

Clinicians' Experiences of the Application of Interpersonal Neurobiology
as a Framework for Psychotherapy

Kelsey J. Myers

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Eric E. McCollum
Andrea K. Wittenborn
Angela J. Huebner

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By

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ABSTRACT

Interpersonal Neurobiology (IPNB) combines multiple fields of thought into one integrated framework. It has been utilized to expand conversation of the “mind” and promote well-being across disciplines. Current literature outlines the IPNB framework, including suggestions for its application to psychotherapeutic practice; however, limited research has examined clinicians’ experiences of using the IPNB framework. This study aims to add to the discussion on IPNB by examining the lived experiences of psychotherapists employing IPNB as a framework for their clinical practice. This study uses thematic analysis procedures to analyze data from a focus group consisting of psychotherapeutic practitioners. The investigation explores how the participants perceive the impact of their implementation of IPNB; as well as how they believe that using the IPNB framework has changed case conceptualization and intervention. Findings and implications are also discussed.

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CHAPTER 1: INTRODUCTION

The Problem and its Setting

The practice of psychotherapy, formally originating with Freudian psychoanalysis in the early 20th century, has undergone an evolutionary process that continues to present day.

Theories and models have moved from the concepts of psychoanalysis to behaviorism, evolved to cognitive based and client-centered treatments, and have ultimately brought the field to a place of postmodern thought and common factors. The models utilized by psychotherapists in present day are increasingly evidence-based and integrative in their utilization. With hundreds of models from which to choose as a therapist, it is becoming increasingly important for psychotherapists to adopt and utilize a guiding framework within which a chosen model may be employed. With major advances in research and technology, many would argue psychotherapy has entered the era of the brain (Schore, 2003; Siegel, 2010; Thompson, 2010). Psychotherapists today have access to research related to the brain that was previously unavailable and unintelligible for those outside the field of neurobiology. A framework has emerged from the findings of neurobiology that psychotherapists are beginning to utilize throughout the world. This framework has been entitled Interpersonal Neurobiology.

Interpersonal Neurobiology (IPNB) is a framework that emerged in the field of psychotherapy within the past two decades. A hybrid of neurobiology, sociology, anthropology, and psychology, IPNB allows professionals from seemingly independent fields to discuss and address common concerns and ideas. Clinicians and scholars such as Badenoeh (2008), Cozolino (2008), and Siegel (2010), have provided initial definitions, concepts, and interventions incorporating IPNB. Siegel suggests that IPNB is not a model itself, but a framework meant to inform all models and modes of psychotherapeutic practice (Siegel, Main, & Hesse, 2010). A discussion of the current practical utilization and application of IPNB in therapy is necessary to

provide the psychotherapeutic community with a guiding baseline for incorporating these important concepts. However, there is currently a lack of research investigating the practical experience of clinicians incorporating these concepts and practices in psychotherapeutic practice. Current publications provide evidence and anecdotal examples regarding the conceptualization of cases and practical application of IPNB in psychotherapeutic practice (e.g., Badenoch, 2008; Siegel, 2010; Thompson, 2010). These publications include case examples, directions for the application of interventions, and implications for the personal functioning of therapists.

IPNB is intended to be a framework that enhances clinical models currently used in therapeutic settings. It is not intended to be utilized independently as a model for therapeutic practice. Models such as Cognitive Behavioral Therapy, Emotion Focused Therapy, Narrative therapy, and Psychoanalysis, for example, may be enhanced by the incorporation of IPNB as a conceptual framework (Siegel, Main, & Hesse, 2010). Through IPNB, the neurosciences address the structural and biological foundations of concepts such as attachment and shed new light upon psychotherapeutic practice and its implications for clients and clinicians.

Current IPNB literature outlines the positive outcomes and potential benefits of the application of IPNB in psychotherapy (Siegel, 2006, 2010; Siegel, Main, & Hesse, 2010). This study will add to current literature by examining the practical experience and perceptions of therapists who ascribe to the concepts and practices promoted by this framework. This study aims to examine the experience of clinicians who choose to implement IPNB in psychotherapeutic practice with the goal of informing the clinical practice of the greater psychotherapeutic community. Without an evaluation of the experience of practicing therapists, the effectiveness and pragmatism of IPNB as a framework for psychotherapeutic practice remains unknown. Because IPNB is a relatively new framework, this study is designed to

determine the essence of the phenomenon of utilizing IPNB in psychotherapeutic practice by eliciting the experience of practicing therapists who have been exposed to the concepts of IPNB and investigate the potential implications of that exposure.

Significance

Interpersonal neurobiology is a framework that originated largely as a result of the “decade of the brain.” This time period took place from the early 1990’s to the beginning of the 21st century during which an explosion of brain research took place as a result of new imaging technology and resources (Schore, 2003). Siegel (2001) coined the term “interpersonal neurobiology” and began to refine the concepts as a framework to inform the practice of psychotherapy. Preliminary studies suggest that the practical application of IPNB concepts produces positive results for clients and clinicians alike (Siegel, 2010). Thus, increased exposure to the concepts of IPNB has the potential for catalyzing the healing process created by psychotherapeutic intervention.

In addition to implications for how IPNB affects clinical practice, it is suggested by scholars and clinicians that the practical applications of IPNB hold benefits for the personal experience of therapists. Siegel (2010), Thompson (2010), Cozolino (2008), and Badenoch (2008) suggest that caregivers and providers who personally and professionally employ the concepts presented in IPNB encounter shifts in their own neural integration, as well as attunement, attention and mindfulness, and in neuroplasticity. These shifts are associated with an improvement in relational functioning and an improvement in the overall sense of mental and physical well-being. With those benefits in mind, the importance of further exploration of the clinical applications and experiences of IPNB from the perception of therapists holds important implications, not only on a professional level, but on a personal level as well. A goal of this

study is to identify how therapists currently employing this framework experience the psychotherapeutic process. The implications of this study have the potential of providing insight into how new and veteran therapists can alter their practice to significantly impact the lives of their clients.

