding me through the process of being a doctoral student. She was my first exposure to the concept of mentoring and to the concept of what it means to be on the receiving end of individualized care. She was remarkably proficient at facilitating the recognition and acceptance for where I was in the present; guiding me to understand how I had arrived at that point in time; and then actively and patiently collaborating with me in identifying how to move the most efficiently and effectively on a path toward reaching my desired goals.

Another reason that this dissertation is dedicated to Dr. Corley is that when I entered the doctorate program, I did so with little interest in doing research. Yet, now as I reach the end of my graduate studies, I find that no matter where I go, and regardless of whatever setting in which I find myself, I now think like a researcher. This has been an unexpected gift that I have received as a result of Dr. Corley's tutelage. In fact, the sense of self-empowerment that I feel as a novice researcher can best be explained with an example from when I was in Kunming, China at the Yunnan Provincial Hospital of Traditional Chinese Medicine (TCM).

It was in the fall semester of 2012 and I was completing the clinical hours for my Practicum. Dr. Eric Willmarth, the Practicum Director, had approved my unusual request for my practicum experience and was flexible in permitting me to travel to China with the People-to-People's tour, *The Healing Traditions of China*. I was part of a very small medical delegation of doctors, therapists, and nurses that toured both small and large, public, private, and rural medical facilities and teaching institutions that extended from Northern to Southern China.

What was significant about the visit to the medical center in Kunming was that I found that I was able to confidently participate and discuss (with the aid of a translator) potential research topics with several of the teaching institution's department heads. Following the meeting, I was able to further speak with one of the English-speaking TCM doctors, Xiong Youlong, and discuss some of his case studies, his current research projects, as well as his future research interests.

Feeling at ease while discussing medical research in a foreign country was an extremely rewarding experience and one that I am unlikely to forget. I concluded that my experience at the medical center would not have been possible had it not been for Dr. Corley's profound influence in supporting me during the Ph.D. program. Consequently, and as a result of her continuous inspiration, I will always be grateful for not only her mentorship and guidance in completing this research project on imagery, but also for her inspiring me to have the clarity and the confidence to think like a researcher.

Acknowledgments

I would first like to acknowledge my sons Robert C. Singler, Jr. (Robbie) and Douglas A. Singler (Doug). They have both been incredibly supportive in my journey as a graduate student and have consistently cheered me on over the last seven years. Doug also proofread the reference list for accurate alphabetical ordering and Robbie revised the models from my thesis manuscript. Additionally, I would like to thank my parents, Annabelle and Vernon Peterson, my brothers Vern, Jr. (Vernie) and Joseph (Joe), and all of my very dear friends for their patience while I have pursued my life-long dream of obtaining my Masters in Nursing and my Ph.D. As a consequence of the demands of graduate school, unfortunately my studies have taken precedence over my relationships with my sons, family, and my friends, and therefore, I will remain forever grateful for their continued support while I pursued my academic aspirations.

I would also like to thank the Saybrook faculty of the School of Mind-Body Medicine (MBM). First, I would like to acknowledge my Imagery for Health course instructor, Dr. Lisa Kelly (formerly Mastain), as well as my hypnosis instructor, Dr. Eric Willmarth. Both of these faculty members inadvertently contributed to opening my eyes and my heart to the healing potential of imagery. Also, I would like to thank Dr. Darlene Viggiano. I believe that she is a gifted master, teacher, and role-model of how to use metaphors in hypnosis. Additionally, Dr. Willmarth introduced me to the therapeutic benefits of medical hypnosis, as well as to his peers in the Society for Clinical and Experimental Hypnosis (SCEH) and the American Society of Clinical Hypnosis (ACSH). In all of my years as a nurse, I have never met such a dedicated group of healthcare providers so committed to “helping others learn how to help themselves.”

Of Dr. Willmarth's peers, I would specifically like to acknowledge Dr. Michael Yapko (2014) from whom I took the *100-Hour Clinical Hypnosis and Strategic Psychotherapy Training.* It was re-affirming for me to learn how sustaining long-term mental health outcomes can be dramatically improved as a result of a therapist's expanded perspectives. Specifically of note was Dr. Yapko's modeling of his extraordinary listening skills. He modeled the benefits of developing a therapeutic strategy that is based on just *listening* to what the patient tells you in the first few moments as to why the patient is seeking help. It is such a simple concept, yet for me, one which holds profound possibilities for improving not only the mental health of the American people, but also for improving the general health of all humankind.

I would also like to acknowledge Dr. Devorah Curtis. In addition to being my exceptional Ph.D. program plan mentor, Dr. Curtis also willingly and selflessly provided personal coaching and guidance in tackling some of the challenges that I faced in the Health Care Systems (HCS) track. She is a rare human being, at times seemingly living more like an angel amongst us than a human. Consequently, I feel that I have had the extraordinary privilege of just meeting her. From a more down-to-earth or practical perspective, it was Dr. Curtis who was the one who helped me format the header page numbers, as well as the Table of Content pages for my dissertation pilot. When I was at my wits-end, it was she who lent a helping hand, and like the many times before, she was ready and willing to help facilitate resolution in whatever capacity was needed.

Also on a very practical note, I would like to acknowledge Monika Landenhamer, the manuscript editor; Dr. Donald Moss, the Chair of Saybrook University's School of Mind-Body Medicine; and Daniel Sterenchuk (Dan), the Administrative Director. Dan

was formerly referred to as the program's Associate Dean. He served as my "rock" and provided the much-needed stability over the first few years of the program. Both he and Dr. Moss asked, and then graciously and patiently listened to my feedback about concerns and issues related to the curriculum, its ongoing development, and my program plan. Their adeptness in shaping, managing, and developing the curriculum and the faculty, while concurrently and individually supporting the students' needs, could well serve as an international poster-model for successful online learning programs.

I would also like to acknowledge Dr. Mary Kay Chess, one of my HCS instructors. She inspired my appreciation for systems thinking and also helped to facilitate my ability to relate the central concepts of systems thinking to my interests of psychopathophysiology and healthcare reform.

Lastly, with regards to the Saybrook MBM faculty, I would also like to thank biophysicist, Dr. Beverly Rubik. In having her as a Saybrook instructor, I was gifted the pleasure of learning about biofields and the human energy field from a woman that I consider one of the most brilliant, yet at the same time, most humble and gracious research scientists of our time.

I would especially like to thank my esteemed classmates of the Fall 2010 cohort with whom I have shared this journey. I could not be more proud than I am to have been a part of this cohort of peers. They have repeatedly left me dumbstruck by their knowledge, skills, care, and compassion. Most especially, I would like to acknowledge Michelle LaMasa-Schrader and Pegi Black.

Michelle, Pegi, and I named ourselves the Three MusCAtears during our first year. This group-assigned title we deemed appropriate given that we all three reside in

California (CA) and took turns comforting each other through the tears, frustrations, and challenges in being a graduate student. I learned the significance of maintaining peer support throughout one's graduate studies and especially the amazing power of listening, unconditional acceptance, networking, and social support. In fact, learning firsthand the power of social support is the lesson that I will treasure the most as I move forward in my life, especially when remembering the Three MusCAtears.

I would also like to acknowledge Dr. Rachel Naomi Remen with whom I had the privilege of completing my first clinical practicum as a Dominican University of California graduate nursing student. As part of my practicum, I was incredibly fortunate to have had the honor of auditing segments of Dr. Remen's Healer's Art Course (Remen, n.d., 2005) at the University of California San Francisco (UCSF). As a result, I learned first-hand the potential for evolving medicine towards patient-centered care. And I learned this from one of the earliest pioneers in the field of mind-body medicine (Hughes, 2004). Basically, my appreciation for Dr. Remen's work rests with the simple fact that "hope" was born during my first graduate practicum. It was a hope for the future, that one day, the "heart" in medicine *and* in nursing would return.

My final acknowledgment is a special thank you to the research participants who took time out of their very busy schedules to respond to my inquiry and especially to those who partook in this and the pilot's email survey. Each that responded could just as easily have ignored the email request, left it buried in a spam folder, or deleted it without even reading it. However, each generously shared their wisdom and expertise and left me feeling as if I had found the elusive pot of gold at the end of the rainbow.

Table of Contents

List of Tables

List of Figures

List of Tables in the Appendices

List of Figures in the Appendices

List of Abbreviations

AGI	Academy of Guided Imagery
AHA	American Heart Association
APA	American Psychological Association
APRN	Advanced Practice Registered Nurse
ASCH	American Society of Clinical Hypnosis
BADL	basic activity of daily living
CAM	complementary and alternative medicine
CDC	Centers for Disease Control and Prevention
CEO	chief executive officer
CLD	causal loop diagram
CMS	Centers for Medicare and Medicaid Services
CNS	central nervous system
CT	computed tomography
CV	curriculum vitae
CVD	cardiovascular disease
DC	Duality Category
DQ	demographic question
Ed.D.	Doctorate of Education
EMDR	eye movement desensitization & reprocessing
FCRAP	functional chronic recurrent abdominal pain
FISc	Focus Intention Subcategory
GBD	global burden of disease
GDP	gross domestic product
HDSc	Health Domains Subcategory
HPA	hypothalamus-pituitary-adrenal axis
HSc	Healing Subcategory
HSS	Health and Human Services
IEESc	Internal External Experience Subcategory
ImSc	Imagination Subcategory
IONS	Institute of Noetic Sciences
LCC	Language Communication Category
LDSc	Learning Domains Subcategory
MBM	mind-body medicine
MBT	mind-body therapy
MCCs	multiple chronic conditions
M.D.	Doctorate of Medicine (also referred to as a medical doctor or physician)
MDD	major depressive disorder
MfC	Multifaceted Category
MFT	marriage and family therapist

MHPAEA	Mental Health Parity and Addiction Equity Act
MSMR	Medical Surveillance Monthly Report
MsSc	Multisensorial Subcategory
NASA	National Aeronautics and Space Administration
NCCAM	National Center for Complementary and Alternative Medicine
NDE	near death experience
NHC	National Health Council
NIH	National Institutes of Health
PANSc	Positive Adverse/Negative Subcategory
PGPF	Peter G. Peterson Foundation
Ph.D.	Doctorate of Philosophy
PNI	psychoneuroimmunology
Psy.D.	Doctorate of Psychology
RC	residential conference
RCT	randomized clinical trial
RQ	research question
RWJF	Robert Wood Johnson Foundation
SCEH	Society for Clinical and Experimental Hypnosis
SpSc	Speech Subcategory
SSRI	selective serotonin reuptake inhibitor
StSc	State Subcategory
TCM	Traditional Chinese Medicine
TTPIC	Tool Technique Process Intervention Category
UCSF	University of California San Francisco
VA	Veterans Affairs
WHO	World Health Organization

Operational Definitions and Related Terms

First presented is a quick overview of a few definitions and how some related terms are used interchangeably within the dissertation. Also of note is that when referencing various authors, the terms that the authors utilized in their respective writings are repeated. This was done in order to maintain consistency and integrity while conveying the authors' thoughts. Therefore, if an author refers to a "patient" in his or her publication, the word "patient" is carried over to the text rather than substituting the word patient with the word client, and vice-versa. Clarification of a few terms include the following:

- Medicine, referred to as allopathic, conventional, mainstream, or most frequently as Western medicine, is treated in the dissertation as referring to the same medical model.
- Words such as subject, practitioner, and expert each reference the same individual: the research participant or the doctor recruited for participation.
- Dysfunction and dysregulation are considered within the same context when describing a disruption in normal physiological or psychological function.
- A concept is conceived of as a "mental representation" as described by Margolis and Laurence (2011), as well the building blocks of thinking as described by Sabet (2010).
- A construct is conceived of as a higher order of clustered, broader, and encompassing concepts as described by Sabet (2010).
- Treatment, treatment modality, therapy, mind-body medicine modality, and mind-body therapy all refer to a therapeutic medical modality, with each term considered within the same context.
- When referring to seniors, the elderly or older adults, the age of the adults is 65-years of age and older. The word that the cited author utilized is repeated within this dissertation, also in order to maintain consistency with the author's writing.
- The words perception and perspective are so closely related (Pratchett, 2011) that they are used here nearly interchangeably. Both words refer to a way of regarding, understanding, or interpreting something. However, the word perspective is more often used. Perspective is viewed in accordance with the Merriam Webster's

Dictionary ("Perspective," n.d.) definition of it being a point of view, a way of regarding, or a mental view of facts or ideas *and* their interrelationships in which the relevant information is connected in a meaningful way.

- Finally, within this study, the words "emotion" and "feeling" are used interchangeably when referring to the affective learning domain. However, emotion is perceived by this investigator as a noun, for example, the emotion of anger; whereas, feeling is perceived as the experience of the emotion, for example, feeling angry.

Chapter 1: Introduction

Organization of the Dissertation

The organization of the dissertation is presented in five chapters. Chapter 1, or the introduction, includes the basics of the study. The following is covered: problem identification and purpose, the overarching research questions that guided the development of the study, and the study's rationale and significance. Finally, also presented in Chapter 1 is the study's background, including the study's theoretical frameworks.

Chapter 2 presents the literature review on imagery. It begins with a brief discussion on the power of images and imagery's use in medicine. An overview of the two mind-body medicine (MBM) modalities of guided imagery and hypnosis is then presented. These two MBM modalities were selected because both modalities incorporate the construct of imagery. Additionally, the overlapping across both is also addressed. Specifically discussed are the connections of imagery to the learning domains and psychoneuroimmunology (PNI) as well as the clinical implications of imagery.

Chapter 3 is an overview of the study's methodology. Chapter 4 identifies and summarizes the study's results, referred to as the study's findings. Chapter 5 is a discussion of the findings, presents concluding thoughts, and implications for future research.

Overview of the Study

This was a qualitative research study that surveyed doctorate-prepared medical experts regarding their perspectives on imagery's meaning and significance. The experts were asked basic demographic questions (DQs) and five open-ended research questions

(RQs). The research design was influenced by a philosophical inquiry with the content analysis aimed at the identification of themes that described the experts' perspectives. This study was subsequent to a pilot study in which a convenience sample of eight doctorate-prepared experts in guided imagery and hypnosis were surveyed. However, for the present study, the sample consisted of 13 doctorate-prepared experts and included doctors with a greater diversity of expertise. For example, included among the 13 doctors were four physicians and two nurses. One nurse was an advanced practice registered nurse (APRN) and the second nurse had several advanced nursing practice certifications.

The Use of Imagery in Mind-Body Medicine (MBM)

Throughout the investigator's graduate studies, it was noted that various medical experts would frequently use the word imagery, both in writings and in presentations. The investigator also noticed that the word imagery had not only been referenced as an inherent component in techniques that are used for stress reduction (Freeman et al., 2008a), but that imagery was also noted to be used across multiple modalities of mind-body medicine (MBM).

MBM, according to Lake (2003), was defined by the 1995 National Institutes of Health's (NIH) Chantilly report. The report defined it "as a set of interventions originating in both Western and non-Western paradigms directed at treating disease or preserving health based on an assumed interconnection or *integration* of mind and body" (Lake, 2003, p. 58). Consequently, the investigator found it significant that Freeman (2009) addressed the phenomenon of imagery by noting that it is often used as a foundational concept in mind-body interventions. The mind-body interventions include,

but are not limited to: guided imagery, hypnosis, autogenic training, relaxation therapy, biofeedback, and some meditation forms according to Crawford (1982).

This prompted the investigator to ponder: What exactly is imagery? In fact, a list of questions began to unfold. For example, does imagery hold the same meaning across disciplines? Do various practitioners of MBM use the same words to define it? In what contextual framework is imagery perceived? Could enhancing the use of imagery improve the efficacy of MBM interventions? Could patients be taught to utilize imagery to enhance MBM techniques, such as in the use of self-hypnosis? Could a better understanding of imagery facilitate individuals to focus towards the future rather than ruminate on the past? And finally, could a better understanding of imagery provide insights as to how one's thoughts, feelings, and actions influence one's health?

The Problem Identified

Even though imagery was noted to be a foundational concept, at the same time, it was also noted that there did not seem to be any recognition or consistent pattern of acknowledgment of imagery. In fact, there did not appear to be any consistency across the various interventions in how the term imagery was actually used (Astin, Shapiro, Eisenberg, & Forys, 2003; P. J. Lang, Kozak, Miller, Levin, & McLean, 1990; Sheikh & Jordan, 1983). Moreover, little research has actually described what produces successful outcomes in the use of imagery (Freeman et al., 2008b). Nor has significant research been done to identify why imagery is deemed significant in regards to expanding knowledge about complementary and alternative medicine (CAM) therapies (Heinschel, 2002).

Additionally, the word imagery is frequently included in publications of both guided imagery and hypnosis, but its meaning and significance to health are not clearly

identified within or across either modality from this investigator's perspective. Furthermore, imagination, like visualization, is a word that is often used in lieu of the word imagery. It is also a word that is used right alongside of imagery. Additionally, both imagination and visualization have been demonstrated to be used in the definitions and descriptions of both of the MBM modalities of guided imagery and hypnosis.

For example, Achterberg (2002) described imagery as an individual's imagination in one or more of the senses. Luskin and associates (1998) described imagery as the use of the imagination "to invoke" the senses. Sarbin, a pioneer in hypnosis research and theory development (Scheibe, 2006), coined the phrase "believed-in-imaginings" when he described hypnosis according to Yapko (2012). Like Sarbin, Josephine Hilgard also examined the components of hypnosis and predicted that hypnotizability was related to an individual's "capacity for imaginative involvement" (Yapko, 2012, p. 167).

Finally, Luskin and his associates (1998), after reviewing mind-body therapies (MBTs) for the treatment of cardiovascular disease (CVD), noted that imagery was often used in combined therapeutic approaches. However, the authors also noted that although the relaxation component of imagery had been studied, they concluded that what was lacking in imagery research was the identification of its underlying mechanisms. Consequently, the authors suggested that the mechanisms of imagery be further studied so that the extent of imagery's positive effects on healing might be better understood. With an enhanced understanding of imagery in both healthy and unhealthy populations, the authors speculated that a modality that best suited an individual's needs could be more readily identified (Luskin et al., 1998).

The Purpose of the Study

The purpose of the study was to gain knowledge about the construct of imagery, specifically what current medical experts consider to be its meaning and significance. An underlying idea that drove the research was to document that across MBM there are similar descriptors employed regarding the use of imagery, as well as other terms that are randomly exchanged in lieu of the word imagery.

The Overarching Research Question and Its Sub-Questions

The overarching research question for this study was: What is imagery? The sub-questions were:

1. How do medical experts define imagery and what terms, phrases or descriptors do they use to describe it?
2. Can imagery's meaning and significance be better understood by identifying the similarities in the common definitions, terms, phrases, and descriptors used by medical experts, especially those shared by doctors who have an expertise in either guided imagery, hypnosis, or both?
3. What are the experts' perceptions of imagery's underpinnings and its relationship to health?
4. Can the examination of the experts' perceptions of imagery contribute to an expanded understanding of imagery's role in influencing health?

The Rationale and the Significance of the Study

The basis or the underlying driver for this study is the rising prevalence of chronic disease in America. The reason that the rising prevalence of chronic disease is of interest to this investigator is because she has had a life-long interest in why people get sick and what helps them to get well. Consequently, she finds it alarming that DeVol and Bedroussain (2007) have estimated that by 2023 there will be a 42% increase in the prevalence of the top seven chronic diseases. The seven include heart disease, stroke, cancer, diabetes, hypertension, pulmonary conditions, and mental disorders (DeVol &

Bedroussain, 2007). Heart disease tops the list with cardiovascular disease (CVD) claiming one life every 35 seconds and more lives per year than the next four common causes of death combined (McCauley, 2007). In fact, from 2000 to 2010, approximately one in every three deaths in the United States was due to CVD according to the American Heart Association's (AHA, 2014) heart and stroke statistics.

Given the anticipated increase in chronic diseases, especially in the face of these latest published statistics, this investigator, in concert with authors such as Achterberg (2002, 2010) and Freeman (2009), believes that imagery can play a central role in combating the prevalence of chronic disease. Consequently, delineating the meaning and significance of imagery is viewed as a mechanism to potentially expand perspectives of health, and as a result, address the rising prevalence of chronic disease. Finally, the meaning and significance of imagery are sought in order to expand its use across all of medicine, not just in the use of MBM or in the use of various complementary and alternative health practices.

The prevalence of chronic disease. The reason that the prevalence of chronic disease is significant as the driver for the study is because 70% of deaths in America are attributed to chronic disease (Kung, Hoyert, Xu, & Murphy, 2008). This figure is consistent with the fact that chronic disease remains the leading cause of mortality in the world (WHO, 2013). Ward, Schiller, and Goodman (2014) of the Centers for Disease Control and Prevention (CDC) reported that in 2012 about half of all adults, or approximately 117 million Americans, had one or more chronic illnesses. By 2020, Bodenheimer, Chen, and Bennett (2009) have estimated that the numbers of those with a chronic illness will number upwards towards 157 million.

Health-risk behaviors. According to the CDC (n.d.), contributing to the prevalence of chronic disease are associated health-risk behaviors. These behaviors are not only considered modifiable, but according to Ornish (2007), the progression of the chronic disease can also be reversed (Ornish, 2007). The CDC (n.d.) considers that the principle health-risk behaviors are smoking, excess alcohol consumption, poor dietary habits, and a lack of physical exercise.

Smoking. Smoking ranks at the top of the list of health-risk behaviors that contribute to chronic disease (Mokdad, Marks, Stroup, & Gerberding, 2004). In fact, smoking remains the leading cause of preventable death in the United States with 443,000 deaths per year attributed to tobacco use at a cost of nearly $100 billion, according to the Robert Wood Johnson Foundation (RWJ F, 2013). Although smoking is a lethal health-risk behavior and is known to increase the risk for heart disease, chronic pulmonary diseases (such as emphysema), and lung cancer (CDC, 2007), Americans continue to smoke. For example, smoking was reported among 19% of adults surveyed (CDC, n.d.-a) and nearly a quarter of high school students surveyed between 2003 and 2005 (CDC, 2007). Additionally, 3.6 million children and adolescents also reported smoking when surveyed (RWJF, 2013). On a final note regarding smoking as a health-risk behavior is the fact that 3,800 deaths were estimated in 2003 to be due to laryngeal cancer (CDC, 2004). Laryngeal cancer is thought to be a direct result of the combination of both of the health-risk behaviors of smoking and alcohol consumption (CDC, 2004).

Excess alcohol consumption. The excess use of alcohol is not only a major health concern for the United States (CDC, n.d.-a), but the World Health Organization (WHO) also considers it to be the world's third largest health-risk behavior. In fact, 2.5 million

deaths per year are associated with excess alcohol consumption (WHO, n.d.-a). Similar to smoking, excess alcohol consumption is associated with an extensive list of health issues. The list includes hypertension, stroke, and other cardiovascular diseases (CVDs), unintentional injuries, and poorly regulated diabetic care (CDC, 2012). In addition to the physical issues are the serious social issues related to excess alcohol use, including assault, rape, and child molestation (Gutierrez, 2008).

Poor dietary habits. According to the NIH (2012), there has been a consistent rise in adult obesity over the last 30 years. Hoffman (2008) noted that the incidence of obesity doubled from 1987 to 2005. Additionally, from 2005-2006, one-third of all adult men and women were noted to have been obese, according to a CDC report published by Ogden, Carroll, McDowell, and Flegal (2007). Furthermore, the prevalence rate of obesity in children and adolescence is at 16.9% according to Ogden, Carroll, Kit, and Flegal (2012).

Obesity, like smoking and excess alcohol consumption, is also associated with complex factors that affect numerous medical conditions. Of specific note is obesity's correlation to the development of type 2 diabetes. In fact, according to the CDC's latest estimates, the number of Americans with diabetes more than tripled between 1980 and 2011 (CDC, 2013). Additionally, the CDC estimates that by 2050 as many as one third of all adults will have diabetes if the current trend continues (Boyle, Thompson, Gregg, Barker, & Williamson, 2010). Finally, obesity also contributes to an increased risk for disability and mortality (Ogden et al., 2007).

Inactivity. Ralph, Mielenz, Parton, Flatley, and Thorpe (2013) reported in a 2009 survey of 1,036 older adults that 28.7% had limitations of their basic activities of daily living (BADL). Assessed BADLs included bathing, eating, and an ability to get in and

out of a bed or a chair. The authors also reported that 60% to 75% of older adults in America and 79% of their sampled population had multiple chronic conditions (MCCs or two or more chronic conditions; Ralph et al., 2013). This is significant for two reasons. One, as the authors noted, is the growing burden of MCCs given America's aging population. The aging population, attributed to longer life spans (Utz, 2003) as well as aging baby boomers, is expected to account for approximately 20% of the U.S. population by 2030 (CDC, n.d.-b). Second, among older adults from low-income, racial/ethnic minority populations, is the clear correlation between activity limitations and a higher disease burden (Ralph et al., 2013). This is noteworthy since activity limitations related to comorbidity not only limit a person's capacity for independent living (Ralph et al., 2013), but additionally as Gijsen and colleagues (2001) pointed out, activity limitations can also predict mortality.

Limitations of daily activities extend to children as well according to the National Health Council's (NHC, 2012) review of health statistics. The NHC's statistics were derived from a CDC document titled *Health, United States, 2007 with Chartbook on Trends in the Health of Americans.* The statistics reflected an estimated 8% of all children, between the ages of 5 to 17, were reported to have activity limitations due to at least one chronic illness or disability (CDC, 2007).

Although the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) suggested that staying active may lower an individual's chance of developing a chronic disease (NIDDK, 2012), physical activity has declined worldwide according to WHO (n.d.-c). WHO (n.d.-c) attributes the decline of physical activity to the "increasingly sedentary nature of many forms of work, changing modes of transportation,

and increasing urbanization" ("What causes obesity," para. 2). Therefore, it is suggested here that a reinforcing and looping health dilemma exists if one considers that physical inactivity contributes to the incidence of chronic disease *and* that chronic disease results in a reduction of physical activity.

Expanding perspectives of health. Expanding perspective of health by delineating the meaning and significance of imagery is important because chronic diseases are not only thought to be preventable (CDC, 2009; Hoffman, 2008), but Shealy (2003) has posited that a comprehensive mind-body-spirit approach to medicine could reduce illnesses by 85%. Reinforcing Shealy's (2003) premise is Perlmutter's (2013) statistic that more than 70% of the genes that code for health and longevity are under epigenetic control. In other words, according to Perlmutter (2013), an individual's lifestyle choices actually influence the transcription of the genes that impact one's health. Additionally, Moss (2003) pointed out that there is a "mismatch between the health needs of the typical patient and the standard medical response" (p. 4). Consequently, this investigator believes that researching the experts' definitions and understanding of imagery may:

1. provide clues for the development of a more comprehensive approach to medicine;
2. provide further examination of the relationships between lifestyle choices, health-risk behaviors and the development of chronic disease; and
3. potentially address the mismatch between needs and provided care that Moss (2003) has identified.

Additionally, as a result of the expanded perspectives, insights into the development of strategies for self-care, self-empowerment, and the human potential for self-healing could also combine to support improved health outcomes. In fact, Achterberg

(2002) and Brigham (2004) seem to be pointing the way toward expanding perspectives of health with the use of imagery. Both authors have described imagery as serving as a communication-type highway between perceptions, emotions, and the biological systems. More importantly, Brigham (2004) has also suggested that imagery is "the crux of how we experience ourselves, our bodies, our environment, our relationships with others, and our spiritual life" (p. 32). Therefore, it is also postulated that a better understanding of the construct of imagery may lead to future research on imagery's role in influencing health, as well as the identification of the underlying mechanisms that support MBM. This in turn could potentially contribute to the reformation of the healthcare system, and with it, an improvement in the nation's health.

The growing costs of healthcare. There is a very practical reason for expanding perspectives of health by better understanding imagery's role in influencing health. The reason is the growing costs of healthcare. According to Hoffman (2008) and the National Center for Chronic Disease Prevention and Health Promotion (CDC, 2009), 75% of all healthcare dollars spent in the United States are dollars spent on patients with one or more chronic conditions. Consequently, it is posited that the disease-management model of healthcare that exists today (Ruff & Mackenzie, 2009) will continue to be supported given that the majority of healthcare dollars spent are allocated for acute and chronic disease management (Thrall, 2005).

The climbing percentage of the gross domestic product (GDP) clearly reflects the growing costs of healthcare. For example, from 2009 to 2011, healthcare costs were estimated at 17.9% of the GDP (Hartman, Marin, Benson, & Catlin, 2013). In 2012, the percentage dropped to 17.2% of the GDP according to the Centers for Medicare and

Medicaid Services (CMS, n.d.). Nevertheless, the dollars spent in 2012 were an estimated $2.8 trillion, and the CMS (n.d.) has estimated that healthcare expenditures will account for 19.3% of the GDP by 2023. This is a marked increase from the 5.1% that was spent in 1960 (Finkler & Getzen, 2008) and the 7.2% that was spent in 1970 (Kaiser Family Foundation, 2009). In fact, from 1960 to 2004, healthcare spending climbed from $27 billion to $1.9 trillion (Finkler & Getzen, 2008), and in 2012, according to the Peter G. Peterson Foundation (PGPF, 2013), it had climbed to $2.8 trillion. Finally, at the Milken Institute, DeVol and Bedroussian (2007) have estimated that by 2023 that healthcare costs will have climbed even higher to a staggering $4.2 trillion.

Another aspect to consider in the growing costs of healthcare is that the costs have continued to escalate to the point that the United States is considered as having the costliest healthcare system in the world (Meadows, n.d.; Squires, 2012). In fact, Americans spend over twice as much per capita on healthcare when compared to other developed countries (PGPF, 2013). And in 2013, the federal government was projected to have operated at a $980 billion dollar loss when a financial analysis demonstrated that health expenditures had far exceeded the actual premium payments collected (PGPF, 2013). Yet, concurrently, Americans have also been noted to be the “most dissatisfied” with the healthcare provided when compared to other developed countries (Weisfeld, 2008, p. 32). Additionally, the cost of health insurance premiums and the shared costs (e.g., copayments and insurance deductibles) have continued to outpace inflation and wage growth (Kaiser Family Foundation, 2009).

While spending has outpaced income, the rising expenditures have not created any advantages for U.S. residents in health and wellness. In fact, other countries that

spend less per capita on healthcare report better health outcomes (PGPF, 2013). For example, in 2011, the United States had the fourth highest infant mortality rate of the 34 countries that comprise the Organisation for Economic Co-operation and Development (OECD, 2014). Additionally, in regard to suicide rates, in 2011, the United States ranked in the middle of the tabulated organization's members (OECD, 2013). In other words, half of the countries had a higher suicide rate and half had a lower suicide rate. However, the United States had nearly double and even more than double the suicide rates of some of the other countries, for example, the United Kingdom, Spain, Mexico, Italy, and Greece (OECD, 2013).

What is also significant is that approximately 48 million people remain uninsured in the United States (DeNavas-Walt, Proctor, & Smith, 2012; Sidoti, 2009; Todd & Sommers, 2012). Consequently, any obtained medical care is paid as an out-of-pocket expense. The result is that not only were almost two million people noted to have unpaid medical bills in 2013, but unpaid medical bills are now the leading cause of bankruptcy in the United States according to CNBC News reporter, Mangan (2013). Therefore, it seems to this investigator that the percentage of medical bankruptcies has climbed with the concurrent rise in healthcare costs. For example, in 1981, 8% of U.S. bankruptcies were due to unpaid medical bills (Himmelstein, Thorne, Warren, & Woolhandler, 2005). By 2001, medical bankruptcies had climbed to 46.2% (Himmelstein et al., 2005) and by 2007 to 62.1% (Himmelstein, Thorne, Warren, & Woolhandler, 2009).

Finally, it has been pondered by this investigator whether multiple interrelated factors provide the basis as to why Americans are venturing outside of mainstream medicine to have their healthcare needs met. For example, the factors considered include

the prevalence of chronic disease and their associated health-risk behaviors, the growing costs of healthcare, and America's dissatisfaction with the healthcare system. Could it be that these complex and interrelated factors serve as the basis for why Americans are turning to complementary and alternative medicine (CAM)?

Complementary and alternative medicine (CAM). MBM is included as one of the types of complementary and alternative medicine (CAM) or therapy (NIH, 2008). CAM is defined as a "group of diverse medical and health care systems, therapies, and products that are not presently considered to be part of conventional medicine" (Barnes, Powell-Griner, McFann, & Nahin, 2004, p. 1). However, according to Oguamanam (2006), the therapeutic approaches of CAM have the same "end goals of decreasing illness and enhancing wellness" (p. 578).

According to Barnes and colleagues (2004), 62% of U.S. adults are seeking CAM. Moreover, they are paying CAM costs as out-of-pocket expenses (Barnes et al., 2004). In fact, in 2007, out-of-pocket expenses for CAM practitioners, classes, materials, and products were estimated at $33.9 billion according to NIH's Nahin, Barnes, Stussman, and Bloom (2009).

Although CAM modalities are outside of conventional medicine, if one considers that "many common medical problems are functional or chronic disorders exacerbated by lifestyle, situational stress, and psychological factors" (Moss, 2003, p. 3), the need to search for cost-effective solutions to address the dissatisfaction is clear. Two CAM therapies that were suggested by Gordon and Moss (2003) as being excellent tools that "interface between the body and mind" (p. 11) are those of hypnosis and of "visualization" or imagery, or what these two authors referred to as a "deliberate

cultivation of positive mental energy" (p. 11). Given their suggestion, a literature review was performed followed by a pilot. The pilot surveyed practitioners of both guided imagery and hypnosis, three experts in guided imagery and five experts in hypnosis. However, with the current study, a more diverse population of experts was sought. Yet, the same goal was maintained of delineating the meaning and significance of imagery, a goal much more readily understood if the investigator's background is considered.

Background

The investigator's background. As a nurse for over 43 years, the investigator has been studying various issues related to health. Specifically studied were development, treatment, and the short and long-term management of acute and chronic illnesses. Thus, the investigator's background of being a nurse serves as not only the driving force of this study, but it also provides the overall structural framework for it. The principal structural components that frame the study's background include the five health domains, the three learning domains, and psychoneuroimmunology (PNI).

The five domains of health. Framing the study is an expanded mind-body-spirit paradigm of health which is visually depicted in Appendix A. The paradigm includes what the investigator considers to be the five interrelated domains of health. Appendix B further illustrates the five domains within a global holistic systems paradigm. It depicts how complex social, cultural, and environmental factors can impact the domains of health, and therefore, the health of the individual (Singler, 2010). The five domains include the physical (or biological) domain, along with the mental, psychological, social, and spiritual domains (Singler, 2010). Each domain has subcomponents that influence its functioning. For example, it is generally accepted that the physical domain includes the

11 biological systems. They are the muscular and the skeletal systems (also referred to as the musculoskeletal system), along with the nervous (including the senses), endocrine, cardiovascular (including the hematologic), pulmonary (or respiratory), urinary (including the renal), reproductive, digestive, integumentary, and the lymphatic or the immune system (Bates,1974; Chaffee & Greisheimer, 1969; Crouch, 1972; Fox, 2008; Huether & McCance, 2008; Iazzetti, & Rigutti, 2002; Jarvis, 2008; Landau, 1976; Martini & Bartholomew, 2007; McCann, 2009).

The learning domains. Also framing the study are the interactions among the three learning domains as described by Bastable and Doody (2008). The authors described the learning domains as consisting of the cognitive domain (or one's cognitions or thoughts); the affective domain (or one's emotions or feelings); and the psychomotor domain (or one's actions or behaviors; Bastable & Doody, 2008). Similar to the five domains of health, the interactions among the learning domains can influence one's health. For example, Forshee and McCance (2008) suggested that an appraisal or a reaction to a stressful situation can trigger a disruption in cognition, emotion, or behavior and thus can adversely influence an individual's health.

Psychoneuroimmunology (PNI). Lastly, also framing the study is the emergent field of psychoneuroimmunology or PNI. It is a relatively new field of study that originated in the late 1970s (Ader, 1995, 2000; Lengacher et al., 1998). In fact, it was not until Ader and Cohen (1993a), in their seminal work on stress's relationship to the underpinnings of PNI, noted in animal studies "that a variety of behavioral manipulations or stressors can influence susceptibility to a variety of disease states in a variety of species" (p. 64).

PNI is significant to the study on imagery given that Brigham (2004) considered imagery as providing the theoretical connections for understanding the interrelations between the biological systems and the underpinnings of PNI. For example, PNI provides a theoretical link between the complex interactions of the biological systems and the untoward effects of stress on immune system function. In fact, according to Gerber (2001), the combination of life's daily stressors and negative emotions can erroneously trigger the immune system. As a result, homeostasis is interrupted.

Homeostasis is a complex internal mechanism that seeks to maintain the body's "stable state of equilibrium" (Hawkes, 2006, p. 36), or as Cannon explained, "the maintenance of internal constancy" (as cited in Fox, 2008, p. 6). It is affected by the hypothalamus-pituitary-adrenal (HPA) axis. The HPA axis includes the hypothalamus, the anterior part of the pituitary gland, and the cortex of each adrenal gland (Kahlman & Grahn, 2004). Its significance, according to HeartMath (2014), is that the HPA axis is thought to release a cascade of hormones estimated to generate approximately 1,400 chemical reactions. Thus, when the HPA axis or the "stress axis" (Kahlman & Grahn, 2004, p. A41), along with its cascade of hormones, is persistently activated by chronic stress and depression, the body is unable to support homeostasis (Hyman & Cohen, 2013). The result is the development of stress-related illnesses and chronic disease.

The specific biological systems thought to be associated with PNI include the nervous, immune, cardiovascular, respiratory, and endocrine systems (Ader, 2000; Ader & Cohen, 1993b). However, PNI also examines the interconnectedness and bidirectional influences of systems with one's behaviors, psyche, attitudes, emotions, values, and beliefs (Ader, 2000). According to Krippner (2003), PNI also "explores the relationship

between psychological and physiological factors in the onset of illness" (p. 196). Furthermore, according to Brigham (2004), PNI also includes one's worldview. From an even broader perspective, McCain, Gray, Walter, and Robbins (2005) considered the PNI paradigm as being more comprehensive beyond just that of the biological systems and any psychological components. The authors also included the individual within social, collective, and environmental contexts (McCain et al., 2005).

Systems theory. Systems theory served as the study's overarching theoretical framework. A theoretical framework provides the means to conceptualize imagery's impact on health. Systems theory was chosen because it best represents the nursing perspective from which the researcher approached the investigation.

O'Connor and McDermott (1997) defined a system as "an entity that maintains its existence and functions as a whole through the interaction of its parts" (p. 2). Meadows (2008) defined systems as "a set of things-people, cells, molecules, or whatever-interconnected in such a way that they produce their own pattern of behavior over time" (p. 2). Similarly, Rubik (2002) defined a system as a "number of different and interacting things that display collective behavior as an integrative whole" (p. 705).

Supporting the use of systems theory as a theoretical framework, Meadows (2008) noted that the human body is a perfect example of a dynamic system given its complexity of integration and interconnectedness. Therefore, in addition to imagery's connections to PNI and the health and learning domains, the complexity of human anatomy and physiology also reflects how systems theory can be used as a model for conceptualization. Additionally, as Rubik (2002) noted, when the body is viewed within a nonlinear perspective, the body's self-organizational qualities of self-maintenance,

renewal, and ongoing adaption also reflect the inner dynamics of systems theory. Moreover, as a self-maintaining complex system (Rubik, 2002), the human organism also interacts within a complex network of other systems (Anderson & Johnson, 1997).

Systems theory also examines the connections between the parts, or as von Bertalanffy (1968) noted, the forces between the parts and how those interactions influence the functioning of the whole entity. As John Muir said, "When we look at any one thing in the world, we find it hitched to everything else" (as cited in Oschman, 2000, p. 41). Included in what is "hitched" are also the external forces that influence the system according to Meadows (2008). Therefore, if changes are made to the system's parts or to its structure, whether those changes occur from within or from without, or whether they include an addition, a subtraction, or a modification of the system's components, changes in the behavior of the system can result (O'Connor & McDermott,1997).

In summary, systems theory provided an ideal overarching theoretical framework for this study. It provided the means with which to examine the structural components and the potential connections between them. Finally, it also provided an ideal framework with which to analyze the internal and the external factors that could affect the parts of the system, as well as the system as a whole.

Chapter 2: A Review of the Literature

The Power of Images

The use of images throughout human history. The power of images is reflective by the fact that images have been used to communicate throughout the entire history of humankind. For example, during prehistoric times, signs and symbols were used in pictographs and petroglyphs and reflected the earliest forms of human communication. Later, sculpted reliefs at ancient construction sites depicted myths, events, oral traditions, or stories derived from ancient manuscripts (Doniger, n.d.). Today, with the advances in modern technology, images can be broadcast worldwide within minutes. For example, Sweet, Haley, and Cohen (2010) pointed out that structural brain imaging with the use of magnetic resonance imaging (MRI) and computerized tomography (CT) are well-established as neurodiagnostic procedures. Consequently, as Hart (2011) explained, brain imaging is "helping to unlock the mysteries of the brain's influence on the body and vice versa" (p. 152). Thus, throughout history and especially today in medicine, the use of images plays a significant role in communication. From this investigator's point of view, this concept is significant since the Merriam-Webster definition of "communication" (n.d.) states that communication is how information is processed, expressed, transmitted, or exchanged. Therefore, images clearly hold a distinctive connection to the countless complexities of human communication.

The lasting effects of images. The lasting effects of images also reflect the power of images. The lasting effects of images are due to the responses that can occur as a result of the complexity in the connections between thoughts and emotions. Today, this concept is better understood given the recent advances in neurophysiology. For example, there

has been an increase in the understanding of the brain's circuitry and how it influences emotions and behavior (Davidson, Pizzagalli, Nitschke, & Putnam, 2002; Lane et al., 2009). Furthermore, in the past, understanding emotion regulation was mainly gleaned from self-report measures obtained from the patient (Davidson et al., 2002). However, with the advances in neuroimaging and those gained from electrophysiological studies, researchers can now move "beyond phenomenology" as Davidson and colleagues (2002, p. 547) have noted. A case in point is that Kensinger and Schacter (2008) have been able to document that individuals remember emotional events much more readily than non-emotional ones. Additionally, Kensinger (2007) has been able to demonstrate that negative events are remembered with much more detail.

Therefore, with the recent advances in technology, humankind has gained a better understanding as to the basis of how and why responses to images can be sustained over time. Additionally, the responses to images can range from a sense of pride, joy, and inspiration to one of fear, terror, or even empathy for another human being. For example, the response to the image of Neil Armstrong as he climbed down the ladder from the Apollo 11 lunar module onto the moon (NASA, 2013) would be very different than the one of Jacqueline Kennedy, clad in black and facing her husband's flag-draped casket. Thus, whether an event took place yesterday or even 50 years ago, the lasting effects of images reflect the power of images.

Imagery and Medicine

Rossman (2002), a co-founder of the Academy for Guided Imagery, defined imagery as "the oldest medicine there is" (p. 82). Jeanne Achterberg (2002), a world-renowned pioneer of guided imagery and a Saybrook University faculty member before

her death in 2012, said that throughout the history of medicine that there were countless examples of imagination's healing powers. In fact, she described imagery as the "stuff of the imagination" (Achterberg, 2002, p. 3). Achterberg's statement is significant since, as was stated earlier, the word imagination is often used in lieu of the word imagery. In fact, dating back to the 1700s, Jackson (1990) stated that one's imagination was considered as the "cause of the effects attributed to magnetism" (p. 351).

The significance of the concept of magnetism's relationship to imagination and imagery dates back to 1646, when at that time, a German mathematician named Kircher introduced the idea that magnetism could influence one's health (Mutter, 1998). In fact, Kircher described "animal magnetism as a force of nature responsible for disease" (as cited in Mutter, 1998, p. 10). In the century that followed, scientists were actively studying the mechanisms of magnetism and magnetic fields and their relationship to health according to Barabasz and Watkins (2005). For example, at the Bavarian Academy of Science, the authors noted that scientists were studying the gravitational forces of the celestial bodies and their potential affects upon the human organism (Barabasz & Watkins, 2005). Perhaps most notable of the scientists was the famed Austrian physician, Franz Anton Mesmer, who lived from 1734-1815 (Barabasz & Watkins, 2005). Mesmer is significant to the discussion of imagery's use in medicine since he is credited as being the "modern inventor of hypnosis and the first physician to use hypnosis in medicine" (Mutter, 1998, p. 10).

Horowitz (2006) explained that Mesmer believed that "disease resulted from an imbalance in the flow of animal magnetism" (p. 86). He used magnets in his medical practice in order to rebalance the disrupted life force according to Horowitz (2006).

Consequently, Mesmer attributed his treatments to what he called “animal magnetism” (Krippner & Kremer, 2010, p. 97). Therefore, the construct of imagery and its relationship to health has historically been linked to both the use of one’s imagination, as well as the beginning use of hypnosis in medicine.

Like Achterberg (2002), Torem (1992b) also studied the history of imagery within the context of medicine. However, he referenced the word visualization. As was noted earlier in Chapter 1, visualization, like imagination is another word used in lieu of the word imagery. Torem (1992b) referred to “visualization rituals” (p. 1), including those from the ancient healing arts of Greece, India, and China, as well as those from the ancient healing practices of indigenous shamans and Muslim Sufis.

Although Torem (1992b) stated that “human beings have always believed in the power of the image to affect their reality” (p. 1), during the 18th century, he noted that the use of imagery in medicine went “underground” (p. 1). In fact, according to Torem (1992b), the use of imagery became more associated with mysticism and “para-religious societies” (p. 1) than medicine. Then by the mid-1950s, Torem (1992b, 2014) explained that imagery was once again being studied and even utilized in psychological testing, for example, in the use of the Rorschach ink blot test.

Finally, in the 1950s at the University of Chicago, imagery’s use in medicine was also evident in the field of psychotherapy. The renowned humanistic psychologist, Carl Rogers and philosopher and psychologist, Eugene T. Gendlin collaborated and developed focusing-oriented/experiential psychotherapy (Hendricks, 2012). Then, later in 1978, Gendlin (1978/2007) published *Focusing*, a book that presented a process-oriented approach to psychotherapy. The technique, referred to as experiential focusing, is one in

which the client is taught to focus on an issue, problem, symptom, or even a memory. Additionally, the client attends to its associated images, words, feelings, and "felt sense" so as to cognitively *and* affectively shift toward a more positive response (Gendlin & Olsen, 1970). As Gendlin (1996) explained, the significance of the images (whether arising from visual or auditory imagery) is that the images can "lead to the felt sense" (p. 63). The felt sense, as he described it, is one of a "maze of meanings" and he likened them to a "Persian rug of patterning" (Gendlin, 1996, p. 8). Thus, imagery's use in medicine has been evident throughout history, but today, perhaps its most obvious use is in that of guided imagery.

The Construct of Imagery in Guided Imagery

Guided imagery defined. Guided imagery is defined as a MBT that is used in clinical settings, specifically as an adjunct therapy for reducing symptoms of stress, anxiety, and for its effectiveness in treating pain according to Hart (2008). As Davenport (2009) further explained, guided imagery supports an individual to gain access to the wisdom of one's heart given that it is a "natural, meditative process" (p. x). Additionally, in Rossman's (2000) forward to his book on imagery, *Guided Imagery for Self-Healing*, Dean Ornish defined guided imagery, or what he also referred to as visualization, as "an applied form of meditation" (p. xii).

As a self-practice technique, guided imagery can be implemented independently by individuals outside of a clinical setting. It can be delivered via an audio recording, by another individual, or by a client independent of a therapist (Hart, 2008). As a very low to no-cost therapy, guided imagery can lead to feelings of self-empowerment, and if mastered, a sense of control over one's own care can also be achieved according to Hart

(2008). As Hart (2008) pointed out, the Merriam-Webster definition also states that guided imagery is:

> Any of various techniques (as a series of verbal suggestions) used to guide another person or oneself in imagining sensations and especially in visualizing an image in the mind to bring about a desired physical response (as a reduction in stress, anxiety, or pain). (p. 295)

Four types of guided imagery. Van Kuiken (2004) described guided imagery as consisting of four different types. The first type is when a client imagines a calm scene, and therefore, a relaxed state is achieved. The second type is more intention-driven with one's attention aimed at some aspect of physiological dysfunction. The application of both intention and attention in this second type of guided imagery is noteworthy since both are also considered to be two of the six neuro-cognitive mechanisms of mindfulness in Vago and Silbersweig's (2012) S-ART model. The S-ART model incorporates the three concepts of self-awareness, self-regulation, and self-transcendence which serve as the theoretical framework for the authors' systems-based neurobiological model (Vago & Silbersweig, 2012).

The third type of guided imagery that Van Kuiken (2004) suggested consists of two different forms of imagery that are framed within the context of time. The first is the imagining or the re-framing of a past event and imagining the event or experience to be different from what actually occurred. The second scenario is one in which the individual performs a mental rehearsal in which the imagining is directed forward in time to a desired experience at a future event. Lastly, the fourth type of guided imagery has to do with what is referred to as performing a body scan (Van Kuiken, 2004). Similar to the concept of scanning grocery items at a checkout stand, the body is mentally scanned in

order to perceive any potential areas in the body that might signal disharmony or dysfunction.

The complexity of defining imagery. In 1990, P. J. Lang and colleagues stated, "We have been at pains to define imagery carefully, in terms of measureable input and output to and from the brain" (p. 191). It is noteworthy that these authors view imagery as not just an outcome from a response to an external stimulus, but rather, they view imagery as an integration of the stimulus and the response (P. J. Lang et al., 1990). That the authors attempted to define imagery in terms of the integration of sensory information is significant since sensory information plays a key role in how perceptions are actually shaped according to neuroscientists Gardner and Johnson (2013b). For example, the ascending sensory information that originates from receptor cells in the periphery and the central nervous system travel to multiple areas in the cerebral cortex where various components of the original stimulus are analyzed (Gardner & Johnson, 2013a). As a result, perception is actually based on the brain's interpretation of the sensory data that is received according to Gardner and Johnson (2013a). Perception is significant to health since, as was stated earlier, an individual's appraisal can influence one's response to stress and, therefore, influence one's thoughts, feelings, and behaviors (Forshee & McCance, 2008).

Imagery as a language. In addition to visual images serving as a form of communication throughout human history, imagery itself is also described within the context of it being a language. For example, Rossman (2002) described imagery as a "coding language of the nervous system," as well as the "natural language of the unconscious" (p. 82). He also considered the "unconscious mind [as] speaking in images

and symbols" (Rossman, 2000, p. 87). Gordon (2011) referred to imagery as "deliberate and directed daydreaming" (p. 18), also explaining that imagery functions like a language, with information shared between the conscious and the unconscious mind.

Thinking and the senses. Rossman (2002) also referred to imagery as a "hypnotic technique called sensory recruitment," in addition to stating that imagery was "sensory-based thought" (p. 85). In a 2010 unpublished manuscript, Achterberg stated that "imagery, simply put, is a way of thinking" (p. 4). She also stated that imagery is "the thought process that invokes and uses the senses" (Achterberg, 2002, p. 3).

Achterberg (2002), like Freeman (2009) and Rossman (2000), noted that imagery can engage all of the five senses. Gardner and Johnson (2013c) explained that in addition to the five senses (vision, hearing, touch, taste, and smell) that there is a somatosensory system that is comprised of proprioception, exteroception, and interoception. For example, exteroception is defined as the "sense of direct interaction with the external world as it impacts the body" (Gardner & Johnson, 2013c, p. 475). The principal mode of exteroception is identified as the sense of touch which includes the "sensations of contact, pressure, stroking, motion, and vibration, and [it] is used to identify objects" (p. 475), according to Gardner and Johnson (2013c). Consequently, what is significant about imagery's relationship to thinking and the use of one's senses is that transmitted sensory information represents the "first neural representation of the external world" (Gardner & Johnson, 2013b, p. 449).

The dual components of imagery. It is noteworthy that the senses were described by Sherman (2013) as a "gateway" to the outside world, since—as the author added—the senses allow individuals to safely navigate the world. However, more noteworthy is that

additionally, Rossman (2000) described imagery as a "window into an inner world" (p. 13). The concept of accessing one's inner world to gain insights is supported by Hendel (n.d.), a physician and the founder of the International Association for Interactive Imagery, now named Imagery International. Like Davenport (2009), Hendel (n.d.) also described imagery as providing the means by which to gain access to one's inner wisdom. In other words, there appears to be dual system components that are used to describe the construct of imagery. In fact, in just this one respect, there are both internal and external factors than can affect an individual's health since imagery is conceptualized as a "gateway to the outside world" (Sherman, 2013), as well as a "window to the inner world" (Rossman, 2000, p. 13).

In further defining imagery, Achterberg (2002) described how Michael Samuels, the author of the 1981 book, *Seeing With the Mind's Eye*, viewed imagery as having dual components of visualization. The first component of imagery that Samuels described was "receptive visualization" according to Achterberg. Receptive visualization, however, was further explained by Achterberg as the body's innate ability to express "body wisdom" (p. 8). Achterberg also described the first component of imagery as a latent human "preverbal" ability when "bodily sensations come into awareness" (p. 76) and a "cognitive assessment of systems is completed" (p. 76).

The second component of imagery was described as "programmed visualization" by Samuels, or the take-action component according to Achterberg (2002). This second component is one in which the awareness of the "body wisdom" is actually utilized according to Achterberg (2002). Joseph (n.d.) described imagery in a somewhat similar

analysis by referring to imagery as visualization with dual components. He viewed imagery as a mental process, as well as a series of therapeutic procedures (Joseph, n.d.).

A summary of how imagery is viewed within various contexts. The challenges in defining a complex construct such as imagery could well be due to the fact that imagery is viewed within so many contexts. For example, the various contexts already noted have included imagery as:

- an integration of sensory information (P. J. Lang et al., 1990);
- an integration of a stimulus and an individual's response (P. J. Lang et al., 1990);
- being linked to the use of the five senses (Achterberg, 2002; Freeman, 2009; Rossman, 2000);
- a form of communication (Doniger, n.d.);
- a language (Gordon, 2011; Rossman, 2000, 2002);
- a preverbal ability (Achterberg, 2002);
- "a way of thinking" (Achterberg, 2010, p. 4);
- a blend of cognition and action (Achterberg, 2002);
- a mental process (Joseph, n.d.);
- a type of meditation (Davenport, 2009; Ornish as cited in Rossman, 2000);
- incorporating intention and attention (Van Kuiken, 2004)
- directed daydreaming (Gordon, 2011);
- a link between the conscious and the unconscious mind (Gordon, 2011; Rossman, 2000);
- providing access to one's inner wisdom in order to gain insights (Davenport, 2009);
- a "window into an inner world" (Rossman, 2000, p. 13);
- a "gateway to the outside world" (Sherman, 2013);

- imagination (Achterberg, 2002);
- visualization (Torem (1992b);
- receptive and programmed visualization (Samuels as cited in Achterberg, 2002);
- and, lastly, as the actualization or the expression of an inherent body wisdom (Achterberg, 2002).

Imagery: A mechanism underlying hypnosis? An additional context in which imagery is described is as an underlying mechanism of hypnosis. For example, in 1980, Achterberg and Lawlis defined imagery as the "internal experience of a perceptual event in the absence of the actual external stimuli" (p. 27). Perhaps, this led Rider and Achterberg (1989) to later suggest that "imagery, itself, may well be the mechanism underlying hypnosis" (p. 248).

Additionally, in the 2002 edition of Achterberg's 1985 book, *Imagery in Healing: Shamanism and Modern Medicine*, she discussed how imagery is not only created within the subject, but that imagery is also influenced by a hypnotherapist's imagination and skill. She stated that these qualities facilitate the changes in client behavior and attitude. Therefore, Achterberg (2002) concluded that the imaginations of both client and therapist, in addition to the therapist's skills, can influence the client's health.

Finally, Trakhtenberg (2008) discussed how many researchers include the construct of imagery as an element, a component, or a subunit of hypnosis. In particular, he noted that Miller and Cohen (2001), in their study of various psychological interventions' effects on the immune system, considered that imagery is a "category of hypnotic suggestion" (Trakhtenberg, 2008, p. 840). Trakhtenberg (2008) also discussed and referred to other researchers regarding imagery as a mechanism that underlies hypnosis. Furthermore, Thierman (2009) discussed imagery as one of the key

components of the standard hypnotic induction. Considering that imagery is perceived to be a key component of hypnosis (Thierman, 2009), a mechanism that underlies hypnosis, as well as a subunit of it (Trakhtenberg, 2008), this researcher began to investigate the descriptors used to define hypnosis.

The Construct of Imagery in Hypnosis

The complexity of defining hypnosis. Like guided imagery, hypnosis (also referred to as hypnotherapy) is a mind-body approach and falls under the umbrella of CAM therapies according to the National Center for Complementary and Alternative Medicine or NCCAM (Horowitz, 2006; NCCAM, 2012). As far as defining hypnosis, Hammond (1998) related that Spiegel and Greenleaf's definition of hypnosis is considered one of the more popular ones. These authors defined hypnosis as a specific attentive, concentrative, and receptive state in which the three interconnected components of dissociation, absorption, and suggestibility influence an individual's awareness to internal and external cues (Spiegel & Greenleaf, 1992). Hammond (1998), on the other hand, taking the stance from the American Psychological Association (APA), defined hypnosis more simply. He stated that hypnosis is "a procedure during which changes are suggested in sensations, perceptions, thoughts, feelings or behavior" (Hammond, 1998, p. 1). Horowitz (2006) added that the APA also includes that the suggestions help the patient "experience posthypnotic alterations" (p. 86) that influence the factors identified by Hammond. Additionally, hypnosis was defined rather broadly by Barabasz and Christensen (2010) as a "set of procedures used by health professionals to treat a range of physical and emotional problems" (p. 1). Perhaps, the simplest description of hypnosis

was provided by Krippner and Kremer (2010) who stated that the hypnotic procedure consists of two parts, an induction and suggestions.

Hypnosis has also been defined as a therapeutic technique by Evans (2000), as a concept by Yapko (2003), and as multifactorial by both. Multiple authors consider hypnosis a complex phenomenon (Evans, 2000; Kihlstrom, 2000; Nash, Benham, & Hamada, 2005; Yapko, 2003) comprised of four distinct components which they described as either being components, dimensions, elements, facets, or characteristics. These characteristics are what Kihlstrom (2000) considered as an entanglement in dichotomies, making hypnosis not only a difficult concept to understand, but as Yapko (2003) also concurred, one in which an agreed-upon definition remains elusive. This is strikingly similar to P. J. Lang and colleagues' (1990) description of imagery's elusive definition.

The components of hypnosis. Evans (2000) identified what he considered as the four main components of hypnosis. They included expectation, suggestion, cognitive distortion, and dissociation from external stimuli (Evans, 2000). Dissociation, Yapko (2003) explained, is a "human capacity for compartmentalizing the different elements of [the] subjective experience" (p. 62). These four components also incorporate subcomponents. For example, according to Evans (2000), cognitive distortion includes the subcomponents of relaxation, imagery, and trance logic.

The multitude of variables that influence the components. Adding to the dynamic interactions of the components, Hammond (1998) found that there is multidimensionality in the differences between clients and the hypnotic response. The complexity is attributed to what Hammond (1998) considered as the enormous amount of variables that influence

the response. For example, Hammond (1998) listed physiological and state variables, along with cognitive, imaginative, and contextual variables, with each type of variable having subcomponents. Thus, a dynamic blend of these components and subcomponents play a role in the extent to which an altered state of consciousness is achieved.

The altered states of consciousness are also referred to as "twilight states" by Yapko (2003, p. 50). Additionally, they are described as ones in which "alterations in perception, sensation, emotion, thought, or behavior" can occur (Krippner, 2004; The Society of Psychological Hypnosis, 2005).The ever changing dynamics in this multifactorial phenomenon is what Yapko (2003) considered the basis for hypnotherapy's various outcomes. Specifically, the range of outcomes include diverse levels of self-efficacy, independence, and resourcefulness according to Yapko (2003).

Also impacting the components of hypnosis are the underlying variables of trust and motivation. Trust and motivation impact expectations, attitudes, desires, beliefs, and one's ability to relax according to Yapko (1995). As Yapko explained, trust and motivation also impact the client's ability to detach long enough from external stimuli in order to bring and maintain one's focus inward. They also impact one's ability to follow suggestions and employ imagery using the multiple senses (Yapko, 1995).

It is significant to the study of imagery that Yapko (1995) noted the use of the senses in hypnosis. In fact, according to Yapko (2003), while doing an induction, words and multisensory imagery are employed in order to achieve a state of altered consciousness, a concept which André Weitzenhoffer also considered as an "altered state of awareness" (p. 42). Thus, the concept of the use of sensory information in hypnosis

parallels Freeman's (2009), Achterberg's (2002), and Rossman's (2000) use of the senses in guided imagery.

The hypnotic state. According to Gordon and Moss (2003), in their article which called for a new paradigm in medicine, hypnosis includes the use of a variety of different types of inductions that are intended to create a hypnotic state. These authors suggested that the hypnotic state provides the opportunity for adjunct clinical applications, for example, in the examination and the processing of memories (Gordon & Moss, 2003). Additionally, like guided imagery, hypnosis is used in pain and stress management. However, according to Horowitz (2006), hypnosis is typically practiced as an adjunct therapy to other types of psychotherapy.

The process of induction and entering the hypnotic state is referred to as hypnosis or trance according to Gordon and Moss (2003). Additionally, as Davenport (2009) pointed out with guided imagery, so too can hypnosis be used independent of a therapist and be self-directed. Horowitz (2006) added that the patient can be trained to enter the hypnotic state independently (referred to as self-hypnosis), with the use of "mental imagery and other techniques" (p. 86). Hammond (1998) also noted that although the hypnotic state is considered an altered state achieved via an induction, an hypnotic state can be achieved spontaneously.

According to Kihlstrom (2000), the traditional view of hypnosis is of the hypnotherapist guiding or facilitating the patient or client into an altered state of consciousness. Like Kihlstrom (2000), Yapko (2003) viewed the therapist as conducting or directing a client in hypnosis wherein the client is led on an inward journey of self-exploration. Gurgevich (2006) also considered hypnosis as a subjective and unique

experience which provides the opportunity for the client to journey inward on a path of self-discovery. While on the journey, Gurgevich (2006) further explained, one uses the imagination to learn the language of the subconscious in order to more readily identify thoughts, feelings, and patterns of behavior. Blair (2004), a certified lay-hypnotist and an instructor of self-hypnosis, provided another perspective on tapping into one's inner wisdom. He suggested that hypnosis "disarms or bypasses the security system of the mind just long enough" (p. 7) to permit communication with one's inner mind.

Hammond (1998) further described the hypnotic state as a "relaxed state of focused attention" (p. 1). Yapko (2011) offered the idea that clinical hypnosis and mindfulness share core elements, for example, intention and attention, wherein "each has the potential to inform the other" (p. 10). This description of hypnosis is similar to Van Kuiken's (2004) description of the second type of guided imagery that also employs intention and attention. Also, as was noted previously, both are mechanisms of Vago and Silbersweig's (2012) S-ART model in which patterns emerge from the relationships between cognitions, emotions, and behaviors.

Finally, Kihlstrom (2000) described the hypnotic state as one similar to a daydream experience, or a state of being that falls between being awake and being asleep. It should be noted that Kihlstrom's (2000) reference to the daydream experience is similar to Gordon's (2011) description of imagery as a form of directed daydreaming. The significance of Kihlstrom (2000) and Gordon (2011) both including a reference to daydreaming in their descriptions of imagery is perhaps best reflected in layperson's terms. After all, it was Walt Disney who stated, "If you can dream it, you can do it" (Torem, 1992b, p. 1).

Left versus right brain function. Dabney Ewin (2009), a clinical professor of surgery and psychiatry at Tulane University, as well as being a past president of the American Society of Clinical Hypnosis (ASCH), addressed hypnosis within the context of left versus right brain function. Ewin (2009) referenced Roger Sperry's 1981 Nobel Prize winning work that compared the differences between the brain's two hemispheres. He noted, from his vast clinical experience, that when patients are in what he calls a "good trance" that the functions of the left brain "progressively begin to shut down" (p. 66). The client does not "initiate speech," but rather, the client will respond verbally when directed to do so according to Ewin (2009, p. 66). Interestingly, he also noted that the ordinary logic of analysis is bypassed by what he refers to as a "global, metaphoric, and intuitive (right brain) processing of information" (Ewin, 2009, p. 66).

The cultural context of hypnosis. A final context in which hypnosis is described is by Krippner and Kremer (2010). They noted that native practitioners, for example, shamans, employ hypnotic-like procedures; but rather than occurring in a private office, the procedures occur within a complex social context (Krippner & Kremer, 2010). However, even though the context varied, Krippner and Kremer stated that the same capacities exist in both contexts, whether the social context be one of a shaman practitioner or a Western practitioner. What is significant to this investigator is the description of the capacities as described by these two authors. They included the "capacity for imaginative suggestibility, the ability to shift attentional style, the potential for intention and motivation, and the capability for self-healing made possible by neurotransmitters, internal repair systems, and other components of mind/body interactions" (Krippner & Kremer, 2010, p. 121). In other words, as Krippner and Kremer

pointed out, the cultural context of the client (beliefs, motivation, procedures, and practices) provides the structural framework in which both internal and external factors can influence the client's potential for self-empowerment and healing.

A summary of how hypnosis is described. Finally, similar to the challenges of defining imagery, defining hypnosis could well be due to the fact that hypnosis is viewed within diverse contexts. For example, the various descriptors of hypnosis already noted have included hypnosis as:

- a procedure (Hammond, 1998);
- a set of procedures (Barabasz & Christensen, 2010);
- a process of induction and entering an hypnotic state (Gordon & Moss, 2003);
- a therapeutic technique (Evans, 2000);
- a concept (Yapko, 2003);
- a multifactorial phenomenon (Evans, 2000; Yapko, 2003);
- a "relaxed state of focused attention" (Hammond, 1998, p. 1);
- a daydream experience (Kihlstrom, 2000);
- a form of communication with one's inner mind (Blair, 2004);
- a capacity for compartmentalizing (Yapko, 2003);
- a state that influences awareness to internal and external cues (Spiegel & Greenleaf, 1992);
- using one's senses (Yapko, 1995)
- using multisensory imagery (Yapko, 2003)
- having imagery as a key component (Thierman, 2009);
- consisting of two parts: an induction and suggestions (Krippner & Kremer, 2010);

- consisting of three interconnected components of dissociation, absorption, and suggestibility (Spiegel & Greenleaf, 1992);
- consisting of the four components of expectation, suggestion, cognitive distortion, and dissociation (Evans, 2000);
- consisting of the subcomponents of relaxation, imagery, and trance logic (Evans, 2000);
- consisting of entering an altered state of consciousness (Gurgevich, 2006; Hammond, 1998; Horowitz, 2006; Kihlstrom, 2000; Yapko, 2003);
- consisting of dampened left brain processing and enhanced right brain processing (Ewin, 2009);
- consisting of an interaction between the mind and the body (Blair, 2004; Krippner & Kremer, 2010);
- a state influenced by the interaction between the therapist and client (Gurgevich, 2006; Kihlstrom, 2000; Yapko, 2003);
- a state influenced by cognitive, imaginative, and contextual variables (Hammond, 1998);
- a state influenced by the variables of trust and motivation (Yapko, 1995);
- a state influenced by intention and motivation (Krippner & Kremer, 2010);
- a state influenced by the cultural context of the client (Krippner & Kremer, 2010);
- a state aimed at detaching from external stimuli (Evans, 2000; Yapko, 1995);
- a state aimed at bringing one's focus inward in order to gain wisdom and insights (Blair, 2004; Gurgevich, 2006; Yapko, 1995);
- sharing with the mindfulness core elements of intention and attention (Yapko, 2011);
- having the capacity for self-empowerment and healing (Krippner & Kremer, 2010);
- being used to treat physical and emotional problems (Barabasz & Christensen, 2010);
- and, lastly, as being used as an adjunct therapy to other types of psychotherapy (Gordon & Moss, 2003; Horowitz, 2006).

The Overlapping Across the Modalities of Guided Imagery and Hypnosis

Imagery's connections to the learning domains and PNI. Aside from the overlapping of concepts noted between the two summary lists previously presented are imagery's connections between the learning domains (or one's thoughts, feelings, and behaviors) and PNI. For example, Rossman (2000) noted that thoughts and feelings can be transformed using guided imagery, adding that the transformation depends upon how thoughts and feelings are first interpreted. Freeman (2009) suggested that there is a correlation between interpreted and repetitive cognitions and biochemical responses. She explained that what an individual thinks, interprets, and continues to repeatedly re-interpret can "fuel the biochemical responses that can impair or improve health" (Freeman, 2009, p. 158).

Rossman (2000), Davenport (2009), Hart (2008), Kabat-Zinn (1994), and Freeman (2009) have also suggested that thoughts can directly impact one's health and sense of well-being. More simply put, Dossey (1993) stated, "thought can become biology" (p. 166). This concept is significant since, according to Hart (2008), imagery can induce neurohormonal changes in the body. Additionally, Davenport (2009) added that mental images can generate the same physiological changes whether real or imagined. However, perhaps the best explanation of the significance of imagery's connections to the learning domains and PNI is Brigham's (2004). She suggested that "for every change of the mind, emotion, body, and spirit, there is a preceding or concomitant image, whether on the conscious or the unconscious level" (Brigham, 2004, p. 17).

Additionally, in the introduction to Rossman's (2000) book on guided imagery, Pelletier addressed the significance of mental imagery in its relationship to mind-body interactions. Within a PNI framework, Pelletier described the interactions between the mind, the brain, the central nervous system (CNS), the body's biochemical responses, and the immune system (Rossman, 2000). Additionally, Achterberg (2002) stated that in using one's imagination, memories can call "forth the biochemistry of emotion" (p. 3), adding that imagery is a "communication mechanism between perception, emotion, and bodily changes" (p. 3). Similar to Achterberg's (2002) conceptualization of imagery serving as a communication mechanism is Hammond's (1998). He stated that hypnosis can also influence an individual's "behavior, attitudes, cognitions, perceptions, and emotions" (Hammond, 1998, p. 2).

Gordon (2011) supported imagery's relationship to PNI by explaining that wiring exists between the emotional part of the brain, the senses, and the hypothalamus. Imagery's connection to the hypothalamus is noteworthy, as Gordon (2011) pointed out, given that the hypothalamus serves as a central relay station for three of the biological systems. These include the autonomic component of the nervous system, as well as the endocrine and immune systems (Gordon, 2011). These are three of the biological systems previously noted by Ader (2000) and Ader and Cohen (1993b) that are specifically associated with PNI.

Hammond (1998) discussed hypnosis in relationship to brain function. However, he explained that hypnosis can not only affect the autonomic nervous system, but also other physiological processes that promote healing (Hammond, 1998). In fact, Lane and colleagues (2009) have suggested that a better understanding of the brain's underlying

mechanisms that influence cognitions, emotions, and behaviors may well link to the mental functions that actually influence one's health.

From this investigator's perspective, it is important to better understand imagery's associations to the learning domains and PNI, especially since imagery provides a potential theoretical link to the interconnectedness and bidirectional influences of both. Finally, as Hendel (n.d.) explained, the use of imagery can lead to inner wisdom. With the insights gained, as Joseph (n.d.) has suggested, imagery has the potential to promote changes in attitudes and behaviors, and consequently, imagery has the potential to offer endless possibilities for healing. Therefore, given the rise in the prevalence of chronic disease due to associated health-risk behaviors, it has been pondered by this investigator whether a better understanding of the meaning and significance of imagery and its relationship to the learning domains and PNI might contribute to promoting health in America.

The clinical applications of imagery. The final aspect to consider when reviewing the construct of imagery is the overlapping in the clinical application of imagery's use across both guided imagery and hypnosis. For example, Astin and colleagues (2003) performed an extensive review of meta-analysis studies that were comprised of more than 46,045 participants. The authors attempted to expose the evidence basis of the efficacy representative of a wide range of what they considered psychosocial-mind-body interventions. They included interventions such as relaxation, behavioral therapies, meditation, imagery, biofeedback, and hypnosis, each viewed as an adjunct treatment for a variety of medical conditions. It is noteworthy that although the authors listed various MBTs separately, they did note that there was in fact a

"considerable crossover between them" (Astin et al., 2003, p. 133). Additionally, Sheikh and Jordan (1983) also reported that there was a "significant overlap between hypnosis and imagery" (p. 410). Consequently, the authors suggested that there was a growing body of evidence to support the effectiveness of imagery in a wide range of medical conditions (Sheikh & Jordan, 1983).

Aside from the overlapping previously noted in the various MBM modalities, is the overlapping of terminology in the clinical application of imagery across both guided imagery and hypnosis. For example, Walters and Oakley (2006) used the term hypnotic imagery to describe their adjunct therapy for irritable bowel syndrome. For children with functional chronic recurrent abdominal pain (FCRAP), Galili, Shaoul, and Mogilner (2009) found the use of hypnosis effective since engaging the children in the use of their imaginations was an inherent component of the therapy implemented. The authors found that the combination of hypnosis and imagination correlated with a significant reduction in the intensity and frequency of abdominal pain (Galili et al., 2009).

Utay and Miller (2006) added that guided imagery has been used successfully in many arenas in healthcare, specifically noting studies in stroke victims and cancer patients. E. V. Lang and associates (2006) noted the same in the field of cancer care by demonstrating the effectiveness of self-hypnosis for women undergoing breast biopsy. Additionally, Richardson and colleagues (2007) reviewed studies that demonstrated the effectiveness of treating chemotherapy-induced nausea and vomiting with hypnosis in which participants noted that "guided imagery in particular was highly valued" (p. 403). It is significant to note that the participants valued the imagery-related hypnosis

intervention since they reported that it gave them a stronger sense of control over their treatment (Richardson et al., 2007).

E. V. Lang and her associates (2000) also demonstrated less pain and anxiety in their study of 241 participants undergoing vascular and renal surgery. In their randomized clinical trial, one of the experimental groups combined self-hypnosis and self-induced imagery and relaxation therapy as an adjunct treatment. The study demonstrated not only a reduction of medications administered, but also a reduction in operating room time (E. V. Lang et al., 2000). Finally, in reviewing the studies that demonstrated the overlapping of imagery across both guided imagery and hypnosis, Gruzelier (2002), along with Gruzelier, Levy, Williams, and Henderson (2001) demonstrated the effectiveness of combining imagery with self-hypnosis in improving immune function.

Chapter 3: Study Methodology

Study Overview

Philosophical inquiry. This study's qualitative design was influenced by a philosophical approach, or what is also referred to as a philosophical inquiry. The reason that this approach influenced the study's design is because its underlying premise is to ask questions and make connections in order to find meaning (Burns & Grove, 2005; Sheffield, 2004; Solomon, 2000). Sheffield (2004) added that a search for meaning is directed towards making the connections between ideas, thoughts, and experiences. He also suggested that with a philosophical approach, complex ideas can be broken down into more understandable and relatable concepts through analyzing, clarifying, and challenging the status quo (Sheffield, 2004). Solomon (2000) added that man has arrived at an era in which it is necessary to re-think and re-build "the beliefs about the beliefs" (p. 21). He also stated that "at its most basic level, a philosophical inquiry can provide methods for examining the things that we so often take for granted during our daily routines" (Solomon, 2000, p. 3).

As Gray (2004) pointed out, the value of a philosophical method of inquiry is in its development of an expanded perspective or view of reality. In just this one aspect, philosophical inquiry was perfectly suited in its influence for this study given that the investigator desires to expand perspectives regarding health. However, as Gray (2004) noted, there are few structural guidelines for philosophical inquiry as a research approach. Yet, Gray (2004) suggested that the approach allows researchers to "step outside of the box," question the evidence, and assess the values and meaning derived in order to "reframe" them from another perspective (p. 1161). This concept is supported by

Stubley (1992) who explained that the end-goal is not in the identification of so-called truths, but rather, in the identification of the lenses through which the truths are filtered. He elaborated by explaining that "philosophy seeks to identify and evaluate the lenses through which we construct experience. By clarifying the language used to describe experience, it exposes the concepts, ideas, and assumptions underlying our constructions" (Stubley, 1992, p. 44). This concept is also supported by Solomon (2000), Ndofirepi and Shumba (2012), and especially Banfield (2013) who stated that a "philosophical inquiry involves the use of reason to critically examine, clarify, and interpret meanings and positions" (p. 82).

Similar to Gortner (1990), this investigator will not offer a discussion that compares one type of philosophical argument over another. For example, Anderson (2008) compared positivism to postmodernism and neomodernism when discussing philosophical inquiry. Therefore, similar to Gray's (2004) description that a philosophical inquiry "involves [the] examination of the meaning of a phenomenon" (p. 1151), what is of interest to this investigator is the examination of the meaning that is created from the relationships that are revealed between the parts of the phenomenon. However, whereas Gray (2004) looked at the phenomenon of addiction, this study examines the phenomenon of imagery. And indeed, imagery has been referred to as a phenomenon by Evans (2000), Freeman (2000), Kihlstrom (2000), Nash and colleagues (2005), and also by Yapko (2003).

Research design. This qualitative descriptive research study surveyed a convenience sample of 13 doctorate-prepared medical professionals, including clinicians, educators, and researchers. The experts were recruited with an email letter (see Appendix

C) that included a short survey that was both embedded and attached (see Appendix D). The survey was embedded in order to allow a quick preview by the experts as to what was expected of them if they chose to participate. The completed surveys were returned to the researcher via an email attachment. Consequently, all communication between the researcher and the participants was restricted to email correspondence.

The study's sole data source was limited to the written content provided in the experts' responses. No additional or clarifying information was sought from the participants since the written responses alone are considered a valid collection technique in qualitative research according to Moore and Komesaroff (2012). A content analysis was manually performed which aimed at making connections within and between the responses of the experts. This was done in order to identify emergent themes that would best describe the experts' perspectives on the meaning and significance of imagery.

Survey instrument. The survey instrument, a Word document, consisted of two parts: the demographic questions (DQs), including contact information, and five open-ended research questions (RQs).

Demographic questions (DQs). The contact information requested accounted for the survey's questions that were numbered 1 through 6. The specific demographic questions numbered 7 through 21 requested information regarding the participant's background. The information requested was as follows:

1. Participant's Name:
2. Email Address:
3. Office Address:
4. URL of Company Website:
5. Phone (s):

6. Preferred Mode of Contact for Questions?
7. What do you consider your area of expertise?
8. Do you routinely use guided imagery in your practice?
9. Do you routinely use hypnosis in your practice?
10. Are you certified in guided imagery, hypnosis, or both?

    If yes, please include any certifying organizations.
11. Do you hold any professional licensure?

    If yes, in what profession (s)?
12. What is your highest level of education?
13. Years in field?
14. Are you a university educator?
15. Are you a university researcher?
16. Do you teach hypnosis?
17. Do you teach guided imagery?
18. Have you edited, authored, or co-authored any books in your area of expertise?
19. Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?
20. Have you conducted research in guided imagery?
21. Have you conducted research in hypnosis?

Open-ended research questions (RQs). The research questions were designed to elicit the experts' perceptions regarding imagery by asking:

1. How do you *define* imagery?
2. In general, what do you think is significant about imagery as it relates to an individual's health?
3. What specific meaning do you believe imagery holds in relationship to your own professional practice?

4. What do you consider is the relationship (if any) between psychoneuroimmunology (PNI) and imagery?
5. What do you consider is the relationship (if any) between imagery and the learning domains (or one's thoughts, feelings, and behaviors)?

Limitations and delimitations within the context of time. The limitations and delimitations of this study are both related to the context of time. As it did in the pilot, the element of time played a prohibitive role in survey completion by this group of very busy experts. For example, of the remaining 60 potential participants, 16 declined, 29 did not respond at all to the repeated inquiries, and two experts responded months after the data collection had ceased. The majority of those that declined participation noted that they were either already behind on writing projects that were past-due to their publishers or that they had prior travel commitments that included speaking engagements. Consequently, even taking an hour to complete a survey was more time than most wanted to spend. This included those who declined who also stated that they actually had an interest in the topic of imagery, or the particular questions asked, or the study's results. Thus, there was a clear advantage of doing the survey via email. For example, not only was there no scheduling time required for an in-person interview, but more importantly, the participants could preview the survey in advance, as well as complete it at their leisure.

However, there were also disadvantages that were connected to the element of time. An obvious limitation was the fact that the investigator was not able to identify potential nonverbal cues that are obtainable when conducting an one-on-one interview. Therefore, without a further assessment of nonverbal cues, the investigator was unable to ask any probing questions which might have provided or enriched the data. Additionally,

the investigator was unable to seek any clarification regarding the written responses to the open-ended questions, again impacting the possibility of enriching the data.

There were also delimitations that were related to the element of time. The investigator was neither seeking to delineate any of the steps in either the process of guided imagery or hypnosis, nor was she attempting to delineate either modality. For example, Achterberg, Dossey, and Kolkmeir (1994) explained the difference between packaged versus customized imagery in their award-winning book, *Rituals of Healing: Using Imagery for Health and Wellness*. Hammond (1990), in his edited text, *Handbook of Hypnotic Suggestions and Metaphors* (commonly referred to as the Big Red Book), offered therapeutic suggestions and metaphors from over 100 hypnotherapists. The medical issues covered in the Hammond (1990) text ranged from managing pain and sleep disorders to enhancing academic and athletic performance. In other words, unlike the authors in these two aforementioned books, the survey did not ask participants to delineate either modality, or outline or explain the similarities, differences, benefits, or advantages of either modality or to compare one modality to the other. Consequently, as a result of these limitations and delimitations, the time commitment required to be a research participant was markedly reduced compared to other potential research designs that could have been employed or research questions that might have been included.

Quantitative versus qualitative research. Since this was a qualitative study, there are those in the medical community that might perceive it as having an inherent design weakness. The potentially perceived weakness is because it did not meet medicine's gold standard of research. This is due to the fact that quantitative research is what is actually favored in medicine with its double-blinded randomized clinical trial

(RCT), or the "objectivist perspective," according to Moore and Komesaroff (2012, p. 22). However, from this investigator's opinion, qualitative research also has its strengths. For example, rather than deal with objective data, as Creswell (2009) explained, qualitative researchers employ inductive reasoning in order to build themes and to make meaning from their interpretations of subjective data. They seek and explore the subjective data in order to better understand the meanings that "individuals or groups ascribe to a social or human problem" (Creswell, 2009, p. 4). Nicholls (2009) added that qualitative research "offers new ways of understanding the complexity of health care, new tools for collecting and analyzing data, and new vocabulary to make arguments about the quality of the care we offer" (p. 527).

Moore and Komesaroff (2012) pointed out that qualitative research fills the "epistemological gaps," given in what they considered are qualitative research's "wide range of philosophical perspectives" (p. 22). Furthermore, Bairstow (2012) explained that the strength of qualitative research is in "its ability to provide complex textual descriptions [regarding the] behaviors, beliefs, opinions, emotions, and relationships of individuals" (slide 2). Consequently, what was specifically sought in this study was subjective information rather than objective information. However, achieving reliability, validity, and objectivity (each considered criteria for scientific rigor), is often not met in qualitative research according to Sandelowski (1986). Therefore, rather than objectivity being the aim in qualitative research, the richness and diversity of the human experience is what is sought (Sandelowski, 1986). This results, according to Sandelowski (1986), in there being more emphasis on the "meaningfulness of the research product rather than [the] control of the process" (p. 29).

The lens of the investigator. Complying with concept of neutrality, wherein the research project is free of investigator bias, was clearly not the case in this study. This was due to the fact that the participants were specifically selected and any perceptions garnered were obtained through the lens of a sole investigator. In fact, according to Creswell (2009), it is the researcher's lens that is actually what shapes how the connections or the relationships are analyzed in qualitative research. Or put another way, it is through the lens of the researcher, according to Creswell (2009), that the data's structure and the relationships between the structural components are identified, organized, categorized, further categorized, and the patterns identified. Therefore, because of the study's inherent lack of neutrality, the investigator has sought to demonstrate what Sandelowski (1986) refers to as auditability. Somewhat similar to the adage of "follow the money" (Campbell, 2012) or a "full disclosure" in business, auditability refers to the researcher creating a trail in which the complete process is fully disclosed. In other words, the trail explains and outlines the origins, frameworks, biases, procedures, findings and conclusions via the lens of the investigator.

Research Procedures

Participant selection. A convenience sample was selected for this study. The sample consisted of doctorate-prepared medical experts. These individuals were selected since they were the authors that the investigator was exposed to over the course of the last seven years while in graduate school. The potential participant list was comprised of 64 individuals who were either clinicians, educators, or researchers. The clinicians included physicians, nurses, and psychologists. The educators included university, public health, medical and nursing school educators. Finally, the potential list of participants also

included experts known to be health-related researchers, either at a university or at a private institution.

The investigator's exposure to the group of potential experts mainly arose from having read their peer-reviewed articles or books. However, potential participants also included those personally encountered while either attending Saybrook University's residential conferences (RCs) or medical and nursing conferences. Finally, potential participants also included experts that the investigator had read about after having observed them via other multimedia forms, for example via a CD, a training DVD, an educational webinar, a televised interview, or a web-posted video.

The reason that these particular individuals were selected is that it was believed that they would be more likely to be able to illuminate the phenomenon of imagery. This was believed for three reasons. First is the obvious fact that all had attained the highest degree of education. Accordingly, they were all published authors, all in the public eye, and all striving to understand and improve human health, the standards of healthcare or its delivery. Second, the doctors had either referenced the word imagery (or a similar term or descriptor) in their written publications or had referenced imagery via one of the other multimedia formats previously mentioned. Third, some of the experts were selected because they had written or spoken about theoretical concepts related to imagery. For example, potential experts included those that were published in the areas of neuroscience, specifically doctors who promote, research, and teach mindfulness and meditation. Also sought were individuals whose expertise is in consciousness studies, for example transpersonal psychologists, as well as those who study consciousness as it relates to healthcare or the human potential. Researchers specific to the area of

psychoneuroimmunology (PNI) were also recruited. Finally, doctors who had published in the areas of behavioral, integrative, or mind-body medicine were also included in the potential selection list.

However, regardless of the attempt at having a diverse sample population, it was anticipated from the onset that the majority of the participants would be professionals who incorporated guided imagery or hypnosis into their medical practices. This expectation was based upon the fact that the investigator has had the most exposure to these two particular sets of authors. For example, given the influence of Professor Lisa Kelly, the investigator was exposed to the medical experts associated with the Academy of Guided Imagery. Additionally, over the last four and a half years, due to Professor Eric Willmarth's inspiration, the investigator has had the most exposure to the members of the Society for Clinical and Experimental Hypnosis (SCEH), as well as to those of the American Society of Clinical Hypnosis (ASCH).

The potential participant selection list included 27 females and 37 males, or a percentage ratio of 42% to 58% respectively. The gender, and the numbers and percentages of the types of doctorate degrees held by the potential participants are reflected in Appendix E in Tables E1 and E2. In summary, the potential participant list of 64 included:

- 43 had a Ph.D.
- 18 were MDs or physicians
- 3 of the physicians also had a Ph.D., which brought the actual total Ph.D. count to 46
- 4 who had a Ph.D. (6%) were also licensed as nurses
- 1 had an Ed.D., or a doctorate in education

- 1 Ph.D. also had an Ed.D.
- 2 were credentialed having a doctorate in psychology (PsyD).

Assumptions. It was assumed that MBM professionals would be more than willing to help this investigator with this research project. Additionally, it was also assumed that the experts' time would be limited given the anticipated demands upon their already existing full schedules. For example, several on the recruitment list are internationally well-known leaders in the field of MBM and frequent the international speaking circuits. Nevertheless, several of the medical experts that were sought as participants have had (or currently have) various connections to Saybrook University's MBM program, as well as its founder and faculty. Therefore, it was also assumed that at least 10 of the 64 individuals would be willing to participate.

Recruitment. First, a potential participant list of 93 individuals was created in an Excel document. This was followed by a search for the participants' email addresses that were the most desired and whereby the participant could be contacted directly. Several desired prospects were deleted when it was identified that public access was not obtainable without first going through an executive assistant, secretary, associate, or manager to either obtain the desired email address or to initiate an inquiry. These individuals were therefore eliminated as the inclusion criteria not only required that the professional have a doctorate degree, but also that direct correspondence with the potential participant would be achieved without any hint of positive or negative coercion from any third party.

From the initial list of 93, the recruitment count was narrowed down to the most desired. The list included 64 individuals whose personal email addresses had also been independently obtained. Of the 64 emails sent, only four bounced back, thereby

narrowing the potential recruitment list to 60. The email addresses were obtained from multiple sources that included:

- journal articles;
- newsletters and blogs;
- letters to the editor;
- book jackets;
- newspaper articles;
- printed and online marketing pieces;
- websites (publisher, university, company, institution, clinic, or facility websites);
- government and institutional documents (grant documents, public health education notices, minutes of meetings, mission statements, and notification or publication of an award ceremony);
- signature boxes on various types of documents;
- membership directories (companies that included general membership directories, as well as biographies and contact information for the respective owners, founders, and/or its directors);
- medical conference itineraries, agendas, poster sessions, or abstracts;
- syllabi and presentation slides posted on the Internet that also included the instructor's or the presenter's contact information;
- business cards collected from various medical conferences;
- broadcast emails generated by the potential participant; and finally, from
- guessing the email addresses based on the general email format of a company or the institution's formatting of the first and last name, and its respective extension.

After identifying the email addresses, the potential participants were emailed over a course of 9 weeks with the aim to have between 10–20 doctors participate. For the participants that did not respond, second and third email letters were also sent out after

the desired deadline and time extensions had passed. For those who had agreed to participate but had not submitted their surveys by the due date, reminders were also sent with the survey re-attached for the participant's convenience.

Participant consent, risks, and safeguards. It was possible to embed the survey with the recruitment letter because no formal consent was needed for participation. The investigator had obtained an exception from the Institutional Review Board (IRB; see Appendix F) under Section 2 of Saybrook University's (2011) *Application for Exemption from IRB Review.* There were no risks identified in this study since the respondents were free to answer the nonpersonal open-ended research questions within their own zone of comfort. All experts were coded in order to protect their identity and any contact information that was provided in the survey was filed separately from the research data. The protected information included any affiliated companies or institutions for which the participants were or are currently employed. Any unsolicited information was also protected, for example, state licensing information that the participant had included in the survey.

Displaying and summarizing the data. A few of the initial procedural steps taken to display and summarize the data were as follows:

- First, the demographic information was used to identify and assign an alphanumeric code. The code identifier was sequentially assigned as the completed surveys were received by the investigator. B1 and B2 were assigned to the two experts who identified expertise in **b**oth guided imagery and hypnosis. The G1 and G2 code identifiers were assigned to those who identified an expertise in **g**uided imagery. The largest group were the respondents whose expertise was stated to be in **h**ypnosis. They were assigned H1 to H6. Finally, N1, N2, and N3 were assigned to those clinicians, educators, or researchers whose expertise was in **n**either guided imagery nor in hypnosis.

- Multiple folders with subfolders and files were created. In all, approximately 156 files were initially created for data collection, coding, analysis, and summary. Because of the need to manage so many files, a master file was created for organizational purposes in order to keep track of each file's location, name, and the specific extracted and summary data that the file contained.

- In order to protect the integrity of the original surveys, first files were created for each original and complete survey, followed by original files of both the demographic questions (DQs) and the research questions (RQs).

- This step was followed by the creation of 26 participant files for separate review and analysis; four files that summarized the demographic data of all 13 participants; and five files for review and analysis that included each of the participant's responses to each of the five open-ended research questions.

Content analysis. Content analysis is the process of analyzing and categorizing the data so that it can be tabulated and summarized (Hancock, 1998). The basic idea, according to Hancock (1998), is to extract the data that is informative, even data that may seem hidden, inferred, or implied. After reviewing, extracting, tabulating, categorizing, and summarizing the data, the end-result of content analysis is to be able to make connections between the data according to Creswell and Clark (n. d.). As Hancock (1998) further explained, a big picture eventually begins to reveal itself since the identification of the connections leads to pattern identification. The patterns begin to form a network as a result of the most obvious connections. For example, the patterns identified can be related to theories, concepts, and principles; or shared history, beliefs, values, opinions, and scientific underpinnings. From the emerging blend of patterns identified, the principal themes can then be identified.

However, the process of content analysis (see Figure 1), from the word and phrase identification to the theme identification, did not begin until the first files were created that maintained the original data's integrity. Next, Word tables and their supporting Excel files (used for computational purposes) were created. The initial identification stage was

directed at searching for repetition within each participant's set of responses and across all of the participants' responses to each question. This was followed by an additional level of analysis that included the identification of broader components and how they were potentially linked or connected.

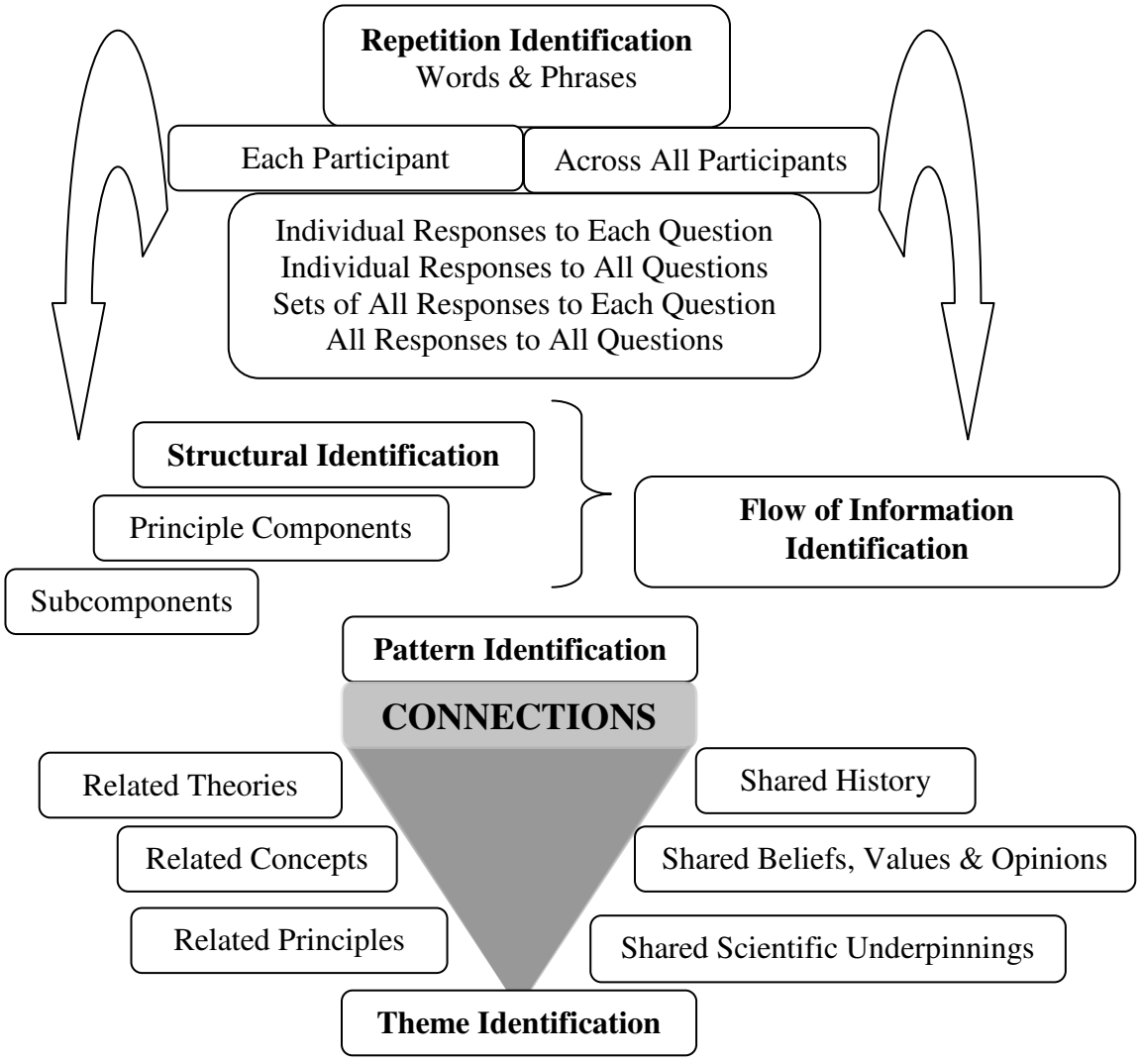

Figure 1. Content analysis: Identifying connections in order to identify themes.