Rationale

This study employed the use of a focus group to collect data in a comprehensive and cohesive format. A focus group format was chosen in order to obtain a sense of the collective experience of the therapists included. The focus group was composed of therapists who have taken a course on IPNB that is provided in the Washington, DC area through an instructor who has been trained in the foundational concepts of IPNB, Curt Thompson, MD. The therapists voluntarily participated in a six-month to one-year-long class, meeting once per month, during which they were introduced to the concepts of IPNB and exposed to different implications for work with clients. Participants from this particular class have been chosen to allow for a collective language to be consistently used between members. Only students currently practicing some form of mental health or therapeutic service directly related to clients were included in the study.

Qualitative methodology was chosen for this study in order to capture a rich dataset focused upon the meaning the participants ascribe to a phenomenon. The methodology in this study provides the participants with an opportunity to describe personal experiences related to the use of IPNB in their clinical practice. The qualitative methodology seemed fitting for a study of this nearly unexamined topic to achieve a less directive, flexible setting for data collection as opposed to using quantitative measures that may limit the creation of meaning. A focus group was chosen over the option of individual interviews in order to obtain a cohesive idea of the

collective experience of using IPNB in clinical work (Krueger & Casey, 2000). In individual interviews, the participants may lose the opportunity to collaborate on meaning and remind one another of pertinent information discussed during the class periods. The instructor, Curt Thompson, MD, was not invited to attend the group due to concern that his presence could have detrimental impact on the freedom with which the participants could reflect on the concepts presented in the IPNB course.

Theoretical Framework

Phenomenology is the guiding theoretical framework for this study. Phenomenological research is meant to ascertain from several individuals the meaning of their lived experiences related to a particular phenomenon or concept (Creswell, 2007). The purpose of phenomenological research is to consider shared individual experiences of a particular phenomenon and reduce those experiences to an explanation of the “universal essence” (Creswell, 2007; White & Klein, 2002). Two of the major types of phenomenology include hermeneutical phenomenology and empirical phenomenology. The major difference between the two is the researcher’s role. With hermeneutical phenomenology, the researcher investigates a phenomenon and then reflects upon and describes essential themes as an interpretive process that takes place with the researcher. Empirical phenomenology requires the investigator to set aside his or her experiences and perceptions in order to examine a phenomenon from a new perspective (Creswell, 2007). This study will utilize hermeneutical phenomenology. One philosophical assumption of phenomenological research is that “knowledge is socially constructed and therefore inherently tentative and incomplete” (Dahl & Boss, 2005, p 65). A second important assumption of phenomenological research is that the researcher is not separate from the phenomena being studied. Therefore it is acknowledged that the feelings, beliefs, and

values of the researcher influence the questions asked of the participants as well as how the collected data is interpreted (Dahl & Boss, 2005). Both assumptions were important in the formulation of this study.

Phenomenology was used to guide the basic development of this study including the decisions to utilize qualitative methodology and to use a focus group as the data collection modality. The research question guiding this study requires an examination of clinicians' experiences of a specific phenomenon. Prior to addressing questions of the utilization and application of IPNB in psychotherapy, it is necessary to define the phenomenon and experience of using IPNB in psychotherapy. Qualitative methodology was chosen over quantitative methodology because phenomenological studies require the collection of individualized experiential statements that are then reduced to determine the "essence" of the experiences. The use of any type of standardized measure necessary for quantitative research would produce filtered responses that would corrupt the collection of rich experiential statements and nuances. A focus group was chosen as the modality for data collection in order to create an environment where individual experiences could be expressed and then accurately reduced, with the participants input, into a concentrated universal concept (Krueger, 1994; Krueger & Casey, 2000).

More specifically, this study aims to describe the essence of the experience of utilizing IPNB as a framework for psychotherapy. The thematic analysis honors the phenomenological approach of reduction as opposed to deduction and began with generalizations and moved as close as possible to the essence of the phenomena (Creswell, 2007; Dahl & Boss, 2007). This study utilized hermeneutical phenomenology. The data that were collected were analyzed by the investigator for themes and then interpreted for discussion. Phenomenology requires the

investigators to acknowledge biases and present them openly, acknowledging their influence on the interpretation of data. This researcher acknowledges several biases as influential in this research. One bias includes the belief that IPNB is an effective and helpful framework. This researcher also acknowledges her biases as a systemically trained marriage and family psychotherapist as influential in the research questions and interpretation of data.

Considering the basic assumption in phenomenology that knowledge is socially constructed, this study intentionally utilized a focus group in order to allow for the social construction of meaning within the group to establish the essence of their experience. In no way does this study intend to make causal implications or “truth” statements based upon its findings. The study is designed to elicit the participants’ collective experience from their unique perspectives as psychotherapists.

Purpose of the Study

The purpose of this study is to add to the body of growing research regarding the impact of the IPNB as a framework when applied to psychotherapeutic practice. The study is meant to examine the implications of using IPNB as a guiding framework and present them to an audience of clinicians entering the field, as well as veteran clinicians seeking to enhance their work. By examining the experience of clinicians, the pragmatic use of IPNB becomes increasingly defined and the ability of other therapists to apply IPNB as a framework may increase as well. Therapists seeking to optimize the healing process for their clients have the opportunity to consider the experiences of colleagues and consider possibilities for their own practice. Readers have the opportunity to examine the collective experience of those who have been educated in the concepts of IPNB and then decide independently if and/or how that framework may benefit their own practice or personal growth.