The main components and subcomponents were further analyzed by color coding and underlining, and then further tabulations were completed. This was done in order to perform concept mapping, or the diagraming of the interrelationships between the identified elements (the categories and the subcategories). As Porter-O'Grady and Malloch (2007) pointed out, "everything is related to everything" (p. 55). So, when attempting to understand the complexity of the elements and their connections, mapping can provide the means by which a system's simplicity can be revealed. Burns and Grove (2005) added that a conceptual map can more readily summarize and integrate the data than a written explanation since it "allows one to grasp the gestalt of a phenomenon" (p. 136).

Finally, from this investigator's perspective, concept mapping is similar to a causal loop diagram (CLD), another tool that is often used in systems thinking (Anderson & Johnson, 1997). Basically, both concept mapping and a CLD demonstrate how a system's components are interrelated. Therefore, in the process of the content analysis, the concept mapping permitted a broader or a big-picture perspective of the principal concepts and their connections from which the main themes emerged.

Chapter 4: Findings

Survey Responses

The findings are divided into two sections, the demographic information of the 13 participants and their responses to the five open-ended research questions. The findings are presented in prose and bulleted summaries, diagrams, and in both embedded and appended tables. The tables in the appendices are each identified by their respective appendix and are sequentially numbered.

Responses to the demographic questions (DQs). First presented are the responses to the demographic questions (DQs). These questions requested basic background information. The gender, the types of the degrees held, and the participants' level of medical expertise are each summarized. Additionally, how the data were tabled in the appendices is also explained. These points are then followed by a review of the responses to DQs #7 to #21.

Gender and types of degrees held. As Chapter 3 noted, the gender distribution and the types of doctorate degrees held by the 64 potential participants were tabled in Appendix E. Appendix G provides the same two tables (G1 and G2), but each includes the data for the actual 13 participants. The gender of the participants included four females and nine males. The majority (69%) of the participants had Ph.Ds. Two of the Ph.Ds were also nurses. There were also four participants who were physicians (MDs), and of the four, one physician also had a Ph.D.

The participants' backgrounds. The responses to the DQs are fully tabulated in Appendix H into four tables, Tables H1 through H4. The tabled demographics are

presented in order of the alphanumeric coding that was used to identify each data set. For example,

- Table H1 includes four participants. Participants B1 and B2 represent the experts in both guided imagery and hypnosis. Participants G1 and G2 represent the experts in guided imagery.
- Table H2 includes the demographics for Participants H1 thru H4 and these experts represent four of the first six experts in hypnosis.
- Table H3 includes Participants H5 and H6, the last two of the six experts in hypnosis.
- Finally, Table H4 includes the demographic data for Participants N1 thru N3. These three experts were considered neither an expert in guided imagery nor in hypnosis.

The participants' level of medical expertise. When reviewing the responses to the DQs, it became clear from the onset that the participants shared a high level of medical expertise. Consequently, data were extracted from six DQ response sets and tabled in Appendix I, Table I1. Particularly noteworthy regarding this specific set of responses was that the experts had a total of 501 years experience among them. In fact, this is the most salient point that is included in the diagram in Figure 2 which summarizes the participants' level of medical expertise.

Additionally, after Table I1 had been created, it also became apparent that most of the experts held or had held one or more leadership positions. There were only two who did not disclose a position of leadership. One of these two included the participant who had the least years of experience. The second was a physician with an active clinical practice who was also certified in hypnosis by three professional organizations.

It is important to note that the two who did not disclose a leadership position could well have or have had a leadership position inclusive in their background since the identification of holding or having held a leadership position was not a background item

requested in the survey. Rather, it was a background item that was revealed during the analysis of the responses to the DQs. Consequently, having or having had a leadership position was an additional point added to Figure 2 which summarizes the findings regarding the participants' level of medical expertise.

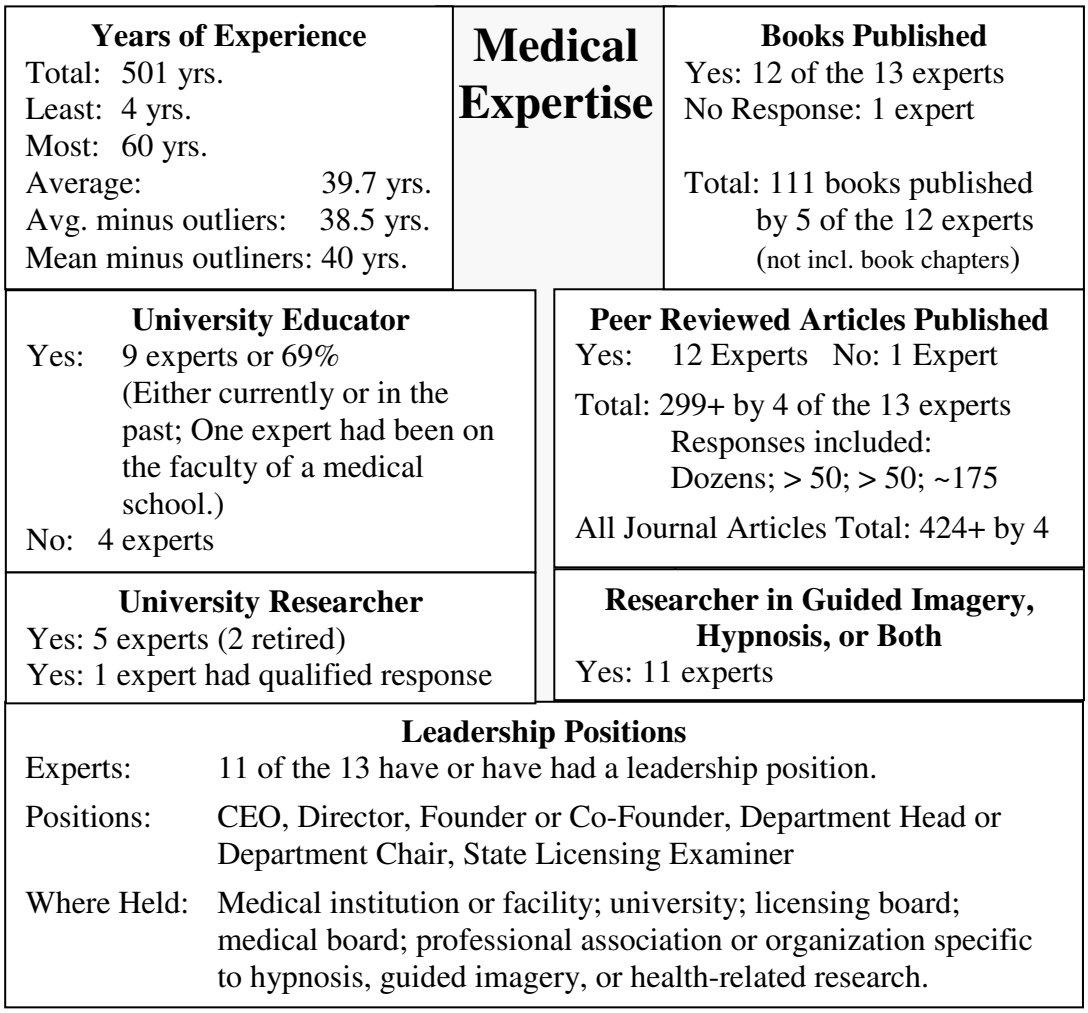

Figure 2. Participants' level of medical expertise.

The remaining demographic responses. What follows is a summary of the remaining responses to the DQs.

Area of expertise. DQ #7 asked: *What is your area of expertise?* All of the participant responses are summarized in Table 1.

Table 1

All Responses to DQ #7: What is Your Area of Expertise?

Subject	Area of Expertise	Subject	Area of Expertise
B1	Pain control	H4	Hypnosis, depression, brief therapies
B2	Psychiatry and Mind-body integrative medicine	H5	Counseling psychology, Individual/Group therapy, Trauma, Hypnosis, EMDR
G1	Interactive guided imagery	H6	Pediatrics and medical hypnosis
G2	Integral, integrative, and holistic nursing	N1	Management of pain, depression, and anxiety
H1	Mind-body medicine within psychology	N2	Psychology, Spirituality and Health, Psychospiritual transformation
H2	Pediatrics	N3	Consciousness studies
H3	Developmental-behavioral pediatrics		

The count of the experts who noted the various areas of expertise is included in Table 2 that follows. The frequency is ranked from the highest to the lowest count. Please note that the areas of expertise are not listed in any particular order, nor are the areas of expertise listed with any prejudice.

Table 2

Count of Experts for Each Particular Area of Expertise

Count	Areas of Expertise Listed in DQ #7
3	Pediatrics
2	Pain management/control
2	Hypnosis
2	Psychology
2	Depression
2	Therapy
1	Psychiatry
1	Nursing
1	Guided imagery
1	Mind-body integrative medicine
1	Trauma
1	EMDR (eye movement desensitization & reprocessing)
1	Management of anxiety
1	Spirituality & psychospiritual transformation
1	Consciousness studies

The use of guided imagery. DQ #8 asked: *Do you routinely use guided imagery in your practice?* Eleven of the 13 participants responded affirmatively and two did not. Two of the hypnosis experts qualified their responses. Participant H1 stated, "I see guided imagery as identical to hypnosis, so yes," and Participant H2 qualified the response and stated, "In hypnosis."

The use of hypnosis. DQ #9 asked: *Do you routinely use hypnosis in your practice?* All of the hypnosis experts responded affirmatively. Participant G2 qualified the response stating that "self-hypnosis" was routinely used. One participant did not respond at all.

Certification. DQ #10 asked: *Are you certified in guided imagery, hypnosis or both?* Ten of the 13 particpants responded affirmatively. DQ #10 also asked the participants to include any certifying organizations. The ones noted were:

- Academy for Guided Imagery (AGI)
- American Society of Clinical Hypnosis (ASCH)
- European Society of Hypnosis
- International Society of Hypnosis
- The Society of Clinical and Experimental Hypnosis (SCEH)
- American Board of Medical Hypnosis
- American Board of Pediatrics
- American Board of Psychiatry and Neurology

Licensure. DQ #11 asked: *Do you hold any professional licensure? It also asked: If yes, in what profession (s)?* Ten of the 13 participants responded affirmatively. The range of professions noted in response to DQ #11 included:

- Ph.D. in Psychology
- Licensed in Acupuncture
- Licensed as a Clinical Psychologist
- Licensed as a Medical Doctor (MD)
- Specialist in Pediatrics
- Nursing
- State Board of Psychologist Examiner
- Advanced Practice Registered Nurse (APRN)
- Marriage and Family Therapist (MFT)

Teaches hypnosis. DQ #16 asked: *Do you teach hypnosis?* As expected, all but one of the experts in hypnosis answered affirmatively. Additionally, both of the experts in guided imagery, as well as the experts identified as neither an expert in guided imagery nor in hypnosis also responded that they do not teach hypnosis. The sole hypnosis expert who did not respond affirmatively was also the doctor with the fewest years of experience. Lastly, Participant N1 did not respond at all to the question.

Teaches guided imagery. Finally, DQ #17 asked: *Do you teach guided imagery?* Five of the 13 participants responded that they did not teach guided imagery, including two of the hypnosis experts: Participants H5 and H6. Participants H1 and H3 qualified their responses. Participant H1 responded by stating, "I don't distinguish between them [hypnosis or guided imagery]…I consider it all clinical hypnosis." Additionally, in response to the question whether or not they teach guided imagery, Participant H3 stated, [guided imagery is] "integral to [the] teaching of hypnosis."

Responses to the five research questions (RQs). Before the study's findings are outlined, a brief overview of the amount of words used to describe imagery is presented. This is followed by a summary of the data reporting process.

Word counts for each RQ. When first reviewing the responses to the five research questions, what was initially identified was the wide range of word counts written in response to the five research questions. These manually tabulated word counts are summarized in Table J1 in Appendix J. The word counts that are bolded are those that reflect the fewest and the most words used to respond to each RQ. The main points extracted from Table J1 are as follows:

- The total word count for all RQs from all participants was 3,671.
- The fewest words written totaled 44 and the most 647.
- RQ #5 was a question that was added to this study following the pilot. It generated the highest word count at a total of 970. It asked: *What do you consider is the relationship (if any) between imagery and the learning domains (or one's thoughts, feelings, and behaviors)?*
- Even when the two outliers (the fewest and the most words written) were deleted from the computation, RQ #5 generated the most response.
- RQ #2 generated the second highest word count at 875. RQ #2 asked: *In general, what do you think is significant about imagery as it relates to an individual's health?*

Summary of the data reporting process. A summary of the process taken to reveal and report the findings derived from the five RQs is as follows:

- First, all of the participants' original responses were collated into five tables and are appended in Appendix K, one table for each research question (Tables K1-K5).
- Second, 13 tables were created, one table for each of the participant's original responses. The sequence of the tables was filed in the same alphanumeric order as was done with the reporting of the demographic data.

- Third, after reviewing the participants' responses multiple times and after having used various formatting techniques (e.g., bolding, underlining, color-coding both by hand and in Word tables), the main concepts were identified and labeled. A coding system was created to represent the concepts with each assigned an acronym as a code identifier. The codes are listed alphabetically in Table 3, whether thought to be a main category or a subcategory. This alphabetized code list was used while analyzing, reporting, and summarizing the findings in order to support a sequential order that would maintain consistency and integrity of the data. Thus, the codes are listed irrespective of any weight attributed by the participants or by the investigator.

Table 3

Alphabetized List of Codes and Their Respective Categories (C) and Subcategories (Sc)

Code	Category (C) or Subcategory (Sc)
DC	Duality Category
FISc	Focus Intention Subcategory
HDSc	Health Domains Subcategory
HSc	Healing Subcategory
IEESc	Internal External Experience Subcategory
ImSc	Imagination Subcategory
LCC	Language Communication Category
LDSc	Learning Domains Subcategory
MfC	Multifaceted Category
MsSc	Multisensorial Subcategory
PANSc	Positive Adverse/Negative Subcategory
SpSc	Speech Subcategory
StSc	State Subcategory
TTPC	Tool Technique Process Intervention Category

- The fourth step taken in the data reporting process was in the coding of the text, first by hand and then in the respective participant tables. Repeating the coding step provided increased internal validity given that the investigator sought to establish consistency throughout the coding and reporting process. The word counts for each RQ and a few of the investigator's notes were also later added to the respective tables.

- The fifth step taken in the process was that the 14 concepts were grouped into four main categories and 10 related subcategories. All 14 are depicted in Table 4 along with a few of the category's descriptors used by the investigator to help differentiate, code, and table the findings. A subcategory was grouped with a main category when it shared the main category's defining characteristic. Although it shared the characteristic, statements were coded under the subcategory when the statement's focus was directed more towards another characteristic. For example, each of the four subcategories linked to the Duality Category (*DC*) also had a dual component, the State Subcategory (*StSc*) being one. States of consciousness occur on a continuum as Schlitz, Vieten, and Amorok (2007) have explained, varying from being aware to unaware. Additionally, the authors explained that consciousness is influenced by "the interactions of one's subjective and objective lives" (p. 16). Consequently, the Duality Category's (*DC*) three other related subcategories were similarly linked since each had dual components as well.

Table 4

Coding System: The 4 Main Categories and the 10 Subcategories

Code	Main Categories	Code	Subcategories
DC	Duality Category (brain-related, hallucination, perception, real vs. imagined, explainable vs. unknown, 2 hemispheres, internal vs. external factors, memory, 2 components)	*IEESc*	Internal External Experience Subcategory
		ImSc	Imagination Subcategory
		PANSc	Positive Adverse/ Negative Subcategory (dual effects on healing)
		StSc	State Subcategory (consciousness, mind)
LCC	Language Communication Category	*SpSc*	Speech Subcategory (nouns, verbs & modifiers)
MfC	Multifaceted Category (complexity, domains, significance, implications, future research)	*HDSc*	Health Domains Subcategory
		HSc	Healing Subcategory
		LDSc	Learning Domains Subcategory (thoughts, feelings, behaviors)
		MsSc	Multisensorial Subcategory (senses)
TTPIC	Tool Technique Process Intervention Category	*FISc*	Focus Intention Subcategory

- Finally, Appendix L was created with 14 tables, one table for each identified category and subcategory. The tables are presented alphabetically in the order of the assigned acronym or code identifier. Each table includes supporting statements related to that particular category or subcategory. Frequently, responses were placed into several tables because they were applicable under multiple codes. The overlapping between categories and subcategories is identified in the right-hand column of each table where the reader is directed to the other applicable coded categories.

A summary of the findings per tabled and coded category and subcategory. The findings are presented in the order in which the tables in Appendix L were created. In other words, the findings are presented by the order of the assigned code or the acronym which represented the category or subcategory.

DC: The Duality Category. Table L1 reflects the responses that were coded under the acronym *DC*, or the Duality Category. This category dealt with statements that were comprised of dual components. The responses (or a part of the response) were often those related to the brain or cerebral function, such as statements regarding memory or the brain's two hemispheres. Also incorporated into this category were opposing concepts, such as real versus imagined, or concepts considered having a bidirectional, interchangeable, dual, or two-fold characteristic. Examples from Table L1 include:

- There are two brains: the knowing brain and the feeling brain, and although they are separate and distinct, both have significant learning and memory capabilities (Participant B1, RQ #5).
- That's why what you know and how you feel can be so totally different (Participant B1, RQ #5).
- Imagery: A mental picture of something not actually present (Participant G1, RQ #1).

FISc: Focus Intention Subcategory. FISc was the acronym used for the Focus Intention Subcategory of *TTPIC* or the Tool Technique Process Intervention Category in

Table L2. Any of the experts' statements that were made regarding focusing one's attention were coded with *FISc*. Three examples included:

- Imagery is the conscious use of the power of the imagination with the intention of activating physiological, psychological, and/or spiritual healing (Participant G2, RQ #1).
- Imagery is a lovely and literal compliment to what we desire, intend, and put our attention upon (Participant H1, RQ #5).
- PNI is more specific as to the purpose and intention of the imagery created (Participant H1, RQ #4).

HDSc: The Health Domains Subcategory. Table L3 included the statements that were specifically related to health, whether physiological, psychological, or spiritual. Consequently, statements such as Participant G2's RQ #1 response noted earlier that was categorized under *FISc*, was also coded under *HDSc*. This was due to the fact that the expert also incorporated three of the health domains in the response. Additionally, Participant H5, looking at the effects of imagery on the health domains, noted that "if one utilizes imagery to make healthier choices, these choices alone could have a myriad of effects" (RQ #2).

HSc: Healing Subcategory. HSc was the code for the Healing Subcategory for Table L4. Participant G2 incorporated the word healing into three of the five responses. For example, RQ #4 asked: *What do you consider is the relationship (if any) between psychoneuroimmunology (PNI) and imagery?* Participant G2 replied, "This relationship is the most ancient and potent healing resource in the history of medicine and rituals" (RQ #4). Additionally, in response to RQ #5, Participant G2 also referenced healing by stating, "The imagery process evokes internal experiences that energize desired emotions, qualities, outcomes, or goals, and the ability to also access stored memory that may be in need of deep healing" (RQ #5).

IEESc: The Internal External Experience Subcategory. Table L5 referenced statements regarding the significance of one's experience, whether the expert qualified the experience to be one of an internal or an external experience. For example, Participant G2, in response to RQ #2, stated that "Imagery is profound in that a person's internal experiences of imagery, memories, dreams, fantasies, inner perceptions, and visions, sometimes involving one, several, or all of the senses, serves as a bridge for connecting body, mind, [and] spirit."

ImSc: Imagination Subcategory. The words imagination/imagine and visualization/visualize were targeted for inclusion in Table L6 or the Imagination Subcategory (*ImSc*). Participant H2 made several statements regarding the use of one's imagination. First, in response to RQ #2 which asked about the significance of imagery as it relates to health, Participant H2 said, "if the individual can imagine comfort instead of pain, they can achieve it." In addition, Participant H2 also referenced imagination in response to RQs #3 and #5 by stating:

- Children have amazing, uninhibited imaginations which they can use to create anxiety and fear OR self-mastery, self-confidence, and self-esteem (RQ #3).
- It was Einstein who said, "Imagination is more important than knowledge" (RQ #5).
- Working with children, I act as their imagination coach helping them to use this valuable resource to tap into their own inner creative strengths to manage their thoughts, feelings, and behaviors (RQ #5).

LCC: Language Communication Category. Table L7 dealt with responses coded under the Language Communication Category or *LCC*. In response to the inquiry regarding the significance of imagery to one's health, Participant B1 stated, "It's the language that the healing systems of the body use to communicate with each other" (RQ

#2). Participant N2 added, “Above all, imagery creates a unique narrative through which we can develop a relationship with our psyche and learn about ourselves” (RQ #5).

LDSc: Learning Domains Subcategory. RQ #5 specifically asked about imagery’s potential relationship to the learning domains or one’s thoughts, feelings, and behaviors. Consequently, there were several responses that were coded under the Learning Domains Subcategory or *LDSc* in Table L8. However, responses related to the learning domains were also noted across all of the RQs. For example,

- An image is a thought form (Participant B1, RQ #1).
- Imagery, as Belleruth Naparstek stated, “is like a depth charge to the emotions,” revealing hidden truths and point to [a] new way of being in the world (Participant G1, RQ #3).
- As per a concept in hypnosis, what you think about effects, what you do (Participant H5, RQ #2).
- Every thought is a prayer and every thought affects behavior (Participant N1, RQ #5).
- Imagery can augment the learning process for many domains of learning (Participant N2, RQ #5).

MfC: Multifaceted Category. The participants’ responses coded under the Multifaceted Category (*MfC*) in Table L9 were those in which multiple and complex aspects of imagery were noted. Also included in this category were implications, either deemed worthy for further consideration or ones which potentially may provide the basis for future research projects. For example,

- Maybe it’s important to better understand it (Participant B1, RQ #2).
- Imagery is crucial for me and has been for the majority of my life (Participant G1, RQ #3).
- Wow … this can be an entire book! (Participant G1, RQ #4).
- Imagery is profound (Participant G2, RQ #2 & #3).

- As research gets more focused on *how* imagery enhances immune functioning, we may learn about physiopathways and develop better targeted imagery for specific health issues (Participant H4, RQ #4).

- It is important to have a distinction between imagery and medical hypnosis (Participant H6, RQ #2).

MsSc: Multisensorial Subcategory. Table L10 included the descriptions of imagery that were multisensorial (*MsSc*). Although listed and discussed as Table L10, this category was the first to be identified. The reason is that in response to RQ #1 (which asked the experts to define imagery), 11 of the 13 participants referenced the senses or a descriptive component of the senses. And the 12th participant referenced the senses in the subsequent RQ, or RQ #2. For example, in response to RQ #1, Participant H5 stated that "Imagery can also be defined as that of Visual imagery, Auditory imagery, Olfactory imagery, Gustatory imagery, Tactile imagery, Kinesthetic imagery, Organic imagery" (RQ #1).

PANSc: Positive and Adverse/Negative Subcategory. *PANSc* was the acronym used in Table L11 to represent the idea that imagery can have both positive and adverse effects on health. Two participants in particular (Participants B2 and N2) addressed this aspect while describing imagery, both in response to RQ #2. Their respective responses are listed later in the table that encompasses the supporting data for an emergent theme.

SpSc: Speech Subcategory. Table L12 presents the experts' responses that were coded under the Speech Subcategory or *SpSc*. This subcategory could also have been labeled the Complex Construction Subcategory (*CCSc*) or the Complex Descriptors Subcategory (*CDSc*) since the range of descriptors was so very broad. However, these statements had to do with the construction of speech, or the words and phrases that were used to describe imagery. Consequently, Table L12 is the longest table appended. The

descriptors include the nouns and their modifiers (adjectives), noun forms (phrases), as well as the verbs (including gerunds, infinitives, and past participles) or their modifiers (adverbs), and verb forms (adverbial phrases) that were used to describe imagery. The partial quasi-alphabetized list of examples that follows demonstrates the complexity of not only defining imagery, but also the complex and various contexts with which imagery was viewed by this group of experts. First listed are the noun descriptors beginning with the many types of imagery noted by the 13 participants, followed by a shorter list of the verb descriptors.

- Auditory, better targeted, gustatory, internal, kinesthetic, mental, multisensory, negative, olfactory, organic, positive, positive outcome, tactile, and visual imagery.
- ability, altered state of consciousness, associated meaning, association, attention, attitudes, automatic thought;
- balance, behavioral, belief, believed-in-imagination, bidirectional loop, bridge;
- capacity, change, cognitive, concept, consequences, considerable overlap, context, cornerstone, correlates;
- conscious, conscious activity, conscious and unconscious levels, consciousness;
- daydreaming, devoid of nonsensory content, dimension, direct experience, direction, dissociation, double-edged sword;
- desirable changes, desired direction, desired images, desired outcomes, desired tasks;
- ecosystem, effects, essential ingredient, evocative nature, expanded states, expectation, experience(s), experiential learning;
- emotional challenges, emotional responses, emotional self-regulation, emotional valence;
- feelings, flow of thinking, final outcome, focus, form, form of freedom, foundational, function, future focused approach;

- generation, generation to generation, goal, goal-oriented purpose, good health, guidance;
- habits, habituated behavior, healing, healthier choices, hypnotic trance;
- immediate environment, immune responses, immune system, impact, implied messages, in mind, in place, intention, intervention;
- imagery processes, images, imaginal processes, imagination, imaginative form, imagined;
- inner experience, inner perception, internal (mental and emotional) construct experience, internal images, internalized self-fulfilling prophesy, interpersonal relationships;
- key, knowledge, language, limitless self-expression;
- means, medium, memory, metaphors, mind, mind-body, mind-body-spirit, mood, motivation, multi-dimensional treatments, muscle memory, myriad;
- meaning, meaningful associations, meaningful change, meaningful images, meaningful experiential learning opportunities, meaning-making aspects;
- mental images, mental memory, mental picture, mental process, mental representation;
- narrative, narrative architecture, neurobiology, neurochemistry, neuroplasticity;
- new adaptive behaviors, new ideas, new perceptions, new solutions, new outcomes, new way;
- perceived significance, perceptions, person as a whole, perspective, phenomenon, phenomena, pleasant meaningful images, plan, potential, power, prayer, process, purpose;
- physical and emotional detriments, physical and emotional healing, mental and physical disorders, physical processes, physical sensations, physiologic realities, physiopathways, psychological and physiologic experiences, psychological foundations, psychological processes, psychophysiological state;
- positive direction, positive effects, positive impact;
- range, reality, recognition, reduction, relationship, relaxation, resource, role;

- senses, sensory, solution, spiritual forces, stagnated thinking, state, state of mind, stimulus, stress management approach, subconscious issues, symbiotic relationship, symbols;

- self-confidence, self-esteem, self-expression, self-fulfilling prophesy, self-injurious behaviors, self-mastery;

- time, past/present/future, hindsight/insight/foresight;

- therapeutic context, therapeutic outcomes, therapy, thought form, thoughts, trance-like state, transformative experience, transpersonal, treatment, triggers;

- unique language, utilization, verbal thought, views, visualization, vital component;

- way, way of being, way of thinking, and wisdom.

- **A**ccess, accompanies, achieve, activated, affects, allows, alter, assessing, associated, automatically and subconsciously, automatically engage;

- can augment, can create, can enhance, can range, can serve, can't be separated;

- communicate, conjure, connecting, consolidate, construct, contributing to, coping, create, created, creating, cultivating;

- develop, directly influence, drive, effects, emerge, enables, energize, enhanced by, enhances, enhancing, evoke, evoked, evokes, evoking, exacerbates, experienced, experiencing, explores, exploring, expressing;

- facilitate, facilitating meaningful experiential learning, feeling, feeling healthy, feeling well, focus on, focused, focusing, focusing upon, functioning;

- generating, help, helps, identified, identifies, identifying, imagine, imaging, improve, incorporates, increases, influences, influencing, integrated, intend, interacts, interface, interfere, internalize, internally generated, interrelated, involved, involves, involving, is integral, leads, learn, learning, maintaining, manage, manifests, may spontaneously, mental rehearsal, modifying, more responsive, naturally occurring;

- practice, produce, recognizing, reconcile, reduce, reduces, reducing, relieving, represented, responds, restore, revealing, sensed, sensing, serves, sets in motion, shift, suggests, suppressing, tap into, teaching, think, thinking, thinks, translatable, trigger;

- to bring about, to catalyze, to connect, to consider, to cope, to create, to eliminate, to enhance, to excel, to identify, to image, to improve, to include, to

inhibit, to lead, to learn, to learning, to make, to practice, to problem solve, to process, to suggest, to take, to teach, to understand, to use;

- use to communicate, using, utilizes, utilizing, vested, visualization, visualize, visualizing, and worked better.

StSc: State Subcategory. Table L13 includes the responses that were coded under the State Subcategory (*StSc*). These are responses in which the level of consciousness was referenced or when the word "mind" was referenced, specifically when it was not directly related to expressed cerebral function. States of consciousness are significant to health, since as Schlitz and her colleagues (2007) at the Institute of Noetic Sciences have explained, "Your consciousness is the context in which all of your experiences, perceptions, thoughts, or feelings converge" (p. 17).

Examples of the responses coded under the State Subcategory (*StSc*) included Participants G2, N3, N2, and B2. Participant G2 stated, "Imagery has the capacity to connect with the transpersonal, beyond personality with expanded states of consciousness" (RQ #3). Participant N3 added, "Imagery is an example of conscious activity" (RQ #2). Participant N2 explained further, stating:

> The field of noetic science involves a deep exploration of inner experience, which of course includes imaginal processes. In order to understand a client/subject's transformative experience, existential crisis, etc., it is imperative to acknowledge, address, and attempt to understand the imagery associated with this dimension of their experience. (Participant N2, RQ #3)

Finally, Participant B2, in referencing the differences between guided imagery and hypnosis, cautioned:

> Some patients may spontaneously shift into a trance-like state even if the therapist does not give any suggestions for the patient to do so. Clinicians should be aware of this phenomenon and verify that the patient has become fully re-oriented to his or her immediate environment at the completion of a guided imagery intervention. (Participant B2, RQ #1)

TTPIC: Tool Technique Process Intervention Category. The last alphabetized category for which a table was created was for Table L14's *TTPIC* or the Tool Technique Process Intervention Category. This category, similar to *MsSc,* was also frequently noted when reviewing the experts' responses. However, unlike *MsSc* which contributed more to a structural component of imagery, *TTPIC* provided a take-action or a process component of imagery. For example, RQ #3 asked: *What specific meaning do you believe imagery holds in relationship to your own professional practice?* Participant H6 responded by noting that, regardless of any term applied to imagery's use, what was significant was the process of imagery being aimed at achieving a specific goal. Additionally, in response to RQ #5, Participant H6 stated that mental imagery can create muscle memory, mental memory, and neuroplasticity.

Other applicable responses to *TTPIC* were as follows:

- Such images are typically experienced with the goal of evoking a psychophysiological state of relaxation or with some specific outcome in mind (e.g., visualizing one's immune system attacking cancer cells, experiencing oneself feeling healthy and well, exploring subconscious issues, or imaging a solution to a current problem). (Participant B2, RQ #1)

- At this point, it's well established that the use of imagery to suggest focus, relaxation, healing, skillful coping, enhanced immune functioning, and much more, is a vital component of good, multi-dimensional treatments (Participant H4, RQ #4).

- Imagery enables me to practice remaining in the moment. Because I have a plan in place for when I am not and practice it with regularly [*sic*], imagery facilitates a flow of thinking versus stagnated thinking (Participant H5, RQ #3).

- Imagery is a means to consider options (Participant H5, RQ #5).

- Of course, using imagery to teach a concept (i.e., in a classroom) can enhance learning and retention of information (Participant N2, RQ #5).

- I think that there is evidence that imagery can be used as a diagnostic tool in assessing an individual's physical, mental, or emotional health. (Participant N3, RQ #2).

- I think that imagery used by skilled practitioners can be used to facilitate the function of the immune system, hence it is an important topic in PNI (Participant N3, RQ #4).

A few more findings. In addition to the coded findings reported in Tables L1 through L14, four other points of interest were noted when reviewing, categorizing, coding, and reporting the data. First was the fact that the experts frequently used the word "help" in their responses. They used help in the first and third person, as well as its verbal elements (e.g., the gerund "helping," or the infinitive "to help"). In addition to those statements already noted that included the word "help," a few more examples included:

- Participant B1: "This difference is the basis for why most people seek psychotherapeutic *help*" (RQ #5).

- Participant H5: "Imagery *helps* me to breathe in my good points, and breathe out automatically thought of bad points" (RQ #2).

- Participant H6: "a. Practicing imagery can *help* patients feel relaxed" (RQ #2).

Second, also interesting to this investigator were the number of experts who noted the mind-body-spirit paradigm or the mind-body paradigm within their responses. For example, Participant G1 noted that imagery is an "effective interface between mind and body" (RQ #2). Additionally, as Participant G2 was previously quoted as saying, imagery "serves as a bridge for connecting body, mind, [and] spirit" (RQ #2).

The third point of interest was the distribution of the codes across the participants. A few of the experts were noted to have a fairly even spread across two or more of the codes. However, the principal category code most often identified was that of *TTPIC*. In fact, the frequency rate of this code led to the development of one of the main themes.

The distribution of codes was first observed when reviewing Participants H6 and N3. It was then that the investigator noticed that nearly the entirety of some of their responses was mainly coded to one category or subcategory. For example, Participant H6 directed the majority of all of the responses towards differentiating between the outcomes derived from the technique or the process of imagery, specifically imagery's use in medical hypnosis. Additionally, the use of imagery in hypnosis was viewed as more of a goal-oriented or goal-directed intervention by Participant H6, at least from this investigator's perspective. Therefore, *TTPIC* (Tool Technique Process Intervention Category) was used the most frequently to code this expert's responses. A case in point is Participant H6's response to RQ #2. This RQ had asked the experts' their thoughts about the significance of imagery as it relates to health. Participant H6 responded, "Imagery to me just helps someone relax. Hypnosis has a specific goal in mind and, with practice, leads to neuroplasticity" (Participant H6, RQ #2).

Participant N3 also responded with statements that were directed toward the process and the use of imagery, noting imagery's use as a "diagnostic tool" or "as part of a therapeutic program to improve or restore physical, mental, or emotional health" (RQ #2). Consequently, *TTPIC* was also used in coding this expert's responses. However, this expert also noted how imagery can be "used to facilitate learning." Therefore, the expert's responses were also coded under the *LDSc* or the Learning Domain Subcategory.

Participant G1 was noted to have made the most statements that were coded to a broader range. Coded were *HSc, LCC,* and *MfC* at a frequency of five times; *LDSc* at six, and *DC* at seven. An example of a *MfC* (Multifaceted Category) coded statement was this expert's response to RQ #2. It suggested a temporal quality in its relationship to health in

which imagery's significance was due to its ability to provide increased awareness regarding one's past, present, and future.

The fourth and final point of interest regarding the findings was the interconnection and the overlap between the categories which is depicted in Figure 3, the drawing of a wagon wheel. Each category and subcategory is represented by their respective acronyms with *TTPIC* connected to the outer rim of the wheel's structural components at *FISc*, or *TTPIC's* Focus Intention Subcategory. The covered wagon wheel was chosen because it seemed to best represent how the structural concepts of imagery were interrelated to one another. *TTPIC* was connected to the other concepts as well, but viewed as a concept of imagery that offers the potential for forward movement.

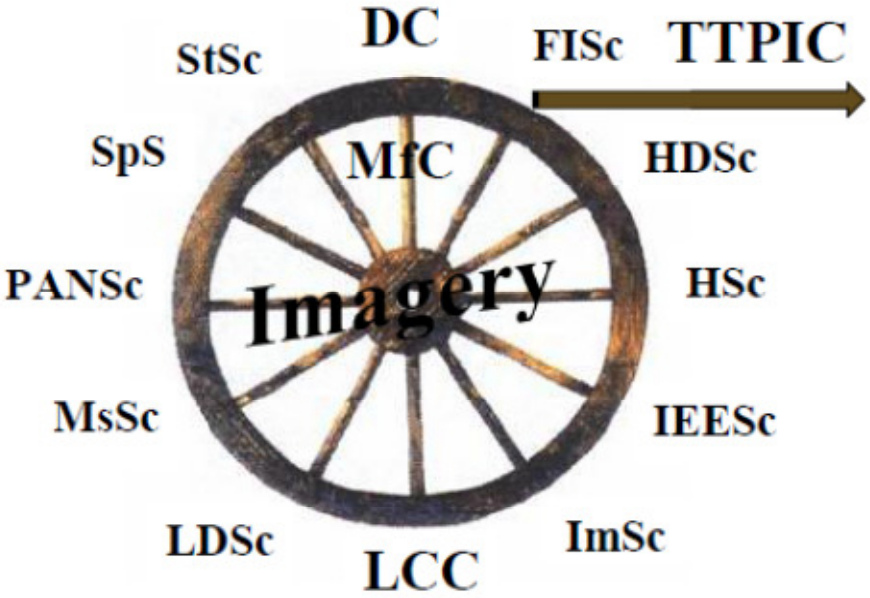

Figure 3. The categories and subcategories depicted as the structural components of a covered wagon wheel. DC–Duality Category with *IEESc*–Internal External Experience, *ImSc*–Imagination, *PANSc*–Positive Adverse/Negative, and *StSc*–State Subcategories. LCC–Language Communication Category with *SpSc*–Speech Subcategory. MFC–Multifaceted Category with *HDSc*–Health Domains, *HSc*–Healing, *LDSc*–Learning Domains, and *MsSc*–Multisensorial Subcategories. TTPIC–Tool Technique Process Intervention Category with *FISc*–Focus Intention Subcategory.

Concept diagram. The mapping that resulted in Figure 3's diagram of a covered wagon wheel provided further clarity about the overlapping of the related concepts that had been observed throughout the analysis. As Figure 1 had earlier demonstrated, the content analysis was aimed at searching for connections with the goal of identifying themes that would best describe the experts' perspectives. What follows in Figure 4 is a concept diagram that depicts the connections that were identified. What was concluded from the extensive content analysis was that imagery consists of two overarching concepts. First is that imagery has a structural component. Second, imagery also has a process component. Finally, these two components are connected via a communication system.

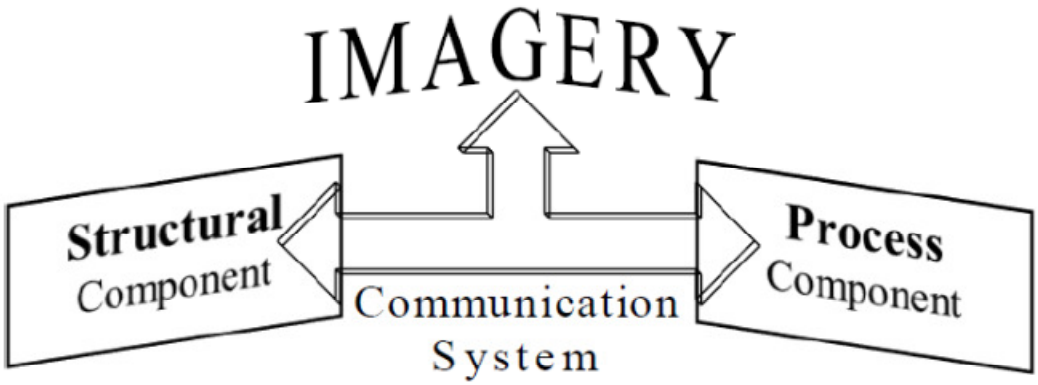

Figure 4. Imagery's main components.

The three themes. As Braun and Clarke (n. d.) explained, coded categories can be conceptualized as "building-blocks." From them, patterns begin to emerge that lead to theme identification. From this study's "building-blocks," three main themes emerged. They were:

- Theme #1: Imagery is a complex construct comprised of both structural and process components which are interconnected via a complex communication system which responds, directs, and transmits the flow of information within the individual and also between the individual and the environment.

- Theme #2: The structural component of imagery is multisensorial, multifaceted, and it influences and is influenced by the learning and health domains resulting in the potential for both positive and adverse effects on health.

- Theme #3: When imagery's process component is used and directed in a goal-oriented, purposeful, intention-driven way, desired outcomes can be achieved in the psychophysiological domains of health.

Tables 5, 6, and 7 provide some of the most pertinent examples of the experts' responses which support the three emergent themes. The responses in Tables 5, 6, and 7 are in addition to the findings already provided. Table 6 consists of three parts (a, b, c) with each part including responses that were applicable to Theme #2. The three themes will be discussed in Chapter 5, which follows Table 7. Additionally in Chapter 5, the three themes will be compared to the six themes of the pilot study. Furthermore, some of the pilot experts' pertinent responses that supported the pilot's themes are included in Chapter 5, in addition to being tabled in the appendices. Finally, the investigator's conclusions regarding both sets of themes are interjected throughout the entirety of Chapter 5's discussion.

Table 5

Responses That Support Theme #1: The Communication System—Linking Imagery's Structural and Process Components

Expert	RQ	Experts' Responses That Support Theme #1
B1	RQ #5	Imagery is the best way to communicate with the feeling brain
B2	RQ #4	The use of imagery is the use of a unique language that speaks directly to the immune system.
G1	RQ #2	Imagery is a natural language for humans for coding, storing and expressing information; for planning and projecting possibilities into the future; and due to its evocative nature an effective interface between mind and body.
G1	RQ #4	Imagery, because it is a natural language for humans, is integrally tied to PNI.
G1	RQ #4	It is the way in which the mind, body and spirit communicate with one another, in a bidirectional loop.
H5	RQ #5	I think these sayings have been passed from generation to generation and each family has their own that they pass to one another. Generally speaking, there appears to be some associated meaning with the saying passed which conjure images of what the sayings implied messages were or how you fit into them.

Table 6a

Responses That Support Theme #2: The Structural Component—Multisensorial

Expert	RQ	Experts' Responses That Support Theme #2
B1	RQ #1	An image is a thought form with sensory qualities.
B2	RQ #1	Guided imagery is defined by Astin [1] as involving the generation of different mental images evoked by one or more of the five senses (visual, auditory, tactile, olfactory, and gustatory).
G1	RQ #1	Images can be seen, heard, smelled, tasted, or sensed in some way.
H2	RQ #1	A hallucination that incorporates one or more of the defined senses (visual, auditory, tactile, olfactory, kinesthetic, gustatory) or the less defined senses such as energy flow.
H3	RQ #1	I define imagery as the internal (mental and emotional) construct experience of sensing ideas – past/present/future, real and/or "imagined," whether these are sensed visually, auditorally, gustatorially, olfactory-ly, or kinesthetically – or, in various combinations, multisensorally.
H6	RQ #1	Visualization of a specific place in one's mind, but not just visualization. You want all of the senses involved.
N3	RQ #1	Imagery can be visual, auditory, kinesthetic, gustatory, olfactory, etc., but is devoid of nonsensory content.

Note. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.

Table 6b

Responses That Support Theme #2: The Structural Component—Multifaceted

Expert	RQ	Experts' Responses That Support Theme #2
B2	RQ #5	I believe that small children learn from their parents and significant others involved in their care such as grandparents, siblings, uncles and teachers certain attitudes and views of their own image and of themselves as well as the world around them. Much of this is internalized subconsciously through repeated exposure and role modeling of the adults. The children growing up, end up emulating some of these adult significant figures in their lives which ends up influencing their own imagery and personality when they become adults.
G2	RQ #4	These two areas impact each other and can't be separated as a person is whole—the interface between body, mind, spirit.
H1	RQ #2	What we image or picture in mind is reflected by every cell and system in our body.
H2	RQ #4	I believe that imagery combined with belief and expectation is the cornerstone of PNI.
H4	RQ #5	Every image has correlates and consequences. These are necessarily physical, cognitive, sensory, and emotional. They may also be behavioral. When someone has an experience of one kind or another associated with some imagery they've generated (either independently or through someone else's guidance), the impact can range in its duration from mere seconds to a lifetime depending on its perceived significance. So, the imagery can be a powerful stimulus to learning, but only if the person sees and responds to it as such. As a parallel in hypnosis, the power isn't in the suggestion someone gives, rather it's in the person's response to it.
H5	RQ #1	Imagery is an ultimate form of freedom where one has the potential for limitless self-expression. It can be practiced individually or alone. I think it is the beginning of meaningful change (i.e., as per a concept in hypnosis, what you think about effects what you do).
N2	RQ #1	The imagery of the mind is part of an ecosystem of subjective constructs experienced in a visual context; it creates the narrative architecture that accompanies our thoughts and feelings.
N2	RQ #3	Imagery is integral to the meaning-making aspects of any experience since it is the medium through which we often re-live our experiences and construct meaning out of them.

Expert	RQ	Experts' Responses That Support Theme #2
N3	RQ #1	Imagery is the cognitive generation of sensory input that has been recalled from experience or that has been self-generated in an imaginative form.
N3	RQ #5	Learning can occur with or without imagery. However, there are many experiments in which images were learned, or during which imagery was used to facilitate learning. Images occur in nighttime dreams, and one function of dreaming is to consolidate what has been learned during the day. Hence imagery can facilitate learning while someone is asleep.

Table 6c

Responses That Support Theme #2: The Structural Component—Positive and Adverse Effects on Health

Expert	RQ	Experts' Responses That Support Theme #2
B2	RQ #2	In my opinion, imagery can serve as a double edged sword. People who internalize negative imagery end up living out a self-fulfilling prophesy with negative outcomes regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage in positive outcome imagery end up with more successful positive outcomes because of an internalized self-fulfilling prophesy. Much of these processes are happening spontaneously, automatically, and subconsciously.
H4	RQ #2	What you focus on influences emotional responses, physical processes, quality of cognition, and more. So, the qualities (e.g., vividness, scope) and emotional valence (e.g., depressing or anxiety producing) of one's imagery has the potential to catalyze—or inhibit—physical and emotional healing. For example, depression has a strong association with cardiovascular disease, so much so that many cardiologists are encouraging early screening for depression as a means of identifying those at later risk for heart disease. Imagery plays a strong role in depression as people visualize rejection, failure, abandonment, betrayal, humiliation, then suffer the physical and emotional detriments that go along with such negative imagery.
H5	RQ #4	Considering hormones created by stress alone can be considerably corrosive and imagery could help reduce stress, the byproduct of this reduction would likely have other positive effects (i.e., in the area of PNI).
N2	RQ #2	Thoughts accompanied with distinct and vivid imagery may have a more marked influence on physical processes in the body, and therefore our health. For example, experiencing imagery associated with fear or stress could trigger the release of adrenaline or cortisol, which certainly affect the overall stasis of the body. Imagery associated with pleasantness, love, etc. could trigger the release of serotonin or dopamine, which have their own correlations to bodily and psychospiritual balance. In short, how one thinks about anything manifests physically in the body in some way. Thus imagery can have positive or adverse effects on health.

Table 7

Responses That Support Theme #3: The Process Component

Expert	RQ	Experts' Responses That Support Theme #3
B2	RQ #4	The power of imagery has been documented in many publications showing both through conditioning and the internalization of final outcome of treatments, using a future focused approached enhanced by hypnosis and imagery to enhance stronger and more effective immune responses or in the cases of autoimmune disorders, to eliminate excessive and aggressive immune responses that include a direct attack of the immune system on one's own cells and tissues.
G1	RQ #2	Imagery is significant because it can provide insight, hindsight, and foresight into an individual's health and life.
H3	RQ #2	I strongly believe that our internal imagery—conscious or otherwise—has varying degrees of correlation with our reality experience(s); and, therefore, that by focusing upon, utilizing, and cultivating our imagination (imagery) we can in fact alter not only perceptions, but also physiologic realities so as to create desired outcomes, and alter psychological and physiologic experiences, in a sense contributing to if not completely creating our own realities.
H3	RQ #3	…and my belief is that hypnosis is a state of mind in which *through focused imagination (imagery)* individuals create a focus on various desired images of desired outcomes in order to evoke and create change in a desired direction (such as in reducing or relieving pain, eliminating a habituated behavior [habit], altering a [patho] physiologic response such as in migraine, irritable bowel syndrome, asthma, etc.), modifying or eliminating emotional challenges such as anxiety, depression etc.
H3	RQ #5	My—for the moment (!)—thoughts on this are that what internal images we have DRIVE our thinking, feeling, and behaviors, at both conscious and unconscious levels, with the unconscious being the more important. As such, as I cultivate my imagination (my way of thinking about what I'm DOING when I do self-hypnosis, which by definition includes my multisensory imagery, OR meditation), my expectation and motivation drive the evolution of positive imagery in the direction of desired, intended, desirable changes; whether those are to image myself sleeping and resting more, exercising regularly, maintaining good health, being efficient in accomplishing desired tasks, et al.
H4	RQ #1	Generating and utilizing mental images (i.e., internally generated

Expert	RQ	Experts' Responses That Support Theme #3
		visual representations) for some goal-oriented purpose (e.g., relaxation, emotional self-regulation, pain management, mental rehearsal of new adaptive behaviors, etc.).
H4	RQ #3	So much of good therapy involves teaching and learning. People learn much more easily when they're focused, and they learn much better through direct experience. Imagery processes provide a context for experiential learning that is immediate, multi-dimensional, and holds greater potential for building the meaningful associations to new ideas, perspectives, and behaviors that can enhance one's life. Thus, striving to excel in facilitating meaningful experiential learning opportunities is foundational to my clinical work.
H6	RQ #3	a. Whether you call it mental imagery, guided imagery, medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in imagination, or daydreaming with a focus, it is all the same. b. And, when I do this guided imagery, etc., above, we have a specific goal in mind.

Chapter 5: Discussion and Conclusion

Discussion

The three emergent themes. As Chapter 4 demonstrated, 14 concepts were identified during the data review and analysis. These concepts were later narrowed down to four main categories and 10 subcategories. The four main categories were then narrowed down to three with the Duality Category (DC) and its four subcategories moved under the Multifaceted Category (MfC). Thus, the MfC became an overarching concept with 10 components, each reflecting aspects of imagery's structural characteristics. From the three main categories remaining, three themes emerged.

Theme #1: Imagery's communication system. The first theme summarized the idea that imagery was viewed as having both a structural as well as a process component, each connected via a complex communication system. Furthermore, the communication system was noted to be one that responds, directs, and transmits the flow of information within the individual and also between the individual and the environment. Two significant aspects that emerged about the communication system were that of language and perception. They are represented in Figure 5.

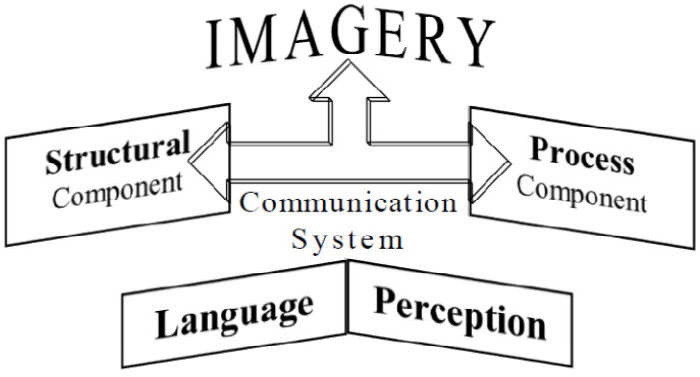

Figure 5. Imagery's communication system.

Language. The concept of imagery being linked to communication is significant because language is what is thought to differentiate humans from other animals (Hurford, 2004; Jose, 2012). Marc Hauser and his colleagues at Harvard University have studied the evolutionary development of language, specifically examining the differences in cognition between humans and other animals. The difference, what Hauser (2008) coined "humaniqueness," is that "humans evolved a distinctive cognitive architecture" (p. 126). The relevance of the concept of "humaniqueness" is that Participant N2 also referenced imagery as "narrative architecture" (RQ #1). Additionally, Participant N3, at the beginning of the response that defined imagery, stated, "imagery is the cognitive generation of sensory input" (RQ #1). However, what is perhaps even more relevant to this study is that one of the four characteristics of humaniqueness is the use of mental symbols. The mental symbols serve not only to encode one's sensory experiences, but according to Hauser, they also are what form the basis of language and communication (Wolchover, 2011). Furthermore, Hauser explained that the mental symbols can be images (or pictures) or even words (Wolchover, 2011).

Within this one characteristic of humaniqueness there are three points that are connected to the experts' responses. First is the fact that language's mental symbols can be words, a concept that was suggested by Participant N1. This expert wrote the fewest words in response to the entire survey, but stated that "ALL THOUGHTS ARE IMAGES." This emphatic statement was immediately followed by a second one which also aligns with Hauser's conceptualization regarding language. It stated, "Every word is a substitute for an image!" The significance of words to one's health was captured by physician, Peter Bloom. According to psychologists, Willmarth and Willmarth (2005),

the authors reported that Bloom, at the 16th International Congress on Hypnosis and Hypnotherapy, reportedly said, “Words can change physiology” (p. 20).

Second is the point of how the brain codes language. In Chapter 2, this concept was addressed by physician Martin Rossman (2002), when he described imagery as a “coding language of the nervous system” (p. 82). Participant G1 also referenced coding, but did so in a somewhat broader context. This expert stated, “Imagery is a natural language for humans for coding, storing, and expressing information” (RQ #2).

The third point is also related to a concept offered by Rossman. In this instance, Rossman (2000) referred to imagery as the “unconscious mind speaking in images and symbols” (p. 18). Rossman’s (2000) reference to the unconscious mind is significant since, as Qureshi (2013) from Saudi Arabia’s King Saud University’s College of Medicine explained, it is “the seat of all of our memories, all of our past experiences and indeed all that we have ever learned” (p. 8). Coincidently, this third point regarding images and symbols was also echoed by Participant G1 who stated, “Attitudes, feelings, beliefs, and ideas are represented and vested in images, symbols, and mental pictures, which become part of our personal narrative and influence our behavior” (RQ #1). These important influences can perhaps also be explained by Torem (2014) who noted that “Jung believed that mental images were, in fact, the most important reality human beings have” (p. 320). Additionally, Participant H1 noted that imagery was a “mental representation of visual content and stimuli” (RQ #1). Finally, Participant G2 referenced the use of symbols when describing imagery stating,

> Imagery is profound in that it allows for a person to connect with one’s deeper knowledge and wisdom, that may occur in the form of symbolic imagery in the form of metaphors or symbols, that may be immediately translatable to rational verbal thought, or they may emerge slowly over time. (RQ #3)

With regard to imagery's relationship to language, two other final aspects were raised by the experts. First is that imagery plays a role in one's own self-talk or internal dialogue. According to Jemmer (2009), an internal dialogue influences one's relationship with self since one's consciousness, self-awareness, worldview, and meaning-making are all impacted. It was determined that Participant H5, who wrote the most extensive responses to the survey questions, addressed this aspect of communication the most thoroughly, specifically when responding to RQ #2. Participant H5 discussed taking accountability for one's "stagnated thinking" and suggested converting "automatic thoughts" to more productive and healthy ones. Negative thinking, as Participant H5 pointed out, can impact one's mood, relationships, behaviors, and choices, and therefore exacerbate "maladaptive functioning."

The second additional aspect of language that was raised by the experts was how imagery was connected to language when it was framed within a PNI framework. For example, Participant G1 was quoted in Table 5 as saying, imagery is directly connected to PNI since it offers a bidirectional communication mechanism that links the tri-model paradigm of the mind, body, and spirit. Participants B1 and B2 also related imagery to language within a PNI framework. Participant B1 offered the idea that the language of imagery is how the body's healing systems communicate. Participant B2 specifically addressed imagery as a "unique language" with its potential to enhance more effective immune responses. Participant N3 also proposed that the use of imagery could facilitate immune system function.

The investigator concluded that the connection between imagery and its potential to enhance immune system function is an important one for improving health in America.

The reason is that more and more studies over the last 50 years have demonstrated a bidirectional connection between the central nervous system (the brain and spinal cord) and the immune system according to Torem (2007), a physician at Northeast Ohio Medical University. For example, Torem has identified a whole host of diseases that are linked to auto-immune mechanisms where the body's own cells are attacked as if they were antigens of foreign agents (e.g., microorganisms). This results in inflammation which can develop into an autoimmune disorder according to Torem. He cited 45 diseases in which an auto-immune mechanism is involved and of which nine easily recognized ones are listed here. For example, Torem's list included diseases and disorders such as Celiac Disease, Chronic Fatigue Dysfunction Syndrome, Fibromyalgia Syndrome, Guillain-Barre Syndrome, Insulin-Resistant Diabetes Mellitus and Diabetes Mellitus Type 1, Multiple Sclerosis, Rheumatoid Arthritis, and Systemic Lupus Erythematosus (Torem, 2007).

Finally, framing imagery within a PNI framework was also addressed by holistic nurse author, Jane Giedt (1997). Giedt viewed the interrelatedness of the "bodymind" as one in which an individual's perceptions influence the interactions between one's internal and external environments. At the same time, Giedt pointed out that the interactions with both also influence the individual's perceptions.

Perception. The concept of perception was also raised by the experts and, thus, is another aspect of the communication system that links the structural and process components of imagery. For example, Participant G2 referenced perception as an "internal experience" (RQ #2). Additionally, Participant G1 suggested, "new perceptions" could be acquired with imagery. Moreover, Participant H3 suggested that

not only could the use of imagery "alter" perceptions, but also that "psychological and physiologic experiences" could be altered as well (RQ #2). The upshot is that according to the experts, imagery not only provides the potential for "new perceptions" (Participant G1), but it also provides the potential for creating desired outcomes, experiences, and realities (Participant H3). How imagery can alter perception and affect change may be due to the fact that perception is comprised of a triad of complex biological communication components: the incoming information, its processing, and the outgoing information.

The first communication component of perception's triad is that of incoming information. For example, sensory information first arrives at the brain via afferent (or ascending) tracts. The brain, the body's central processing unit, is connected to the spinal cord. The spinal cord functions like a main highway of bidirectional neural communication between the brain and the rest of the body (Martini & Bartholomew, 2007).

The second communication component of perception involves extensive internal processing whereby the incoming information is directed to multiple relay stations and regulating centers. One example is the hypothalamus, which according to Siegel (2012), is the body's master hormone regulating center. The hippocampus is another example. It is part of the complex memory system (Fox, 2008) with a memory storage capability (Martini & Bartholomew, 2007), which according to Siegel (2012), is what links mental representations to the regulating appraisal center. Furthermore, the amygdala, with its bidirectional communication pathways, is also considered an "integrative center" given that it regulates emotions and behavior according to Wright (n.d.) from the Department of

Neurobiology and Anatomy at the University of Texas. The specific relevance of the amygdala to imagery was highlighted by Participant H2 when stating that "the amygdala can't tell the difference between what is real and what is imagined" (RQ #2).

Finally, there is an efferent component with its outgoing information. In this third communication component of the triad, the processed information is transmitted via the exiting or descending tracts (Martini & Bartholomew, 2007). The efferent information is significant because it branches to two subsystems, the somatic and the autonomic nervous systems (Stern, Ray, & Quigley, 2001).

Given perception's complex biological communication components that influence both physiological functioning as well as human behavior, it was concluded by the investigator that perception alone could be the basis for why Achterberg (2002) referred to imagery as a "communication mechanism" (p. 3). This also seems a possibility given that Gardner and Johnson (2013a) explained that perception is actually based upon how the brain "interprets" sensory information. Plus, as McGrady and Moss (2013) have also explained, the physiological functions of both the hippocampus and the amygdala play a significant role in memory and learning. In fact, the authors noted that in re-experiencing a negative memory, it is possible for the response to be even greater than it was when compared to the initial event (McGrady & Moss, 2013). Therefore, in laypersons' terms, it was concluded that when it comes to negative memories, there does not seem to be an expiration date on associated negative feelings.

As Participant H3 explained, imagery can "alter" one's perception. Taking this perspective into consideration, it is also proposed here that the complex biological communication components of perception are what possibly provide the underpinnings as

to *how* the potential for change is even possible. Furthermore, as Participant N3 pointed out, "the cognitive generation of sensory input" can be recalled from experience *or* it can be as a result from having been "self-generated in an imaginative form" (RQ #1).

Finally, Participant G2 offered one overarching point regarding perception's role in the communication system which links the structural and process components of imagery. This expert explained that the "internal experiences of imagery" function like a bridge (RQ #2). It is this bridge, which Participant G2 illuminated, which is what connects the mind, the body, and the spirit.

Theme #2: The structural component of imagery. The second theme to emerge was the experts' complex descriptions of the structural component of imagery. Imagery was described as multisensorial, multifaceted, and influencing and being influenced by the learning and health domains. Also included in the description of imagery was the fact that imagery has the potential for both positive and adverse effects on health. The structural component of imagery is represented in Figure 6.

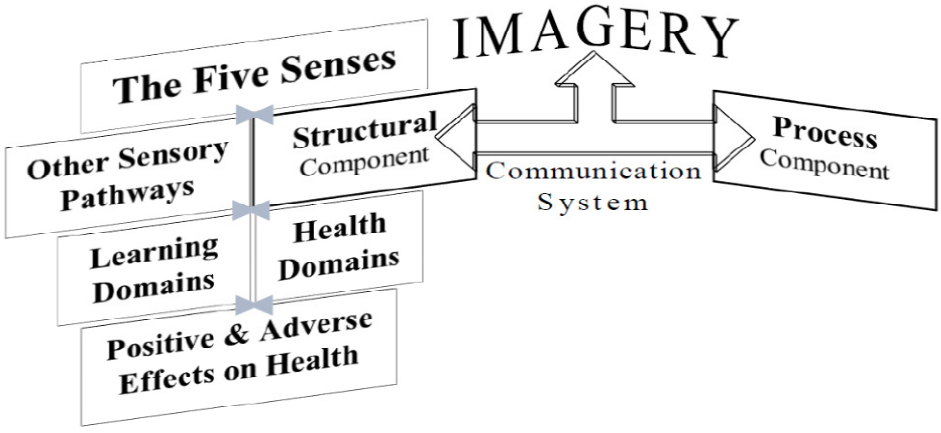

Figure 6. The structural component of imagery.

Multisensorial. The most frequent description of imagery's structural component was one in which the five senses were incorporated. The sense of vision was noted the most often, from Participant H1 suggesting that imagery is a "mental representation" of visual information to N2 suggesting that "subjective constructs" are experienced in a visual context (RQ #1). However, regardless of which sense was identified, it was concluded that imagery's generation of mental images is what was significant. As Participant B1 noted, imagery is what "the mind mentally sees, hears, smells, tastes, touches, and/or feels" (RQ #1). This structural characteristic was also identified by psychologist, Kirwan Rockefeller (2007), the author of *Visualize Confidence: How to Use Guided Imagery to Overcome Self-Doubt.* Rockefeller (2007) stated that imagery was a "sensory experience made up of thoughts that you can see, feel, hear, taste, and smell" (p. 3).

A few of the experts also identified imagery in terms of other sensory pathways and contexts. For example, Participant H2 defined imagery as an "hallucination" that incorporated either one or more of the five senses or what the expert referred to as one of the "less defined senses such as energy flow" (RQ #1). The concept of an hallucination was also referenced by Willmarth and Willmarth (2005) when the authors suggested that an hallucination had the potential to change physiology. Additionally, Participant H3 defined imagery as a "construct experience of sensing ideas" and Participant G1 defined it as a "mental picture" (RQ #1). Finally, Participant N3, in defining imagery within a context of the senses, defined it in terms of what it did *not* include, suggesting that imagery was "devoid of non-sensory content" (RQ #1).

Multifaceted. The experts raised multiple facets of imagery, including imagination, visualization, and additional issues related to cerebral function and memory. For example, Participant G2 defined imagery as the "conscious use of the power of imagination." Participant H6 defined imagery as the "visualization of a specific place in one's mind" (RQ #1). Participant B1 referenced the idea of there being two brains, one a "knowing brain" and the other a "feeling brain" (RQ #5), both of which the expert expressed as being significant to both memory and learning. Finally in response to RQ #5, Participant H6 had noted that mental imagery could create neuroplasticity, in addition to creating muscle and mental memory.

The connection between imagery and neuroplasticity is an important one, since as Doidge (2007) explained, neuroplasticity is the ability of the brain to restructure itself. According to Doidge (2007), the brain can create new neurons (nerve cells) as well as new neural circuits given that it is "changeable, malleable, and modifiable" (p. xix). Consequently, as Doidge (2007) further explained, how one thinks, learns, and acts can affect gene expression. Or as Yapko (2012) more simply put, "neuroplasticity refers to the changes in the brain as a result of experience" (p. 85). Thus, it was concluded that the concept of neuroplasticity being raised by Participant H6 was a relevant one and relevant for two reasons. First, neuroplasticity offers a potential scientific underpinning as to how imagery influences neurobiology. Secondly, neuroplasticity also offers a link to understanding how imagery may be connected to the internalization of one's experiences and learning, a concept which was raised by Participants B2, G2, H3, and H4.

The learning and health domains. The connection of imagery to the learning and health domains, or how one's thoughts, feelings, and actions influence health, was clearly

evident across the responses. However, imagery's connection between learning and health was specifically noted in Participant B2's response to RQ #5. This expert discussed how a child learns, not only from his or her parents, but also from all of the significant others in the child's environment. The expert also explained that a child's self-image, attitudes, beliefs, and worldview are all constructed through an internalization process. The expert went on to explain that the internalization occurs as a result of the child's repeated exposure to the adults' role-modeling. Therefore, according to Participant B2, what and how the child learns will influence "their own imagery and personality when they become adults" (RQ #5).

The connection of imagery to the learning and health domains was also conveyed by Participant H5 when the expert introduced part of a Mahatma Gandhi quote. Interestingly, the quote links many of the facets of imagery, specifically how one's thoughts are linked to one's behaviors, and subsequently over time, how they influence one's values and life. Gandhi said,

> Keep your thoughts positive because your thoughts become your words.
> Keep your words positive because your words become your behavior.
> Keep your behavior positive because your behavior becomes your habits.
> Keep your habits positive because your habits become your values.
> Keep your values positive because your values become your destiny. (Gold, 2002, p. 65)

The connection between imagery and the learning and health domains was also reflected by Participants N3, H4, and N2. For example, Participant N3 stated that imagery could be used to "facilitate learning" (RQ #5). Participant H4 referenced imagery within a context of "experiential learning" in which meaningful associations could be built which could be conducive to enhancing one's life (RQ #3). Additionally, Participant N2 also discussed the "meaning-making" aspect of imagery.

In addition to the Gandhi quote noted previously, Participant H5 also raised the idea about how sayings are passed down through the generations. According to Participant H5, each adage, with its respective images, has an "associated meaning" from which family members learn from the "implied messages" (RQ #5). Finally, the connection of imagery to the learning and health domains was most aptly suggested by Participant H5 when stating that imagery has a "symbiotic relationship" with the learning domains (RQ #5).

It is noteworthy that Participants N2, H4, and H5 each raised the concept of meaning. The reason that the concept of meaning is significant to imagery is because as Bennett (1967) suggested, when one examines meaning, connections can be identified. From a reverse viewpoint, Remen (1999) pointed out that when examining connections, meaning can also be discovered. Therefore, in finding connections or in finding meaning, it was concluded that either perspective could contribute to expanding perspectives regarding imagery's role in influencing health.

Imagery's positive and adverse effects on health. Participant B2 presented the concept that imagery can be viewed as a double-edged sword, indicating that it can have both positive and adverse effects on health. The expert related this dual concept to self-fulfilling prophecies. The expert explained that internalizing negative imagery could result in negative health outcomes and that positive imagery could result in positive outcomes. Participant H4 also discussed this same dual concept of imagery as having the potential for both positive and adverse effects on health by stating that "imagery has the potential to catalyze—or inhibit—physical and emotional healing" (RQ #2).

However, most of the experts discussed imagery in relation to its positive effects on health. For example, Participant G2 noted that imagery can activate physical, as well as psychological and spiritual healing. Participant G2 also noted how imagery can "energize desired" outcomes (RQ #5). Along that same line of thinking, Participant H3 suggested that because imagery has the potential to create desired outcomes, in essence, it is what provides individuals the potential for "creating their own realities" (RQ #2).

On a final note regarding the structural component of imagery, Participant N2 also concluded that imagery could have either positive or adverse effects on health. The expert explained that imagery that is associated with fear and stress can trigger the release of adrenaline and cortisol with their respective negative effects on health. Whereas the release of serotonin and dopamine can be triggered by associated *positive* imagery resulting in their respective *positive* effects on health. Basically, Participant N2 explained this dual concept by stating that "how one thinks about anything manifests physically in the body" (RQ #2).

Theme #3: The process component of imagery. In addition to imagery having a structural component, also inherent to imagery was its process component. The experts suggested that when imagery is utilized in a goal-oriented, purposeful, intention-driven way, desired outcomes could be achieved in the psychophysiological domains of health. This concept was particularly noted when imagery was viewed within the context of hypnosis. Figure 7 represents this third theme of imagery's process component.

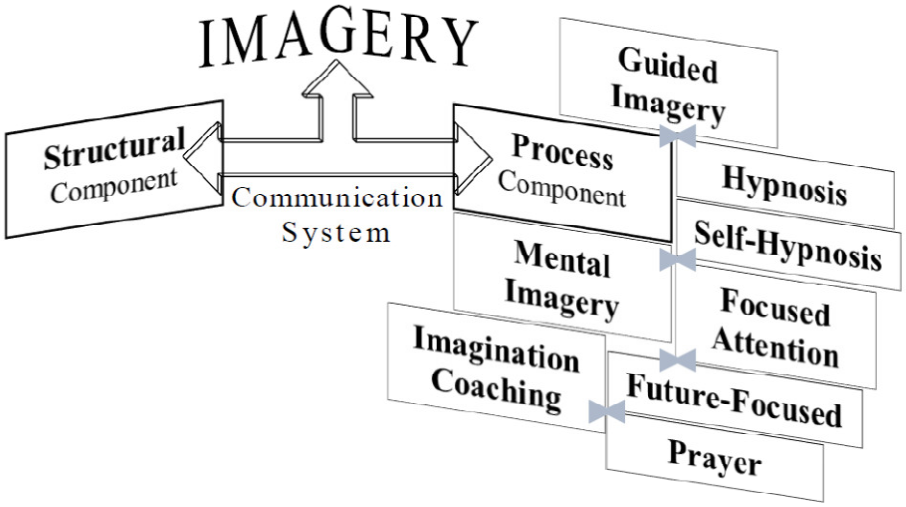

Figure 7. The process component of imagery.

The action component of imagery. Focusing, conditioning, creating, cultivating, and utilizing were all words used to describe the process component of imagery. Because of words like these, the process component was seen as imagery's *action* component and different from the structural component, although complementary to it. The difference between the two is that the structural component provides the theoretical structure for understanding the meaning and significance of imagery's role in influencing health. The process component, on the other hand, reflects imagery's practical application.

There were two reasons that the process component was viewed as imagery's action component. First is that the experts considered imagery either as an inherent component of a MBM modality or that imagery itself was a tool or a technique. Interwoven throughout the process component of imagery was the concept that imagery consists of the generation and the utilization of mental images. Concurrently, also included in the discussion of the generation and utilization aspect was the significance of attention, intention, and focus. Also, framing the process component was the concept that

mental images could be used pro-actively to attain a specific goal or outcome. Finally, the second reason that the process component was viewed as imagery's action component is that the experts suggested several clinical applications for which imagery could be used in a therapeutic context.

The principal interventions. As Figure 7 demonstrates, the principal interventions mentioned by the experts included guided imagery, hypnosis, self-hypnosis, imagination coaching, mental imagery, and prayer. Participant N3 also added that imagery could be used as an assessment tool for evaluating "an individual's physical, mental, or emotional health" (RQ #2). Also referenced were techniques that included focused attention or those that were future-focused. It should be noted, however, that Participant H6 commented on the fact that regardless of which technique was referenced, they were "all the same" (RQ #3). In fact, within this context, Participant H6 listed several modalities which were conceived of as *the same*. They included "mental imagery, guided imagery, medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in-imagination, and daydreaming with a focus" (RQ #3). Most importantly, however, what distinguished these modalities according to Participant H6 (e.g., the difference between guided imagery and hypnosis), was in having "a specific goal in mind" (RQ #3). For example, according to Participant H6, imagery could be utilized for just the purpose of relaxation, whereas medical hypnosis, he explained, was clearly more goal-oriented.

The significance of attention, intention, and focus. Regardless of which technique was identified or for what type of medical condition imagery was used, it was concluded that the process component of imagery was one in which there was focused attention on one's intentions *or* an intention to focus one's attention. Furthermore, regardless of which

MBM intervention was discussed, each technique offered a means to focus one's intentions towards improving, restoring, creating, or achieving better health. This underpinning is best reflected by Participant H4 in response to RQ #2. In it the expert stated, "What you focus on influences emotional responses, physical processes, quality of cognition, and more." This concept was also reflected by Willmarth and Willmarth (2005) when relating the use of biofeedback and hypnosis in the treatment of pain. The authors pointed out that the use of hypnosis, with its focused and narrowed attention, has the potential to redirect and shift the chronic pain patient's experience away from the pain toward thoughts or memories that are more pleasant and conducive to one's health (Willmarth & Willmarth, 2005).

The significance of focus can be further explained by the fact that imagery, whether it is comprised of real or imagined mental images, can generate the same physiological changes (Davenport, 2009; Torem, 2014). Therefore, the ramifications of using "focused imagination" or imagining a desired future image can be clinically useful in many different types of medical conditions. Additionally, in behavioral medicine, Participant H4 suggested that generating and utilizing mental images is also helpful for the "mental rehearsal of new adaptive behaviors" (RQ #1). Therefore, it was concluded that *how* the focus is re-directed is the key to understanding the action component of imagery's role in influencing health. Based on this underpinning of imagery, Participants G1, H3, and H4 each conveyed that mental images could be utilized pro-actively in a therapeutic context. Participant H3 made this point crystal clear by stating that the purpose of focused imagination (imagery) was "to evoke and create change in a desired direction" (RQ #3).

Using mental images pro-actively. A powerful example of using mental images in a pro-active, goal-oriented way is Torem's (1992a) "Back from the Future" age-progression technique. According to Hammond (1990), the term age-progression is interchangeably used with mental rehearsal, process imagery, goal imagery, success imagery, and end-result imagery. Each, according to Hammond (1990), refers to "future-oriented therapeutic work" (p. 515). In fact, as Hammond (1990) pointed out, the advantage of utilizing a future-oriented approach is that people often use their imagination in self-defeating ways; so he asked, why not apply this concept in a constructive way instead? The mental images generated, in a "Back from the Future" or in a future-focused approach, use interactive imagery according to Torem (2006). Interactive imagery is where all five senses are used to deepen the client's experience so that the client is supported in developing a desired future self-image (Torem, 2006).

On a final note regarding using mental images pro-actively via various MBM interventions, Bresler (2005) explained that he considered guided imagery also to refer to a wide selection of other mind-body techniques. Included in his list were "metaphor and story-telling, fantasy exploration, game playing, dream interpretation, and drawing" to name but a few (Bresler, 2005, p. 2). The reason that this list is specifically included here is because Participants G2 and N3 also raised the point about dreams, each conveying that dreams play an active role in learning.

The clinical applications of imagery. The experts explained that there are many medical issues for which imagery can be used, highlighting the second characteristic of the practical application of imagery's process component. A few of the suggested ones included the dampening *or* the enhancement of the immune response, and the

management of pain, stress, and anxiety. Another clinical application mentioned was imagery's connection within the context of depression, an area of expertise noted by two of the experts. The clinical application of imagery within the context of depression was particularly interesting to the investigator for three reasons.

First is that three cousins of the investigator have committed suicide. Additionally, a fourth cousin died from an accidental overdose while under a doctor's care for chronic pain management. Unfortunately, the cousin shared a pain history with his father, the investigator's maternal uncle, since the uncle had also suffered from chronic pain throughout his entire adult life. Consequently, the investigator has personally witnessed the negative health effects of depression, including the adverse psychosocial effects on the surviving family members.

The second reason for the investigator's interest in the clinical application of imagery within the context of depression is also a personal one. The investigator has been a part of the U.S. Air Force's military family, and therefore, the healthcare provided to members of the military and the current statistics regarding their care remain of keen interest to her. Of particular interest was a 2013 report from the Armed Forces Health Surveillance Center which stated that mental health disorders are currently the leading cause of hospitalization for active-duty service members (Medical Surveillance Monthly Report [MSMR], 2013). In fact, when comparing 2010 to 2011 statistics, it was reported that there was an approximate 87% increase in mental health-related hospitalizations, hospitalizations that included an increase of 66% for depression (MSMR, 2013). Equally disconcerting is that Kemp and Bossarte (2013), in a Veterans Affairs' (VA) study, noted that 22 veterans are thought to die each day from suicide. Furthermore, in 2012,

according to the then Secretary of Defense, Leon Panetta, there were 349 suicides among active-duty military personnel (Burns, 2013). According to Burns (2013), this figure represented the highest record since the Pentagon began tracking data in 2001.

Finally, the third and primary reason for this investigator's interest in imagery's relation to depression, also known as major depressive disorder (MDD) or unipolar affective disorder according to Yapko (2010), is its known association to chronic disease (the study's underlying driver). For example, chronic disease can exacerbate the symptoms of depression and depression can exacerbate the symptoms of chronic disease. Thus, the association is believed to be detrimental to one's health according to Chapman, Perry, and Strine (2005) from the CDC. Of particular note is depression's "strong association with cardiovascular disease" (RQ #2), a point raised by Participant H4 and supported in the literature by psychology and cardiopulmonary researchers, Hughes and Casey (2010).

Presumably, given the steady rise in mental health issues, in 2008 Congress passed the Mental Health Parity and Addiction Equity Act (MHPAEA). The law required mental healthcare to be on par with the treatment of any physical illness (U.S. Department of Labor, 2010). However, the law has not been enforced according to the former Secretary of Health and Human Services (HHS), Kathleen Sebelius (Christensen, 2013). Therefore, failed policy or not, or the fact that depression is linked to CVD, Hughes and Casey (2010) pointed out that seeking and obtaining mental healthcare continues to carry an undesirable and unwanted stigma in American society.

Consequently, this investigator finds the current statistics regarding depression alarming. For example, it was only in 1990 that unipolar major depression was the fourth

leading cause of the world's total disease burden (Ayuso-Mateos, 2006; Murray & Lopez, 1996), or what has been referred to as the global burden of disease (GBD; World Bank, 1993). Additionally, it was projected that by 2020 depression would rank in the top three leading causes of the GBD (Murray & Lopez, 1996). However, it did not take 30 years, but only 10, since already in 2000, depressive disorders were ranked as the third leading cause of the GBD (Ferrari et al., 2013). Perhaps even more importantly, depression has been identified as the leading cause of disability worldwide (Hughes & Casey, 2010; Üstün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004; WHO, n.d.-b). Therefore, depression's significance cannot be underestimated, especially given that "the patterns and trends are remarkably similar worldwide" according to Üstün and colleagues (2004, p. 391) whose collaborative research has represented both the World Health Organization and the National Institutes of Health.

There were two respondents that shed new light on the significance of depression and the influencing role of negative imagery to one's health. First, Participant B2 connected imagery to how children learn from significant role models. This gave the investigator pause because in 2013, Jonas, Gu, and Albertorio-Diaz from the CDC reported that depression is one of the two most common mental health disorders among adolescents. Additionally, the authors noted that 3.2% of non-institutionalized adolescents, aged 12-19, were taking antidepressants (Jonas et al., 2013). Furthermore, from an adult perspective, Kessler, Chiu, Demler, and Walters (2005) found in their 26-month survey sample of 9,282 adults, aged 18 and older, that 26.2% suffered from a diagnosable mental health disorder within a given year.

Participant H4's reference to depression also gave pause, but even more so, since the construct of imagery began to unfold in yet another new light. Participant H4 stated, "Imagery plays a strong role in depression as people visualize rejection, failure, abandonment, betrayal, humiliation, then suffer the physical and emotional detriments that go along with such negative imagery" (RQ #2).

Reversing negative imagery. As a result of Participants B2 and H4's statements, the significance of imagery's role in influencing health became clearer when the investigator realized that negative imagery can be a learned phenomenon. More importantly, the investigator concluded that what is learned in life can actually be detrimental to one's health, particularly patterns learned from significant adults as Participant B2 explained. Consequently, it was reasoned that if negative imagery is learned, positive imagery could be learned as well. Therefore, the potential health benefits of reversing negative imagery became apparent, mainly when Participant H4 highlighted the physical and emotional hazards of negative imagery within the context of depression. The pause quickly gave way to more questions. But rather than seek to understand the meaning of imagery, the focus moved to the potential outcomes of reversing negative imagery. For example, could not the emotional hazards of feeling helpless, hopeless, or futureless, considered as the main characteristics of clinical depression according to Torem (2006), be reversed if one's negative expectations were shifted more towards positive expectations? Could not the role-modeling of negative attitudes, beliefs, and dysfunctional responses to stress be replaced with desired role-modeling of positive imagery?

Additionally, the nocebo and placebo effects were brought to mind when Participant B2 suggested that the processes involved with internalizing negative and positive imagery occur "spontaneously, automatically, and subconsciously" (RQ #2). The nocebo effect has been explained as a phenomenon in which negative expectations (and their associated emotions) can result in negative health outcomes (Hahn, 1997). On the other hand, positive health outcomes that result from the placebo effect have been linked to belief, expectancy, and conditioning (Ives & Jonas, 2011). Consequently, the investigator concluded that the process component of imagery has the potential to reverse negative imagery by facilitating the movement from the negative expectations of a nocebo effect to the positive expectations of the placebo effect.

Giedt (1997) has also suggested that the placebo phenomenon may be an underlying mechanism of guided imagery. Additionally, Yapko (2013) has suggested that "depression is largely a disorder of perspective" (p. 274). So why not implement positive imagery with the placebo effect, or what Lipton's (2005) colleague Rob Williams referred to as the "perception effect" (p. 37)? In fact, both Gerber (2001) and Lipton (2005) referred to the placebo effect as the "belief effect."

Similar to Participant H6's thoughts on the irrelevancy of imagery's many titles, it seems irrelevant to this investigator whether the placebo effect is called the perception or the belief effect. However, the question does remain as to why not utilize the goal-oriented process component of imagery in a more constructive and health-promoting way? A way in which fear-driven negative expectations are facilitated towards hope-driven positive expectations? It seems to this investigator that the new attitudes and beliefs acquired would be much more conducive to supporting healthier thoughts,

feelings, and behaviors. Thus, the relevance and significance of Hammond (1990) and Torem's (1992a) suggestion of employing imagery in a goal-oriented approach became even clearer to this investigator, particularly after analyzing the numerous responses coded as a process component. Finally, the question seems simple enough: Why not use the powers of the imagination to reverse negative imagery and promote health?

Summary of the process component. In conclusion, two important suppositions were derived regarding the process or the action component of imagery. First is that there were several types of interventions in which it was identified that imagery plays a major role in the structure or the form of the intervention. Additionally, there are countless medical conditions for which the application of the intervention's imagery component can be utilized to improve one's physical and emotional health. Secondly, the generation and utilization of imagery in a focused, goal-oriented, purposeful, intention-driven way can lead to the attainment of desired outcomes, whatever those desired outcomes might be. Finally, the investigator concluded that one potential key to maximizing and understanding imagery's role in influencing health is to reverse the patterns of negative imagery by learning how to focus, condition, create, cultivate, and utilize positive imagery.

Comparing the themes to the pilot's themes. Prior to the current study, a pilot study (Singler, 2013) was conducted in which medical experts in guided imagery and hypnosis were similarly surveyed regarding the meaning and significance of imagery. Given that there were several consistencies between the pilot and the study's responses, a brief comparison of the themes is presented.

Imagery: The pot of gold at the end of the rainbow. After reviewing and analyzing the responses to the pilot, the investigator felt as if she had found the elusive *pot of gold at the end of the rainbow*. Yet, with the current study, it became clear as to *why* imagery was perceived as such. What the investigator came to realize was that imagery has several components that are similar to gold's elemental properties. For example, Helmenstine (2014) explained that while gold is dense and heavy, it is also soft and malleable. Gold also has a dual capacity to conduct both electrical and heat energy while also concurrently shielding or protecting against radiation energy (Helmenstine, 2014). These elemental components are similar to imagery's multifaceted structural components. For examples, imagery has the dual capacity of having both positive and negative effects on health. Furthermore, as Yapko (2011) was previously noted to have explained, shared elements have the potential to inform one another. In this case, the interrelated structural and process components of imagery also support, explain, and inform the other.

Finally, because gold is soft and malleable, it is often alloyed with other metals to make it stronger and more durable. So is the case with imagery when it is purposefully integrated within therapeutic modalities. Particularly notable are the techniques that integrate imagery's use of all five senses. Moreover, when imagery is alloyed with focused intention and attention, its strength and durability also increase given that desired and optimal outcomes are attained when imagery's goal-oriented process component is maximized.

Demographics of the pilot's participants. A total of eight doctorate-prepared experts were surveyed for the pilot, three experts in guided imagery (Pilot Experts G1–

G3) and five experts in hypnosis (Pilot Experts H1–H5). Four of the participants were male and four were female. Two of the eight participants were physicians. Seven of the eight were well-known published authors who were repeatedly encountered in readings during graduate studies in the Mind-Body Medicine (MBM) Ph.D. program at Saybrook University. Five of the eight were individuals whom the investigator had previously encountered in person over the course of her seven years of graduate studies. As it turned out, all of the respondents were university educators. Also of note is that the pilot experts were affiliated with at least five different universities, some of which also included medical and nursing schools.

The pilot's research questions. The overarching research question asked for the research pilot was: *Can imagery's meaning and significance be better understood by identifying the similarities in the common terms and definitions used across both modalities of guided imagery and hypnosis?* The pilot, like the current study, also asked five open-ended research questions. The reason that the pilot questions are provided here is because the questions were somewhat altered for the current study. Therefore, when comparing the themes to the pilot's themes, each response is identified by its respective research question. The pilot's research questions (PRQs) were:

1. How do you *define* imagery?
2. What specific *meaning* do you believe imagery holds in relationship to your professional practice?
3. What do you think is *significant* about imagery in general as it relates to an individual's health and sense of well-being?
4. Please describe what you consider as imagery's interrelated or associated components, attributes, or terms in relationship to mind-body medicine.

5. What do you consider the relationship (if any) between the interrelated components or interactions between imagery and psychoneuroimmunology or PNI?

The pilot's six themes. Six themes emerged from the pilot's data analysis: (a) imagery's complexity was reflected in its language construction; (b) it included both passive and active qualities; (c) it encompassed a multidomain learning construct; (d) its simplicity was reflected being a form of communication; (e) it acted as a theoretical bridge; and finally, (f) its benefits were thought to be maximized when in an altered state of consciousness. The pilot's six themes shared both similarities as well as differences with the current study. In addition to the points summarized below, a few of the experts' responses that supported each of the pilot's themes are also tabled in Appendix O.

Pilot Theme #1: Complex language construction. The first theme from the pilot stated: *Imagery is a very complex and dynamic construct which is reflected in the multiple forms of language or speech construction that were used to identify and describe its definition, meaning, and significance.* This first pilot theme was easily identified during the analysis. In fact, unlike the current study, no tedious coding process was necessary during the analysis because the first theme, like the ones that followed, were readily identifiable. Granted, the first theme was found to be similar to this study in that there was a long list of words and phrases used to describe imagery. However, what differed is that the eight experts in the pilot used the exact same words within and across each data set and they used them in several forms of speech. For example, words such as value and experience were repeatedly used as both a verb and a noun.

Additionally, unlike in the current study, words in the pilot such as core, central, and conduit were also repeatedly used across all of the pilot's responses. For example, the pilot's experts emphasized that imagery was the *core* of mind-body medicine and that it

was at the *core* of their professional life. They also noted that since imagery was at the *core* of people's beliefs systems about illness, medicine, and healing, it was *central* to their medical practices and *central* to healing.

Pilot Theme #2: Active and passive qualities. The pilot's second theme was also readily identifiable. It stated: *Imagery entails both a passive or unconscious (or subconscious) quality, as well as an active or conscious quality*. In response to two different PRQs, imagery was described by Pilot Expert G1 whereby an individual could "tap into the unconscious" and "explore hidden meanings." Participant G1 also described imagery in a similar context by referencing Naparstek and the idea that imagery offers the potential to reveal "hidden truths." This concept was supported in the literature by Gilbert (2003) who pointed out that the inner journey to the subconscious provides an opportunity to be vulnerable to one's own thoughts, emotions, and sensations in a nonjudgmental way.

The active characteristic described in Pilot Theme #2 was also similar to Theme #3, the process or the action component of the current study. For example, Pilot Expert G1 related that imagery can provide practice opportunities for mental rehearsals, a finding consistent with Participant H4 and Gurgevich (2006). In using mental rehearsals, old patterns of behavior can be replaced with ones that are more conducive to increasing self-awareness, self-understanding, and self-acceptance. These attributes in turn, according to Gurgevich (2006), can improve one's health and sense of well-being.

Finally, Pilot Expert H3 also raised imagery in relationship to neuroplasticity, which was consistent with both Participant H6 and the current literature regarding the brain's ability to re-wire itself (Gauthier et al., 2008; Merzenich, 2004). For example,

constraint-induced movement therapy (CIM therapy) is used for stroke victims where the unaffected side is restrained. Regaining the use of the affected limb is possible, according to Gauthier and colleagues (2008), because the brain restructures itself by increasing both the sensory and motor gray areas of the brain.

Pilot Theme #3: Multidomain learning construct. The pilot's third theme was stated as: *Imagery is a multidomain learning construct that includes interactive aspects of all three of the cognitive, affective, and psychomotor domains.* Pilot Expert G2, similar to the other seven pilot experts (specifically Pilot Experts H1 and H4), addressed the interactive quality of imagery to all three of the learning domains, or one's thoughts, feelings, and actions (or behaviors). Particularly pertinent to the study's underlying driver, Pilot Expert G2 stated that imagery "can influence both mood and physiology, and plays a major role in finding and stimulating motivation for behavioral change, which may be critical in treating chronic and preventable illness" (PRQ #4). This was consistent with Participant G1 who stated, "Imagery is a key to effective learning precisely because it links attitudes, beliefs, thoughts, feeling and behavior" (RQ #5). The significance of these statements is that they were also consistent with the literature, particularly Achterberg (2002) who stated that imagery is comprised of a "complex landscape of thinking, feeling and being" (p. 5).

Several pilot experts, along with Participants B1, G1, H3, and N2, also provided a global example of imagery's relationship to the learning domains. They used the word, "way" to describe imagery. The use of the word "way" was also consistent with Achterberg (2002) who described imagery as a "way of thinking" (p. 4).

Finally, Pilot Expert G1 explained, “Studies have shown that imagined visualized action and emotion can be as real to our physiology as experiencing the real thing” (PRQ #1). This statement was consistent with Participants H2 and H3, and also Davenport (2009) and Torem (2014). Additionally, also in the literature, Balugani (2008) suggested that the same neural mechanisms that affect actual neural physiology are influenced by an individual’s thoughts, feelings, and actions whether real or imagined. He explained this phenomenon stating that the neurons involved in controlling intentional action are also the very same ones that respond to sensorial information experienced with imagery. In fact, Balugani (2008) viewed mental imagery as “a kind of simulation: a representation of a perception internally created” (p. 33).

Pilot Theme #4: Form of communication. The fourth theme focused on communication saying: *Although a complex and dynamic construct, its simplicity is also reflected in that imagery is merely a form of communication, albeit a complex form of communication given its internal physiological and emotional attributes that directly and indirectly influence one’s health and sense of well-being.* The Heart-Trinity Model in Appendix M was drawn to reflect the idea that communication was perceived to be at the heart of all relationships. The model incorporated the idea that although imagery was seen as a complex construct, communication reflected its simplicity. Yet, communication was also presented by the pilot’s experts as complex since it not only bridged the learning domains (Pilot Theme #3), but it also linked one’s inner world to the immediate world (or the immediate environment) and then to the external world. Consequently, communication with the self was included in the model. It was seen as extending bidirectionally from the inner world at one’s cellular level (including one’s own negative

brain chatter), to how one thinks, feels, and acts, responds, or reacts to the immediate and external worlds. It was posited in the pilot's summary that the bidirectional influence could be thought of as a part of a complex feedback loop system. Therefore, the outcomes produced from altered or modified perceptions, for example of one's attitudes or beliefs, could impact thoughts, feelings, and behaviors.

Although communication was also a theme in the current study, shown here in Figure 8 linking the other two themes, it was discussed more often by the pilot's experts in terms of physiological communication. Additionally, more references were made to neuroscience, evolutionary development, and self-communication in the pilot. In fact, based on the connections made between imagery and neurophysiology, neuroscientists were added to the potential recruitment list for the current study.

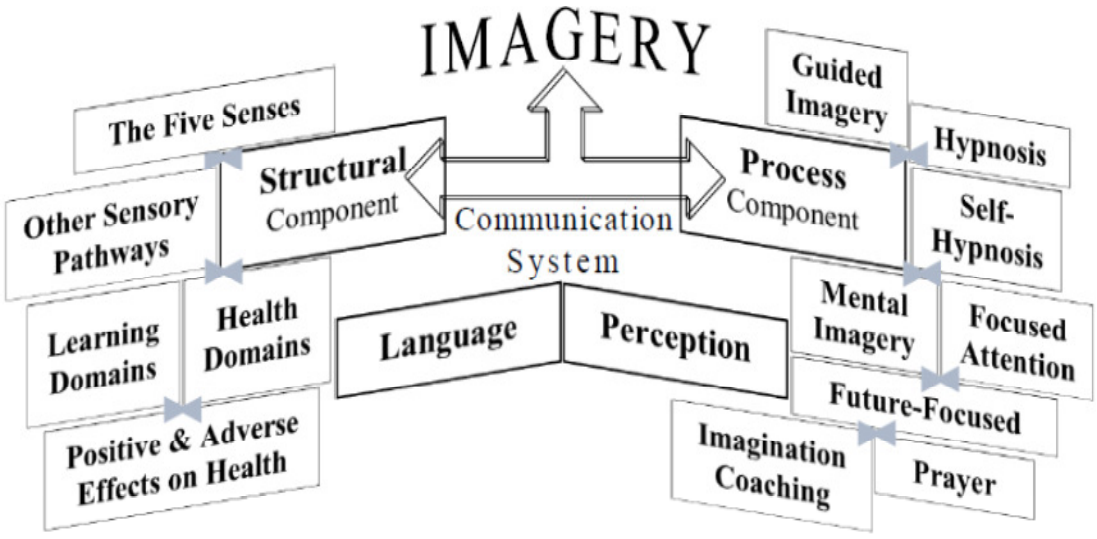

Figure 8. The three themes diagrammed together.

Of the eight pilot experts surveyed, Pilot Expert H3 was the one to actually use the word *communication* the most often to describe imagery. The expert's detailed responses are listed in Table O4 in the Appendix. PRQ #5 dealt with imagery's relationship to PNI and it sparked the most discussion involving communication. Pilot Expert G1 referenced Candice Pert, the renowned neuroscientist and author of *Molecules of Emotion: The Science behind Mind-Body Medicine*. Pert (1997) was referenced because it was she who introduced the concept of the "bodywide network information" system reflecting the "biochemical basis for emotions" (p. 27). Pert (1997) clarified that it was the neuropeptide, a type of extracellular messenger, which is what is responsible for communication at cell receptor binding sites. What was significant was that Pert (1997) described the molecular communication as a type of language wherein the body's cells communicated with one another across all of the biological systems, including the endocrine, neurological, gastrointestinal, and immune systems. This is a similar to how Lipton (2005) described the feedback loop systems of the various hormones that are regulated within the biological systems when the HPA axis is triggered.