It is the intent of the researcher to incite further research and methods of tracking the use of IPNB in the therapy field. This study is meant to shed light on the experience of several therapists willing to discuss the impact or lack of impact they have observed while employing IPNB as a framework for psychotherapeutic practice. This study strives to answer the question: how do clinicians experience the use of IPNB as a framework in the practice of psychotherapy? More specifically, the research question driving this study is as follows: How is case conceptualization and clinical intervention affected by the use of IPNB in psychotherapeutic practice?

CHAPTER 2: LITERATURE REVIEW

The following is a review of the current literature addressing the clinical applications of IPNB as well as the implications for its use in psychotherapy. IPNB is an expansive framework; therefore the following literature review is limited to the scope of this project which includes a brief discussion of the basic concepts of IPNB, existing suggestions and possibilities for psychotherapeutic application of IPNB, and the influence of IPNB on the self of the therapist. While some literature has provided suggestions for therapists based on IPNB research, the research has yet to explore the perceptions and experiences of therapists who have received education on concepts of IPNB and its clinical implications and employed the framework in their practice. This study is intended to add to the literature by investigating and reporting the lived experiences of psychotherapists who have received education on the basic concepts of IPNB and its potential influence on their clinical practice. These experiences were examined in order to provide the perspectives of service providers, thus expanding available information on whether clinicians find the IPNB framework useful, the specific benefits they glean from using IPNB, and how it has affected them personally as clinicians.

Overview of Interpersonal Neurobiology

Interpersonal Neurobiology (IPNB) is a multidisciplinary framework based in science and includes aspects of interpersonal interaction and subjectivity (Siegel, 2010a). Siegel (2006) describes IPNB as an “interdisciplinary view in exploring the ways in which one individual can help others alleviate suffering and move toward well-being.” IPNB is designed to incorporate concepts from multiple fields, including anthropology, psychology, neuroscience, and sociology, in order to create a platform upon which these distinct fields can engage in fruitful conversation. Siegel (2006) describes a central tenant of IPNB as “a definition of the mind and of mental well-being that can be used by a wide range of professionals concerned with human development.”

Since the introduction of IPNB to the social sciences, and more specifically to psychotherapy, the conversation has been expanded. Thompson (2010) asserts:

“[IPNB] expresses the reality that the mind is ultimately a dynamic, mysterious confluence of the brain and experience, with many aspects of it deeply connected (or potentially so) in ways that often go unnoticed. The interactions within interpersonal relationships deeply shape and influence the development of the brain; likewise, the brain and its development shape and influence those very same relationships (Thompson, 2010, p. 6).”

For the purpose of this study, a comprehensive definition will be utilized. Interpersonal Neurobiology is an interdisciplinary approach which emphasizes the neuroscience findings regarding the mirror neuron system, attention and neuroplasticity and examines the independent fields of ‘knowing’ to assist individuals in developing and improving the integration of mind, brain, body and relational functioning (Siegel, 2006, 2010, 2010a; Thompson, 2010). There are several key components regarding how IPNB describes the functions of the “mind” and crucial components of well-being; they include integration, attunement/attention/mindfulness, memory, and neuroplasticity. These concepts will be described next.

Integration. Integration is formally defined as “the overall process of linkage of differentiated elements [within the mind] (Siegel, 2007, p. 61).” In the context of IPNB, integration is seen as the fundamental process in the development of personal well-being (Siegel, 2001). The movement toward a fully integrated mind is one of the primary objectives of therapy according to IPNB, and is characterized by F.A.C.E.S.; an acronym created by Siegel (2007). F.A.C.E.S. stands for flexible, adaptive, coherent, energized, and stable (Siegel, 2010, 2010a). It is concentrated effort toward attaining these states of being that is the goal for those seeking

“well-being.” Integration is described by Siegel (2010a) as a metaphorical river where harmony and integration make up the center channel and the two banks or boundaries of the river represent rigidity and chaos. At any point in time one may move closer to the rigid boundary and feel immobilized or toward the chaotic boundary and feel out of control; but when well and at ease, we are able to maintain a steady flow toward the center of the channel where a sense of harmony is maintained. Siegel and other IPNB scholars also describe domains of integration which are meant to direct integrative changes within the mind. These domains include integration of consciousness, horizontal integration, vertical integration, memory integration, narrative integration, state integration, interpersonal integration, and temporal integration (Siegel, 2010, 2010a; Badenoch, 2008).

Attunement, Attention, and Mindfulness. According to Cozolino (2008), the human brain does not exist in isolation and depends on connection to other living systems in order to survive. He asserts that “from conception to death, we impact and are impacted by the biology and behavior of those around us, and depend on the scaffolding of others for our survival and sustained well-being (Cozolino, 2008, p 13).” He goes on to assert that our species is born with brains that are immature and thrive and develop through interpersonal interactions. Because our brains evolve as social organs, it is arguable that humans are literally meant for and survive through relationships. Attunement is subjectively defined as a genuine feeling of connection, of “knowing” someone deeply or “taking in the essence of another person in a moment (Siegel, 2010, p 34).” The concept of attunement rests on the idea that a mind must be open and free of anticipatory assumptions in order to truly take in the experience of another. Thompson (2010) discusses attunement as the concept of “knowing and being known.” When attunement is established, the parties involved experience a sense of connection in which they can “feel felt”

by one another (Siegel, 2010; Thompson, 2010). The discovery of mirror neurons provides one neurological possibility for how energy is exchanged when attunement is occurring, though further research is needed in order to specifically link mirror neurons to attunement. However, because mirror neurons function as connectors between sensory input and motor output, there are implications for mirror neurons also functioning as connectors between the input we receive related to the functioning of others and how we can experience their state of being (Siegel, 2007b, 2010).