Consistent with the literature, the pilot experts, particularly Pilot Experts G2, G3, and H2, also discussed imagery in terms of molecular communication and the links that exist between images and their emotional and physiological responses. More so than the current study's participants, each pilot expert seemed to suggest in their own unique words that there is a complex network of information being shared across the body's trillions of cell walls, in essence, forming a type of molecular communication highway.

Pilot Theme #5: Theoretical bridge. Pilot Theme #5 was summarized to state: *Given its complexity as well as being a form of communication, imagery serves as a link*

in not only bridging an understanding of the theoretical basis of mind-body medicine to allopathic medicine, but it also serves as a link in bridging the potential to better understand the connection of mind-body medicine modalities to allopathic treatment modalities in addressing various chronic diseases. Similar to the process component described in Theme #3, multiple examples of modalities that include imagery were suggested by the pilot's experts. Also, multiple examples of various medical conditions were listed for which imagery had a clinical application. For example, in response to PRQ #3, Pilot Expert H5 specifically noted imagery's use with irritable bowel syndrome, asthma, facilitating relaxation and vascular control, and reducing inflammation. In response to PRQ #5, the expert also provided pages of single-spaced annotated references that reflected a correlative significance of hypnosis to immune function.

In terms of modalities that include imagery, Pilot Expert G1 suggested that imagery was the "central principle" in hypnosis and biofeedback (PRQ #4). Additionally, Pilot Expert H4 noted that imagery provided access to the "Central Healing Response" (PRQ #3). Consistent with Participants H3 and H4, Pilot Expert H4 also noted imagery's use in pain management. However, Pilot Expert H5 noted that some practitioners do not use the word hypnosis in their practices. Given the political and social misunderstandings regarding the use of the term hypnosis, the expert used the term "imagery modification" with pain patients, "convinced that mind knows how to use imagery to facilitate physiological responses" (Pilot Expert H5, PRQ #3). Therefore, consistent with Participant H6's statement, which term is selected to name a modality is less important than achieving a desired outcome, specifically, when imagery is used in a goal-oriented way.

Finally, similar to Participants G1 and G2, Pilot Expert H4 framed imagery and the learning domains within a mind-body connection. Across all 21 experts, the responses were consistent with Utay and Miller (2006) who pointed out that imagery "helps clients connect with their internal cognitive, affective, and somatic resources" (p. 41). In fact, Pilot Expert G1 stated that imagery was "the magic that we all have at our disposal" (PRQ #2). Therefore, regardless of the medical condition or chronic disease addressed, it was concluded that imagery can serve as a potential link to bridge mind-body medicine to allopathic medicine.

Pilot Theme #6: Maximizing its benefits. The final theme from the pilot stated: *Inherent in imagery is its potential to provide the benefits of improving one's health and sense of well-being with the healing potential maximized, not only as a result of conscious choice, but the benefits of imagery are also maximized at deeper levels of subconsciousness, for example via a hypnotic induction*. Several of the pilot's experts made extensive comments regarding maximizing the benefits of imagery at a deeper level of subconsciousness. Pilot Expert H5 even provided several case studies, particularly noting that when a hypnotic induction is employed and the client is absorbed and focused, imagery's effects are more potent. The concept that a hypnotic trance supports responsiveness to therapeutic suggestions was also consistent with Participant B2. Additionally, Pilot Expert H2 commented on how imagery is important to hypnosis because as metaphors for problems, images can be manipulated to impact outcomes. Furthermore, Pilot Experts G1, G2, and H5 discussed the concepts of practice, mindfulness, and developing imagery as a skill, concepts echoed by Participants H4, H5, and H6.

In response to PRQ #3, Pilot Expert H3 discussed negative imagery in terms of negative self-narratives, belief systems, and "associated negative memory material." The concept of imagery having the potential for both positive as well as adverse effects on health was echoed by Participants B2, H4, H5, and N2. Consequently, the pilot's experts were consistent with the current study's participants who addressed the adverse effects of internalizing negative imagery and the negative health effects from negative self-chatter. As Participant B2 explained, negative outcomes can ensue, not only in health, but also in many other areas of one's life. Consequently, self-induced suggestions, or persistent negative brain-chatter, self-talk, or what Jemmer (2009) referred to as the hidden language of one's inner speech, only reinforce the potential for unwanted and undesirable health outcomes.

Pilot Experts G1and G2 also discussed imagery's relationship to choice, one's self-image and beliefs about healing, and the implications to where one focuses attention. These statements were consistent with the study's participants who noted that imagery offers the potential for gaining self-understanding about one's health and life. Additionally, both sets of the experts' responses were consistent with the literature, for example, in writings by David Bresler, the co-founder of the Academy for Guided Imagery. Bresler (2005) discussed how mental images "lie at the core of who we think we are, what we believe the world is like, what we feel we need and deserve, and how motivated we are to take care of ourselves" (p. 2). Thus, as Bresler explained, any potential outcomes from any type of medical or psychological intervention will be influenced by the beliefs and attitudes that have been generated as a result of one's mental images.

On a final note regarding Pilot Theme #6, the investigator found it significant that both sets of experts discussed a relationship between imagery, choice, and one's beliefs regarding sickness, wellness, and healing. This complex relationship is of particular interest to the investigator for several reasons. One reason is that both sets of participants raised the issue of taking personal accountability for one's own health. Second, in addition to honesty and integrity, accountability is considered an inherent part of a tri-model of overarching ethics (Singler, 2011). Third, accountability is also considered one of the nine universal principles of ethics (Striefel, 2003). Finally, from the investigator's point of view, an individual's beliefs not only influence *how* choices are made, but also the extent to which a person assumes accountability for them.

Participant H5's statement, therefore, not only seemed especially poignant, but it was relevant and consistent with the pilot's last theme. Participant H5, in offering a unique perspective in this investigator's opinion, stated that imagery is the "ultimate form of freedom" (RQ #1). This statement was reminiscent of Viktor Frankl's 1946 chronicle of his experiences as a prisoner in the Auschwitz concentration camp. "The last of the human freedoms," Frankl (1959/2006) said, "was to choose one's attitude in any given set of circumstances, to choose one's own way" (p. 66).

The overlapping between the two sets of themes. Regardless of how the themes emerged in each study, there was an obvious overlapping across all 21 experts in both studies. The most obvious overlapping was the consistency between both sets of experts regarding imagery's use of the senses. In fact, Table N1 in Appendix N contains all of the pilot responses to PRQ #1, which like the current study asked for the expert's definition of imagery. Similar to the current study, all but one referenced the senses or a descriptive

component of the senses. For example, Pilot Expert GI, one of the two pilot experts who wrote the most in-depth responses, noted, “Human beings think in terms of images. Words, sounds, smells, taste, visual images, and physical sensations are all forms of imagery.” Having “words” be inclusive in a descriptive list for imagery was consistent with Participant N1 who happened to write the fewest words. Additionally, Pilot Expert H4 said, “I define imagery as a cognitive skill that involves the ability to use memory to re-create visual, auditory, tactile, and or olfactory experiences.” Pilot Expert H2 defined imagery stating that it is “the experience of visual images when the eyes are closed.” Framing the multisensorial characteristic of imagery within a construct of experience was similar to Participants H3 and N2. Additionally, Pilot Expert H5 defined imagery as “a multisensory capacity to use imagination that may involve all or some of the senses (visual, auditory, kinesthetic, olfactory, and gustatory).” Although the word imagination was not included in the responses to RQ #1 in direct association to the senses, visualization was included by Participant H6. Finally, Participant G2 also referenced the power of imagination.

A second point of overlapping had to do with the temporal aspect of imagery. For example, Rockefeller (2007) and Participant H3 both noted a temporal aspect of imagery when defining it. Rockefeller (2007) pointed out, “Imagery can be about events that have happened in the past or have yet to happen” (p. 3). The author also went on to explain that since imagery informs the present, it influences “how we plan for the future” (Rockefeller, 2007, p. 3). The fact that both included a temporal component to imagery is understandable, since according to Yapko (1992), a temporal component is an inherent factor in all human experience. Yapko (1992) explained that each and every event is

related to a context of time. The significance of the temporal aspect of imagery is also reflected in the business tag line of a fellow doctoral student, Michelle LaMasa-Schrader. For her Recall Healing MBM practice, the tagline states, "*Honor the Past, Live in the Present, and Create the Future*." A similar temporal concept was also conveyed by HeartMath in their daily quote broadcast of August 4, 2014. In it, Albert Einstein was quoted as having said, "Learn from yesterday, live for today, hope for tomorrow." Finally, as Gopalakrishnan (2008) stated at UNESCO's 3rd International Memory of the World Conference, "the future is invented through a dialogue with the past engaged in the present" (p. 1).

The challenge of defining imagery. The challenge of defining imagery was reflected in the diversity of responses to RQ #1 which asked: *How do you define imagery?* Aside from having previously noted the shared characteristic of the senses used to describe imagery, delineating and summarizing the experts' definitions was a challenge given the various contexts that were interwoven throughout the responses. Although Table K1 and Table N1 in the appendices list each expert's complete responses to PRQ #1, and Tables P1 and P2 were created to demonstrate the first part of all 21 of the experts' responses. The responses not only reflect the complexity of defining imagery, but more importantly, these initial responses also highlight the basis and provide the validation as to why the investigator launched the study in the first place.

The diversity of responses also signaled the potential for a future mixed methods study. Data analysis could employ Kanter's (2011) "zoom in, zoom out" strategic leadership approach, but direct its focus more toward "zooming in" on the broad range of descriptors that were coded under the Speech Subcategory (*SpSc*). This would vary from

this study's analysis since the focus was "zoomed out" in order to obtain a bird's eye view of the data so that the connections, patterns, and themes could be identified.

Limitations and Delimitations

Unable to clarify subjective interpretation of subjective data. As was stated earlier, this study was based not only on subjective data, but also on the investigator's subjective interpretation during the review and analysis. Therefore, the conclusion and the implications were as well. Additionally, the data were restricted to the written responses. Therefore, the investigator neither had an opportunity to penetrate the data deeper nor to seek clarification regarding any of the statements. It was concluded that it would have been interesting if not enlightening to have had the opportunity to delve further into some of the responses. For example:

- Participant H4's incorporated the phrase: "emotional valence" (RQ #2). This is a term unknown to this non-psychologist investigator. In fact, the term valence is only known in relation to chemistry where it refers to the outermost electrons of an atom.

- In response to RQ #2, Participant H5 included an apparent successful strategy, described as "having a plan in place" in which a "simple coping card" was employed for countering what was identified as the "triggers" that led to "automatic thoughts." It is assumed that the expert was referring to a strategy to overcome negative rumination. However, only a follow up interview would be able to clarify if the investigator's assumption was correct.

- In regard to the implications for further study, it would have been enlightening to have been able to obtain Participant N1's perspectives about the spiritual domain of imagery (RQ #2) and the relationship between prayer and imagery (RQs #2 & 5). Additionally, it is expected that Participant N1's perspectives regarding how imagery is conceived of as being "critical" (RQ #3) and "interrelated" (RQ #4) might have revealed the "hidden truths" that Participant G1 referenced when speaking of Naparstek.

The tedious coding process. Also of note regarding study limitations is the fact that while in the midst of doing the data analysis, it became clear to the investigator that the use of several software applications would have been useful. Specifically, a

linguistics research application would have been very helpful for establishing word frequency rates, syntax (word patterns) and linguistic morphology, or what is defined as the internal structural components of words and how they are formed (Aronoff & Fudeman, n.d.). Second, a qualitative research application would also have been helpful in the coding process. Not only was the process tedious and time-consuming, but a software package would have also provided a higher level of internal consistency with how the codes were applied to the categories and subcategories and then more accurately reviewed for theme exploration.

Delimitation. A delimitation of this study, which was not disclosed in Chapter 3, is that the study did not focus on imagery's connections to the spiritual domain of health. Consequently, no experts were sought with degrees in divinity nor were experts who have published on topics that are related to spirituality. For example, Eben Alexander (2012) has written *Proof of Heaven: A Neurosurgeon's Journey into the Afterlife.* The book chronicles his near-death experience (NDE) after having contracted bacterial meningitis with the bacterium Escherichia coli, better known as E. coli. Another author not included is a prior Saybrook University research professor, Annabelle Nelson (2014) who recently published a book on imagery, *Archetypal Imagery and the Spiritual Self.* Although the publication is on imagery, because its focus is similar to Dr. Alexander's on the spiritual domain of health, hers, like many others were excluded from the study. Including experts who have published in the spiritual domain, especially physicians like Alexander, Raymond Moody, or Deepak Chopra would have potentially added a broader scope to the study. However, restricting the types of doctors that were sought also helped to keep the study more manageable.

Study Strengths

Time. Reflecting two of the study's strengths were the easy access to the survey and the minimal amount of time needed for its completion, both of which were research design objectives. Of note is that all of the participants were contacted via email with the survey both attached and embedded. However, the willingness to participate, and the depth and breadth of the responses also revealed the participants' interest in the topic of imagery. Subsequently, the survey instrument proved to be an effective and efficient one given the richness of the experts' responses.

Tapping into the wisdom of the living. Given the wide range of specialties represented by the participants, the investigator was able to tap into the wisdom of the living. From this investigator's point of view, this represents the study's most obvious strength. In fact, to the best of the investigator's knowledge, this is the first qualitative descriptive research project of its kind. The study, framed in systems theory with its design influenced by a philosophical approach, was aimed at making connections and identifying patterns. From the patterns, the three themes emerged that highlighted the experts' perspectives on the meaning and significance of imagery. Surveying the 21 experts (13 plus 8 in the pilot study) offered a rare opportunity to gather, delineate, connect, and collate concepts from a wide range of doctorate-prepared medical experts.

The collective wisdom arose from clinicians, educators, and researchers who are actively involved in working toward not only improving the health of the nation, but also the health of all people worldwide. Furthermore, the responses from just this study's 13 participants reflected perspectives from a variety of different medical backgrounds, settings, and contexts. The areas of expertise ranged from clinical psychology to

psychiatry, pediatrics, primary care, trauma care, integrative and behavioral medicine, consciousness research, and nursing. Therapies practiced included acupuncture, biofeedback, counseling and coaching, EMDR, guided imagery, pain management, and clinical and medical hypnosis. In the investigator's opinion, being able to tap into the wisdom of the living is significant because wisdom is often not appreciated until after a person is deceased. Consequently, it was an honor and a privilege to have had the opportunity to assemble the perspectives of these renowned individuals, making it an extremely rewarding experience.

Conclusion

Imagery's significance to health. The investigator believes that the participants have each contributed to facilitating a better understanding of imagery's definition, its significance to health and the practice of medicine, as well as its relationship to PNI and the learning domains. The experts have indicated that imagery is inherently connected to cerebral function (including memory, perception, and the senses), molecular communication, and self-communication. Also, the experts have explained that each of imagery's structural components combine to impact the learning domains or one's thoughts, feelings, and behaviors. Additionally, they noted that imagery's components also impact the complex interactions that occur among all of the health domains. Finally, as a dynamic healing construct, the experts expressed that imagery offers the potential to address chronic disease from wholly different and expanded perspectives. For example, Participant H4 offered an expanded perspective on how depression could be viewed within a context of negative imagery. From just this one perspective, the investigator concluded that first recognizing the hazards of negative imagery could be an important

step towards improving health, since as Participant H5 conveyed, imagery is the "beginning of meaningful change" (RQ #1). Participant H4 also suggested that with an enhanced understanding of imagery, imagery-specific treatment plans could be developed, which in the future, could address various medical conditions.

Furthermore, supporting Theme #3 or the process component, in addition to delineating imagery's significance was Participant B2 who stated,

> I believe that every competent clinician should learn the significance of imagery in a person's life and learn its potential utilization in the treatment of patients with mental and physical disorders. Moreover, educators, coaches, and other influential positive leaders and role models should be familiar with the power of imagery and learn how to use it appropriately and ethically. (Participant B2, RQ #3)

The investigator concluded that several other concepts were raised that could also help tackle the rising prevalence of chronic disease (the driving force for the study), and therefore, contribute to the advancement of the nation's health. For example, Participant B1 raised the significance of imagery within the important context of communication. Participants G1 and H3 related imagery to learning within a temporal context. Participant G2 noted imagery's significance given that it is an interface between the domains of the mind, body, and spirit. Also, Participant G2 raised the issue of imagery's capacity to support and achieve expanded states of consciousness. Participants H1, H2, N2, and N3 raised imagery's connection to improved physiological functioning. These four experts were in addition to Participant H6 who discussed the goal-oriented approach of hypnosis as being relevant to neuroplasticity and its healing potential. Participant H3 brought to focus the significance of cultivating imagination in order to create desired experiences and even alter perception. Participant N1 focused on the significance of words, an important concept to the healing process, according to physicians Larry Dossey (1993) and Dabney Ewin (2009).

It became obvious to the investigator that the challenge of defining imagery may have been compounded by the fact that defining health is also challenging, since health itself is such a complex construct. In fact, during the course of her studies the investigator began to contemplate: *What is health*? The WHO and two well-known theorists of holistic nursing, Barbara Dossey and Cathie Guzzetta, define health this way:

- "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1948/2003, para. 2).
- "Health is the state or process in which the individual (nurse, client, family, group, or community) experiences a sense of well-being, harmony, and unity where subjective experiences about health, health beliefs, and values are honored" (Dossey & Guzzetta, 2005, p. 6).

However, even when health is framed within these two encompassing definitions, as Remen (1977) pointed out, medicine has continued to define health in terms of disease. Actually, in 1732 Thomas Fuller said, "Health is not valued till Sickness comes" (as cited in Greenberg, 2007, p. 83). Nearly 300 years later, it would seem that the significance of Fuller's adage has not changed. In fact, it has been more than a quarter of a century since Remen (1977) said that the "main killers of mankind" were "diseases of choice" (p. 1). Hence, the investigator believes that the time has come for Americans to exercise their "ultimate form of freedom," as Participant H5 described, and learn to be accountable for the choices that are made.

Finally, the investigator also concluded that the construct of imagery offers a bridge between the two medical models of mind-body medicine and allopathic or conventional medicine. This was concluded since the experts clearly described imagery in terms of its healing potential, particularly Participant G2 who considered imagery as a healing resource. Plus, learning how to access "the power of imagery for healing," as Rockefeller, Serlin, and Fox (2007, p. 64) have explained, can be accomplished by both

healthcare provider and patient alike. Finally, Participant H4 offered a perspective that this investigator believes is applicable across all of medicine and not just mind-body medicine. Participant H4 stated that treatments work better "when people are viewed and treated multi-dimensionally, rather than only as bodies with symptoms" (RQ #4).

Recommendations for future research. What is recommended for further research is delineating *how* the process component of imagery is implemented. The recommendation is based on the fact that each expert similarly discussed imagery's structural components whether the expert was a clinician, researcher, or educator. However, the differences lie in the form or the format in *how* the process component was implemented. For example, a research project could focus on the differences between guided imagery and hypnosis in *how* imagery is perceived and utilized. This idea actually originated from statements made by Pilot Expert H5 and Participant B2. Pilot Expert H5 stated that imagery can be successfully used without hypnosis. However, as was stated earlier, Pilot Expert H5 conveyed the opinion that imagery's potency was enhanced when the person was focused and absorbed, for example following a hypnotic induction. Participant B2 also addressed this concept when stating,

> Guided imagery is differentiated from hypnosis by the fact that it does not require the patient to be in an altered state of consciousness or experience a state of dissociation. Other differences include that people who are in a hypnotic trance are more responsive to suggestions, frequently develop post-hypnotic amnesia, and their behaviors and physical sensations are often experienced as involuntary. (Participant B2, RQ #1)

Final thoughts. Akin to Commander James Lovell's communication to Houston's Mission Control Center during the 1970 Apollo 13 Moon Mission ("Houston, we have a problem," 2012), this investigator wishes to signal a similar sense of urgency. Given the prevalence of chronic disease in America, *We too Have a Problem*! Yet, it was

out-of-the-box thinking and collaboration that led to the resolution of the en route explosion and the survival of the Apollo crew (NASA, 2002). Coincidently, Participant G1 had also referenced imagery with *out-of-the-box* thinking. The expert summed up imagery's healing potential by stating that imagery can help "people 'think outside the box' for new perceptions, new behavior, new solutions and ultimately, new outcomes" (RQ #2).

By the same token, the investigator concluded that "thinking outside the box" may offer the simplest solution to tackling the prevalence of chronic disease. In fact, "the simplest solution is usually the correct one" according to the 14th century philosopher William Ockham (Willey, 2009). Yet, assuming responsibility and accountability for health may remain elusive, regardless of how simple the solution. Until the public begins to better understand imagery and its significance to health, particularly negative imagery's adverse effects on health, it is feared that the disease-management model of healthcare will continue to persist. However, as Peter Bloom explained in Dabney Ewin's little book of wisdom, *101 Things I Wish I'd Known When I Started Using Hypnosis*, "the mind can change the way the brain functions [and] the brain can change the way the mind functions" (Ewin, 2009, p. iii). Understanding this dual concept may facilitate a better understanding of the positive health benefits of positive imagery.

The expanded perspective of health gained by the investigator was that imagery is like theory in motion; its healing potential empowering and limitless. As Participant H1 explained, "It is a tool to help individuals select what they want to change, improve or create for themselves" (RQ #3). To which Participant H3 added, "*through focused*

imagination (imagery) individuals create a focus on various desired images of desired outcomes in order to evoke and create change in a desired direction" (RQ #3).

In summary, the most significant point learned about imagery was the conclusion that every image, word, thought, feeling, or action can be the source for change. Thus, the potential for healthcare reform begins right at home with each and every individual. So although imagery has a communication component that links, informs, and helps us to understand its structural and process components, the choice to make any changes lies right inside each individual.

One final note is presented on the meaning and significance of imagery. It is in relationship to Pilot Expert G1 and also Participant H3's suggestion that imagery contributes to, if not completely creates, one's reality. The investigator's final thoughts on imagery are borrowed from the 2011 science-fiction/fantasy movie, the *Green Lantern* (IMDb, 2011). To make this last point, the word that was scripted in the film, "ring" is substituted with the word *imagery*. In the scene of particular interest, Geoffrey Rush, who plays the role of Tomar-Re, is a mentor and trainer to the young man who eventually becomes the hero in the film. Tomar-Re tells his trainee, "Will is the strongest source of energy in the universe." He later adds, "Your will turns thought into reality. To master *imagery*, you must learn to focus your will and create what you see with your mind. *Imagery's* limits are only what you can imagine." Perhaps, Pilot Expert G1 was right. Perhaps, "imagery is the magic that we all have."

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Appendices

Appendix A

The Five Health Domains: An Expanded Mind-Body-Spirit Paradigm of Health

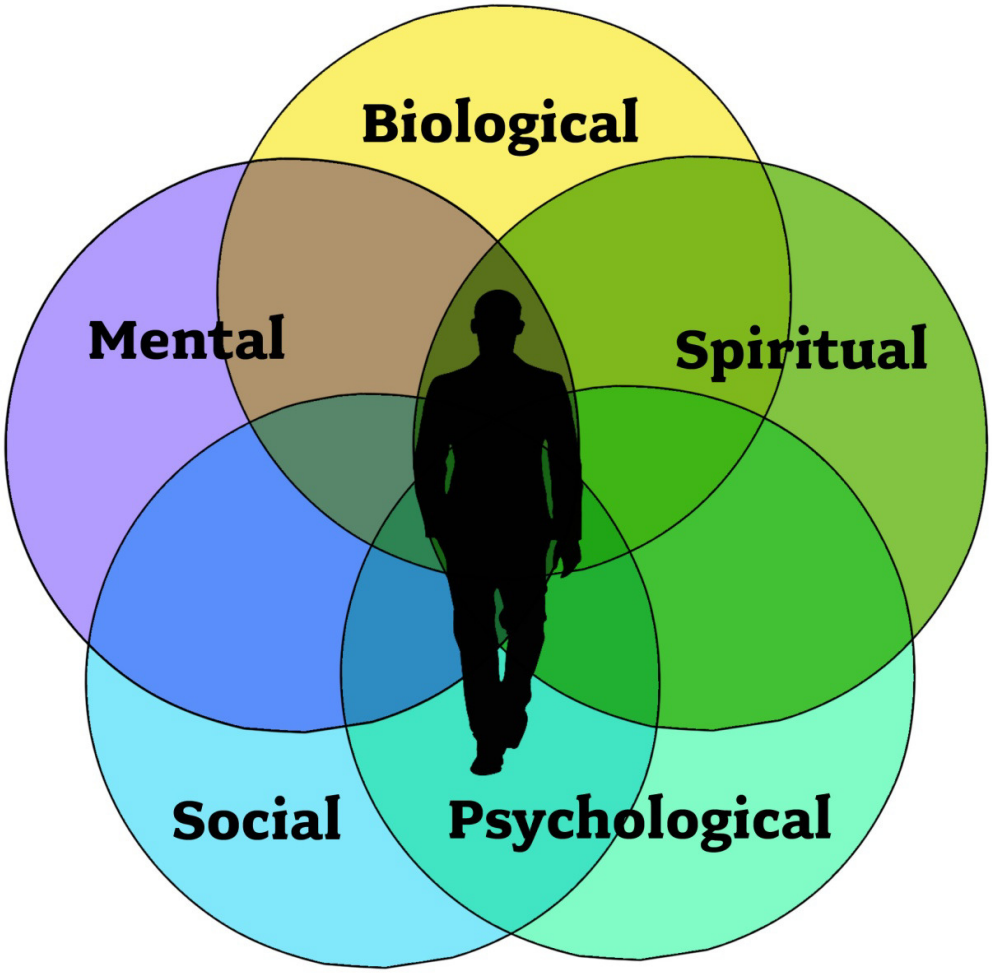

Figure A1. The five health domains: An expanded mind-body-spirit paradigm of health. Adapted from Figure 1: "The five domains of health" (p. 34), by M. Singler (2010), *Stressors and hypertension in women: Negative emotion and its effect on blood pressure* (Unpublished master's thesis). Dominican University, San Rafael, CA.

Appendix B

The Five Health Domains Viewed Within a Global Holistic Systems Paradigm

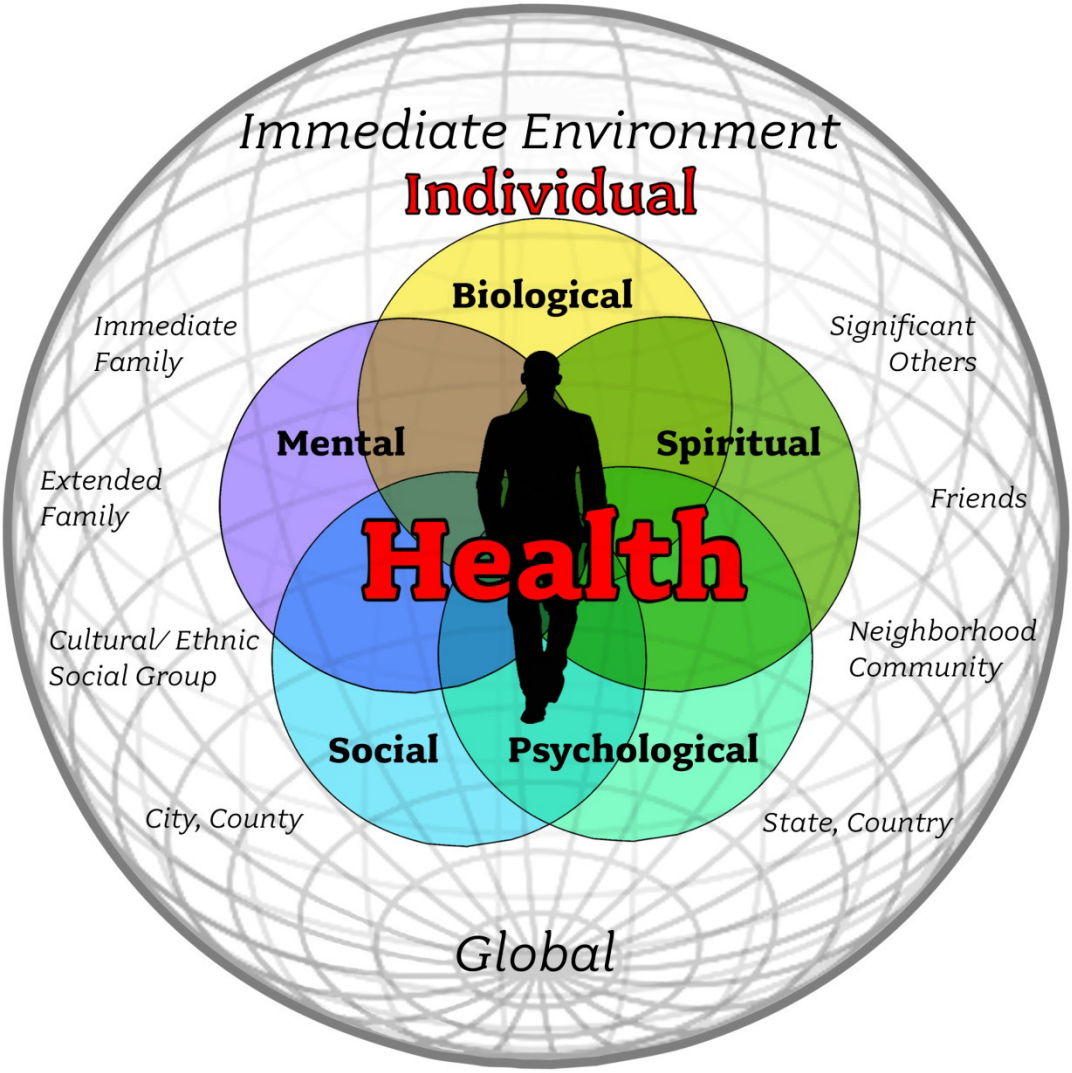

Figure B1. The five health domains viewed within a global holistic systems paradigm. Adapted from Figure 3: "The five domains of health" (p. 82), by M. Singler (2010), *Stressors and hypertension in women: Negative emotion and its effect on blood pressure* (Unpublished master's thesis). Dominican University, San Rafael, CA.

Appendix C

Recruitment Email Letter

Date_____

Dear Dr. _____,

Hello, my name is Mary Singler. I am a nurse and a doctoral student at Saybrook University in the School of Mind-Body Medicine. I am conducting an email survey on the construct of imagery. The purpose of my dissertation study is to identify the similar descriptors that are employed in the use of imagery in order to delineate the meaning and significance of imagery and its potential role in influencing health.

The study consists of answering a few demographic questions and the answers to five opened-ended questions. The questions are embedded below for a quick preview of what is requested. Additionally, the survey is attached and the time required for its completion is estimated at approximately one hour. A formal written consent form was waived by Saybrook University's Institutional Review Board on ____ by _____.

My sample population will be comprised of doctorate-prepared participants, including physicians, clinical practitioners, neuroscientists, researchers, and/or academicians who specialize, or potentially include within their area of expertise, the construct of imagery.

There are minimal to no risks identified in this study. Your participation is strictly voluntary and you may decline, or withdraw at any time, for any reason without prejudice. Your answers will remain strictly anonymous since the answers provided will be correlated upon receipt with an alphanumerical identifier. Additionally, neither your name nor any identified affiliations will be used in any subsequent written work or future publication related to this research project.

I would appreciate your prompt reply to this email request as to whether you agree to participate or not. If you agree to be a participant, if possible, your responses to the questions are desired by _____. However, if additional time is needed to complete the attached written survey, I am happy to make an accommodation that is more suited to your schedule.

As a research participant, if you find that you have any concerns or questions, please feel free to contact me, Mary E. Singler at: ---. Additionally, my dissertation chairperson, Dr. Connie Corley, can be reached at: ---. If any concerns arise that are not sufficiently addressed by me or by Dr. Corley, they may be addressed by emailing the Director of the Saybrook Institutional Review Board, Dr. M. Willson Williams, at: ---.

Thank you so much for your assistance. I look forward to hearing from you.
Mary E. Singler

For Preview Only: The Embedded Word Document Below is Also Attached
(Participants: please complete answers within the attached Word document)

PARTICIPANT CONTACT INFORMATION

1) Participant's Name:
2) Email Address:
3) Office Address:
4) URL of Company Website:
5) Phone (s):
6) Preferred Mode of Contact for Questions?

PARTICIPANT BACKGROUND

7) What is your area of expertise?
8) Do you routinely use guided imagery in your practice?
9) Do you routinely use hypnosis in your practice?
10) Are you certified in guided imagery, hypnosis or both?
    If yes, please include any certifying organizations.
11) Do you hold any professional licensure?
    If yes, in what profession (s)?
12) What is your highest level of education?
13) Years in field?
14) Are you a university educator?
15) Are you a university researcher?
16) Do you teach hypnosis?
17) Do you teach guided imagery?
18) Have you edited, authored or co-authored any books in your area of expertise?
19) Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?
20) Have you conducted research in guided imagery?
21) Have you conducted research in hypnosis?

FIVE OPEN-ENDED RESEARCH QUESTIONS

Participant Identifier: _____
(To be completed by investigator upon receipt from participant)

Directions:

Please answer the questions below to the depth and breadth as you deem fit. You may use as many or as few paragraphs, lines, or pages as desired. Please use this Word document to attach and return your responses.

Again, thank you so much for your participation! *Mary E. Singler*

Five Open-Ended Questions:

1) How do you *define* imagery?

2) In general, what do you think is *significant* about imagery as it relates to an individual's health?

3) What specific meaning do you believe imagery holds in relationship to your own professional practice?

4) What do you consider is the relationship (if any) between psychoneuroimmunology (PNI) and imagery?

5) What do you consider is the relationship (if any) between imagery and the learning domains (or one's thoughts, feelings, and behaviors)?

Appendix D

Singler Research Survey on the Meaning and Significance of Imagery

(Participants: Please complete your answers within this Word document, Reattach and Email the survey to me at [email]. Thank You.)

PARTICIPANT CONTACT INFORMATION

1) Participant's Name:
2) Email Address:
3) Office Address:
4) URL of Company Website:
5) Phone (s):
6) Preferred Mode of Contact for Questions?

PARTICIPANT BACKGROUND

7) What is your area of expertise?
8) Do you routinely use guided imagery in your practice?
9) Do you routinely use hypnosis in your practice?
10) Are you certified in guided imagery, hypnosis or both?
    If yes, please include any certifying organizations.
11) Do you hold any professional licensure?
    If yes, in what profession (s)?
12) What is your highest level of education?
13) Years in field?
14) Are you a university educator?
15) Are you a university researcher?
16) Do you teach hypnosis?
17) Do you teach guided imagery?
18) Have you edited, authored or co-authored any books in your area of expertise?
19) Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?
20) Have you conducted research in guided imagery?
21) Have you conducted research in hypnosis?

FIVE OPEN-ENDED RESEARCH QUESTIONS

Participant Identifier: _____
(To be completed by investigator upon receipt of survey from participant)

Directions:

Please answer the questions below to the depth and breadth as you deem fit. You may use as many or as few paragraphs, lines, or pages as desired. Please use this Word document to attach and return your responses.

Again, thank you so much for your participation! *Mary E. Singler*

Five Open-Ended Questions:

1) How do you *define* imagery?

2) In general, what do you think is *significant* about imagery as it relates to an individual's health?

3) What specific meaning do you believe imagery holds in relationship to your own professional practice?

4) What do you consider is the relationship (if any) between psychoneuroimmunology (PNI) and imagery?

5) What do you consider is the relationship (if any) between imagery and the learning domains (or one's thoughts, feelings, and behaviors)?

Appendix E

Demographics of Gender and Types of Degrees Held by Potential Participants

Table E1

Gender Distribution of the 64 Potential Participants

Potential Participants	Gender Numbers	Gender Percentages
Females	27	42 %
Males	37	58 %
Total	64	100 %

Table E2

Types of Degrees Held by 64 Potential Participants and Corresponding Percentages

Potential Participants	Type of Degree (s)	Degree Percentages	PhD versus MD
PhD	38	59 %	PhD Total
PhD & RN	4	6 %	43 + 3
PhD & EdD	1	2 %	67%
MD	15	23 %	MD Total
MD & PhD	3	5 %	18 28%
EdD	1	2 %	
PsyD	2	3 %	
Total	64	100%	

Note. MD with secondary Ph.D. is ranked in MD Count. The secondary doctorate is noted as (+3) in the Ph.D. count and is neither incorporated into the count nor the percentage of Ph.Ds.

Appendix F

Saybrook Institutional Review Board (SIRB) Approval

March 16, 2014

Ms. Mary E. Singler

Re: SIRB Application for Proposed Research (14-S-MESingler)

Dear Ms. Singler,
I have reviewed the IRB application materials related to your dissertation research, and I am pleased to inform you that your protocol is cleared for implementation. Please note that clearance of this research is effective for a one-year period only from the date of this communication (i.e., clearance effective until March 16, 2015). If more time is required, request an extension before the period expires. After that, renewal is required by reapplication to the IRB.
Should you wish to make modifications that could conceivably have an impact on human participants, you are required to submit those modifications to the Saybrook IRB for review. At the completion of your study, please email SIRB a copy of any type of Summary Report you might send to your participants, as this needs to be included in your official SIRB file. Usually a Summary Report is a one- or two-page summary of your findings, but feel free to write up your findings for the participants in any way that seems appropriate to your study. The Saybrook IRB will not evaluate your findings; however, it is a federal requirement that we have a record of your project completion.
For your information, I have recorded your IRB clearance in your SMS file at the school, to facilitate your future graduation clearance upon completion of your graduate program. If you have any questions, do not hesitate to contact me. Best of success with your research.

Sincerely,

M. Willson Williams

M. Willson Williams, Ph.D., Director of IRB

Skype: ------

cc: Dr. Constance Corley, Research Supervisor; SIRB file

Appendix G

Demographics of Gender and Types of Degrees Held by Actual Participants

Table G1

Gender Distribution of the 13 Actual Participants

Actual Participants	Gender Numbers	Gender Percentages
Females	4	31 %
Males	9	69 %
Total	13	100 %

Table G2

Types of Degrees Held and Corresponding Percentages of the 13 Actual Participants

Actual Participants	Type of Degree (s)	Degree Percentages	PhD versus MD
PhD	7	54 %	PhD Total
PhD & RN	2	15%	9 (+ 1) @ 69 %
PhD & EdD	0	0 %	
MD	3	23 %	MD Total
MD & PhD	1	8 %	4 @ 31 %
EdD	0	0 %	
PsyD	0	0 %	
Total	13	100 %	

Note. MD with secondary Ph.D. is ranked in MD Count. The secondary doctorate is noted as (+1) in the Ph.D. count and is neither incorporated into the count nor the percentage of Ph.Ds.

Appendix H

Summary Tables of Demographics From Participant B1 to N3

Table H1

Summary 1 of Demographic Questions and Reponses Per Participant

Demographic Questions	B1	B2	G1	G2
#7 What is your area of expertise?	Pain control	Psychiatry & Mind-Body Integrative Medicine	Interactive Guided Imagery	Integral, integrative, and holistic nursing
#8 Do you routinely use guided imagery in your practice?	Yes	Yes	Yes	Yes
#9 Do you routinely use hypnosis in your practice?	Yes	Yes	No	Self-hypnosis
#10 Are you certified in guided imagery, hypnosis or both?	Yes	Yes	Yes	No
	In Guided Imagery	In Hypnosis	In Guided Imagery	
If yes, please include any certifying organizations	Academy for Guided Imagery (AGI)	American Society of Clinical Hypnosis & Board Certified in Psychiatry by the American Board of Psychiatry & Neurology	Academy for Guided Imagery (AGI)	
#11 Do you hold any professional licensure?	Yes	Yes	No	Yes
If yes, in what profession (s)?	PhD in Psych.	Licensed to Practice		Nursing

Demographic Questions	B1	B2	G1	G2
	LAc In Acupuncture	Medicine		
#12 What is your highest level of education?	PhD	MD	PhD	PhD
#13 Years in field?	40+	35+	35	49
#14 Are you a university educator?	Yes	Yes	Yes	Not now. Have been. Currently a nurse educator in an integrative nurse coaching program
#15 Are you a university researcher?	Yes	No	No	No
#16 Do you teach hypnosis?	Yes	Yes	No	No
#17 Do you teach guided imagery?	Yes	Yes	Yes	Yes
#18 Have you edited, authored or co-authored any books in your area of expertise?	53 books	Yes	Yes	Authored 24 books since 1982
#19 Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?	Dozens	Yes	No	Over 50
#20 Have you conducted research in guided imagery?	Many studies	Yes	Yes	Yes, in the 80s
#21 Have you conducted research in hypnosis?	Many studies	Yes	Yes	No

Note. Header Row: B1 & B2 represent experts in both guided imagery and hypnosis; and G1 & G2 represent guided imagery experts. Column 1: Includes all of the demographic questions listed in order as they appeared on the survey.

Table H2

Summary 2 of Demographic Questions and Reponses Per Participant

Demographic Questions	H1	H2	H3	H4
#7 What is your area of expertise?	Mind-body medicine within psychology	Pediatrics	Developmental-Behavioral Pediatrics	Hypnosis Depression Brief therapies
#8 Do you routinely use guided imagery in your practice?	I see guided imagery as identical to hypnosis, so yes.	In hypnosis	Imagery, yes	Yes
#9 Do you routinely use hypnosis in your practice?	95% of my work is applications of clinical hypnosis for forty years now.	Yes	Yes	Yes
#10 Are you certified in guided imagery, hypnosis or both?	Yes Hypnosis	Yes Hypnosis	Yes Hypnosis	Yes Hypnosis
If yes, please include any certifying organizations.	I am an Approved Consultant of ASCH and a Life Fellow of ASCH	ASCH	Board Certified by American Board of Medical Hypnosis and American Board of Pediatrics Certified as Approved Consultant of	ASCH

Demographic Questions	H1	H2	H3	H4
			ASCH and Fellow: ASCH & SCEH	
#11 Do you hold any professional licensure?	Yes	Yes	Yes	Yes
If yes, in what profession (s)?	Licensed as a State Board of Psychologist Examiner	APRN	Licensed as a Physician in 2 States	Licensed as Psychologist and as a Marriage & Family Therapist
#12 What is your highest level of education?	PhD	PhD	M.D. Specialist in Pediatrics	PhD
#13 Years in field?	41	42	44	37
#14 Are you a university educator?	Yes	Adjunct faculty	Yes, formerly. Retired 2013 after 35 years of being on Medical School Faculty	No
#15 Are you a university researcher?	Yes	No	Yes, formerly	No
#16 Do you teach hypnosis?	Yes	Yes	Yes	Yes

Demographic Questions	H1	H2	H3	H4
#17 Do you teach guided imagery?	I don't distinguish between them… I consider it all clinical hypnosis	No	Integral to teaching of hypnosis	Yes
#18 Have you edited, authored or co-authored any books in your area of expertise?	Yes 2 books, several book chapters	Yes	Yes, co-author, (named 2 editions)	Yes
#19 Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?	Yes	Yes	Many (>50)	Yes
#20 Have you conducted research in guided imagery?	Yes	No	Integral to #20 below	No
#21 Have you conducted research in hypnosis?	Again, I don't use the term guided imagery as I call it clinical hypnosis	Yes	Yes	No

Note. Header Row: H1 thru H4 represent experts in hypnosis. Column 1: Includes all of the demographic questions listed in order on the survey.

Table H3

Summary 3 of Demographic Questions and Reponses Per Participant

Demographic Questions	H5	H6
#7 What is your area of expertise?	Counseling Psychology; Individual/Group therapy; Trauma; Hypnosis; EMDR	Pediatrics & Medical Hypnosis
#8 Do you routinely use guided imagery in your practice?	Yes	Yes
#9 Do you routinely use hypnosis in your practice?	Yes	Yes
#10 Are you certified in guided imagery, hypnosis or both?	Hypnosis	Hypnosis
If yes, please include any certifying organizations.	SCEH	American Society of Clinical Hypnosis (ASCH) and European Society of Hypnosis and International Society of Hypnosis
#11 Do you hold any professional licensure?	Yes	Yes
If yes, in what profession (s)?	Licensed Clinical Psychologist	MD
#12 What is your highest	PhD	MD

Demographic Questions	H5	H6
level of education?		
#13 Years in field?	4 yrs. pre-licensure; I year as a licensed psychologist	33
#14 Are you a university educator?	No	No
#15 Are you a university researcher?	No, although is "part of a research team" at a State Hospital	No
#16 Do you teach hypnosis?	No	Yes
#17 Do you teach guided imagery?	No	No
#18 Have you edited, authored or co-authored any books in your area of expertise?	Yes, book chapters in the area of hypnosis	No Response
#19 Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?	Yes	Yes
#20 Have you conducted research in guided imagery?	No	No
#21 Have you conducted research in hypnosis?	Yes	No

Note. Header Row: H 5 & H6 represent the final experts in the field of hypnosis. Column 1: Included are all of the demographic questions listed in order on the survey.

Table H4

Summary 4 of Demographic Questions and Reponses Per Participant

Demographic Questions	N1	N2	N3
#7 What is your area of expertise?	Management of pain, depression & anxiety	Psychology, Spirituality and Health, Psychospiritual Transformation	Consciousness studies
#8 Do you routinely use guided imagery in your practice?	Yes	No	No
#9 Do you routinely use hypnosis in your practice?	No response	No	No
#10 Are you certified in guided imagery, hypnosis or both?	Certified for years by	No	No
If yes, please include any certifying organizations.	Association for Applied Psychophysiology and Biofeedback		
#11 Do you hold any professional licensure?	Yes	Yes	No
If yes, in what profession (s)?	Physician	Clinical Psychology	
#12 What is your highest level of education?	MD & PhD	PhD	PhD
#13 Years in field?	58	23	60

Demographic Questions	N1	N2	N3
#14 Are you a university educator?	Have been; retired now	No	Yes
#15 Are you a university researcher?	Have been; retired now	No	Yes
#16 Do you teach hypnosis?	No response	No	No
#17 Do you teach guided imagery?	No response	No	No
#18 Have you edited, authored or co-authored any books in your area of expertise?	30	Yes	Yes
#19 Have you authored or co-authored any articles in peer-reviewed journals in your area of expertise?	Total articles 300. About 175 in peer-reviewed journals	Yes	Yes
#20 Have you conducted research in guided imagery?	Yes	No	No
#21 Have you conducted research in hypnosis?	Yes	No	Yes

Note. Header Row: N1 thru N3 represent neither an expert in guided imagery nor in hypnosis. Column 1: Included are all of the demographic questions listed in order on the survey.

Appendix I

Summary Table of All Respondents' Medical Expertise

Table I1

Summary Table of All Respondents' Medical Expertise

Demo	B1	B2	G1	G2	H1	H2	H3	H4	H5	H6	N1	N2	N3
Yrs. of Experience	40+	35+	35	49	41	42	44	37	O 4	33	58	23	O 60
Books Published	53	Yes no#	Yes no#	24	2+	Yes no#	2	Yes no#	Yes no#	NR	30	Yes no#	Yes no#
Articles Published in peer-reviewed journals	doz.	Yes no#	No	**>50**	Yes no#	Yes no#	**>50**	Yes no#	Yes no#	Yes no#	**175/** 300	Yes no#	Yes no#
University **E**ducator (present or past)	E	E	E	E	E	E	E	No	No	No	E	No	E
University **R**esearcher (present or past)	R	No	No	No	R	No	R	No	RT	No	R	No	R
Has **C**onducted **R**esearch in either guided imagery, hypnosis, or both	CR	CR	CR	CR	CR	CR	CR	CR	CR	No	CR	No* see note	CR

Note. D = Demographics; T = total years of experience; Cells: O = Outlier, deleted from mean computation; Yes/No # = Responded affirmatively but expert did not provide a count; NR = No response; E = Educator; R = University Researcher; RT = Research Team; CR = Conducted Research in either guided imagery and/or hypnosis; Y= Yes.