The first stage of attunement is focused attention. Thompson (2010) describes attention as the mind function that occurs when a person voluntarily, intentionally/involuntarily, or unintentionally acts on the world in which he or she lives. He asserts that many mental and physical actions depend upon what is attended to. Anatomically speaking it is the dorsolateral prefrontal cortex (DLPFC) that is responsible for our “focusing mechanisms.” This part of the brain is described as a “spotlight” or focusing mechanism that assists the brain with making synaptic connections and focusing the different elements of the brain that contribute to the process of concentrating on one cognition or visual/auditory stimuli (Silton, et. al. 2010; Thompson, 2010). In other words, the dorsolateral prefrontal cortex is the part of the brain that assists the brain with filtering extraneous stimuli and bringing attention to one thing. Attention, including the anatomical contributors is necessary in developing the ability to attune to others with intentionality (Siegel, 2007b, 2010a). With this in mind, and then considering Cozolino’s assertions (2008), without the ability to attend and attune, the brain is not able to develop to its potential in terms of interpersonal connection.

According to present research, one way of developing the DLPFC and the practice of attention and attunement is through mindfulness practice (Kabat-Zinn, 2003; Siegel, 2010a).

Mindfulness practice is described as the process of attuning to personal processes as a way of being open and understanding of the processes of those with whom one is relating (Siegel & Hartzell, 2003). Bishop et al. (2004) describe the operational definition of mindfulness as two fold. First, mindfulness begins with intentionally bringing awareness to the present internal and external experience by controlling, readjusting, and maintaining focused attention. Second, mindfulness is characterized by orienting the self to the experience of active, curious, non-judgmental, acceptance based meditation.

Recent research has documented the effectiveness of mindfulness practice in enhancing integrated functioning and increasing overall well-being. While the field of mindfulness research is fairly young, and sophisticated measures have not been constructed, there are promising provisional outcomes indicating mindfulness is a practice that positively affects overall human functioning and brain development. Brown, Ryan, and Creswell (2007) demonstrate that there is a growing consensus across many methodologies that the consistent practice of mindfulness contributes to the overall increased functioning of those who practice. A mindful orientation has the capability of expanding tolerance for pain and fear and has the potential of changing the function and structure of the brain, including negating some of the potential detriments to the brain's functioning created by the aging process (Badenoch, 2008).

In a review article by Baer (2003), the use of mindfulness training as clinical intervention is reviewed from the perspective of several empirical studies conducted with patients experiencing a variety of issues. The overwhelming conclusion, after considering multiple studies across methodologies, indicates that mindfulness training is helpful in the improvement of mental functioning as well as the alleviation of medical complaints. The research seems to be in agreement, however rudimentary in terms of empirical research, that mindfulness and

mindfulness practice have positive psychological, interpersonal, and neurobiological effects. Finally, studies have also shown that focused attention, which is affected by mindful practice, and increases the ability to attune, has a direct effect on the stimulation and growth of neurons, which is the foundation of neuroplasticity (Siegel, 2010a).

Neuroplasticity. A concept originating in the late 1960's to early 1970's, neuroplasticity is the term used to describe the flexibility of the brain and its ability to change based on the needs and functioning of its parts (Doidge, 2007). Prior to the 1960's brain researchers functioned under the assumption that the brain functioned much like a machine; a machine that had certain parts which operated in specific ways. The common belief of the time was that machines cannot adapt or change, they simply function. Once the "neuroplastic" revolution began, implications for all areas of the humanities, including all disciplines dealing with human nature such as psychotherapy, were enormous. The idea that the brain is "self-changing" incites the revelation that the basic structure of each brain is different depending upon the individual.

Siegel (2010a) asserts that because humans have the power to direct their own attention, that power has effect on the fire patterns of the brain and thus the power to shape and reshape the architecture of the brain. He goes on to describe neuronal firing and wiring as similar to muscle development. Just as we are able to concentrate on the development of particular muscle groups through concentrated exercise designed to target those areas, we are also able to stimulate firing in certain areas, zones, hemispheres, etc. through the focusing of attention in ways that integrate neural circuits. The implications of neuroplasticity are both positive and negative when considering our ability to attend to different stimuli (Doidge, 2007; Siegel, 2010, 2010a). If an individual chooses to allow the brain to continue to stimulate and develop neural networks that perpetuate the experiences of trauma for example, the brain will respond by structuring itself

around those firings. However, if a trauma survivor chooses to commit focused attention on the formulation of new neural networks and the integration of helpful firing patterns, the brain can then restructure to experience that same trauma very differently. An individual must be intentional about neuronal change or the brain will rely on default responses. Badenoch (2008) refers to psychotherapy as a process of “mutual engagement” that has the power to modify both the function and the structure of the brain and nervous system. Some of the practical applications of increasing neuroplasticity include aerobic activity, meaningfully novel experiences, focused attention exercises, a good diet, healthy sleep patterns, and engagement in interpersonal community (Thompson, 2010).

Interpersonal Neurobiology and Psychotherapy

Badenoch (2008) refers to psychotherapy within the IPNB framework as a process of “mutual engagement” that has the power to modify both the function and the structure of the brain and nervous system. She goes on to say that when clients are experiencing psychological distress based in well-established areas of neural disintegration, the therapist in the room has the power to “lend” their mind as a source of attention, attunement, and thus compassion for the suffering they are experiencing. Therapists have the unique opportunity to enter a client’s world through intentional, focused attention as well as the modeling of secure attachment. The client’s mirror neuron system is then able to build upon the therapist’s intentional actions and reactions until the client is able to function independently and begins to attend to his or her own body, feelings, and thoughts with novel integration and regulation (Badenoch, 2008). Hebb’s axiom states “neuron’s that fire together wire together” (Badenoch, 2008; Siegel, 2010; Thompson 2010). Therapists not only have the opportunity to educate clients about the neural functioning of the brain, but to directly affect the way neurons wire and rewire within the minds of their clients.

IPNB is based in the idea that the mind does not exist within a single individual entity or organ; rather the mind, including its development, is inseparably linked to the minds of others (Badenoch, 2008; Siegel, 2010, 2010a; Thompson, 2010). The mind is constantly redefined, reshaped, and reintegrated based on interpersonal interactions, novel experiences, as well as genetics and physiological functions (Siegel, 2006). Therefore, when a therapist encounters a client, both neurobiological processes (energy and information flow within the brain) and interpersonal processes (energy and information flow between brains) shape the interaction and has an impact on the functioning of both the client and the therapist.

Siegel (2010, 2010a) asserts that any therapeutic treatment that is effective is accomplishing the task of integration within the brain. Considering clients and conceptualizing cases with the influence of IPNB encourages the therapist to view the issues with which clients present as blockages to the natural or organic path of integration (Badenoch, 2008). We identify these blockages as either manifestations of rigidity or chaos in the client's presentation or a therapist's experience of the client's presentation (Siegel, 2010). Therefore a therapist will experience a client's change or progress as a calming of chaos or a softening of rigidity and movement toward coherence, which leads to well-being and an experience of flexibility, adaptability, coherence, energy, and stability (F.A.C.E.S.) (Badenoch, 2008; Siegel, 2006, 2010). Clients experiencing F.A.C.E.S are less likely to fall back into disintegrated states of dysregulated thoughts, feelings, and behaviors. According to Badenoch (2008), the "agenda" for therapeutic intervention can be conceptualized with two questions: "Where has integration broken down?" and "What can happen in the interpersonal system and in the individual mind to encourage integration to emerge (p. 51)."

Practical applications of IPNB are created from the basic concepts of integration, attention/attunement/mindfulness, memory, and neuroplasticity. All interventions rest on the concept of intentionally maintaining integrated connection in order to stimulate the generation of neurons and neural networks necessary for clients to integrate their minds and increase overall function both in their individual processes and interpersonal processes (Badenoch, 2008, Cozolino, 2008; Siegel, 2006, 2010). With the IPNB frame, age is not a definitive factor for neural generation or integration, and thus for therapeutic intervention. Research shows that the nervous system creates generative and regenerative change within the brain from birth until death (Cozolino, 2008). However, if novel change is not intentionally sought, the brain will reach a stage where neuroplastic change becomes increasingly difficult to establish. Therapeutic intervention can be equally effective for young children and elderly populations as long as intentional change and novel experiences are maintained over time.

One IPNB based intervention created by Schwartz (1997) was implemented with patients with Obsessive Compulsive Disorder (OCD). In his four-step process, patients used mindful awareness to re-label, reattribute, refocus, and revalue cognitions and compulsions. After ten weeks of treatment, subjective experience and objective brain scans both confirmed significant change in neural functioning (Schwartz, 1997). Other research determined that some of the practical applications of increasing neuroplasticity include aerobic activity, meaningfully novel experiences, focused attention exercises, a good diet, healthy sleep patterns, and engagement in interpersonal community (Siegel, 2010a; Thompson, 2010). While these are suggestions that are made to clients from the basis of other frameworks, the purpose and supporting concepts are unique to IPNB.

Meditation practice is one other way of assisting clients with increasing focused attention and decreasing mindless chaos or rigidity. When clients are open to participation, studies have shown that 10 minutes of mindfulness/meditation practice each day creates a substantial difference in physiological brain functioning as well as subjective experiences, described as “unique forms of consciousness (Badenoch, 2008; Dunn, Hartigan, & Mikulas, 1999).” Siegel (2010) describes meditation practice with clients as a two-fold process, both for the client’s well-being and also for the therapist. He continues by indicating that regular mindfulness/meditation practice on the part of the therapist actually has powerful implications for the functioning of the clients served. When therapists have better attention, emotion regulation, and integration, they are better able to expand their sense of self, remain open to new possibilities and perspectives, and ultimately serve clients with new possibilities and potential (Siegel, 2010). A therapist’s ability to nurture and remain open to the experiences of others is directly related to his or her level of integration and expression of flexibility, adaptability, cohesion, energy, and stability.

Interpersonal Neurobiology and the Self of the Therapist

The “self of the therapist” is described by Durtschi and McClellan (2010) as a “critical ingredient” when considering why psychotherapy is an effective catalyst to personal change. A therapist is considered an instrument in need of all of its “strings” in order to be as effective as possible. Ultimately, the elements composing the “self of the therapist” include a therapist’s training, morals and values, education, relationships, and any other aspect of the therapist’s character, personality, or presentation that affects the therapeutic process (Durtschi & McClellan, 2010). It is virtually impossible to accurately describe the active contributing factors to therapeutic change without considering the elements brought to the therapeutic relationship by the clinician.