**Note:* Although the expert has neither conducted research in guided imagery nor in hypnosis, expert has conducted research, and has been a director as well as a co-director in health-related research.

Appendix J

Summary Table of Word Counts

Table J1

Summary Table of Word Counts Per Expert and Per RQ

Experts	RQ #1	RQ #2	RQ #3	RQ #4	RQ #5	Total Word Count	Questions Identified as "vague"	Question Identified as "least clear"
B1	21	23	10	22	68	144		
B2	**250**	77	68	**125**	85	605		
G1	59	69	40	41	17	226		
G2	21	36	65	38	30	190		
H1	**7**	17	18	14	17	73		
H2	26	28	24	14	42	134		
H3	33	67	**99**	52	131	382	RQ #3 & #5	
H4	36	107	73	120	154	490		RQ #5
H5	68	**254**	42	55	**228**	**647**		
H6	19	39	42	12	17	129		
N1	12	**15**	**4**	**3**	**10**	**44**		
N2	29	98	76	97	116	416		
N3	38	45	26	27	55	191		
Word Count Totals per RQ	619	875	587	620	**970**	3,671		
Outliers of H5 & N1 Deleted								
Word Count Totals per RQ of 11/13	539	606	541	562	**732**	2,980		
Average Word Count of 11/13	49	55.09	49.2	51.09	**66.5**	270.9		

Appendix K

Summary Tables of All Responses to Each RQ

Table K1

All Responses to RQ #1: How do you define imagery?

Subjects	Table K1: Research Question #1
B1	An image is a thought form with sensory qualities. It's something the mind mentally sees, hears, smells, tastes, touches, and/or feels.
B2	Guided imagery is defined by Astin [1] as involving the generation of different mental images evoked by one or more of the five senses (visual, auditory, tactile, olfactory and gustatory). Such images are typically experienced with the goal of evoking a psychophysiological state of relaxation or with some specific outcome in mind (e.g., visualizing one's immune system attacking cancer cells, experiencing oneself feeling healthy and well, exploring subconscious issues, or imaging a solution to a current problem.) Bresler and Rossman, founders of the Academy of Guided Imagery [2], expand their definition of guided imagery to include experiences that are activated by a range of techniques that include simple visualization, meditation, prayer, artistic drawings, and storytelling. Guided imagery is differentiated from hypnosis by the fact that it does not require the patient to be in an altered state of consciousness or experience a state of dissociation. Other differences include that people who are in a hypnotic trance are more responsive to suggestions, frequently develop post-hypnotic amnesia, and their behaviors and physical sensations are often experienced as involuntary. These phenomena typically do not happen during guided imagery and are not necessary for therapeutic outcomes with its use. However, some patients may spontaneously shift into a trance-like state even if the therapist does not give any suggestions for the patient to do so. Clinicians should be aware of this phenomenon and verify that the patient has become fully re-oriented to his or her immediate environment at the completion of a guided imagery intervention.
G1	Imagery: A mental picture of something not actually present. Attitudes, feelings, beliefs and ideas are represented and vested in images, symbols and mental pictures which become part of our personal narrative and influence our behavior. Guided Imagery: A way of thinking that uses sensory information for processing. Images can be seen, heard, smelled, tasted or sensed in some way.
G2	Imagery is the conscious use of the power of the imagination with the

Subjects	Table K1: Research Question #1
	intention of activating physiological, psychological, and/or spiritual healing.
H1	Mental representation of visual content and stimuli
H2	A hallucination that incorporates one or more of the defined senses (visual, auditory, tactile, olfactory, kinesthetic, gustatory) or the less defined senses such as energy flow.
H3	I define imagery as the internal (mental and emotional) construct experience of sensing ideas – past/present/future, real and/or 'imagined', whether these are sensed visually, auditorally, gustatorially, olfactory-ly, or kinesthetically – or, in various combinations multisensorally.
H4	Generating and utilizing mental images (i.e., internally generated visual representations) for some goal-oriented purpose (e.g., relaxation, emotional self-regulation, pain management, mental rehearsal of new adaptive behaviors, etc.). This definition assumes a therapeutic context for its application.
H5	Imagery is an ultimate form of freedom where one has the potential for limitless self-expression. It can be practiced individually or alone. I think it is the beginning of meaningful change (i.e. as per a concept in hypnosis, what you think about effects what you do). Imagery can also be defined as that of: Visual imagery; Auditory imagery; Olfactory imagery; Gustatory imagery; Tactile imagery; Kinesthetic imagery; Organic imagery.
H6	Visualization of a specific place in one's mind, but not just visualization. You want all of the senses involved.
N1	ALL THOUGHTS ARE IMAGES. Every word is a substitute for an image!
N2	The imagery of the mind is part of an ecosystem of subjective constructs experienced in a visual context; it creates the narrative architecture that accompanies our thoughts and feelings.
N3	Imagery is the cognitive generation of sensory input that has been recalled from experience or that has been self-generated in an imaginative form. Imagery can be visual, auditory, kinesthetic, gustatory, olfactory, etc., but is devoid of non-sensory content.

Notes. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.
[2] Academy of Guided Imagery (AGI): Participant retrieved Jan 31, 2013 from http://academyforguidedimagery.com/research/index.html
*The citations were provided by the participant in another document attached to the email survey and were re-formatted here by the researcher.

Table K2

All Responses to RQ# 2: In general, what do you think is significant about imagery as it relates to an individual's health?

Subjects	Table K2: Research Question #2
B1	It's the language that the healing systems of the body use to communicate with each other. Maybe it's important to better understand it.
B2	In my opinion, imagery can serve as a double edged sword. People who internalize negative imagery end up living out a self-fulfilling prophesy with negative outcomes regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage in positive outcome imagery end up with more successful positive outcomes because of an internalized self-fulfilling prophesy. Much of these processes are happening spontaneously, automatically and subconsciously.
G1	Imagery is significant because it can provide insight, hindsight and foresight into an individual's health and life. This helps people "think outside the box," for new perceptions, new behavior, new solutions and ultimately, new outcomes. Imagery is a natural language for humans for coding, storing and expressing information; for planning and projecting possibilities into the future; and due to its evocative nature an effective interface between mind and body.
G2	Imagery is profound in that a person's internal experiences of imagery, memories, dreams, fantasies, inner perceptions, and visions, sometimes involving one, several, or all of the senses, serves as a bridge for connecting body, mind, spirit.
H1	What we image or picture in mind is reflected by every cell and system in our body.
H2	The amygdala can't tell the difference between what is real and what is imagined. Therefore, if the individual can imagine comfort instead of pain, they can achieve it.
H3	I strongly believe that our internal imagery – conscious or otherwise – has varying degrees of correlation with our reality experience(s); and, therefore, that by focusing upon, utilizing, and cultivating our imagination (imagery) we can in fact alter not only perceptions, but also physiologic realities so as to create desired outcomes, and alter psychological and physiologic experiences, in a sense contributing to if not completely creating our own realities.
H4	What you focus on influences emotional responses, physical processes,

Subjects	Table K2: Research Question #2
	quality of cognition, and more. So, the qualities (e.g., vividness, scope) and emotional valence (e.g., depressing or anxiety producing) of one's imagery has the potential to catalyze – or inhibit – physical and emotional healing. For example, depression has a strong association with cardiovascular disease, so much so that many cardiologists are encouraging early screening for depression as a means of identifying those at later risk for heart disease. Imagery plays a strong role in depression as people visualize rejection, failure, abandonment, betrayal, humiliation, then suffer the physical and emotional detriments that go along with such negative imagery.
H5	As per a concept in hypnosis, <u>what you think about effects what you do</u>, if one utilizes imagery to make healthier choices, these choices alone could have a myriad of effects. However, it seems to me that the person has to identify for themselves what would be important as it relates to their health. For me, it starts with an automatic thought (usually something negative). Since for me, negative thoughts interfere with my work (which increases stress), interfere with self-esteem (which dampers my mood), and therefore interpersonal relationships (which exacerbates stress and maladaptive functioning) recognizing a shift in my thinking sooner rather than later is ideal. When I am able to identify the shift, I can pair my automatic thought with something more productive quickly and more readily bypass responses which I would otherwise regret. In this example because I have identified "triggers" which tend to lead to the automatic thoughts, I have a plan in place. This enables me to take the time to pull a <u>simple</u> coping card out which identifies counter points to the negative. By nature of this practice, paired associations are occurring. Imagery helps me to breathe in my good points, and breath out the automatically thought of bad points. The points on my coping card are those which I selected and instantaneously produce pleasant meaningful images for me. Putting this together, I suppose when individuals have readily available identified things which instantaneously produce f.ex. an alternative emotion, this can be quite significant in reducing panic, self-injurious behaviors, etc.
H6	a. Practicing imagery can help patients feel relaxed. b. It is important to have a distinction between imagery and medical hypnosis. Imagery to me just helps someone relax. Hypnosis has a specific goal in mind and, with practice, leads to neuroplasticity.
N1	Every thought is a prayer. Thinking sets I motion spiritual forces to bring about change.
N2	Thoughts accompanied with distinct and vivid imagery may have a more

Subjects	Table K2: Research Question #2
	marked influence on physical processes in the body, and therefore our health. For example, experiencing imagery associated with fear or stress could trigger the release of adrenaline or cortisol, which certainly affect the overall stasis of the body. Imagery associated with pleasantness, love, etc. could trigger the release of serotonin or dopamine, which have their own correlations to bodily and psychospiritual balance. In short, how one thinks about anything manifests physically in the body in some way. Thus imagery can have positive or adverse effects on health.
N3	I think that there is evidence that imagery can be used as a diagnostic tool in assessing an individual's physical, mental, or emotional health, and that it can be used as part of a therapeutic program to improve or restore physical, mental, or emotional health.

Table K3

All Responses to RQ #3: What specific meaning do you believe imagery holds in relationship to your own professional practice?

Subjects	Table K3: Research Question #3
B1	It's how I teach patients how to better heal themselves.
B2	Following my comments and my answer to question 2, I believe that every competent clinician should learn the significance of imagery in a person's life and learn its potential utilization in the treatment of patients with mental and physical disorders. Moreover, educators, coaches, and other influential positive leaders and role models should be familiar with the power of imagery and learn how to use it appropriately and ethically.
G1	Imagery is crucial for me and has been for the majority of my life. Imagery, as Belleruth Naparstek states, "is like a depth charge to the emotions," revealing hidden truths and point to new way of being in the world.
G2	Imagery is profound in that allows for a person to connect with one's deeper knowledge and wisdom, that may occur in the form of symbolic imagery in the form of metaphors or symbols, that may be immediately translatable to rational verbal thought, or they may emerge slowly over time. Imagery has the capacity to connect with the transpersonal, beyond personality with expanded states of consciousness.
H1	It is a tool to help individuals select what they want to change, improve or create for themselves.
H2	I work in pediatrics and children have amazing, uninhibited imaginations which they can use to create anxiety and fear OR self-mastery, self-confidence and self-esteem.
H3	This is a vague question. MOST (95%) of the clinical work that I do involves varying degrees of both formal and informal hypnosis; and my belief is that hypnosis is a state of mind in which *through focused imagination (imagery)* individuals create a focus on various desired images of desired outcomes in order to evoke and create change in a desired direction (such as in reducing or relieving pain, eliminating a habituated behavior [habit], altering a [patho] physiologic response such as in migraine, irritable bowel syndrome, asthma, etc.), modifying or eliminating emotional challenges such as anxiety, depression, et al.).
H4	So much of good therapy involves teaching and learning. People learn much more easily when they're focused, and they learn much better through direct experience. Imagery processes provide a context for experiential learning that

Subjects	Table K3: Research Question #3
	is immediate, multi-dimensional, and holds greater potential for building the meaningful associations to new ideas, perspectives, and behaviors that can enhance one's life. Thus, striving to excel in facilitating meaningful experiential learning opportunities is foundational to my clinical work.
H5	Possibly this was answered in question two. Imagery enables me to practice remaining in to moment. Because I have a plan in place for when I am not and practice it with regularly, imagery facilitates a flow of thinking versus stagnated thinking.
H6	a. Whether you call it mental imagery, guided imagery, medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in imagination, or daydreaming with a focus, it is all the same. b. And, when I do this guided imagery, etc., above, we have a specific goal in mind.
N1	Critical in every aspect
N2	The field of noetic science involves a deep exploration of inner experience, which of course includes imaginal processes. In order to understand a client/subject's transformative experience, existential crisis, etc., it is imperative to acknowledge, address and attempt to understand the imagery associated with this dimension of their experience. Imagery is integral to the meaning-making aspects of any experience since it is the medium through which we often re-live our experiences and construct meaning out of them.
N3	Imagery is an example of conscious activity, hence it is directly related my field. I am not a psychotherapist so I do not have a practice.

Table K4

All Responses to RQ #4: What do you consider is the relationship (if any) between psychoneuroimmunology (PNI) and imagery?

Subjects	Table K4: Research Question #4
B1	Imagery has physiological consequences. If you imagine sucking on a lemon, you salivate. PNI is one way to study some of them.
B2	The field of psychoneuroimmunology has grown exponentially in the last 30 years. There are thousands of research articles that have shown how the central nervous system interacts with the immune system by either enhancing it or suppressing it. The use of imagery is the use of a unique language that speaks directly to the immune system. The power of imagery has been documented in many publications showing both through conditioning and the internalization of final outcome of treatments, using a future focused approached enhanced by hypnosis and imagery to enhance stronger and more effective immune responses or in the cases of autoimmune disorders, to eliminate excessive and aggressive immune responses that include a direct attack of the immune system on one's own cells and tissues.
G1	Wow … this can be an entire book! Imagery, because it is a natural language for humans, is integrally tied to PNI. It is the way in which the mind, body and spirit communicate with one another, in a bidirectional loop.
G2	These two areas impact each other and can't be separated as a person is whole —the interface between body, mind, spirit. This relationship is the most ancient and potent healing resource in the history of medicine and rituals.
H1	PNI is more specific as to the purpose and intention of the imagery created.
H2	I believe that imagery combined with belief and expectation is the cornerstone of PNI.
H3	My thinking and understanding is that the word psychoneuroimmunology IMPLIES/describes itself as the ability of psychological processes – INCLUDING the essential ingredient of IMAGERY – to directly influence an individual's BIOLOGY, preferably in a positive direction. That Biology includes the potential for alterations in neurochemistry and neurobiology as well effects upon one's immune system.
H4	It's a strong relationship. PNI gradually emerged from the recognition that when people are viewed and treated multi-dimensionally, rather than only as bodies with symptoms, treatments worked better. As the relationship between stress and immune functioning became clearer, and various focusing and stress management approaches were integrated into treatment along with so-

Subjects	Table K4: Research Question #4
	called alternative treatments (such as acupuncture, nutrition, etc.), treatments continued to improve. At this point, it's well established that the use of imagery to suggest focus, relaxation, healing, skillful coping, enhanced immune functioning, and much more, is a vital component of good, multi-dimensional treatments. As research gets more focused on *how* imagery enhances immune functioning, we may learn about physiopathways and develop better targeted imagery for specific health issues.
H5	While this is not my area of practice/knowledge, my simplified understanding leads me to believe there is considerable overlap between the two. Considering hormones created by stress alone can be considerably corrosive and imagery could help reduce stress, the byproduct of this reduction would likely have other positive effects (i.e. in the area of PNI).
H6	Yes. It works. I got rid of my plantar warts with self-hypnosis.
N1	All directly interrelated
N2	My answer to this is similar to Question 2. Research in the field of PNI suggests that psychological processes, etc. produce a physiological response. The imagery involved in any mental process plays a causal role in the nature of the corresponding physiological response, with the specific response depending on the nature of the imagery. With regard to immune function, it is well established empirically that stress reduces immunological function. Guided imagery that reduces stress from the inside out (i.e. attending to its psychological foundations) would therefore have a positive impact on the function of the immune system.
N3	I think that imagery used by skilled practitioners can be used to facilitate the function of the immune system, hence it is an important topic in PNI.

Table K5

All Responses to RQ #5: What do you consider is the relationship (if any) between imagery and the learning domains (or one's thoughts, feelings, and behaviors)?

Subjects	Table K5: Research Question #5
B1	There are two brains; the knowing brain, and the feeling brain, and although they are separate and distinct, both have significant learning and memory capabilities. That's why what you know and how you feel can be so totally different. This difference is the basis for why most people seek psychotherapeutic help. Imagery is the best way to communicate with the feeling brain and to help reconcile these differences.
B2	I believe that small children learn from their parents and significant others involved in their care such as grandparents, siblings, uncles and teachers certain attitudes and views of their own image and of themselves as well as the world around them. Much of this is internalized subconsciously through repeated exposure and role modeling of the adults. The children growing up, end up emulating some of these adult significant figures in their lives which ends up influencing their own imagery and personality when they become adults.
G1	Imagery is a key to effective learning precisely because it links attitudes, beliefs, thoughts, feeling and behavior.
G2	The imagery process evokes internal experiences that energize desired emotions, qualities, outcomes, or goals, and the ability to also access stored memory that may be in need of deep healing.
H1	Imagery is a lovely and literal compliment to what we desire, intend, and put our attention upon.
H2	It was Einstein who said "Imagination is more important than knowledge." Working with children I act as their imagination coach helping them to use this valuable resource to tap into their own inner creative strengths to manage their thoughts, feelings and behaviors.

Subjects	Table K5: Research Question #5

H3 Sorry, but I believe this too is very vague; but I'm sure you also realize that and I'm guessing that in part drives the desire for doing this research. My for the moment (!) thoughts on this are that what internal images we have DRIVE our thinking, feeling, and behaviors, at both conscious and unconscious levels, with the unconscious being the more important. As such, as I cultivate my imagination (my way of thinking about what I'm DOING when I do self-hypnosis, which by definition includes my multisensory imagery, OR meditation), my expectation and motivation drive the evolution of positive imagery in the direction of desired, intended, desirable changes; whether those are to image myself sleeping and resting more, exercising regularly, maintaining good health, being efficient in accomplishing desired tasks, etc.

H4 This question was the least clear of the five, so I hope I address it in a manner consistent with your intent.

It's a strong relationship. Every image has correlates and consequences. These are necessarily physical, cognitive, sensory, and emotional. They may also be behavioral. When someone has an experience of one kind or another associated with some imagery they've generated (either independently or through someone else's guidance), the impact can range in its duration from mere seconds to a lifetime depending on its perceived significance. So, the imagery can be a powerful stimulus to learning, but only if the person sees and responds to it as such. As a parallel in hypnosis, the power isn't in the suggestion someone gives, rather it's in the person's response to it.

As a final comment, I don't distinguish imagery from hypnosis. They differ in form, but not in terms of the process for conducting such sessions.

H5 There appears to be considerable overlap, from my perspective. As previously stated, if how you think about something effects what you do, and imagery is a means to consider options, it will naturally affect other learning domains. There are also adages which attest to this notion:

Thoughts produce things.

Keep my words positive, words become my behaviors, keep my behaviors positive, behaviors become my habits…

(to name two from my head)

I think these sayings have been passed from generation to generation and each family has their own that they pass to one another. Generally speaking, there appears to be some associated meaning with the saying passed which conjure images of what the sayings implied messages were or how you fit

Subjects	Table K5: Research Question #5
	into them. As I say this now, I think of one I picked up along the way, when the going gets tough the tough get going… it was on a poster with two Clydesdales pulling this enormous load. For whatever reason, when I think I have it rough, I can instantaneously conjure that image and ask myself if it is actually that bad in contrast to their load. Usually when I do that, I take a breath, regain my ability to problem solve, and reduce at least some vulnerability factors. All of which largely have to do with the symbiotic relationship between imagery and the learning domains.
H6	a. Mental imagery can create muscle memory b. Mental imagery can create mental memory c. Mental imagery can create neuroplasticity.
N1	Every thought is a prayer and every thought affects behavior.
N2	Imagery can augment the learning process for many domains of learning. For example, using imagery to learn how to cope and/or how to process events and feelings can be hugely beneficial for some people. Not everyone will resonate with an imaginal process in the same way but working through imagery to learn about oneself, about coping, etc. is an endeavor that can have significantly beneficial results in both a clinical setting and simply in day-to-day life. Above all, imagery creates a unique narrative through which we can develop a relationship with our psyche and learn about ourselves. Of course, using imagery to teach a concept (i.e. in a classroom) can enhance learning and retention of information.
N3	Learning can occur with or without imagery. However, there are many experiments in which images were learned, or during which imagery was used to facilitate learning. Images occur in nighttime dreams, and one function of dreaming is to consolidate what has been learned during the day. Hence imagery can facilitate learning while someone is asleep.

Appendix L

Summary Tables of All Categories and Subcategories With Supporting Responses From All Participants From All Five RQs

Table L1

All Participants' Statements Coded Per RQ Under Duality Category (DC)

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
B1	RQ #5	There are two brains; the knowing brain, and the feeling brain, and although they are separate and distinct, both have significant learning *(LDSc)* and memory capabilities (*SpSc*).	*LDSc* *SpSc*
	RQ #5	That's why what *(LDSc)* you know *(LDSc)* and how *(LDSc)* you feel *(LDSc)* can be so totally different.	*LDSc*
	RQ #5	Imagery is the best way to communicate (*LCC*) with the feeling brain	*LCC*
B2	RQ #1	Guided imagery is defined by Astin [1] as involving the generation of different mental *(StSc)* images *(MsSc)* evoked by one or more of the five senses…	*StSc* *MsSc*
	RQ #1	Such images *(MsSc)* are typically experienced *(IEESc)* with the goal *(TTPIC)* of evoking a psychophysiological *(HDSc)* state *(StSc)* of relaxation *(TTPIC)* or with some specific outcome *(TTPIC)* in mind…	*MsSc* *IEESc* *TTPIC* *HDSc* *StSc*
	RQ #1	Bresler and Rossman, founders of the Academy of Guided Imagery, [2] expand their definition of guided imagery to include experiences *(IEESc)* are activated by a range of techniques *(TTPIC)*	*IEESc* *TTPIC*
	RQ #1	These phenomena *(MfC)* typically do not happen during guided imagery *(TTPIC)* and are not necessary for therapeutic outcomes *(TTPIC)* with its use.	*MfC* *TTPIC*
	RQ #2	Much of these processes are happening spontaneously, automatically and subconsciously (*StSc*).	*StSc*
	RQ #3	…I believe that every competent clinician *(MfC)* should learn (*LDSc)* the significance *(MfC)* of imagery in a person's life and learn its potential *(DC)* utilization…	*Theme 3* *MfC* *LDSc*

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
	RQ #4	There are thousands of research articles that have shown how the central nervous system (*HDSc*) interacts with the immune system (*HDSc*) by either *(PANSc)* enhancing it or suppressing it.	*HDSc* *PANSc*
	RQ #4	The power of imagery has been documented in many publications showing both through conditioning *(TTPIC)* and the internalization of final outcome *(TTPIC)* of treatments *(TTPIC)*, using a future focused (*FISc*) *(TTPIC)* approached *(TTPIC)* enhanced by hypnosis *(TTPIC)* and imagery to enhance stronger and more effective immune responses *(HDSc)* or in the cases of autoimmune disorders *(HDSc)*, to eliminate excessive and aggressive immune responses *(HDSc)* that include a direct attack *(LCC)* of the immune system *(HDSc)* on one's own cells *(HDSc)* and tissues *(HDSc)*.	*Theme 3* *TTPIC* *FISc* *HDSc* *LCC*
G1	RQ #1	Imagery: A mental picture *(StSc)* of something not actually present.	*StSc*
	RQ #1	Attitudes, feelings, beliefs and ideas *(LDSc)* are represented…	*LDSc*
	RQ #1	A way of thinking that uses sensory *(MsSc)* information *(LCC)* for processing.	MsSc *LCC*
	RQ #2	This helps *(HSc)* people "think outside the box," *(LDSc)* for new perceptions, new behavior, *(LDSc)* new solutions…	*HSc* *LDSc*
	RQ #2	Imagery is a natural language *(LCC)* for humans for coding, storing and expressing information *(LCC)…*	*LCC*
	RQ #3	…revealing hidden truths…	
	RQ #4	…communicate *(LCC)* with one another, in a bidirectional loop.	*LCC*
G2	RQ #2	…a person's internal experiences *(IEESc)* of imagery, memories, dreams, fantasies, inner perceptions, and visions…	*IEESc*
	RQ #3	…that may occur in the form of symbolic imagery in the form of metaphors or symbols, that may be immediately translatable *(LCC)* to rational verbal thought *(TTPIC)...*	*LCC* *TTPIC*
	RQ #4	These two areas impact each other…	
	RQ #5	…and the ability to also access stored memory…	

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
H1	RQ #1	Mental *(StSc)* representation of visual *(MsSc)* content and stimuli…	*StSc, MsSc, DC*
H2	RQ #1	A hallucination that incorporates…	
	RQ #2	The amygdala can't tell the difference between what is real and what is imagined.	
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional *(HDSc)*) construct experience *(IEESc)* of sensing ideas – past/present/future*(MfC)*, real and/or 'imagined'*(ImSc)*	*StSc HDSc IEESc MfC ImSc*
	RQ #2	I strongly believe that our internal imagery *(MsSc)* – conscious *(StSc)* or otherwise – has varying degrees of correlation with our reality experience(s) *(IEESc)*; and, therefore, that by focusing upon, utilizing, and cultivating *(TTPIC)* our imagination *(ImSc)* (imagery) we can in fact alter not only perceptions, but also physiologic *(HDSc)* realities so as to create desired outcomes *(TTPIC)*, and alter psychological *(HDSc)* and physiologic *(HDSc)* experiences, in a sense contributing to if not completely creating *(TTPIC)* our own realities.	*MsSc StSc IEESc TTPIC ImSc HDSc*
	RQ #4	That Biology *(HDSc)* includes the potential for alterations in neurochemistry *(HDSc)* and neurobiology *(HDSc)* as well effects upon one's immune system *(HDSc)*.	*HDSc*
	RQ #5	thoughts on this are that what internal images *(MsSc)* we have DRIVE our thinking, feeling, and behaviors, at both) conscious and unconscious levels *(StSc)*,	*Theme 3 MsSc LDSc StSc*
	RQ #5	when I do self-hypnosis *(TTPIC)*, which by definition includes my multisensory imagery *(MsSc),* OR meditation *(TTPIC)*), my expectation *(LDSc)* and motivation *(LDSc)* drive the evolution of positive imagery *(PANSc)* in the direction of desired *(TTPIC)*, intended *(TTPIC)*, desirable changes *(TTPIC)*;	*Theme 3 TTPIC MsSc LDSc PANSc*
H4	RQ #1	Generating *(TTPIC)* and utilizing *(TTPIC)* mental *(StSc)* images *(MsSc)* (i.e., internally *(IEESc)* generated visual *(MsSc)* representations)…	*TTPIC StSc MsSc IEESc*
	RQ #2	What you focus *(FISc)* on influences emotional responses *(HDSc)*, physical processes *(HDSc)*, quality of cognition *(HDSc)*, and more.	*Theme 2*

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
		So, the qualities (e.g., vividness *(MsSc)*, scope) and emotional valence *(HDSc)* (e.g., depressing or anxiety producing) of one's imagery has the potential to catalyze *(TTPIC)* - or inhibit *(TTPIC)* - physical *(HDSc)* and emotional *(HDSc)* healing *(HSc)*. For example, depression *(HDSc)* has a strong association with cardiovascular disease *(HDSc)*, so much so that many cardiologists are encouraging early screening *(HDSc)* for depression *(HDSc)* as a means of identifying *(TTPIC)* those at later risk *(HDSc)* for heart disease *(HDSc)*. Imagery plays a strong role in depression…	*FISc* *HDSc* *MsSc* *TTPIC* *HSc*
	RQ #3	So much of good therapy *(TTPIC)* involves teaching *(TTPIC)* and learning *(LDSc) & (TTPIC)*. People learn *(LDSc)* much more easily when they're focused *(FISc)*, and they learn *(LDSc)* much better through direct experience *(IEESc)*. Imagery processes *(TTPIC)* provide *(TTPIC)* a context for experiential learning *(TTPIC) & (LDSc)* that is immediate, multi-dimensional *MfC*, and holds greater potential...	*Theme 3* *TTPIC* *LDSc* *FISc* *IEESc* *MfC* *HDSc*
	RQ #5	It's a strong relationship. *(MfC)* Every image *(MsSc)* has correlates and consequences. These are necessarily physical *(HDSc)*, cognitive *(HDSc)*, sensory *(MsSc)*, and emotional *(HDSc)*. They may also be behavioral *(HDSc)*. When someone has an experience *(IEESc)* of one kind or another associated with some imagery they've generated (either independently or through someone else's guidance) *(TTPIC)*, the impact *(HDSc)* range in its duration from mere seconds to a lifetime *(MfC)* depending on its perceived significance *(HDSc)*.	*Theme 2* *MfC* *MsSc* *HDSc* *IEESc* *TTPIC*
H5	RQ #1	Imagery is an ultimate *(MfC)* form of freedom *(StSc)* where one has the potential for limitless self-expression *(LCC)*. It can be practiced individually or alone. *(TTPIC)* I think it is the beginning of meaningful *(LDSc)* change *(TTPIC)* (i.e. as per a concept in hypnosis *(TTPIC)*, what you think about effects what you do *(LDSc)*).	*Theme 2b* *MfC* *StSc* *LCC* *TTPIC* *LDSc*
	RQ #2	When I am able to identify the shift *(TTPIC)*, I can pair *(TTPIC)* my automatic thought *(LDSc)* with something more productive *(TTPIC)* quickly and more readily bypass responses which I would otherwise regret.	*TTPIC* *LDSc*
	RQ #2	In this example because I have identified "triggers" which tend to lead to the automatic thoughts *(LDSc)*, I have a plan *(TTPIC)* in place. This enables me to take the time to pull a <u>simple</u> coping card *(TTPIC)* out which identifies *(TTPIC)* counter points to the	*LDSc* *TTPIC* *PANSc*

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
		negative *(PANSc)*. By nature of this practice *(TTPIC)*, paired associations are occurring.	
	RQ #2	Imagery helps *(TTPIC)* me to breathe in my good points, and breath [*sic*] out the automatically thought *(LDSc)* of bad points. The points on my coping card *(TTPIC)* are those which I selected and instantaneously produce pleasant meaningful *(LDSc)* images *(MsSc)* for me. Putting this together, I suppose when individuals have readily available identified *(TTPIC)* things which instantaneously produce f.ex. an alternative emotion *(LDSc)*, this can be quite significant in reducing *(TTPIC)* panic *(LDSc)*, self-injurious behaviors *(LDSc)*, etc.	*TTPIC LDSC MsSc*
	RQ #3	Imagery enables *(TTPIC)* me to practice *(TTPIC)* remaining in the moment. Because I have a plan *(TTPIC)* in place for when I am not and practice *(TTPIC)* it with regularly, imagery facilitates *(TTPIC)* a flow of thinking *(LDSc)* versus stagnated thinking *(LDSc)*.	*TTPIC LDSc*
	RQ #5	Generally speaking, there appears to be some associated meaning with the saying passed which conjure images *(MsSc)* of what the sayings implied messages *(LCC)* were or how you fit into them. As I say this now, I think of one I picked up along the way, when the going gets tough the tough get going…*(LCC)* it was on a poster *(MsSc)* with two Clydesdales *(MsSc)* pulling this enormous load. For whatever reason, when I think I have it rough, I can instantaneously conjure image *(MsSc)* and ask myself *(LCC)* if it is actually that bad in contrast to their load. Usually when I do that, I take a breath (*HDSc)*, regain my ability to problem solve (*LDSc &)*, and reduce at least some vulnerability factors (*LDSc)*.	*Theme 1 MsSc LCC HDSc LDSc*
H6	RQ #1	Visualization *(ImSc)* of a specific place in one's mind *(StSc)*, but not just visualization. You want all of the senses involved (*MsSc)*.	*ImSc StSc MsSc*
	RQ 2	Hypnosis has a specific goal *(TTPIC)* in mind and, with practice, *TTPIC* leads to neuroplasticity.	*TTPIC MfC*
	RQ #5	c. Mental imagery can create *(TTPIC*) neuroplasticity	*TTPIC*
N1	RQ #1	Every word *(LCC)* is a substitute for an image!	*LCC*
N2	RQ	…it creates (*TTPIC)* the narrative architecture that accompanies	*TTPIC*

Expert	RQ	Table L1: DC: Duality Category Brain-related, 2 hemispheres, hallucination, real vs. imagined, potential, memory, associations	Notes See also
	#1	our thoughts and feelings *(LDSc)*.	*LDSc*
	RQ #2	Thoughts *(LDSc)* accompanied with distinct and vivid imagery *(MsSc)* may have a more marked influence on physical processes *(HDSc)* in the body, and therefore our health *(HDSc)*. For example, experiencing *(IEESc)* imagery associated with fear or stress *(LDSc)* could trigger the release of adrenaline or cortisol *(HDSc)*, which certainly affect the overall stasis *(HDSc)* of the body. Imagery associated with pleasantness, love, etc. could trigger the release of serotonin or dopamine *(HDSc)*, which have their own correlations to bodily *(HDSc)* and psychospiritual balance *(HDSc)*.	*Theme 2* *LDSc* *MsSc* *HDSc* *IEESc* *LDSc*
	RQ #3	...to understand the imagery associated with this dimension *(StSc)* of their experience *(IEESc)*.	*StSc* *IEESc*
	RQ #3	Imagery is integral (*MfC*) to the meaning-making *(LDSc)* aspects of any experience since it is the medium through which we often re-live *(LDSc)* our experiences *(IEESc)* and construct meaning *(LDSc)* out of them.	*MfC* *LDSc* *IEESc*
	RQ #4	The imagery involved in any mental process *(StSc)* plays a causal role in the nature of the corresponding physiological response *(HDSc)*, with the specific response depending on the nature of the imagery *(MsSc?)*.	*StSc* *HDSc* *MsSc*
	RQ #5	…can enhance *(TTPIC)* learning *(LDSc)* and retention of information (*LCC*).	*LCC* *TTPIC*
N3	RQ #1	Imagery is the cognitive *(LDSc)* generation of sensory *(MsSc)* input that has been recalled from experience *(IEESc)* …	*LDSc* *MsSc* *IEESc*
	RQ #1	…but is devoid of non-sensory *(MsSc)* content.	*MsSc*
	RQ #4	…used to facilitate the function of the immune system, *(HDSc)*	*HDSc*
	RQ #5	…and one function of dreaming is to consolidate what…	
	RQ #5	Hence imagery can facilitate…	

Note. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.

Table L2

All Participants' Statements Coded Per RQ Under Focus Intention Subcategory (FISc)

Expert	RQ	Table L2: FISc: Focus Intention Subcategory	Notes See also
B2	RQ #4	The power of imagery has been documented in many publications showing both through conditioning *(TTPIC)* and the internalization of final outcome *(TTPIC)* of treatments *(TTPIC)*, using a future focused *(TTPIC)* approached *(TTPIC)* enhanced by hypnosis *(TTPIC)* and imagery to enhance stronger and more effective *(DC)* immune responses *(HDSc)* or in the cases of autoimmune disorders *(HDSc)*, to eliminate excessive *(DC)* and aggressive *(DC)* immune responses *(HDSc)* that include a direct attack *(LCC)* of the immune system *(HDSc)* on one's own cells *(HDSc)* and tissues *(HDSc)*.	*Theme 3 TTPIC DC HDSc*
G2	RQ #1	Imagery is the conscious *(StSc)* use of the power of the imagination *(ImSc)* with the intention of activating *(TTPIC)* physiological, psychological, and/or spiritual healing *(HSc)*.	*StSc ImSc TTPIC HSc*
H1	RQ #4	PNI is more specific as to the purpose *TTPIC* and intention of the imagery created.	*TTPIC*
	RQ #5	Imagery is a lovely and literal compliment *(TTPIC)* to what we desire *(TTPIC)*, intend, and put our attention upon	*TTPIC*
H3	RQ #3	…and my belief is that hypnosis is a state of mind *(StSc)* in which *through focused imagination (ImSc) (imagery)* individuals create a focus on	*StSc ImSc*
H4	RQ #2	What you focus on influences emotional responses *(HDSc)*, physical processes *(HDSc)*, quality *(DC)* of cognition *(HDSc)*, and more.	*Theme 2 HDSc DC*
	RQ #3	People learn *(LDSc)* much more easily when they're focused,	Theme 3 *LDSc*
	RQ #4	As the relationship *(HDSc)* between stress *(HDSc)* and immune functioning *(HDSc)* became clearer, and various focusing and stress management approaches *(TTPIC)* were integrated into treatment *(TTPIC)* along with so-called alternative treatments *(TTPIC)* (such as acupuncture, nutrition, *(TTPIC)* etc.), treatments *(TTPIC)* continued to improve. At this point, it's well established that the use of imagery *(TTPIC)* to suggest *(TTPIC)* focus,	*MfC TTPIC HDSc*

Expert	RQ	Table L2: FISc: Focus Intention Subcategory	Notes See also
		relaxation, healing, skillful coping, enhanced immune *(HDSc)*functioning *(TTPIC)*, and much more, is a vital component of good, multi-dimensional *(MfC)* treatments. *(TTPIC) (MfC):* As research gets more focused on *how (TTPIC)* imagery enhances immune functioning *(HDSc)*,	
H6	RQ #3	a. Whether you call it mental imagery, guided imagery, medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in imagination, or daydreaming with a focus, it is all the same.	*Theme 3c TTPIC ImSc*

Table L3

All Participants' Statements Coded Per RQ Under Health Domains Subcategory (HDSc)

Expert	RQ	Table L3: HDSc: Health Domains Subcategory Principally: Physical & Psychological Domains of Health	Notes See also
B1	RQ #4	Imagery has physiological consequences. PNI is one way to study *(TTPIC)* some of them.	*TTPIC*
B2	RQ #1	Such images *(MsSc)* are typically experienced *(IEESc)* with the goal *(TTPIC)* of evoking a psychophysiological state *(StSc)* of relaxation *(TTPIC)* or with some specific outcome *(TTPIC)* in mind *(DC)* (e.g. visualizing *(MsSc)* one's immune system attacking cancer cells, experiencing *(IEESc)* oneself feeling healthy and well, exploring *(TTPIC)* subconscious *(StSc)* issues, or imaging *(MsSc)* a solution *(TTPIC)* to a current problem.)	*MsSc* *IEESc* *StSc* *TTPIC* *DC*
	RQ #1	Other differences include that people who are in a hypnotic trance *(StSc)* are more responsive *(StSc)* to suggestions *(TTPIC)*, frequently develop post-hypnotic amnesia *(StSc)*, and their behaviors *(LDSc)* and physical sensations are often experienced *(IEESc)* as involuntary *(StSc)*.	*StSc* *TTPIC* *LDSc* *IEESc*
	RQ #3	Moreover, educators, coaches, and other influential positive leaders and role models (*social domain)* should be familiar (*LDSc*) with the power of imagery and learn how to use it *(TTPIC)* appropriately (*LDSc*) and ethically (*LDSc)*.	*Theme* *LDSc* *TTPIC*
	RQ #4	There are thousands of research articles that have shown how the central nervous system interacts *(DC)* with the immune system by either *(PANSc)* enhancing it or suppressing it. The use of imagery *(TTPIC)* is the use of a unique language *(LCC)* that speaks *(LCC)* directly to the immune system. The power of imagery has been documented in many publications showing both through conditioning *(TTPIC)* and the internalization of final outcome *(TTPIC)* of treatments *(TTPIC)*, using a future focused *(FISc) (TTPIC)* approached *(TTPIC)* enhanced by hypnosis *(TTPIC)* and imagery to enhance stronger and more effective *(DC)* immune responses or in the cases of autoimmune disorders, to eliminate excessive *(DC)* and aggressive *(DC)* immune responses that include a direct attack *(LCC)* of the immune system on one's own cells and tissues.	*Theme 1&3* *DC* *PANSc* *TTPIC* *FISc* *LCC*
	RQ #5	I believe that small children learn *(LDSc)* from their parents and significant others involved in their care such as grandparents, siblings, uncles and teachers certain attitudes *(LDSc)* and views *(LDSc)* of their own image *(ImSc)* and of themselves *(LDSc)* as well as	*LDSc* *ImSc* *IEESc* *StSc* *MsSc*

Expert	RQ	Table L3: HDSc: Health Domains Subcategory Principally: Physical & Psychological Domains of Health	Notes See also
		the world around them. Much of this is internalized *(IEESc)* subconsciously *(StSc)* through repeated exposure *(LDSc)* and role modeling of the adults. The children growing up, end up emulating *(LDSc)* some of these adult significant figures in their lives which ends up influencing *(LDSc)* their own imagery *(MsSc)* and personality *(LDSc)* when they become adults.	
G1	RQ #4	Imagery, because it is a natural language *(LCC)* for humans, is integrally tied to PNI.	*LCC*
	RQ #4	It is the way in which the mind, body and spirit communicate *(LCC)* with one another, in a bidirectional loop (*DC*).	*M-B-S* *LCC* *DC*
G2	RQ #1	Imagery is the conscious *(StSc)* use of the power of the imagination *(ImSc)* with the intention of activating *(TTPIC)* physiological, psychological, and/or spiritual healing *(HSc)*.	*StSc* *ImSc* *TTPIC* *HSc*
	RQ #2	…serves as a bridge for connecting *(TTPIC)* body, mind, spirit *(M-B-S).*	*TPPIC* *M-B-S*
	RQ #4	These two areas impact *(DC*) each other and can't be separated as a person is whole —the interface *(MfC)* between body, mind, spirit *(M-B-S).*	*DC* *MfC* *M-B-S*
H1	RQ #2	What we image *(ImSc)* or picture *(DC)* in mind *(StSc)* is reflected by every cell and system in our body.	*ImSc* *DC* *StSc*
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional)…	*StSc*
	RQ #2	…we can in fact alter not only perceptions *(DC)*, but also physiologic realities *(DC)* so as to create desired outcomes *(TTPIC)*, and alter psychological and physiologic experiences *(IEESc)*,	*Theme 3* *DC* *TTPIC* *IEESc*
	RQ #3	(such as in reducing *(TTPIC)* or relieving *(TTPIC*) pain , eliminating *(TTPIC)* a habituated *(LDSc)* behavior [habit] *(TTPIC)*, altering *(TTPIC)*a [patho] physiologic response such as in migraine, irritable bowel syndrome, asthma , etc.), modifying *(TTPIC)* or eliminating *(TTPIC)* emotional challenges such as anxiety, depression , et al)	*Theme 3* *StSc* *FISc* *ImSc* *TTPIC* *LDSc*
	RQ	My thinking and understanding is that the word	*PANSc*

Expert	RQ	Table L3: HDSc: Health Domains Subcategory Principally: Physical & Psychological Domains of Health	Notes See also
	#4	psychoneuroimmunology IMPLIES/describes itself as the ability of psychological processes – INCLUDING the essential ingredient of IMAGERY – to directly influence an individual's BIOLOGY, preferably in a positive direction *(PANSc)*. That Biology includes the potential (*DC*) for alterations (*DC*) in neurochemistry and neurobiology as well effects upon one's immune system.	*DC*
	RQ #5	whether those are to image *(ImSc)* myself sleeping and resting more, exercising regularly, maintaining *(TTPIC)* good health, being efficient *(LDSc)* in accomplishing *(TTPIC)* desired tasks *(TTPIC)*, etc.	*ImSc* *TTPIC* *LDSc*
H4	RQ #1	Generating *(TTPIC)* and utilizing *(TTPIC)* mental *(StSc)* images *(MsSc)* (i.e., internally *(IEESc)* generated visual *(MsSc)* representations *(DC)*) for some goal-oriented purpose *(TTPIC)* (e.g., relaxation *(TTPIC)*, emotional self-regulation *(LDSc)*, pain management, mental rehearsal *(TTPIC)* of new adaptive behaviors *(LDSc)*, etc.). This definition assumes a therapeutic context for its application *(TTPIC)*.	*Theme 3* *TTPIC* *StSc* *MsSc* *IEESc* *DC* *LDSc*
	RQ #2	What you focus *(FISc)* on influences emotional responses, physical processes, quality *(DC)* of cognition, and more. So, the qualities *(DC)* (e.g., vividness *(MsSc)*, scope *(DC)*) and emotional valence (e.g., depressing or anxiety producing) of one's imagery has the potential *(DC)* to catalyze *(TTPIC)* - or inhibit *(TTPIC)* - physical and emotional healing *(HSc)*. For example, depression has a strong association *(DC)* with cardiovascular disease, so much so that many cardiologists are encouraging early screening for depression as a means of identifying *(TTPIC)* those at later risk for heart disease. Imagery plays a strong role *(DC)* in depression as people visualize *(ImSc)* rejection *(LDSc)*, failure *(LDSc)*, abandonment *(LDSc)*, betrayal *(LDSc)*, humiliation *(LDSc)*, then suffer the physical and emotional detriments that go along with such negative imagery (*PANSc*).	*Theme 2* *FISc* *DC* *TTPIC* *MsSc* *HSc* *ImSc* *LDSc* *PANSc*
	RQ #3	Imagery processes *(TTPIC) & (DC)* provide *(TTPIC)* a context for experiential learning *(TTPIC) & (LDSc)* that is immediate, multi-dimensional (*MfC*), and holds greater potential *(DC)* for building *(TTPIC)* the meaningful *(LDSc)* associations *(LDSc)* to new ideas, perspectives, and behaviors *(LDSc)* that can enhance one's life.	Theme 3 *TPIC* *DC* *LDSc* *MfC*
	RQ #4	It's a strong relationship. *(MfC)* PNI gradually emerged from the recognition that when people are viewed and treated *(TTPIC)* multi-dimensionally *(MfC)*, rather than only as bodies with symptoms, treatments *(TTPIC)* worked better. As the relationship between stress and immune functioning became clearer, and various focusing *(FISc)* and stress management approaches *(TTPIC)* were integrated into treatment *(TTPIC)* along with so-called alternative	*MfC* *TTPIC* *FISc*

Expert	RQ	Table L3: HDSc: Health Domains Subcategory Principally: Physical & Psychological Domains of Health	Notes See also
		treatments *(TTPIC)* (such as acupuncture, nutrition, *(TTPIC)* etc.), treatments *(TTPIC)* continued to improve. At this point, it's well established that the use of imagery *(TTPIC)* to suggest *(TTPIC)* focus *(FISc)*, relaxation, healing, skillful coping, enhanced immune functioning *(TTPIC)*, and much more, is a vital component of good, multi-dimensional *(MfC)* treatments *(TTPIC). (MfC):* As research gets more focused *(FISc)* on *how (TTPIC)* imagery enhances immune functioning, we may learn about physiopathways and develop *(TTPIC)* better targeted *(TTPIC)* imagery for specific health issues.	
	RQ #5	These are necessarily physical, cognitive, sensory *(MsSc)*, and emotional. They may also be behavioral. When someone has an experience *(IEESc)* of one kind or another associated *(DC)* with some imagery they've generated *(DC)* (either independently or through someone else's guidance) *(TTPIC)*, the impact range in its duration from mere seconds to a lifetime *(MfC)* depending on its perceived *(DC)* significance.	*Theme 2* *MfC* *MsSc* *DC* *IEESc* *TTPIC*
H5	RQ #2	As per a concept in hypnosis *(TTPIC)*, <u>what you think about effects what you do</u> *(LDSc)*, if one utilizes *(TTPIC)* imagery to make healthier choices *(TTPIC)*, these choices *(TTPIC)* alone could have a myriad of effects. However, it seems to me that the person has to identify *(TTPIC)* for themselves what would be important as it relates to their health. For me, it starts with an automatic thought *(LDSc)* (usually something negative *(PANSc)*). Since for me, negative thoughts *(LDSc)* interfere with my work (which increases stress), interfere with self-esteem *(LDSc)* (which dampens my mood), and therefore interpersonal relationships (which exacerbates stress and maladaptive functioning) recognizing a shift in my thinking *(LDSc)* sooner rather than later is ideal.	*TTPIC* *LDSc* *PANSc*
	RQ #4	…my simplified understanding leads me to believe there is considerable overlap *(MfC)* between the two. Considering hormones created by stress alone can be considerably corrosive and imagery could help reduce stress, the byproduct of this reduction would likely have other positive effects *(PANSc)* (i.e. in the area of PNI).	*Theme 2c* *MfC* *PANSc*
	RQ #5	Usually when I do that, I take a breath, regain *(DC)* my ability to problem solve *(DC) & (LDSc)*, and reduce at least some vulnerability factors *(LDSc)*.	*Theme 1* *DC* *LDSc*

Expert	RQ	Table L3: HDSc: Health Domains Subcategory Principally: Physical & Psychological Domains of Health	Notes See also
H6	RQ #4	It works. (*TTPIC)* I got rid of my plantar warts with self-hypnosis.	*TTPIC*
N1	RQ #2	Thinking sets in motion spiritual forces to bring about change *(LDSc)*	*LDSc*
N2	RQ #2	Thoughts *(LDSc)* accompanied with distinct and vivid imagery *(MsSc)* may have a more marked influence on physical processes in the body, and therefore our health. For example, experiencing *(IEESc)* imagery associated *(DC)* with fear or stress *(LDSc)* could trigger *(DC)* the release of adrenaline or cortisol, which certainly affect the overall stasis of the body. Imagery associated *(DC)* with pleasantness, love, etc. could trigger *(DC)* the release of serotonin or dopamine, which have their own correlations *(DC)* to bodily and psychospiritual balance. In short, how one thinks *(LDSc)* about anything manifests physically in the body in some way. Thus imagery can have positive or adverse effects on health *(PANSc)*.	*Theme 2* *DC* *MsSc* *IEESc* *LDSc* *PANSc*
	RQ #4	Research in the field of PNI suggests that psychological processes etc. produce a physiological response The imagery involved in any mental process plays a causal role *(DC)* in the nature of the corresponding physiological response, with the specific response depending *(DC)* on the nature of the imagery *(MsSc?)*. With regard to immune function, it is well established empirically that stress reduces immunological function. Guided imagery that reduces stress from the inside out (i.e. attending to its psychological foundations) would therefore have a positive impact on the function of the immune system.	*DC* *MsSc*
N3	RQ #2	I think that there is evidence that imagery can be used as a diagnostic tool *(TTPIC)* in assessing *(TTPIC)* an individual's physical, mental, or emotional health, and that it can be used as part of a therapeutic program *(TTPIC)* to improve or restore physical, mental, or emotional health.	*MfC* *TTPIC*
	RQ #4	I think that imagery used by skilled practitioners can be used to facilitate the function *(DC)* of the immune system, hence it is an important topic (*MfC*) in PNI.	*DC* *MfC*

Table L4

All Participants' Statements Coded Per RQ Under Healing Subcategory (HSc)

Expert	RQ	Table L4: HSc: Healing Subcategory	Notes See also
B1	RQ #2	It's the language *(LCC)* that the healing systems of the body use to communicate *(LCC)* with each other.	*LCC*
	RQ #3	It's how I teach (*TTPIC*) patients how to better heal themselves.	*TTPIC*
	RQ #5	This difference *(DC)* is the basis for why most people seek psychotherapeutic help.	*DC*
	RQ #5	Imagery is the best way (*TTPIC)* to communicate *(LCC)* with the feeling brain *(DC)* and to help reconcile these differences *(DC)*	*LCC* *DC* *TTPIC*
G1	RQ #2	This helps people "think outside the box" (*LDSc*), for new perceptions *(DC)*, new behavior (*LDSc*), new solutions (*TTPIC)* and ultimately, new outcomes.	*LDSc* *DC* *TTPIC*
	RQ #2	…interface between mind and body *(HDSc).*	*HDSc*
	RQ #3	Imagery is crucial for me…	
	RQ #3	…new way *(TTPIC)* of being…	*TTPIC*
	RQ #4	…the way in which the mind, body and spirit communicate *(LCC)* with one another,	*HDSc* *LCC*
G2	RQ #1	Imagery is the conscious *(StSc)* use of the power of the imagination *(ImSc)* with the intention of activating *(TTPIC)* physiological, psychological, and/or spiritual *(HDSc)* healing.	*StSc* *ImSc* *TTPIC* *HDSc*
	RQ #4	…the most ancient and *(MfC)* potent healing resource *(TTPIC)…*	*MfC* *TTPIC*
	RQ #5	…the ability to also access stored memory *(DC)* that may be in need of deep healing.	*DC*
H2	RQ #2	Therefore, if the individual can imagine (*ImSc)* comfort *(TTPIC)* instead of pain, they can achieve *(HSc)* it.	*ImSc* *TTPIC*
H4	RQ #2	So, the qualities *(DC)* (e.g., vividness *(MsSc)*, scope *(DC)*) and emotional valence *(HDSc)* (e.g., depressing or anxiety producing) of one's imagery has the potential *(DC)* to catalyze *(TTPIC)* - or inhibit *(TTPIC)* - physical *(HDSc)* and emotional *(HDSc)* healing.	*Theme 2* *HDSc* *DC* *TTPIC* *MsSc*

Table L5

All Participants' Statements Coded Per RQ Under Internal External Experience Subcategory (IEESc)

Expert	RQ	Table L5: IEESc: Internal External Experience Subcategory	Notes See also
B2	RQ #1	Such images *(MsSc)* are typically experienced *(IEESc)* with the goal *(TTPIC)* of evoking a psychophysiological *(HDSc)* state *(StSc)* of relaxation *(TTPIC)* or with some specific outcome *(TTPIC)* in mind *(DC)* (e.g. visualizing *(MsSc)* one's immune system attacking cancer cells, experiencing oneself feeling healthy *(HDSc)* and well *(HDSc)*, exploring *(TTPIC)* subconscious *(StSc)* issues, or imaging *(MsSc)* a solution *(TTPIC)* to a current problem.)	*MsSc TTPIC HDSc StSc DC HDSc*
	RQ #1	Bresler and Rossman, founders of the Academy of Guided Imagery, [2] expand their definition of guided imagery to include experiences that are activated by (*DC)*	*DC*
	RQ #1	Guided imagery is differentiated from hypnosis by the fact that it does not require the patient to be in an altered state of consciousness *(StSc)* or experience a state *(StSc)* of dissociation *(StSc*. Other differences include that people who are in a hypnotic trance *(StSc)* are more responsive *(StSc)* to suggestions *(TTPIC)*, frequently develop post-hypnotic amnesia *(StSc)*, and their behaviors *(LDSc)* and physical sensations *(HDSc)* are often experienced as involuntary *(StSc)*.	*StSc TTPIC LDSc HDSc*
	RQ #2	In my opinion, imagery can serve as a double edged sword *(PANSc)*. People who internalize negative imagery end up living out *(LDSc)* a self-fulfilling prophesy *(LDSc)* with negative *(PANSc)* outcomes *(TTPIC)* regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage *(DC)* in positive outcome *(PANSc)* imagery end up with more successful positive *(PANSc)* outcomes *(TTPIC)* because of an internalized self-fulfilling prophesy *(LDSc)*.	*PANSc LDSc TTPIC DC StSc*
	RQ #5	Much of this is internalized subconsciously *(StSc)* through repeated exposure *(LDSc)* and role modeling of the adults (*social domain of HDSc)*.	*StSc LDSc Social domain of HDSc*
G2	RQ #1	Imagery is profound *(MfC)* in that a person's internal experiences of imagery, memories, dreams, fantasies, inner perceptions, and visions *(DC)*	*MfC DC*

Expert	RQ	Table L5: IEESc: Internal External Experience Subcategory	Notes See also
	RQ #5	The imagery process *(TTPIC)* evokes internal experiences…	*TTPIC*
H2	RQ #5	Working with children I act as their imagination *(ImSc)* coach *(TTPIC)* helping them to use this valuable resource *(TTPIC)* to tap into *(TTPIC)* their own inner creative strengths *(StSc)* to manage *(TTPIC)* their thoughts, feelings and behaviors *(LDSc)*.	*TTPIC StSc LDSc*
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional *(HDSc)*) construct experience…	*StSc HDSc*
	RQ #2	I strongly believe that our internal imagery *(MsSc)* – conscious *(StSc)* or otherwise*(DC)* – has varying degrees of correlation with our reality experience(s);	*MsSc StSc DC*
H4	RQ #1	Generating *(TTPIC)* and utilizing *(TTPIC)* mental *(StSc)* images *(MsSc)* (i.e., internally generated visual *(MsSc)* representations *(DC)*)…	*TTPIC StSc MsSc DC*
	RQ #3	So much of good therapy *(TTPIC)* involves teaching *(TTPIC)* and learning *(LDSc) & (TTPIC)*. People learn *(LDSc)* much more easily when they're focused *(FISc)*, and they learn *(LDSc)* much better through direct *(DC)* experience.	*Theme 3 TTPIC LDSc FISc DC*
	RQ #5	When someone has an experience of one kind or another associated *(DC)* with some imagery they've generated *(DC)…*	*DC*
N2	RQ #1	The imagery of the mind *(StSc)* is part of an ecosystem *(MfC)* of subjective constructs experienced in a visual context *(MsSc)*;	*StSc MfC MsSc*
	RQ #2	For example, experiencing imagery associated *(DC)* with fear or stress *(LDSc)* could trigger *(DC)* the release of adrenaline or cortisol *(HDSc)*, which certainly affect the overall stasis *(HDSc)* of the body. Imagery associated *(DC)* with pleasantness, love, etc. could trigger *(DC)* the release of serotonin or dopamine *(HDSc)*, which have their own correlations *(DC)* to bodily *(HDSc)* and psychospiritual balance *(HDSc)*. In short, how one thinks *(LDSc)* about anything manifests physically *(HDSc)* in the body in some way. Thus imagery can have positive or adverse effects on health *(PANSc)*.	*Theme 2 DC MsSc LDSc PANSc*
	RQ #3	The field of noetic science *(StSc)* involves a deep exploration of inner experience, which of course includes imaginal processes *(ImSc)*. In order to understand *(LDSc)* a client/subject's transformative experience, existential crisis *(StSc)*, etc., it is	*StSc ImSc LDSc MfC*

Expert	RQ	Table L5: IEESc: Internal External Experience Subcategory	Notes See also
		imperative *(MfC)* to acknowledge, address and attempt to understand the imagery associated *(DC)* with this dimension *(StSc)* of their experience.	*DC*
	RQ #3	Imagery is integral *(DC)* to the meaning-making *(LDSc)* aspects of any experience since it is the medium *(DC)* through which we often re-live *(LDSc)* our experiences and construct *(DC)* meaning *(LDSc)* out of them.	*DC* *LDSc*
N3	RQ #1	Imagery is the cognitive *(LDSc)* generation *(DC)* of sensory *(MsSc)* input that has been recalled *(DC)* from experience …	*LDSc* *DC* *MsSc*

Table L6

All Participants' Statements Coded Per RQ Under Imagination Subcategory (ImSc)

Expert	RQ	Table L6: ImSc: Imagination Subcategory Imagination/Imagine/Image or Visualization/Visualize	Notes See also
B1	RQ #4	If you imagine sucking on a lemon, you salivate.	
B2	RQ #5	I believe that small children learn *(LDSc)* from their parents (*social domain of HDSc)* and significant others (*social domain of HDSc)* involved in their care such as grandparents, siblings, uncles and teachers (*social domain of HDSc)* certain attitudes *(LDSc)* and views *(LDSc)* of their own image and of themselves *(LDSc)* as well as the world (Social domain of *HDSc)* around them.	*Social domain of HDSc LDSc*
G2	RQ #1	Imagery is the conscious *(StSc)* use of the power of the imagination…	*StSc*
H1	RQ #2	What we image or picture in mind…	
H2	RQ #2	Therefore, if the individual can imagine comfort *(TTPIC)* instead of pain, they can achieve *(HSc)* it.	*TTPIC HSc*
	RQ #3	…children have amazing, uninhibited imaginations they can use to create *(TTPIC)* anxiety and fear OR self-mastery, self-confidence and self-esteem *(StSc)*.	*TTPIC StSc*
	RQ #5	It was Einstein who said "Imagination is more important than knowledge *(LDSc)*."	*LDSc*
	RQ #5	Working with children I act as their imagination coach *(TTPIC)* helping them to use this valuable resource *(TTPIC)* to tap into *(TTPIC)* their own inner creative *(IEESc)* strengths *(StSc)* to manage *(TTPIC)* their thoughts, feelings and behaviors *(LDSc)*.	*TTPIC IEESc StSc LDSc*
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional *(HDSc)*) construct experience *(IEESc)* of sensing ideas – past/present/future*(MfC)*, real and/or *(DC)* 'imagined'	*StSc HDSc IEESc MfC DC*
	RQ #2	…by focusing upon, utilizing, and cultivating *(TTPIC)* our imagination (imagery)	*TTPIC*
	RQ #3	…hypnosis is a state of mind *(StSc)* in which *through focused (FISc) imagination (imagery)*…	*StSc FISc*

Expert	RQ	Table L6: ImSc: Imagination Subcategory Imagination/Imagine/Image or Visualization/Visualize	Notes See also
	RQ #5	As such, as I cultivate *(TTPIC)* my imagination (my way of thinking about what I'm DOING *(TTPIC)* when I do self-hypnosis *(TTPIC)*,	*Theme 3* *TTPIC*
	RQ #5	…whether those are to image myself sleeping and resting more, exercising regularly, maintaining *(TTPIC)* good health (*HDSc*), being efficient *(LDSc)* in accomplishing *(TTPIC)* desired tasks *(TTPIC)*, etc.	*Theme 3* *TTPIC* *HDSc* *LDSc*
H4	RQ #2	Imagery plays a strong role *(DC)* in depression *(HDSc)* as people visualize rejection *(LDSc)*, failure *(LDSc)*, abandonment *(LDSc)*, betrayal*(LDSc)*, humiliation *(LDSc)*, then suffer *(HDSc)* the physical *(HDSc)* and emotional *(HDSc)* detriments that go along with such negative imagery (*PANSc*).	*Theme 2* *DC* *HDSc* *LDSc* *PANSc*
H6	RQ #1	Visualization of a specific place *(DC)* in one's mind *(StSc)*, but not just visualization. You want all of the senses involved.	*DC* *StSc* *MsSc*
N2	RQ #3	The field of noetic science *(StSc)* involves a deep exploration of inner experience *(IEESc)*, which of course includes imaginal processes.	*StSc* *IEESc*
N3	RQ #1	…or that has been self-generated *(TTPIC)* in an imaginative form.	*TTPIC*

Table L7

All Participants' Statements Coded Per RQ Under Language Communication Category (LCC)

Expert	RQ	Table L7: LCC: Language Communication Category	Notes See also
B1	RQ #1	An image is a thought form	*LDSc*
	RQ #2	It's the language that the healing *(HSc)* systems *(HDSc)* of the body use to communicate with each other.	*HSc HDSc*
	RQ #5	Imagery is the best way (*TTPC)* to communicate with the feeling brain (*DC)* and to help reconcile these differences.	*TTPC DC*
B2	RQ #4	The use of imagery *(TTPIC)* is the use of a unique language *(LCC)* that speaks *(LCC)* directly to the immune system *(HDSc)*.	*Theme 1 TTPIC HDSc*
	RQ #4	… to eliminate excessive *(DC)* and aggressive *(DC)* immune responses *(HDSc)* that include a direct attack of the immune system *(HDSc)…*	*DC HDSc*
G1	RQ #2	Imagery is a natural language for humans for coding, storing *(DC)* and expressing information	*DC*
	RQ #4	Imagery, because it is a natural language for humans,	
	RQ #4	It is the way in which the mind, body and spirit (*HDSc, HSc*) communicate with one another, in a bidirectional loop *(DC)*.	*HDSc, HSc DC*
G2	RQ #3	Imagery is profound in that allows for a person to connect (*TTPIC)* with one's deeper knowledge and wisdom, that may occur in the form of symbolic imagery in the form of metaphors or symbols *(SpSc)*, that may be immediately translatable to rational *(DC)* verbal thought (*TTPIC)*	*TTPIC DC SpSc*
H5	RQ #1	Imagery is an ultimate *(MfC)* form *(DC?)* of freedom *(StSc)* where one has the potential *(DC)* for limitless self-expression *(LCC)*.	*MfC DC*
	RQ #5	There are also adages which attest to this notion…	*StSc Theme 1*
	RQ #5	Keep my words positive, words become my behaviors, keep my behaviors positive, behaviors become my habits…	*Theme 1*

Expert	RQ	Table L7: LCC: Language Communication Category	Notes See also
		(to name two from my head) I think these sayings have been passed from generation to generation and each family has their own that they pass to one another. Generally speaking, there appears to be some associated meaning *(DC)* with the saying passed which conjure *(DC)* images *(MsSc)* of what the sayings implied messages were or how you fit into them. As I say this now, I think of one I picked up along the way, when the going gets tough the tough get going…it was on a poster *(MsSc)* with two Clydesdales *(MsSc)* pulling this enormous load *(DC)*. For whatever reason, when I think I have it rough, I can instantaneously conjure *(DC)* image *(MsSc)* and ask myself if it is actually that bad in contrast *(DC)* to their load.	*DC* *MsSc*
N1	RQ #1	Every word is a substitute *(DC)* for an image!	*DC*
N2	RQ #5	Above all, imagery creates *(TTPIC)* a unique narrative…	*TTPIC* *DC*
	RQ #5	…enhance *(TTPIC)* learning *(LDSc)* and retention *(DC)* of information.	*TTPIC* *LDSc* *DC*

Table L8

All Participants' Statements Coded Per RQ Under Learning Domains Subcategory (LDSc)

Expert	RQ	Table L8: LDSc: Learning Domains Subcategory The Influence of Thoughts, Feelings, & Behaviors on Health (including meaning)	Notes See also
B1	RQ #1	An image is a thought form	
	RQ #5	…[two brains-*(DC)*] both have significant learning and memory capabilities *(SpSc)*.	*DC* *SpSc*
B2	RQ #1	Other differences include that people who are in a hypnotic trance *(StSc)* are more responsive *(StSc)* to suggestions *(TTPIC)*, frequently develop post-hypnotic amnesia *(StSc)*, and their behaviors and physical sensations *(HDSc)* are often experienced *(IEESc)* as involuntary *(StSc)*.	*StSc* *TTPIC* *HDSc* *IEESc*
	RQ #2	People who internalize *(IEESc)* negative imagery end up living out a self-fulfilling prophesy with negative *(PANSc)* outcomes *(TTPIC)* regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage *(DC)* in positive outcome *(PANSc)* imagery end up with more successful positive *(PANSc)* outcomes *(TTPIC)* because of an internalized *(IEESc)* self-fulfilling prophesy.	*IEESc* *PANSc* *TTPIC* *StSc*
	RQ #3	Following my comments and my answer to question 2, I believe that every competent clinician *(MfC)* should learn the significance *(MfC)* of imagery in a person's life and learn its potential *(DC)* utilization in the treatment *(TTPIC)* of patients with mental and physical disorders (*HDSc*). Moreover, educators, coaches, and other influential positive leaders and role models (*social domain of HDSc*) should be familiar with the power of imagery and learn how to use it *(TTPIC)* appropriately and ethically.	*Theme 3* *MfC* *DC* *TTPIC* *HDSc* *social domain*
	RQ #5	I believe that small children learn from their parents (*social domain of HDSc)* and significant others (*social domain of HDSc)* involved in their care such as grandparents, siblings, uncles and teachers (*social domain of HDSc)* certain attitudes and views of their own image *(ImSc)* and of themselves as well as the world (Social domain of *HDSc)* around them. Much of this is internalized *(IEESc)* subconsciously *(StSc)* through repeated exposure and role modeling of the adults (*social domain of HDSc)*. The children growing up, end up emulating some of these adult significant figures (*social domain of HDSc)* in their lives which ends up influencing their own imagery *(MsSc)* and personality when they	*Theme 2b (social domain)* *HDSc* *ImSc* *IEESc* *StSc* *MsSc*

Expert	RQ	Table L8: LDSc: Learning Domains Subcategory The Influence of Thoughts, Feelings, & Behaviors on Health (including meaning)	Notes See also
		become adults (*social domain of HDSc).*	
G1	RQ #1	Attitudes, feelings, beliefs and ideas are represented (*DC)* and vested in images, symbols and mental pictures (StSc) which become part of our personal narrative and influence our behavior.	*DC* *StSc*
	RQ #2	This helps *(HSc*) people "think outside the box," for new perceptions *(DC)*, new behavior new solutions, and ultimately, new outcomes *(HSc*).	*HSc* *DC* *TTPIC*
	RQ #3	is like a depth charge to the emotions	
	RQ #5	Imagery is a key *(MfC)* to effective learning precisely because it links *(MfC)* attitudes, beliefs, thoughts, feeling and behavior.	*MfC*
G2	RQ #3	translatable to rational verbal thought (*TTPIC)*	*TTPIC*
H2	RQ #3	children have amazing, uninhibited imaginations they can use to create *(TTPIC)* anxiety and fear (*StSc*) OR self-mastery, self-confidence and self-esteem.	*TTPIC* *StSc*
	RQ #4	imagery combined with belief	
	RQ #5	It was Einstein who said "Imagination *(ImSc)* is more important than knowledge."	*ImSc*
	RQ #5	Working with children I act as their imagination *(ImSc)* coach *(TTPIC)* helping them to use this valuable resource *(TTPIC)* to tap into *(TTPIC)* their own inner creative *(IEESc)* strengths *(StSc)* to manage *(TTPIC)* their thoughts, feelings and behaviors.	*ImSc* *TTPIC* *IEESc* *StSc*
H3	RQ #3	eliminating *(TTPIC)* a habituated behavior [habit] *(TTPIC)*	*TTPIC*
	RQ #5	internal images *(MsSc)* we have DRIVE *(DC)* our thinking, feeling, and behaviors,	*MsSc* *DC*
	RQ #5	my expectation and motivation drive *(DC)* the evolution of positive imagery *(PANSc)*	*DC* *PANSc*
H4	RQ #1	…for some goal-oriented purpose *(TTPIC)* (e.g., relaxation *(TTPIC)*, emotional self-regulation, pain management *(HDSc)*, mental rehearsal *(TTPIC)* of new adaptive behaviors *(LDSc)*, etc.).	*TTPIC* *HDSc*
	RQ #2	Imagery plays a strong role *(DC)* in depression *(HDSc)* as people visualize *(ImSc)* rejection, failure, abandonment, betrayal,	*Theme 2*

Expert	RQ	Table L8: LDSc: Learning Domains Subcategory The Influence of Thoughts, Feelings, & Behaviors on Health (including meaning)	Notes See also
		humiliation, then suffer *(HDSc)* the physical *(HDSc)* and emotional *(HDSc)* detriments that go along with such negative imagery (*PANSc*).	*DC* *HDSc* *ImSc* *PANSc*
	RQ #3	So much of good therapy *(TTPIC)* involves teaching *(TTPIC)* and learning *(TTPIC)*. People learn much more easily when they're focused *(FISc)*, and they learn much better through direct *(DC)* experience *(IEESc)*. Imagery processes *(TTPIC) & (DC)* provide *(TTPIC)* a context for experiential learning *(TTPIC &)* that is immediate, multi-dimensional (*MfC)*, and holds greater potential *(DC)* for building *(TTPIC)* the meaningful associations to new ideas, perspectives, and behaviors that can enhance *(HDSc)* one's life. Thus, striving to excel in facilitating *(TTPIC)* meaningful experiential learning opportunities is foundational *(MfC)* to my clinical work *(TTPIC)*.	Theme 3 *TTPIC* *FISc* *DC* *IEESc* *MfC* *HDSc*
	RQ #5	So, the imagery can be a powerful stimulus *(MsSc)* to learning, but only if the person sees *(MsSc)* and responds to it as such.	*Theme 2* *MsSc*
H5	RQ #1	I think it is the beginning of meaningful *(LDSc)* change *(TTPIC)* (i.e. as per a concept *(DC)* in hypnosis *(TTPIC)*, what you think about effects what you do).	*TTPIC* *DC* *StSc*
	RQ #2	*Mary Note*: Entirety of H5's RQ #2 response included under LDSc or the learning domains subcategory: As per a concept in hypnosis *(TTPIC)*, <u>what you think about effects what you do</u>, if one utilizes *(TTPIC)* imagery to make healthier choices *(TTPIC)*, these choices *(TTPIC)* alone could have a myriad of effects *(HDSc)*.) However, it seems to me that the person has to identify *(TTPIC)* for themselves what would be important as it relates to their health *(HDSc)*. For me, it starts with an automatic thought (usually something negative *(PANSc)*). Since for me, negative thoughts interfere with my work (which increases stress *(HDSc)*), interfere with self-esteem (which dampens my mood *(HDSc)*), and therefore interpersonal relationships *(HDSc)* (which exacerbates stress *(HDSc)* and maladaptive functioning *(HDSc)*) recognizing a shift in my thinking sooner rather than later is ideal. When I am able to identify the shift *(TTPIC)*, I can pair *(TTPIC)* my automatic thought with something more productive *(TTPIC)* quickly and more readily bypass *(DC)* responses which I would otherwise regret. In this example because I have identified "triggers" *(DC)* which	*TTPIC* *HDSc* *PANSc* *DC* *MsSc*

Expert	RQ	Table L8: LDSc: Learning Domains Subcategory The Influence of Thoughts, Feelings, & Behaviors on Health (including meaning)	Notes See also
		tend to lead to the automatic thoughts, I have a plan *(TTPIC)* in place. This enables me to take the time to pull a <u>simple</u> coping card *(TTPIC)* out which identifies *(TTPIC)* counter points to the negative *(PANSc)*. By nature of this practice *(TTPIC)*, paired associations *(DC)* are occurring. Imagery helps *(TTPIC)* me to breathe in my good points, and breath [*sic*] out the automatically thought of bad points. The points on my coping card *(TTPIC)* are those which I selected and instantaneously produce *(DC)* pleasant meaningful images *(MsSc)* for me. Putting this together, I suppose when individuals have readily available identified *(TTPIC)* things which instantaneously produce *(DC)* f.ex. an alternative emotion, this can be quite significant in reducing *(TTPIC)* panic, self-injurious behaviors, etc.	
	RQ #3	Because I have a plan *(TTPIC)* in place for when I am not and practice *(TTPIC)* it with regularly, imagery facilitates *(TTPIC)* a flow *(DC)* of thinking versus stagnated thinking.	*TTPIC* *DC*
	RQ #5	As previously stated, if how you think about something effects what you do, and imagery is a means to consider options *(TTPIC)*, it will naturally affect other learning domains.	*Theme 1* *TTPIC*
	RQ #5	Usually when I do that, I take a breath (*HDSc)*, regain *(DC)* my ability to problem solve *(DC &)*, and reduce at least some vulnerability factors (*LDSc)*.	*Theme 1* *HDSc* *DC*
N1	RQ #1	ALL THOUGHTS ARE IMAGES.	
	RQ #2	Thinking sets I motion spiritual *(HDSc)* forces to bring about change	*HDSc*
	RQ #5	Every thought is a prayer and every thought affects behavior	
N2	RQ #1	The imagery of the mind *(StSc)* is part of an ecosystem *(MfC)* of subjective constructs experienced *(IEESc)* in a visual context *(MsSc)*; it creates (*TTPIC)* the narrative architecture *(DC)* that accompanies our thoughts and feelings.	*StSc* *MfC* *IEESc* *MsSc* *TTPIC* *DC*
	RQ #2	Thoughts accompanied with distinct and vivid imagery *(MsSc)* may have a more marked influence on physical processes *(HDSc)* in the body In short, how one thinks about anything manifests physically *(HDSc)* in the body in some way.	*HDSc* *MsSc*
	RQ #2	In short, how one thinks about anything manifests physically *(HDSc)* in the body in some way.	*HDSc*

Expert	RQ	Table L8: LDSc: Learning Domains Subcategory The Influence of Thoughts, Feelings, & Behaviors on Health (including meaning)	Notes See also
	RQ #3	In order to understand a client/subject's transformative experience *(IEESc)*, existential crisis *(StSc)*, etc., it is imperative *(MfC)* to acknowledge, address and attempt to understand the imagery associated *(DC)* with this dimension *(StSc)* of their experience *(IEESc)*.	*StSc* *IEESc* *ImSc* *MfC* *DC*
	RQ #3	Imagery is integral *(MfC) (DC)* to the meaning-making aspects of any experience since it is the medium *(DC)* through which we often re-live our experiences *(IEESc)* and construct *(DC)* meaning out of them.	*MfC* *DC* *IEESc*
	RQ #5	N2's RQ #5 copied here under *LDSc* in its entirety Imagery can augment the learning process for many domains of learning. For example, using imagery to learn how to cope and/or how to process events and feelings can be hugely beneficial for some people. Not everyone will resonate with an imaginal process in the same way but working through imagery to learn about oneself, about coping, etc. is an endeavor that can have significantly beneficial results in both a clinical setting *(TTPIC)* and simply in day-to-day life *(TTPIC)*. Above all, imagery creates *(TTPIC)* a unique narrative (*LCC*) through which we can develop *(TTPIC)* a relationship with our psyche and learn about ourselves. Of course, using imagery *(TTPIC)* to teach *(TTPIC)* a concept (i.e. in a classroom) can enhance *(TTPIC)* learning and retention *(DC)* of information (*LCC*).	*LCC* *TTPIC* *DC*
N3	RQ #1	Imagery is the cognitive generation *(DC)*	*DC*
	RQ #5	Learning can occur with or without imagery. However, there are many experiments in which images were learned, or during which imagery was used to facilitate *(DC)* learning. Images occur in nighttime dreams *(MfC)*, and one function *(DC)* of dreaming is to consolidate *(DC)* what has been learned during the day. Hence imagery can facilitate *(DC)* learning while someone is asleep.	*DC* *MfC*

Table L9

All Participants' Statements Coded Per RQ Under Multifaceted Category (MfC)

Expert	RQ	Table L9: MfC: Multifaceted Category Multiple aspects/domains, Significance, Time, Implications, Future research	Notes See also
B1	RQ #2	Maybe it's important to better understand it.	
B2	RQ #1	These phenomena typically do not happen during guided imagery *(TTPIC)* and are not necessary (*DC)* for therapeutic outcomes *(TTPIC)* with its use.	*TTPIC DC*
	RQ #1	Clinicians should be aware *(TTPIC)* of this phenomenon and verify *(TTPIC)* that the patient has become fully re-oriented *(StSc)* to his or her immediate environment at the completion *(TTPIC)* of a guided imagery intervention *(TTPIC)*.	*TTPIC StSc*
	RQ #3	I believe that every competent clinician should learn (*LDSc)* the significance of imagery in a person's life and learn its potential *(DC)* utilization in the treatment *(TTPIC)* of patients with mental and physical disorders (*HDSc*).	*Theme 3 LDSc DC TTPIC HDSc*
G1	RQ #2	Imagery is significant because it can provide insight, hindsight and foresight into an individual's health *(HSc)* and life.	*HSc*
	RQ #2	and due to its evocative nature an effective interface	
	RQ #3	Imagery is crucial *(HSc)* for me and has been for the majority of my life.	*HSc*
	RQ #4	Wow … this can be an entire book!	
	RQ #5	Imagery is a key to effective learning *(LDSc)* precisely because it links attitudes, beliefs, thoughts, feeling and behavior *(LDSc)*.	*LDSc*
G2	RQ 2/3	Imagery is profound	
	RQ #4	These two areas *(DC)* impact each other and can't be separated as a person is whole —the interface between body, mind, spirit (M-B-S).	*DC Extra section*
	RQ #4	This relationship is the most ancient and potent healing *(HSc)* resource *(TTPIC)* in the history of medicine and rituals.	*HSc TTPIC*

Expert	RQ	Table L9: MfC: Multifaceted Category Multiple aspects/domains, Significance, Time, Implications, Future research	Notes See also
H2	RQ #4	I believe that imagery combined with belief *(LDSc)* and expectation is the cornerstone of PNI.	*LDSc*
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional *(HDSc)*) construct experience *(IEESc)* of sensing ideas – past/present/future,	*StSc* *HDSc* *IEESc*
H4	RQ #3	Imagery processes *(TTPIC) & (DC)* provide *(TTPIC)* a context for experiential learning *(TTPIC) & (LDSc)* that is immediate, multi-dimensional,	*TTPIC* *DC* *LDSc*
	RQ #3	Thus, striving to excel in facilitating meaningful experiential learning *(LDSc)* opportunities is foundational to my clinical work (*TTPIC)*.	*LDSc* *TTPIC*
	RQ #4	It's a strong relationship. PNI gradually emerged from the recognition that when people are viewed and treated *(TTPIC)* multi-dimensionally, rather than only as bodies with symptoms *(HDSc)*, treatments *(TTPIC)* worked better. As the relationship *(HDSc)* between stress *(HDSc)* and immune functioning *(HDSc)* became clearer, and various focusing *(FISc)* and stress management approaches *(TTPIC)* were integrated into treatment *(TTPIC)* along with so-called alternative treatments *(TTPIC)* (such as acupuncture, nutrition, *(TTPIC)* etc.), treatments *(TTPIC)* continued to improve. At this point, it's well established that the use of imagery *(TTPIC)* to suggest *(TTPIC)* focus *(FISc)*, relaxation, healing, skillful coping, enhanced immune *(HDSc)* functioning *(TTPIC)*, and much more, is a vital component of good, multi-dimensional treatments. *(TTPIC)* As research gets more focused *(FISc)* on *how (TTPIC)* imagery enhances immune functioning *(HDSc)*, we may learn about physiopathways *(HDSc)* and develop *(TTPIC)* better targeted *(TTPIC)* imagery for specific health *(HDSc)* issues.	*TTPIC* *HDSc* *FISc*
	RQ #5	It's a strong relationship.	*Theme 2*
	RQ #5	As a parallel in hypnosis *(TTPIC)*, the power isn't in the suggestion *(TTPIC)* someone gives, rather it's in the person's response *(LDSc)* to it.	*Theme 2* *TTPIC* *LDSc*
	RQ #5	As a final comment, I don't distinguish imagery from hypnosis. They differ in form *(TTPIC)*, but not in terms of the process	*Theme 2* *TTPIC*

Expert	RQ	Table L9: MfC: Multifaceted Category Multiple aspects/domains, Significance, Time, Implications, Future research	Notes See also
		(TTPIC) for conducting *(TTPIC)* such sessions.	
H5	RQ #1	Imagery is an ultimate form *(DC?)* of freedom *(StSc)* where one has the potential *(DC)* for limitless self-expression *(LCC)*.	*DC* *StSc* *LCC*
	RQ #4	…my simplified understanding leads me to believe there is considerable overlap between the two.	*Theme 2c*
	RQ #5	There appears to be considerable overlap, from my perspective.	*Theme 1*
	RQ #5	All of which largely have to do with the symbiotic relationship between imagery and the learning domains.	*Theme 1*
H6	RQ #2	Hypnosis has a specific goal *(TTPIC)* in mind and, with practice, *TTPIC* leads to neuroplasticity *(DC)*.	*TTPIC* *DC*
	RQ #2	It is important to have a distinction between imagery and medical hypnosis.	*TTPIC*
N1	RQ #1	Every word *(LCC)* is a substitute *(DC)* for an image!	*DC* *LCC*
	RQ #2	Critical in every aspect	
	RQ #4	All directly interrelated	
N2	RQ #1	The imagery of the mind *(StSc)* is part of an ecosystem	*StSc*
	RQ #3	it is imperative to acknowledge, address and attempt to understand the imagery associated *(DC)* with this dimension *(StSc)* of their experience *(IEESc)*.	*StSc* *IEESc* *DC*
	RQ #3	Imagery is integral *(DC)* to the meaning-making *(LDSc)* aspects	*DC* *LDSc*
N3	RQ #2	I think that there is evidence that imagery can be used as a diagnostic tool *(TTPIC)* in assessing *(TTPIC)* an individual's physical, mental, or emotional health *(HDSc)*, and that it can be used as part of a therapeutic program *(TTPIC)* to improve or restore physical, mental, or emotional health *(HDSc)*.	*TTPIC* *HDSc*
	RQ #4	I think that imagery used *(TTPIC)* by skilled practitioners can be used to facilitate *(TTPIC)* the function *(DC)* of the immune system *(HDSc)*, hence it is an important topic in PNI *(HDSc)*.	*TTPIC* *DC* *HDSc*

Expert	RQ	Table L9: MfC: Multifaceted Category Multiple aspects/domains, Significance, Time, Implications, Future research	Notes See also
	RQ #5	Images occur in nighttime dreams, and one function *(DC)* of dreaming is to consolidate *(DC)* what has been learned *(LDSc)* during the day. Hence imagery can facilitate *(DC)* learning *(LDSc)* while someone is asleep.	*DC* *LDSc*

Table L10

All Participants' Statements Coded Per RQ Under Multisensorial Subcategory (MsSc)

Expert	RQ	Table L10: MsSc: Multisensorial Subcategory The Senses	Notes See also
B1	RQ #1	An image is a thought form with sensory qualities.	
	RQ #1	It's something the mind mentally sees, hears, smells, tastes, touches, and/or feels.	
B2	RQ #1	Guided imagery is defined by Astin [1] as involving the generation *(DC)* of different mental *(StSc)* images evoked *(DC)* by one or more of the five senses (visual, auditory, tactile, olfactory and gustatory).	*DC* *StSc*
	RQ #5	The children growing up, end up emulating *(LDSc)* some of these adult significant figures (*social domain of HDSc)* in their lives which ends up influencing *(LDSc)* their own imagery and personality *(LDSc)* when they become adults (*social domain of HDSc)*.	*LDSc* *Social domain of HDSc*
G1	RQ #1	uses sensory information	
	RQ #1	Images can be seen, heard, smelled, tasted or sensed	
G2	RQ #2	Imagery is profound in that a person's internal experiences *(IEESc)* of imagery, memories, dreams, fantasies, inner perceptions, and visions *(DC)*, sometimes involving one, several, or all of the senses, serves as a bridge for connecting *(TTPIC)* body, mind, spirit (*M-B-S*).	*IEESc* *TTPIC* *M-B-S*
H1	RQ #1	Mental representation *(DC)* of visual content and stimuli	*DC*
H2	RQ #1	A hallucination *(DC)* that incorporates one or more of the defined senses (visual, auditory, tactile, olfactory, kinesthetic, gustatory) or the less defined senses such as energy flow	*DC*
H3	RQ #1	I define imagery as the internal (mental *(StSc)* and emotional *(HDSc)*) construct experience *(IEESc)* of sensing ideas – past/present/future*(MfC)*, real and/or *(DC)* 'imagined'(*ImSc)*, whether these are sensed visually, auditorally, gustatorially, olfactory-ly, or kinesthetically – or, in various combinations multisensorally	*StSc* *HDSc* *IEESc* *MfC* *DC* *ImSc*

Expert	RQ	Table L10: MsSc: Multisensorial Subcategory The Senses	Notes See also
	RQ #5	internal images; …which by definition includes my multisensory imagery…	
H4	RQ #1	Generating *(TTPIC)* and utilizing *(TTPIC)* mental *(StSc)* images (i.e., internally *(IEESc)* generated visual representations *(DC)*)	*TTPIC* *StSc* *IEESc* *DC*
	RQ #2	So, the qualities *(DC)* (e.g., vividness, scope *(DC)*)…	*DC*
	RQ #5	Every image has correlates *(DC)* and consequences *(DC)*. These are necessarily physical *(HDSc)*, cognitive *(HDSc)*, sensory, and emotional *(HDSc)*.	*Theme 2* *DC* *HDSc*
	RQ #5	So, the imagery can be a powerful stimulus to learning *(LDSc)*, but only if the person sees and responds *(LDSc)* to it as such.	Theme 2, LDSc
H5	RQ #1	Imagery can also be defined as that of: Visual imagery; Auditory imagery; Olfactory imagery; Gustatory imagery; Tactile imagery; Kinesthetic imagery; Organic imagery.	
	RQ #2	The points on my coping card *(TTPIC)* are those which I selected and instantaneously produce *(DC)* pleasant meaningful *(LDSc)* images for me.	*TTPIC* *DC* *LDSc*
	RQ #5	Generally speaking, there appears to be some associated meaning *(DC)* with the saying passed which conjure *(DC)* images of what the sayings implied messages *(LCC)* were or how you fit into them.	*Theme 1* *DC* *LCC*
	RQ #5	…it was on a poster with two Clydesdales pulling this enormous load *(DC)*.	*Them 1* *DC*
H6	RQ #1	Visualization of a specific place *(DC)* in one's mind *(StSc)*, but not just visualization. You want all of the senses involved.	*ImSc* *DC* *StSc*
N2	RQ #1	The imagery of the mind *(StSc)* is part of an ecosystem *(MfC)* of subjective constructs experienced *(IEESc)* in a visual context;	*StSc* *MfC* *IEESc*
	RQ #2	Thoughts *(LDSc)* accompanied with distinct and vivid imagery may have a more marked influence on physical processes *(HDSc)* in the body, and therefore our health *(HDSc)*.	*LDSc* *HDSc*

Expert	RQ	Table L10: MsSc: Multisensorial Subcategory The Senses	Notes See also
	RQ #4	The imagery involved in any mental process *(StSc)* plays a causal role *(DC)* in the nature of the corresponding physiological response *(HDSc)*, with the specific response depending *(DC)* on the nature of the imagery.	*StSc* *DC* *HDSc*
N3	RQ #1	Imagery is the cognitive *(LDSc)* generation *(DC)* of sensory input that has been recalled *(DC)* from experience *(IEESc)* …	*LDSc* *DC* *IEESc*
	RQ #1	Imagery can be visual, auditory, kinesthetic, gustatory, olfactory, etc., but is devoid *(DC)* of non-sensory content.	*DC*

Note. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.