Common factors research indicates that competency, compassion, and creativity in a therapist's presentation can outweigh and transcend potential limits imposed by skin color, gender, or age (Blow, Sprenkle, & Davis, 2007). Implications of this research indicate it is the elements composing the "self of the therapist" that influence therapy when compared to purely genetic and observable traits. Blow et al. (2007) go on to assert their belief that the reason marriage and family therapy is effective is because of common elements such as therapist competency and ability to cohesively apply all necessary skills to the therapeutic process. This review of common factors literature culminates in the argument that it is not the techniques or utilization of a model that creates change, but rather the therapist's understanding of the principles of change offered by multiple models combined with factors such as empathy, compassion, and creativity that elicits successful outcomes (Blow, et al. 2007). Lambert and Ogles (2003) suggest similar findings and indicate that significant improvements in psychotherapy patients can be accounted for by factors that are common across therapeutic models and treatments; common factors such as therapeutic alliance, therapist competency, and other interpersonal factors. The current body of knowledge points to the therapist as a crucial indicator for successful outcomes in therapy; therefore the therapist's development and concurrent maintenance of self also has important implications for therapeutic outcomes.

Siegel (2010) and Badenoch (2008) address the issue of therapist burnout indicating that stress reduction can be linked to the level of attuned attention given to the internal state and openness to internal experience. A study by Krasner et al. (2009) demonstrated that physicians who were taught practices aimed at attuning to themselves and reducing stress were less likely to experience clinician burnout. When clinicians apply the concepts they use in the therapeutic process to their own processes, they encounter changes to their own neural networks and

integration. Because therapists who practice IPNB are well aware of how the brain operates (as far as “knowing” is possible at this stage in neurobiology research), the possible transference issues that may plague therapists in other settings are observed and processed from a F.A.C.E.S standpoint and understood from a “brainwise” perspective that diminishes the possibility of vicarious trauma reactions or burn out (Badenoch, 2008; Siegel, 2010).

CHAPTER 3: METHODS

Design of the Study

This study is qualitative in design and data were collected through the use of a focus group in an effort to present a rich and comprehensive description of how therapists in one particular training group currently employ the framework of IPNB in their professional psychotherapeutic practice. Again, for the purposes of this study the phrase “IPNB framework” will be defined as an interdisciplinary approach which emphasizes the neuroscience findings regarding the mirror neuron system, attention, and neuroplasticity and examines the independent fields of ‘knowing’ to assist individuals in developing and improving the integration of mind, brain, body and relational functioning (Siegel, 2006, 2010). The participants recruited to participate in this study include mental health professionals who attended the 2008-2009, 2009-2010, and/or 2010-2011 Interpersonal Neurobiology classes conducted by Curt Thompson, MD. A focus group was conducted in order to gain collective insight into the ways in which current therapists employ the framework of interpersonal neurobiology in different aspects of their psychotherapeutic practice.

Research Participants

Focus group participants were drawn from the student roster for Dr. Thompson’s 2008-2009, 2009-2010, and/or 2010-2011 Interpersonal Neurobiology classes. Participants were required to be clinically active and report practicing in the field of mental health for two years by the time of the focus group. Additional criteria for participation included mastery of the English language and a willingness to volunteer time to participate in the focus group. There was no monetary or other compensation for participation. Participants were required to identify themselves as utilizing the IPNB framework as defined above, at least in part, and be willing to discuss that utilization, in their practice of psychotherapy.

Description of the Interpersonal Neurobiology Course

Dr. Curt Thompson's Interpersonal Neurobiology course was chosen for this study due to the content and intention of the course itself, as well as the accessibility to information presented by the instructor. Due to the lack of other available structured IPNB training in the area, this course created a baseline for ensuring participants had a consistent base knowledge between them from which to conduct this research. The course began in 2006 and has grown in size from approximately 7 participants to the last class involving 22-25 participants. The course is designed around the ideas of integration and includes experiential exercises congruent with IPNB principles as well as information presented by Thompson and his associates. The course includes an emphasis on the application of IPNB within psychotherapy and with clients. The composition of the participants generally includes mental health professionals, church leaders, and other interested community members with backgrounds unrelated to the mental health profession. The course changes in its focus from year to year, but has a consistent underlying curriculum that always goes through the following topics: anatomy of the brain, the nine domains of integration, suggestions for how to educate and empower clients toward change, as well as experiential exercises aimed at assisting participants with experiencing change themselves. The course has had an increasingly influential focus on Christianity and spiritual links between neurobiology and concepts such as "being know" in relationship to others and God. See Appendix B for an outline of the course curriculum.

Procedures

As previously described, the sample for this study was recruited from the class roster for Dr. Curt Thompson's 2008-2009, 2009-2010, and 2010-2011 Interpersonal Neurobiology classes. Because the purpose is to determine the essence of the experience of clinicians utilizing

IPNB, it was necessary to establish that the participants have been exposed to similar information pertaining to IPNB. Because there is currently no structured or established certification or curriculum for teaching IPNB, the utilization of the class roster from Thompson's course provides a baseline of information common to all participants. The roster of course attendees was contacted via email and asked to participate. If interested, potential participants were screened by phone or email to determine if they met the inclusion criteria. After multiple emails were sent to approximately 35 clinicians describing the study and inviting them to participate, the researcher received 11 email responses. Three responses indicated scheduling issues preventing their participation and two indicated they did not meet the inclusion criteria of being mental health providers. Finally, a sample of six participants volunteered and was selected to participate. The reason for a complete lack of response from the remaining 24 therapists is unknown.

The focus group was scheduled for a two-hour block of time. The chosen participants were provided with a consent form ahead of time to review. The consent form was then discussed verbally and signed during the first portion of the group session. See Appendix A for the Informed Consent. Data was collected after approval from the Institutional Review Board. See attached file for IRB approval letter. The focus group was video and audio recorded to allow for transcribing. After consent was given by all participants, the researcher read the purpose of the focus group and began discussion utilizing a set of questions delineated below. The topics of the focus group included the following: questions related to the participants' experiences in Dr. Thompson's class including reflections regarding perceived important topics and material; how the participants are currently utilizing aspects of IPNB in their clinical practice practically speaking and philosophically speaking; reflections regarding if and/or how they feel their

practice of psychotherapy has changed since taking Dr. Thompson's class; how they feel the use of IPNB affects their clients; if and/or how the use of IPNB as a framework has been personally beneficial; and how the use of IPNB has affected their perception and experience of psychotherapy in general. After the conclusion of the focus group the tape was transcribed word-for-word and was analyzed using thematic coding (Braun & Clark, 2006).

Measures

The topics proposed in the focus group were semi-structured and began with a broad focus moving toward a narrowed focus on elements of participants' experiences (Krueger, 1994). The focus group lasted for two hours allowing for the development of collective reflection. The questions began with broad topics in order to allow for some interpretation from the participants, but then included specific prompts in order to add structure to the conversation. As the conversation developed the researcher remained open to the direction of the group and probed with specific questions for the purpose of clarifying meaning. The following is a list of questions that were asked as well as clarifying queries that were directed to the participants in the group:

Introductory Question/ Ice Breaker: What were the most salient or important concepts, ideas, or feelings and experiences you have taken from being a part of the IPNB course.

1. How, if at all, did exposure to interpersonal neurobiology (IPNB) change the way you conceptualize cases and plan treatment for your clients?
2. How, if at all, has exposure to the basic concepts of IPNB changed your "presence" in the therapy room? Presence will be defined as awareness, attention, and attunement to your experience in the room as well as the client's experience in the room.
3. How does the framework of IPNB affect the utilization of your preferred models of psychotherapy

- a. What does this look/feel like in the therapy room?
- b. Is anything different about your utilization of techniques and models changed now that you have a base knowledge of IPNB?
- c. Would you provide an example?

Analyses

Once the data was collected a tape based analysis with a word-for-word transcript was used to begin the process of open coding for thematic analysis. The coding included analysis of words, context, internal consistency, and specificity of responses (Kruger, 1994). In this study, reliability was established through the use of multiple coders, the primary investigator and co-investigator, in order to establish inter-rater reliability. The initial open coding was conducted by at least two researchers and compared in order to identify overt cultural/experiential bias. Axial coding was utilized to further determine causes, context, contingencies, and relationships between categories and subcategories, in order to better understand the therapists' experiences (Moon & Trepper, 1996.) The entire analysis was situational in nature in order to allow for appropriate responsiveness to remain true to the inductive properties of this qualitative research (Krueger, 1994). A theme was determined by the prevalence of concepts among members of the focus group as well as the identified importance of that concept. Due to the nature of qualitative analysis the condition under which themes were identified remained flexible and shifted as a result of the data collection process (Braun & Clark, 2006). Themes were identified among and within explicit surface meanings of the dataset rather than considering latent level data analysis to examine underlying meanings. Analysis included the complete dataset in order to provide descriptions of principal themes as opposed to analyzing one particular theme or aspect of the

dataset. Analysis was primarily inductive in order to prevent fitting data into a pre-existing set of expectations or codes (Braun & Clark, 2006).

CHAPTER 4: RESULTS

The results of this study reflect the phenomenological purpose with which they originated. The purpose of this study is to understand the experiences of psychotherapists who have been exposed to and are currently utilizing the framework of Interpersonal Neurobiology in their psychotherapeutic practice. More specifically, the research question being addressed is: how is case conceptualization and clinical intervention affected by the use of IPNB in psychotherapeutic practice. Thematic analysis was used to reduce data collected in a focus group setting into a rich description of the “essence of experience” (Creswell, 2007; White & Klein, 2002). Participants were asked a series of questions designed to assist them in expressing the essence of their experience with utilizing interpersonal neurobiology as a framework for their clinical practice. The following is a description of the themes that emerged from the collected data.

Demographics

These results were gathered from the transcript of a focus group held by researchers on July 1, 2011 at the Northern Virginia Center of Virginia Polytechnic Institute and State University. Among the six participants, two were male and four were female. The participants in the focus group consisted of five licensed psychotherapists and one Well-Being Coach, all practicing in the northern Virginia and surrounding areas. Each mental health practitioner reported a different specialty including but not limited to: addictions, families of the seriously mentally ill, family therapy including children and adolescents, adults and couples, mindfulness therapies, and collaborative divorce. All participants had been practicing psychotherapy more than two years at the time of the focus group and experience ranged from four years of practice to 30 years of practice. All participants had taken at least six months of Thompson’s

Interpersonal Neurobiology course, and one participant had been involved with the class for three years. All participants indicated coming from a Christian perspective and participating in spiritually based practices either personally, professionally, or both. Several participants made statements indicating the direct practice of spirituality in practice with clients, such as prayer or spiritual imagery, however some participants indicated they do not regularly incorporate spiritual practices with clients.