Table L11

All Participants' Statements Coded Per RQ Under Positive Adverse/Negative Subcategory (PANSc)

Expert	RQ	Table L11: PANSc: Positive Adverse/Negative Subcategory Effects on Health	Notes See also
B2	RQ #2	In my opinion, imagery can serve as a double edged sword. People who internalize *(IEESc)* negative imagery end up living out *(LDSc)* a self-fulfilling prophesy *(LDSc)* with negative outcomes *(TTPIC)* regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage *(DC)* in positive outcome *(TTPIC)* imagery end up with more successful positive outcomes *(TTPIC)* because of an internalized *(IEESc)* self-fulfilling prophesy *(LDSc)*. Much of these processes *(DC)* are happening spontaneously *(DC)*, automatically *(DC)* and subconsciously (*StSc*).	*Theme 2c IEESc LDSc TTPIC DC StSc*
	RQ #4	There are thousands of research articles that have shown how the central nervous system (*HDSc*) interacts *(DC)* with the immune system (*HDSc*) by either enhancing it or suppressing it.	*HDSc DC*
H3	RQ #4	…to directly influence an individual's BIOLOGY *(HDSc)*, preferably in a positive direction.	*HDSc*
	RQ #5	my expectation *(LDSc)* and motivation *(LDSc)* drive *(DC)* the evolution of positive imagery	*LDSc DC*
H4	RQ #2	…then suffer *(HDSc)* the physical *(HDSc)* and emotional *(HDSc)* detriments that go along with such negative imagery.	*HDSc*
H5	RQ #2	This enables me to take the time to pull a <u>simple</u> coping card *(TTPIC)* out which identifies *(TTPIC)* counter points to the negative.	*TTPIC*
	RQ #4	… the byproduct *(HDSc)* of this reduction would likely have other positive effects (i.e. in the area of PNI).	*Theme 2c HDSc*
N2	DQ #2	Thus imagery can have positive or adverse effects on health.	*Theme 2*

Table L12

All Participants' Statements Coded Per RQ Under Speech Subcategory (SpSc)

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
B1	RQ #1	thought form	mind mentally
	RQ #2	language	use to communicate
	RQ #3		teach, better heal
	RQ #4	consequence	imagine
	RQ #5	Learning and memory capabilities, the best way	communicate, reconcile
B2	RQ #1	generation, mental images, senses, images, goal psychophysiological state, relaxation, outcome, in mind immune system, cancer cells, subconscious issues, a solution, problem, experiences, range, techniques, visualization, meditation, prayer, artistic drawings, storytelling, altered state of consciousness, state, dissociation, differences, hypnotic trance, suggestions, post-hypnotic amnesia, behaviors, physical sensations, phenomena, therapeutic outcomes, trance-like state, suggestions, phenomenon, immediate environment, completion, intervention	involving, evoked, experienced, evoking, visualizing, attacking, experiencing, feeling healthy, well, exploring, imaging, to include, activated, include, experience, include, more responsive, develop, experienced, may spontaneously shift, be aware, re-oriented
	RQ #2	double edged sword, negative imagery, self-fulfilling prophesy, negative outcomes, health, aspects, lives, work, marriage, family, friends, positive outcome imagery, more successful positive outcomes, internalized self-fulfilling prophesy, processes	can serve, internalize, living out, regarding, automatically engage, end up, are happening spontaneously, automatically and subconsciously

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
	RQ #3	clinician, significance, life, utilization, treatment, mental and physical disorders, educators, coaches, influential positive leaders, role models, power of imagery	should learn, learn, should be familiar, learn, to use
	RQ #4	central nervous system, immune system, unique language, power of imagery, internalization, final outcome, treatments, future focused approached [*sic*], hypnosis, immune responses, cases, autoimmune disorders, immune responses, immune system, cells, tissues	interacts, enhancing, suppressing, speaks, conditioning, using, enhanced by, to enhance, to eliminate, attack
	RQ #5	children, parents, significant others, care, grandparents, siblings, uncles, teachers, attitudes, views, image, world, exposure, adults, significant figures, lives, personality	learn, involved, internalized subconsciously, role modeling, growing up, end up, emulating, ends up, influencing, become
G1	RQ #1	mental picture, a way of thinking	represented, vested, become part, influence
	RQ #2	insight, hindsight, foresight, perceptions, behavior, solution, outcomes, language, information, possibilities, evocative nature	provide, helps, think outside of box, coding, storing, expressing, planning, projecting, interface
	RQ #3	depth charge, truths, new way, of being	revealing, point
	RQ #4	language, the way, bidirectional loop	tied, communicate
	RQ #5	key	learning, links
G2	RQ #1	power, imagination, intention, healing	conscious use, activating
	RQ #2	internal experiences, memories, dreams, fantasies, inner perceptions, visions, senses, bridge, body, mind, spirit	serves, connecting

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
	RQ #3	knowledge & wisdom, symbolic imagery, metaphors, symbols, capacity, transpersonal, verbal thought, expanded states, consciousness	allows, to connect, translatable, emerge, beyond
	RQ #4	person as a whole, relationship, body, mind, spirit, resource	impact, can't be separated, interface
	RQ #5	process, internal experiences, emotions, qualities, outcomes, goals, ability, memory, need, healing	evokes, energize, access
H1	RQ #1	mental representation, content, stimuli	
	RQ #2	cell, system, body	image or picture (here as verbs), reflected)
	RQ #3	tool, individuals	help, want to change, improve, create
	RQ #4	purpose, intention	created
	RQ #5	compliment, attention	desire, intend, put
H2	RQ #1	hallucination, senses, energy flow	incorporates
	RQ #2	amygdala, difference, real, imagined, comfort, pain	imagine, achieve
	RQ #3	imaginations, anxiety, fear, self-mastery, self-confidence, self-esteem	use to create
	RQ #4	belief, expectation, cornerstone	combined
	RQ #5	imagination, knowledge, imagination coach, resource, inner creative strengths, thoughts, feelings, behaviors	to use, tap into, manage

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
H3	RQ #1	internal (mental and emotional) construct experience, ideas, past, present, future, real, imagined	sensing, sensed
	RQ #2	internal imagery, conscious, degrees of correlation, reality experience(s), imagination, perceptions, physiologic realities, desired outcomes, psychological and physiologic experiences, realities	focusing upon, utilizing, cultivating, to create, alter, contributing to, creating
	RQ #3	varying degrees, formal and informal hypnosis, belief, state of mind, focus, various desired images, desired outcomes, change, desired direction, pain, habituated behavior [habit], [patho] physiologic response, emotional challenges	create, evoke, reducing, relieving, eliminating, altering, modifying
	RQ #4	ability, essential ingredient, positive direction, potential, alterations, neurochemistry, neurobiology, immune system	directly influence, includes, effects
	RQ #5	internal images, behaviors, conscious and unconscious levels, unconscious, imagination, way of thinking, self-hypnosis, multisensory imagery, meditation, expectation, motivation, evolution, positive imagery, direction, desired, intended, desirable changes; good health, desired tasks	DRIVE, thinking, feeling, cultivate, DOING, do, drive, to image, sleeping, resting, exercising, maintaining, accomplishing
H4	RQ #1	mental images, visual representations, goal-oriented purpose, relaxation, emotional self-regulation, pain management, new adaptive behaviors, therapeutic context, application	generating, utilizing, internally generated, mental rehearsal, assumes
	RQ #2	emotional responses, physical processes, quality of cognition,	focus on, influences, depressing or anxiety producing, to catalyze - or

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
		qualities, vividness, scope, emotional valence, potential, physical and emotional healing, depression, association, cardiovascular disease, means, risk, heart disease, role, rejection, failure, abandonment, betrayal, humiliation, physical and emotional detriments, negative imagery	inhibit, are encouraging, early screening, identifying, plays, visualize, suffer, go along
	RQ #3	therapy, direct experience, imagery processes, context, experiential learning, multi-dimensional, potential, meaningful associations, new ideas, perspectives, behaviors, life, meaningful experiential learning opportunities, foundational	involves, teaching, learning, learn, focused, provide, holds, building, can enhance, striving, to excel, facilitating meaningful experiential learning (*put in both lists because of adverb-MES*)
	RQ #4	relationship, recognition, bodies with symptoms, treatments, stress, stress management approaches, treatment, alternative treatments, acupuncture, nutrition, focus, relaxation, healing, vital component, multi-dimensional treatments, physiopathways, better targeted imagery, health issues	emerged, are viewed, treated, worked better, immune functioning, became, focusing, integrated, to improve, use of imagery, to suggest, coping, enhanced immune functioning, enhances, functioning, learn, develop
	RQ #5	strong relationship, image, correlates, consequences, physical, cognitive, sensory, emotional, behavioral, experience, guidance, impact, duration, seconds, lifetime, perceived significance, stimulus, parallel, hypnosis, power, suggestion, response, form, terms, process, sessions	associated, generated, can range, depending, to learning, sees, responds, don't distinguish, differ, conducting
H5	RQ #1	form of freedom, potential, limitless self-expression, beginning, meaningful change, concept, hypnosis, Visual imagery, Auditory imagery, Olfactory imagery, Gustatory imagery, Tactile imagery,	practiced, think, do, defined

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
		Kinesthetic imagery; Organic imagery	
	RQ #2	concept, hypnosis, healthier choices, choices, myriad, effects, health, automatic thought, something negative, negative thoughts, work, stress, self-esteem, mood, interpersonal relationships, maladaptive functioning, shift, responses, triggers, plan, time, coping card, counter points, negative, nature of this practice, paired associations, good points, bad points, points, pleasant meaningful images, alternative emotion, panic, self-injurious behaviors	think, effects [*sic*], utilizes, to make, to identify, starts, interfere, increases, interfere, dampens, exacerbates, functioning, recognizing, thinking, to identify, pair, more readily bypass, regret, identified, to lead, enables, to take, identifies, occurring, helps, to breathe, breath [*sic*] out produce, Putting, produce, reducing
	RQ #3	moment, plan, in place, flow of thinking, stagnated thinking	Enables, to practice, remaining, practice, facilitates
	RQ #4	considerable overlap, hormones, corrosive, stress, byproduct, reduction, positive effects	created, help, reduce
	RQ #5	overlap, perspective, means, options, learning domains, adages, notion, thoughts, things, word, behaviors, habits, sayings, generation to generation, family, associated meaning, images, sayings, implied messages, way, the going, the tough, poster, Clydesdales, load, reason, image, breath, ability, vulnerability factors, symbiotic relationship	effects, do, to consider, naturally affect, attest, produce, become, passed, pass, speaking, appears, conjure, fit, picked, gets tough, get going, regain, to problem solve, reduce
H6	RQ #1	specific place, mind, senses	visualization, involved
	RQ #2	patients, medical hypnosis, goal, in mind, neuroplasticity	practicing, help, feel, helps, relax, practice, leads
	RQ	mental imagery, guided imagery,	

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
	#3	medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in imagination, daydreaming; focus, goal	
	RQ #4	self-hypnosis	got rid
	RQ #5	mental imagery, muscle memory, mental memory, neuroplasticity	can create
N1	RQ #1	thoughts, images, substitute	
	RQ #2	thought, prayer, spiritual forces, change	thinking, sets in motion, to bring about
	RQ #3	aspect	
	RQ #4		interrelated
	RQ #5	thought, prayer, behavior	affects
N2	RQ #1	mind, part of an ecosystem, subjective constructs, visual context, narrative architecture, thoughts, feelings	experienced, creates, accompanies
	RQ #2	thoughts, distinct & vivid imagery, marked influence, physical processes, health, fear, stress, release, adrenaline, cortisol, stasis, pleasantness, love, serotonin, dopamine, correlations, bodily & psychospiritual balance, some way, positive or adverse effects, health	accompanied, experiencing, associated, trigger, affect, thinks, manifests
	RQ #3	field of noetic science, inner experience, imaginal processes, transformative experience, existential crisis, dimension, experience, meaning-making aspects of any experience, medium, meaning	involves, exploration, includes, to understand, is imperative, to acknowledge, address, attempt to understand, associated, is integral, re-live, construct

Expert	RQ	Table L12: SpSc: Noun Descriptors & Modifiers used to Describe Imagery	Speech Subcategory Verb Descriptors & Modifiers used to Describe Imagery
	RQ #4	field of PNI, psychological processes, physiological response, mental process, causal role, nature of the corresponding physiological response, specific response, immune function, stress, immunological function, psychological foundations, positive impact, function, immune system	suggests, produce, plays, depending on the nature of the imagery, reduces, inside-out, attending
	RQ #5	learning process, domains of learning, events and feelings, imaginal process, endeavor, significantly beneficial results, clinical setting, day-to-day life, unique narrative, relationship, psyche, concept, information	can augment, using, to learn, to cope, to process, will resonate, working through, to learn, coping, creates, can develop, learn, to teach, can enhance, learning, retention
N3	RQ #1	cognitive, sensory input, experience, imaginative form, non-sensory content	generation, recalled, self-generated, devoid
	RQ #2	evidence, diagnostic tool, p/m/e health, part, therapeutic program	can be used, assessing, improve, restore
	RQ #3	example, conscious activity	conscious activity (?) directly related
	RQ #4	function, immune system	used by, to facilitate
	RQ #5	learning, experiments, images, nighttime dreams, function	learned, facilitate, occur, consolidate, learning, asleep

Table L13

All Participants' Statements Coded Per RQ Under State Subcategory (StSc)

Expert	RQ	Table L13: StSc: State Subcategory Level or state of consciousness, mind	Notes See also
B1	RQ #1	It's something the mind mentally…	
B2	RQ #1	Guided imagery is defined by Astin [1] as involving the generation *(DC)* of different mental images *(MsSc)* evoked by *(DC)* one or more of the five senses *(MsSc)* (visual, auditory, tactile, olfactory and gustatory *(MsSc)*). Such images *(MsSc)* are typically experienced *(IEESc)* with the goal *(TTPIC)* of evoking a psychophysiological *(HDSc)* state of relaxation *(TTPIC)* or with some specific outcome *(TTPIC)* in mind *(DC)* (e.g. visualizing *(MsSc)* one's immune system attacking cancer cells, experiencing *(IEESc)* oneself feeling healthy *(HDSc)* and well *(HDSc)*, exploring *(TTPIC)* subconscious issues, or imaging *(MsSc)* a solution *(TTPIC)* to a current problem.)	*DC MsSc IEESc TTPIC HDSc*
	RQ #1	Guided imagery is differentiated from hypnosis by the fact that it does not require the patient to be in an altered state of consciousness or experience *(IEESc)* a state of dissociation. Other differences include that people who are in a hypnotic trance are more responsive to suggestions *(TTPIC)*, frequently develop post-hypnotic amnesia, and their behaviors *(LDSc)* and physical sensations *(HDSc)* are often experienced *(IEESc)* as involuntary. These phenomena *(MfC)* typically do not happen during guided imagery *(TTPIC)* and are not necessary *(DC)* for therapeutic outcomes *(TTPIC)* with its use. However, some patients may spontaneously shift into a trance-like state even if the therapist does not give any suggestions for the patient to do so. Clinicians should be aware *(TTPIC)* of this phenomenon *(MfC)* and verify *(TTPIC)* that the patient has become fully re-oriented to his or her immediate environment at the completion *(TTPIC)* of a guided imagery intervention *(TTPIC)*.	*IEESc TTPIC LDSc HDSc MfC DC*
	RQ #2	Much of these processes *(DC)* are happening spontaneously *(DC)*, automatically *(DC)* and subconsciously.	*DC*
	RQ #5	Much of this is internalized *(IEESc)* subconsciously through repeated exposure *(LDSc)* and role modeling of the adults (*social domain of HDSc)*.	*IEESc LDSc Social domain of HDSc*

Expert	RQ	Table L13: StSc: State Subcategory Level or state of consciousness, mind	Notes See also
G1	RQ #1	Imagery: A mental picture	
	RQ #1	Attitudes, feelings, beliefs and ideas *(LDSc)* are represented (*DC)* and vested *(LDSc)* in images, symbols and mental pictures	*LDSc* *DC*
G2	RQ #1	Imagery is the conscious use	
	RQ #3	beyond personality with expanded states of consciousness	
H1	RQ #2	What we image *(ImSc)* or picture *(DC)* in mind	*ImSc* *DC*
H2	RQ #3	…children have amazing, uninhibited imaginations they can use to create *(TTPIC)* anxiety and fear OR self-mastery, self-confidence and self-esteem *(LDSc).*	*TTPIC* *LDSc*
H2	RQ #5	Working with children I act as their imagination *(ImSc)* coach *(TTPIC)* helping them to use this valuable resource *(TTPIC)* to tap into *(TTPIC)* their own inner creative *(IEESc)* strengths to manage *(TTPIC)* their thoughts, feelings and behaviors *(LDSc).*	*ImSc* *TTPIC* *IEESc* *LDSc*
H3	RQ #1	I define imagery as the internal (mental and emotional *(HDSc)*)	*HDSc*
	RQ #3	my belief is that hypnosis is a state of mind	
	RQ #5	…internal images *(MsSc)* we have DRIVE *(DC)* our thinking, feeling, and behaviors *(LDSc)*, at both *(DC*) conscious and unconscious levels, with the unconscious being the more important.	MsSc DC LDSc
H4	RQ #1	Generating *(TTPIC)* and utilizing *(TTPIC)* mental images *(MsSc)*	*TTPIC* *MsSc*
H5	RQ #1	Imagery is an ultimate *(MfC)* form *(DC?)* of freedom where one has the potential *(DC)* for limitless self-expression *(LCC).*	*MfC* *DC* *LCC*
H6	RQ #1	Visualization *(ImSc)* of a specific place *(DC)* in one's mind, but not just visualization. You want all of the senses (*MsSc)* involved.	*ImSc* *DC* *MsSc*
N2	RQ #1	The imagery of the mind is part of	

Expert	RQ	Table L13: StSc: State Subcategory Level or state of consciousness, mind	Notes See also
	RQ #3	The field of noetic science involves a deep exploration of inner experience *(IEESc)*, which of course includes imaginal processes *(ImSc)*. In order to understand *(LDSc)* a client/subject's transformative experience *(IEESc)*, existential crisis, etc., it is imperative *(MfC)* to acknowledge, address and attempt to understand the imagery associated *(DC)* with this dimension of their experience *(IEESc)*.	*IEESc* *ImSc* *LDSc* *MfC* *DC*
	RQ #4	The imagery involved in any mental process plays a causal role *(DC)* in the nature of the corresponding physiological response *(HDSc)*,	*DC* *HDSc*
N3	RQ #3	Imagery is an example of conscious activity, hence it is directly related my field. *(TTPIC)*	*TTPIC*

Note. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.

Table L14

All Participants' Statements Coded Per RQ Under Tool Technique Process Intervention Category (TTPIC)

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
B1	RQ #5	Imagery is the best way to communicate *(LCC)* with the feeling brain (DC) and to help reconcile these differences *(DC).*	*LCC DC*
B2	RQ #1	Such images *(MsSc)* are typically experienced *(IEESc)* with the goal of evoking a psychophysiological *(HDSc)* state *(StSc)* of relaxation or with some specific outcome in mind *(DC)* (e.g. visualizing *(MsSc)* one's immune system attacking cancer cells, experiencing *(IEESc)* oneself feeling healthy *(HDSc)* and well *(HDSc)*, exploring subconscious *(StSc)* issues, or imaging *(MsSc)* a solution to a current problem.)	*MsSc IEESc HDSc StSc*
	RQ #1	Bresler and Rossman, founders of the Academy of Guided Imagery, [2] expand their definition of guided imagery to include experiences *(IEESc)* that are activated by *(DC)* a range of techniques that include simple visualization, meditation prayer, artistic drawings, and storytelling.	*IEESc DC*
	RQ #1	Other differences include that people who are in a hypnotic trance *(StSc)* are more responsive *(StSc)* to suggestions, frequently develop post-hypnotic amnesia *(StSc)*, and their behaviors *(LDSc)* and physical sensations *(HDSc)* are often experienced *(IEESc)* as involuntary *(StSc)*. These phenomena *(MfC)* typically do not happen during guided imagery and are not necessary *(DC)* for therapeutic outcomes *(TTPIC)* with its use. However, some patients may spontaneously shift *(StSc)* into a trance-like state *(StSc)* even if the therapist does not give any suggestions for the patient to do so. Clinicians should be aware of this phenomenon *(MfC)* and verify that the patient has become fully re-oriented *(StSc)* to his or her immediate environment at the completion of a guided imagery intervention.	*StSc LDSc IEESc HDSc MfC*
	RQ #2	People who internalize *(IEESc)* negative imagery end up living out *(LDSc)* a self-fulfilling prophesy *(LDSc)* with negative *(PANSc)* outcomes regarding their health and other aspects of their lives such as work, marriage, family, friends, etc. On the other hand, people who automatically engage *(DC)* in positive outcome imagery end up with more successful positive *(PANSc)* outcomes because of an internalized *(IEESc)* self-fulfilling prophesy *(LDSc).*	*IEESc LDSc Dc PANSc StSc*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
	RQ #3	Following my comments and my answer to question 2, I believe that every competent clinician *(MfC)* should learn (*LDSc)* the significance *(MfC)* of imagery in a person's life and learn its potential *(DC)* utilization in the treatment of patients with mental and physical disorders (*HDSc*). Moreover, educators, coaches, and other influential positive leaders and role models (*social domain of HDSc*) should be familiar (*LDSc*) with the power of imagery and learn how to use it appropriately (*LDSc*) and ethically (*LDSc)*.	Theme 3 (MfC & *TTPIC)* Theme 3: *LDSc DC HDSc*
	RQ #4	The use of imagery is the use of a unique language *(LCC)* that speaks *(LCC)* directly to the immune system *(HDSc)*. The power of imagery has been documented in many publications showing both through conditioning and the internalization of final outcome of treatments, using a future focused (*FISc*) approached enhanced by hypnosis and imagery to enhance stronger and more effective *(DC)* immune responses *(HDSc)* or in the cases of autoimmune disorders *(HDSc)*, to eliminate excessive *(DC)* and aggressive *(DC)* immune responses *(HDSc)* that include a direct attack *(LCC)* of the immune system *(HDSc)* on one's own cells *(HDSc)* and tissues *(HDSc)*.	Theme 1 & 3 *FISc HDSc DC PANSc TTPIC LCC*
G1	RQ #1	Guided Imagery: A way of thinking	
	RQ #1	Images can be seen, heard, smelled, tasted or sensed *MsSc* in some way	*MsSc*
	RQ #2	This helps *(HSc*) people "think outside the box" (*LDSc*), for new perceptions *(DC)*, new behavior new solutions, and ultimately, new outcomes *(HSc*).	*HSc LDSc DC*
	RQ #2	Imagery is a natural language *(LCC)* for humans for coding storing (*DC)* and expressing information (*LCC)*; for planning and projecting possibilities	*LCC DC*
	RQ #3	…and point to new way…	
G2	RQ #1	Imagery is the conscious *(StSc)* use of the power of the imagination *(ImSc)* with the intention of activating physiological, psychological, and/or spiritual healing *(HSc)*.	*StSc ImSc HSc*
	RQ #2	serves as a bridge for connecting body, mind, spirit *(more findings)*	*M-B-S*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
	RQ #3	…allows for a person to connect…	
	RQ #3	…translatable to rational verbal thought *(LDSc &)*…	*LDSc TTPIC*
	RQ #3	Imagery has the capacity *(SpSc)* to connect…	*SpSc*
	RQ #4	…the most ancient and *(MfC)* potent healing (*HSc*) resource…	*MfC*
	RQ #5	The imagery process evokes…	
	RQ #5	…energize desired emotions, qualities, outcomes, or goals…	
H1	RQ #3	It is a tool to help individuals select what they want to change, improve or create for themselves.	
	RQ #4	PNI is more specific as to the purpose and intention *(FISc)* of the imagery created.	*FISc*
	RQ #5	Imagery is a lovely and literal compliment to what we desire intend *(FISc)*, and put our attention upon…	*FISc*
H2	RQ #2	…if the individual can imagine (*ImSc)* comfort instead of pain, they can achieve *(HSc)* it.	*ImSc* *HSc*
	RQ #3	…children have amazing, uninhibited imaginations they can use to create anxiety and fear OR self-mastery, self-confidence and self-esteem *(StSc)*.	*ImSc StSc*
	RQ #5	Working with children I act as their imagination *(ImSc)* coach helping them to use this valuable resource to tap into their own inner creative *(IEESc)* strengths *(StSc)* to manage their thoughts, feelings and behaviors *(LDSc)*.	*ImSc IEESc StSc LDSc*
H3	RQ #2	…therefore, that by focusing upon, utilizing, and cultivating our imagination *(ImSc)* (imagery) we can in fact alter not only perceptions *(DC)*, but also physiologic *(HDSc)* realities *(DC)* so as to create desired outcomes, and alter psychological *(HDSc)* and physiologic *(HDSc)* experiences, in a sense contributing to if not completely creating our own realities *(DC)*.	*Theme 3 MsSc DC IEESc ImSc HDSc*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
	RQ #3	…and my belief is that hypnosis is a state of mind *(StSc)* in which *through focused (FISc) imagination (ImSc) (imagery)* individuals create a focus *(FISc)* on various desired images of desired outcomes in order to evoke and create change in a desired direction (such as in reducing or relieving *(TTPIC*) pain *(HDSc)*, eliminating a habituated *(LDSc)* behavior [habit], altering a [patho] physiologic *(HDSc)* response such as in migraine *(HDSc)*, irritable bowel syndrome *(HDSc)*, asthma *(HDSc)*, etc.), modifying or eliminating emotional *(HDSc)* challenges such as anxiety *(HDSc)*, depression *(HDSc)*, et al)	*Theme 3 StSc FISc ImSc TTPIC HDSc LDSc*
	RQ #5	As such, as I cultivate my imagination (my way of thinking about what I'm DOING when I do self-hypnosis, which by definition includes my multisensory imagery *(MsSc),* OR meditation), my expectation *(LDSc)* and motivation *(LDSc)* drive *(DC)* the evolution of positive imagery *(PANSc)* in the direction of desired, intended, desirable changes; whether those are to image *(ImSc)* myself sleeping and resting more, exercising regularly, maintaining good health (*HDSc*), being efficient *(LDSc)* in accomplishing desired tasks, etc.	*TTPIC MsSc DC LDSc StSc ImSc PANSc HDSc*
H4	RQ #1	Generating and utilizing mental images (i.e., internally generated visual *(MsSc)* representations *(DC)*) for some goal-oriented purpose (e.g., relaxation, emotional self-regulation *(LDSc)*, pain management *(HDSc)*, mental rehearsal of new adaptive behaviors *(LDSc)*, etc.). This definition assumes a therapeutic context *(HDSc)* for its application.	*Theme 3 StSc MsSc IEESc DC LDSc HDSc*
	RQ #2	one's imagery has the potential *(DC)* to catalyze - or inhibit	*DC*
	RQ #3	So much of good therapy involves teaching and learning *(LDSc).* People learn *(LDSc)* much more easily when they're focused *(FISc)*, and they learn *(LDSc)* much better through direct *(DC)* experience *(IEESc)*. Imagery processes *(DC)* provide a context for experiential learning *(LDSc)* that is immediate, multi-dimensional (*MfC)*, and holds greater potential *(DC)* for building the meaningful *(LDSc)* associations *(LDSc)* to new ideas, perspectives, and behaviors *(LDSc)* that can enhance *(HDSc)* one's life. Thus, striving to excel in facilitating meaningful experiential learning *(LDSc)* opportunities is foundational (*MfC*) to my clinical work *(TTPIC).*	Theme 3 *LDSc FISc DC IEESc MfC HDSc TTPIC*
	RQ	It's a strong relationship. *(MfC)* PNI gradually emerged from the	*MfC*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
	#4	recognition that when people are viewed and treated multi-dimensionally *(MfC)*, rather than only as bodies with symptoms *(HDSc)*, treatments worked better. As the relationship *(HDSc)* between stress *(HDSc)* and immune functioning *(HDSc)* became clearer, and various focusing *(FISc)* and stress management approaches were integrated into treatment along with so-called alternative treatments (such as acupuncture, nutrition, etc.), treatments continued to improve. At this point, it's well established that the use of imagery to suggest focus, relaxation, healing, skillful coping, enhanced immune *(HDSc)* functioning, and much more, is a vital component of good, multi-dimensional *(MfC)* treatments. *(MfC):* As research gets more focused *(FISc)* on *how* imagery enhances immune functioning *(HDSc)*, we may learn about physiopathways *(HDSc)* and develop better targeted imagery for specific health *(HDSc)* issues.	*HDSc FISc HDSc*
	RQ #5	When someone has an experience *(IEESc)* of one kind or another associated *(DC)* with some imagery they've generated *(DC)* (either independently or through someone else's guidance), the impact *(HDSc)* range in its duration from mere seconds to a lifetime *(MfC)* depending on its perceived *(DC)* significance *(HDSc)*.	*Theme 2 IEESc DC HDSc LDSc*
	RQ #5	*(MfC):* As a parallel in hypnosis, the power isn't in the suggestion someone gives, rather it's in the person's response *(LDSc)* to it. As a final comment, I *(MfC):* don't distinguish imagery from hypnosis. They differ in form, but not in terms of the process for conducting such sessions.	*Theme 2 MfC LDSc*
H5	RQ #1	It can be practiced individually or alone. I think it is the beginning of meaningful *(LDSc)* change (i.e. as per a concept *(DC)* in hypnosis, what you think about effects what you do *(LDSc)*).	*LDSc DC*
	RQ #2	As per a concept in hypnosis *(TTPIC)*, <u>what you think about effects what you do</u> *(LDSc)*, if one utilizes *(TTPIC)* imagery to make healthier choices *(TTPIC)*, these choices *(TTPIC)* alone could have a myriad of effects *(HDSc)*.) However, it seems to me that the person has to identify *(TTPIC)* for themselves what would be important as it relates to their health *(HDSc)*.	*LDSc HDSc*
	RQ #2	When I am able to identify the shift *(TTPIC)*, I can pair *(TTPIC)*	*LDSc DC*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
		my automatic thought *(LDSc)* with something more productive *(TTPIC)* quickly and more readily bypass *(DC)* responses which I would otherwise regret.	
	RQ #2	In this example because I have identified "triggers" *(DC)* which tend to lead to the automatic thoughts *(LDSc)*, I have a plan *(TTPIC)* in place. This enables me to take the time to pull a simple coping card *(TTPIC)* out which identifies *(TTPIC)* counter points to the negative *(PANSc)*. By nature of this practice *(TTPIC)*, paired associations *(DC)* are occurring.	*DC LDSc PANSc*
	RQ #2	Imagery helps *(TTPIC)* me to breathe in my good points, and breath [*sic*] out the automatically thought *(LDSc)* of bad points. The points on my coping card *(TTPIC)* are those which I selected and instantaneously produce *(DC)* pleasant meaningful *(LDSc)* images *(MsSc)* for me. Putting this together, I suppose when individuals have readily available identified *(TTPIC)* things which instantaneously produce *(DC)* f.ex. an alternative emotion *(LDSc)*, this can be quite significant in reducing *(TTPIC)* panic *(LDSc)*, self-injurious behaviors *(LDSc)*, etc.	*LDSc DC LDSc MsSc*
	RQ #3	Mary note: entirety of H5's RQ #3 included here under TTPIC Imagery enables me to practice remaining in the moment. Because I have a plan in place for when I am not and practice it with regularly, imagery facilitates a flow *(DC)* of thinking *(LDSc)* versus stagnated thinking *(LDSc)*.	*DC LDSc*
	RQ #5	As previously stated, if how you think about *(LDSc)* something effects what you do *(LDSc)*, and imagery is a means to consider options, it will naturally affect other learning domains *(LDSc)*.	*Theme 1 LDSc*
H6	RQ #2	a. Practicing imagery can help patients feel relaxed. b. It is important to have a distinction *MfC* between imagery and medical hypnosis. Imagery to me just helps someone relax. Hypnosis has a specific goal in mind and, with practice, leads to neuroplasticity *(DC)*.	*MfC DC*
	RQ #3	a. Whether you call it mental imagery, guided imagery, medical hypnosis, clinical hypnosis, visualization, self-hypnosis, believed-in imagination, or daydreaming with a focus (FISc), it is all the same. b. And, when I do this guided imagery, etc., above, we have a specific goal in mind.	*FISc*
	RQ #4	It works. I got rid *(HDSc)* of my plantar warts with self-hypnosis.	*HDSc*

Expert	RQ	Table L14: TTPIC: Tool Technique Process Intervention Category	Notes See also
	RQ #5	a. Mental imagery can create muscle memory b. Mental imagery can create mental memory *(DC)* c. Mental imagery can create neuroplasticity. *(DC)*	*DC*
N2	RQ #5	…can have significantly beneficial results in both a clinical setting and simply in day-to-day life. Above all, imagery creates a unique narrative (*LCC*) through which we can develop a relationship with our psyche and learn *(LDSc)* about ourselves. Of course, using imagery to teach a concept (i.e. in a classroom) can enhance learning *(LDSc)* and retention *(DC)* of information (*LCC*).	*LCC* *LDSc* *DC*
N3	RQ #1	Imagery is the cognitive *(LDSc)* generation *(DC)* of sensory *(MsSc)* input that has been recalled *(DC)* from experience *(IEESc)* or that has been self-generated in an imaginative *(ImSc)* form.	*LDSc* *DC* *MsSc* *ImSc*
	RQ #2	I think that there is evidence that imagery can be used as a diagnostic tool in assessing an individual's physical, mental, or emotional health *(HDSc)*, and that it can be used as part of a therapeutic program to improve or restore physical, mental, or emotional health *(HDSc)*.	*MfC* *HDSc*
	RQ #4	I think that imagery used by skilled practitioners can be used to facilitate the function *(DC)* of the immune system *(HDSc)*, hence it is an important topic in PNI *(HDSc)*.	*MfC* *DC* *HDSc*

Appendix M

The Heart-Trinity Model: The Cognitive, Affective, and Psychomotor Learning Domains

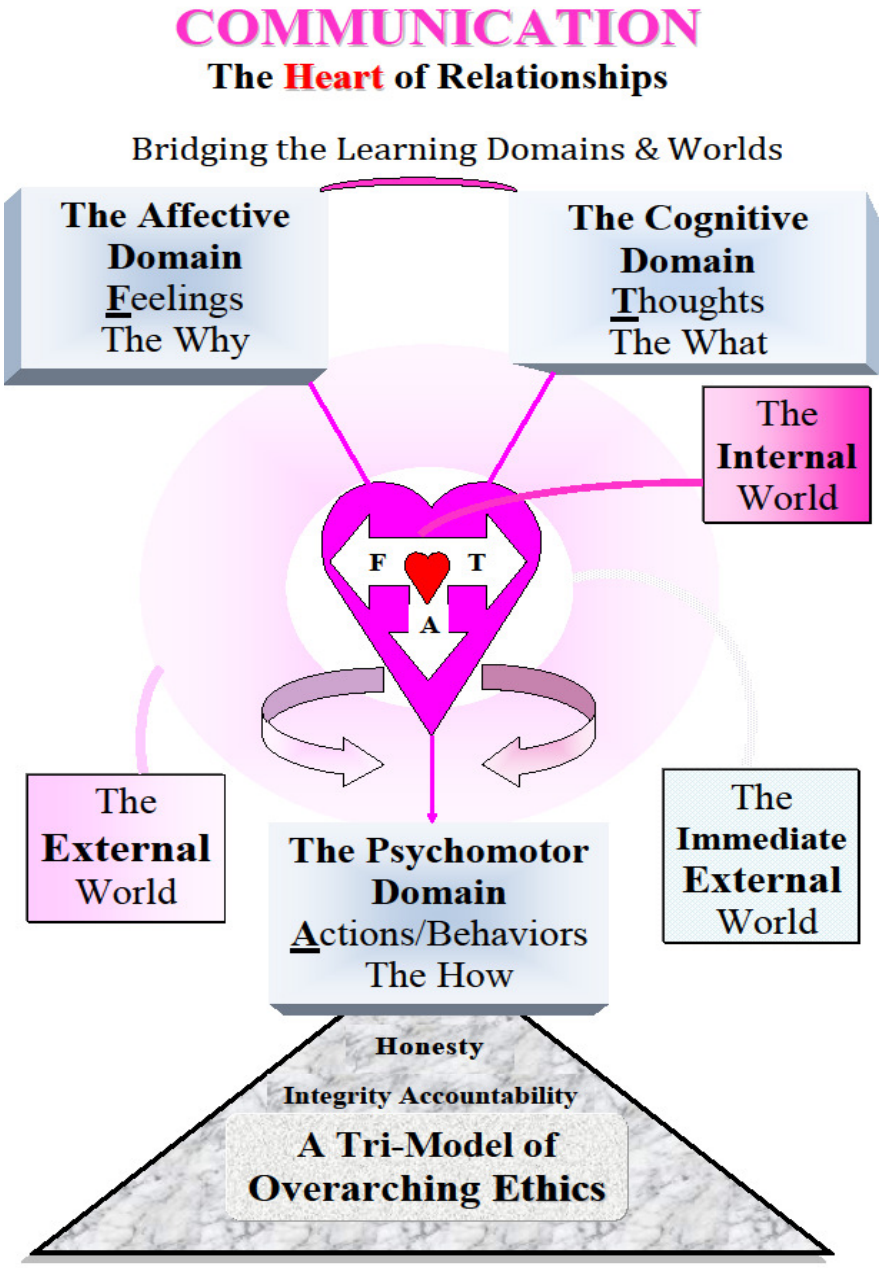

Figure M1. The heart-trinity model: The cognitive, affective, and psychomotor learning domains. Adapted from Appendix I: "The Heart-Trinity Model," by M. E. Singler (2013), *The search for imagery's meaning and significance across both guided imagery and hypnosis* (p. 102). Unpublished manuscript. Design dated July 23, 2012. Pilot theme #4: Imagery and communication. Poster Session at Saybrook University School of Mind-Body Medicine's Residential Conference, August 2012, San Diego, CA.

Appendix N

Pilot Responses to PRQ #1

Table N1

All Pilot Responses to PRQ #1: How Do You Define Imagery?

Subjects	Table N1: Pilot Research Question #1
G1	Imagery is the way we make sense of the world. Human beings think in terms of images. Words, sounds, smells, taste, visual images and physical sensations all are forms of imagery. We unconsciously use imagery to interpret what is going on around us, to keep ourselves safe, to communicate with other humans and to intention and manifest creative action in our lives. We can also use imagery in a conscious manner to change unhealthy thought or behavior patterns. We do this through paying attention to the meanings inherent in spontaneous images that arise in our daily lives. By being mindful of our dreams, our intuitive hunches or through techniques such as journaling, contemplation or therapy we can unearth images that hold great power to provide insight and healing. We can also use supportive techniques such as guided visualization or interactive guided imagery where we not only can explore the hidden meanings and messages in spontaneous images, we can also intention inner and outer changes and action that will transform the insights from these images into qualities that will assist us in living more balanced and healthy lives. Finally imagery can be used as a kind of rehearsal to help us perform better, or to help us structure our lives in a way that will allow us to achieve our goals and dreams. Studies have shown that imagined "visualized action and emotion" can be as real to our physiology as experiencing the real thing. I think that imagery is really where we actually live most of the time. It is important to note as well that Images, thoughts and emotions are tied together and are not separate from our bodies. We experience an image both in our minds and in our bodies.
G2	Internal representations with sensory qualities
G3	Imagery is the way the mind works.
H1	I define it in a word as visualization. In practice, this can denote images, but also thoughts, senses, active imagination, or any number of other types of reverie. This can then further encompass daydreams, visions, hypnagogia, and

Subjects	Table N1: Pilot Research Question #1
	dreams, including those that are hypnotic and those that are lucid.
H2	The experience of visual images when the eyes are closed.
H3	A form of self-communication in which affects and sensory perceptions are perceived by the subject as mental occurrences (passive imagery) or acts (active imagery). (2.) the creation of mental imagery though the use of word, sounds, emotions, and bodily sensations (as writing writing (*sic*), the spoken word, music, massage, aromas, etc.).
H4	I define imagery as a cognitive skill that involves the ability to use memory to re-create visual, auditory, tactile, and or olfactory experiences. These senses can also be used to create new experiences based on information available from memory.
H5	A multisensory capacity to use imagination that may involve all or some of the senses (visual, auditory, kinesthetic, olfactory, gustatory).

Appendix O

Summary Tables of the Pilot Responses That Supported the Pilot's Six Themes

Table O1

Pilot Responses That Supported Theme #1: Complex Language Construction

Expert	PRQ	Table O1: Pilot Responses That Supported Pilot Theme #1
Imagery is a very complex and dynamic construct which is reflected in the multiple forms of language or speech construction that were used to identify and describe its definition, meaning and significance.		
G1	PRQ #1	We *experience* an image both in our minds and in our bodies.
G1	PRQ #2	Imagery is at the *core* of all that I do. I believe it is the most powerful *conduit* of insight and personal growth we have at our disposal as human beings. Imagery is the magic that we all have at our disposal.
G1	PRQ #4	Imagery is at the *core* of mind-body medicine. Whether a healer is using hypnosis, biofeedback, bodywork, dance, coaching, energy medicine – imagery is the *central* principle that drives all of these healing modalities.
G2	PRQ #3	I believe that imagery is at the *core* of people's belief systems about illness, medicine, and healing, and is thus *central* to medical practice
H4	PRQ #1	These senses can also be used to create new *experiences* based on information available from memory.
H4	PRQ #2	Imagery is a *conduit* to intentional alteration of psychophysiological functioning, a key to accessing abilities not available from a strictly rational approach.

Table O2

Pilot Responses That Supported Theme #2: Active and Passive Qualities

Expert	PRQ	Table O2: Pilot Responses That Supported Pilot Theme #2
Imagery entails both a passive or unconscious (or subconscious) quality, as well as an active or conscious quality.		
G1	PRQ #1	We can also use supportive techniques such as guided visualization or interactive guided imagery where we not only can explore the hidden meanings and messages in spontaneous images, we can also intention inner and outer changes and action that will transform the insights from these images into qualities that will assist us in living more balanced and healthy lives. Finally, imagery can be used as a kind of rehearsal to help us perform better, or to help us structure our lives in a way that will allow us to achieve our goals and dreams.
G1	PRQ #1	We unconsciously use imagery to interpret what is going on around us, to keep ourselves safe, to communicate with other humans and to intention and manifest creative action in our lives.
G1	PRQ #1	We can also use imagery in a conscious manner to change unhealthy thought or behavior patterns.
G2	PRQ #4	Images are the closest we can get to subconscious thought. It can represent what people believe about their symptoms and illnesses and about their ability to heal, or respond to treatments
H3	PRQ #3	Because of what we know about neuroplasticity these beliefs, narratives, and memory materials are deeply embedded in the symptoms.
H5	PRQ #2	It can be used to focus attention inwardly in hypnotic induction and deepening, and also as a treatment technique with both psychological problems and mind-body issues.

Table O3

Pilot Responses That Supported Theme 3: Multi-domain Learning Construct

Expert	PRQ	Table O3: Pilot Responses That Supported Pilot Theme #3
Imagery is a multi-domain learning construct that includes interactive aspects of all three of the cognitive, affective and psychomotor domains.		
G1	PRQ #1	Imagery is the *way* we make sense of the world.
G1	PRQ #1	I think that imagery is really where we actually live most of the time, and that images, thoughts and emotions are tied together.
G3	PRQ #1	Imagery is the *way* the mind works.
G3	PRQ #2	Imagery is the basis for everything we do, including our professional practice. The mind works by creating images and everything we do is informed by the images we create and therefore, the stories we make with those images.
H1	PRQ #4	Imagery remains more related to the mind until it takes form, shape or substance and becomes a body of its own. For example, if I have a dream, I can describe the imagery and allow it to stay largely in the realm of the mind or I can dance, draw, or drum it, thereby bringing in more of the senses and making it more corporeal. The more I want an image to affect my physical being, the more important it will be for me to interact with it in some substantive way. I can make medicine of my images, just as images may have been part of a dysfunctional or even destructive pattern from the past.
H4	PRQ #4	Imagery involves cognitive and affective areas of the brain, allows access to self-healing abilities that are otherwise difficult to access and acts as the quickest demonstration of the mind-body connection. Example: Imagine a lemon…"

Table O4

Pilot Responses That Supported Theme 4: Form of Communication

Expert	PRQ	Table O4: Pilot Responses That Supported Pilot Theme #4
Although a complex and dynamic construct, its simplicity is also reflected in that imagery is merely a form of communication, albeit a complex form of communication given its internal physiological and emotional attributes that directly and indirectly influence one's health and sense of well-being.		
G1	PRQ #5	As Candice Pert found—our thoughts are tied to our physical chemistry.
G2	PRQ #5	Images can change physiology and imagery has been found to be able to up or down regulate immune function, likely through effects on the HPA axis and levels of informational molecules that effect both neurons and immune cells
G3	PRQ #5	There is evidence that the images we create may have an effect on our psycho-neuro-immune system
H2	PRQ #5	I think that given the links between images and emotional and physiological responses, images can impact PNI. As those images change, and our associations between images and emotions change, then the associations between images and PNI might be strengthened or weakened.
H3	PRQ #1	(1.) A form of self-communication in which affects and sensory perceptions are perceived by the subject as mental occurrences (passive imagery) or acts (active imagery).
H3	PRQ #2	Imagery is one of the fundamental ways we communicate with ourselves and [it] preceded speech in our evolutionary development. This makes imagery and imagining, like affect, <u>one of the primary and basic elements in my work.</u>
H3	PRQ #4	Since imagery is self-generated self-communication, it contains the meaning and power of both the source (illness belief systems) and the possible healing for many illnesses. This is accomplished though the HPA and other pathways, as well as messenger molecules (neuropeptidea).
H3	PRQ #5	The mechanisms are very complex. End organs and the immune system are affected directly and indirectly in a number of ways. What follows is the briefest of summaries:

Expert	PRQ	Table O4: Pilot Responses That Supported Pilot Theme #4
H3	PRQ #5	1. Imagery messages move from the cerebral cortex to the central limbic system and then to the hypothalamus. Hence the messages are [sent] to the anterior pituitary and thus to the glandular system. 2. There is also a hypothalamic-pituitary-adrenal axis that promotes the stress response involving the adrenal medulla which directly influences the immune system. 3. Messenger molecules (neuropeptides) are also released throughout the body. 4. There are [also] other nervous system pathways.

Table O5

Pilot Responses That Supported Theme 5: Theoretical Bridge

Expert	PRQ	Table O5: Pilot Responses That Supported Pilot Theme #5
Given its complexity as well as being a form of communication, imagery serves as a link in not only bridging an understanding of the theoretical basis of mind-body medicine to allopathic medicine, but it also serves as a link in bridging the potential to better understand the connection of mind-body medicine modalities to allopathic treatment modalities in addressing various chronic diseases.		
G1	PRQ #4	Whether a healer is using hypnosis, biofeedback, bodywork, dance, coaching, energy medicine – imagery is the central principle that drives all of these healing modalities.
G2	PRQ #5	Imagery can also alter blood flow to areas of the body, which can increase or decrease inflammation and rate of healing.
H1	PRQ #5	Hypnosis is one of the clearest ways imagery is used in an attempt to affect PNI and other mind-body interactions. It is likely through these systems that hypnosis is able to affect such bodily functions as bleeding and auto-anesthesia.
H1	PRQ #5	The more I bring the body to bear on an image from the mind, the more I embody that image and the more cellular activation and genetic expression can come from it. Thus, I take the psychological image, bring my neurological and physiological processes to bear upon it, and thereby imbue it with the potential to affect my body's sympathetic and parasympathetic homeostasis and protective equilibrium.
H4	PRQ #3	I believe that imagery is one way to access the Central Healing Response, the mind-body ability for self-healing. Medication, placebo, faith and other keys also access this response. Imagery is a more direct and honest way to access this ability.
H5	PRQ #3	These techniques can also be used with things like irritable bowel syndrome, with facilitating relaxation, with helping hemophiliacs control bleeding, with asthma patients, burns (imagining putting the burned area into an icy cold stream for both the pan relief and to reduce inflammation and promote healing.

Table O6

Pilot Responses That Supported Theme 6: Maximizing Its Benefits

Expert	PRQ	Table O6: Pilot Responses That Supported Pilot Theme #6
Inherent in imagery is its potential to provide the benefits of improving one's health and sense of well-being with the healing potential maximized, not only as a result of conscious choice, but the benefits of imagery are also maximized at deeper levels of subconsciousness, for example via a hypnotic induction.		
G1	PRQ #3	I think people who know how to utilize their power to imagine in a conscious and mindful manner are more likely to achieve balance and well-being. This process comes with practice and mindfulness. I think mindfulness practices actually help people become the "observer" of their thoughts and images. Then they have the option to choose to follow a thought or image or to let a destructive or simply not important or helpful image move on out of their consciousness.
G1	PRQ #3	Then the next step is to utilize one's ability to focus on an image to empower it, to give it fuel and energy to help one manifest whatever they need for optimal health and well-being. I think imagery is the key to healing illness, both physical and emotional. It is a natural skill we all possess; we just need to know how to harness the power in it. That is what we are doing in the [affiliation deleted] – helping people to consciously harness this power (in the old days this would be called magic) to heal themselves and others.
G1	PRQ #5	I think guided imagery is an especially effective and relevant technique to use for chronic diseases – especially those that impact the immune system and are sourced in chronic stress. Our world has become extremely stressful (maybe it always has been in some ways) – but now our minds are being bombarded with images (the very thing that can help us heal is also the part of our physical/emotional/cognitive make-up that is the pathway to our dis-ease).
G2	PRQ #3	Images represent what people believe about themselves, their relation to health and illness, and their potential to heal and recover. It plays a large role in determining what people believe they deserve and thus how they care for themselves.
G2	PRQ #5	Imagery-based suggestion is much more effective in inducing these [physiological] responses than non-imagery containing verbal suggestion.
H1	PRQ #2	Imagery tends to mean imagination to my patients. If they value their imagination, inventiveness, creativity and/or intuition, they can make great use of it. If they have even the potential to value it, I can help them

Expert	PRQ	Table O6: Pilot Responses That Supported Pilot Theme #6
		toward achieving that potential. If they discount this side of themselves in favor of strictly logical, rational thought, I can show them how their emotion is tied to their values often via the imagination, or help them remember a time when perhaps their imagination was experienced as more fascinating or captivating, as a way to motivate trying new behaviors
H1	PRQ #3	Imagery is a form of experience that can be catalytic in changing an individual's health and sense of well-being, both for better or for worse. Temporary imagery may produce short-term sensations, while ubiquitous and sustained imagery may be a factor or determinant in major aspects of health. Sometimes a failure to find solutions to problems is linked to a failure of the imagination, or even a failure to value it. Over-reliance on it, however, could lead to superstition, phobia, or even delusion, on the other side of the coin.
H3	PRQ #3	Psychopathology in general is associated with negative imagery that reflects negative self-narratives or belief systems and/or may be associated with negative memory material. Because of what we know about neuroplasticity these beliefs, narratives, and memory materials are deeply embedded in the symptoms.
H5	PRQ #3	I believe that imagery can be successfully used without hypnosis, but I believe that when a hypnotic induction has been done and the person is more intently absorbed and focused that it increases its potency.
H5	PRQ #5	Persons with high hypnotic capacity have different brain wave patterns than low hypnotizable individuals, and I believe that this enables them to utilize imagery even more powerfully because of the manner in which they are able to focus their minds. They simply have a better mind-body connection.

Appendix P

The Complexity of Responses in Defining Imagery

Table P1

Pilot Responses to PRQ #1

Pilot Responses to PRQ #1: Pilot Experts G1-G3 & H1-H5
• Imagery is the way we make sense of the world. (Pilot Expert G1)
• Internal representations with sensory qualities (Pilot Expert G2)
• Imagery is the way the mind works. (Pilot Expert G3)
• I define it in a word as visualization. (Pilot Expert H1)
• The experience of visual images when the eyes are closed. (Pilot Expert H2)
• A form of self-communication in which affects and sensory perceptions are perceived by the subject as mental occurrences (passive imagery) or acts (active imagery). (Pilot Expert H3)
• I define imagery as a cognitive skill that involves the ability to use memory to re-create visual, auditory, tactile, and or olfactory experiences. (Pilot Expert H4)
• A multisensory capacity to use imagination that may involve all or some of the senses (visual, auditory, kinesthetic, olfactory, gustatory). (Pilot Expert H5)

Table P2

Responses to RQ #1

Responses to RQ #1: Participants B1-B2, G1-G2, H1-H6, & N1-N3
• An image is a thought form with sensory qualities. (Participant B1)
• Guided imagery is defined by Astin [1] as involving the generation of different mental images evoked by one or more of the five senses (visual, auditory, tactile, olfactory and gustatory). (Participant B2)
• Imagery: A mental picture of something not actually present. (Participant G1)
• Imagery is the conscious use of the power of the imagination with the intention of activating physiological, psychological, and/or spiritual healing. (Participant G2)
• Mental representation of visual content and stimuli (Participant H1)
• A hallucination that incorporates one or more of the defined senses (visual, auditory, tactile, olfactory, kinesthetic, gustatory) or the less defined senses such as energy flow (Participant H2)
• I define imagery as the internal (mental and emotional) construct experience of sensing ideas – past/present/future, real and/or 'imagined', whether these are sensed visually, auditorally, gustatorially, olfactory-ly, or kinesthetically – or, in various combinations multisensorally (Participant H3)
• Generating and utilizing mental images (i.e., internally generated visual representations) for some goal-oriented purpose (e.g., relaxation, emotional self-regulation, pain management, mental rehearsal of new adaptive behaviors, etc.). (Participant H4)
• Imagery is an ultimate form of freedom where one has the potential for limitless self-expression. (Participant H5)
• Visualization of a specific place in one's mind, but not just visualization. (Participant H6)
• ALL THOUGHTS ARE IMAGES. (Participant N1)
• The imagery of the mind is part of an ecosystem of subjective constructs experienced in a visual context; it creates the narrative architecture that accompanies our thoughts and feelings. (Participant N2)
• Imagery is the cognitive generation of sensory input (Participant N3)

Note. [1] Astin, J. A., Shapiro, S. L., Eisenberg, D. M., & Forys, K. L. (2003). Mind-body medicine: State of the science, implications for practice. *Journal of the American Board of Family Practice, 16*(2), 137-147.