The ages of participants ranged from 32-63 with a majority of the participants being over the age of 50. When asked to describe their clinical practice prior to exposure to IPNB participants described their practice as a.) “Integrated systemic” including Brief Solution Focused Therapy, Narrative Therapy, and interventions influenced by Bowen; b.) Goal and change oriented; c.) Integrated client centered including psychodynamic, EMDR, family systems, Internal Family Systems, cognitive therapies, and Brief Solution Focused Therapy; d.) Solution focused, Emotion Focused, and client centered with a psychodynamic lens; e.) Cognitive Behavioral Therapy with some solution focused ideas; and f.) Cognitive Behavioral Therapy with some Psychoanalysis. When asked how they would define their work after being exposed to IPNB, participants made the following statements.

One participant said, “...the IPNB material has shifted me more to redefining what solution based looks like and alternate ways of getting to that change point.” Another participant indicated, “[My practice] has changed as I am using those models in addition to helping clients identify their purpose/calling to obtain true fulfillment and identity (which ends up bringing healing to the presenting problem).” A third participant said, “Due to IPNB training, as well as MBCT training, use of mindfulness personally and professionally, and IFS/EFT/attachment based trainings, I would say my theory has expanded to include IPNB-based case

conceptualization and interventions.” A fourth stated, “Having taken the [IPNB course], it's changed my practice in a few ways: when able, I educate more about the brain and I ask folks to read Curt's book (or something similar on the brain). In session I have them experience mindfulness and encourage them to learn meditation. And of course I encourage them to pay attention to what they're paying attention to.”

Participants also discussed a change in the definition of the goal of their work with clients and a shift in their definition of change or pathways to change. All participants indicated some positive shift in their work or experience of their work, even if the shift was relatively minor.

Credibility and Trustworthiness

Researchers contacted as many potential participants as possible, considering inclusion criteria, to participate in the focus group. As many participants as met the inclusion criteria and were willing to participate were included in the focus group. Due to the small number of volunteers one focus group was determined to be appropriate for collecting the data necessary for this study. During the focus group, the co-investigator took notes and video/audio taped in order to capture verbatim responses as well as to record the experience in the room during the session. Directly following the conclusion of the focus group the co-investigator recorded key thoughts and reflections to maintain the authenticity of the responses and present reflections as clearly as possible. The focus group was transcribed verbatim and themes were established through analysis by the researcher and committee co-chair.

Phenomenological Themes

The first topic covered in the focus group was based around case conceptualization and the different elements participants perceived as influences to the way they viewed clients and

their treatment. The participants provided information that addressed changes in their consideration of case conceptualization as a result of exposure to IPNB and its basic elements. The next topic covered dealt primarily with the utilization of interventions and how their practice of therapeutic intervention changed as a result of their training in IPNB. Ultimately, the responses provided by participants provided insight into both case conceptualization and implementation of interventions from an IPNB lens, however unanticipated depth was provided in terms of the participants overall reaction and experience of IPNB as a guiding framework.

The following themes indicate implications for case conceptualization and interventions, however also provide insight into the essence of the therapists' experiences incorporating the basic principles of IPNB.

Theme 1: Spirituality. Spirituality was a theme discussed by multiple participants throughout the course of the focus group. Participants indicated that one effect of being exposed to IPNB, particularly Dr. Thompson's course on IPNB, was an increase in the value placed upon their experience of spirituality in the therapy process as well as an increase in value placed upon the spirituality expressed by clients. A change in intervention with clients was discussed when multiple participants indicated they pray with clients as a way of increasing connection and helping them to "feel known" by God.

I think that what's most helpful for me, there's several concepts that I think that the primary one was understanding the difference between the left-brain and the right-brain. 'Cause there's a lot of clients who, you know, are stuck in their intellectual, rational, analytical mind and the majority of my clients are Christians and they are, sort of, stuck in whatever presenting problem, you know,

they come in with, and they want to incorporate their relationship with the Lord, so I find that they are stuck because they're not experiencing an intimate personal relationship with Christ and they're wanting Him to be a part of their healing process, so um you know Curt says that, you know, emotion is a way the brain organizes itself, so I've learned with each individual client how to help them access their right brain, their intuition, their imagination, emotion, and helping them experience God rather than just intellectually knowing about Him. –

Participant 05

Participants discussed spiritual practices as neurologically integrative tools used to promote healing. Integration was discussed in terms of right/left brain synchronicity through emotional connection with God as well as integration through connection with the therapist's experience. The participants indicated a change in the way cases were conceptualized based upon IPNB's principle of integration.

An additional thought for me that comes out of his work is that the focus on attachment and being secure. And I also appreciate, from a spiritual dimension, you think of vertically in terms of, you know, the, you know, that God and Jesus connection that we have, you know, being able to recognize that in sessions and also being able to think about it myself in terms of how attached I might feel or how attached, it sounds like, you know the folks are that I've been working with.

– Participant 04

The idea of “feeling felt” was a strong theme independently and will be discussed next, however the theme of “feeling felt” through spirituality and spiritual practices was discussed by multiple participants as being increasingly important since their exposure to IPNB.

... And for me personally, the concept of feeling felt has been powerful, and the concept of being known, I guess, sort of tied together. I've really learned to, when I am sitting with a client especially, initially to ask myself, "Am I really listening to their story? Am I even feeling in myself what I'm feeling based on what they're sharing?" "Um Because I know that the Lord has put me in their life as their counselor, so I realize that I'm the vehicle that He is going to be working through. So if I'm thinking something, if I'm feeling something, you know, I've learned to start, you know, sharing that or asking, "What do you think I'm feeling about this part of your story?" and really trying to let them experience being known in what they are sharing rather than I think my tendency prior to that was to already start to think about more from what the CBT method well, you know, what tools am I gonna, you know, use with them, and just sort of stepping away from, you know, the spirit of the moment and really trying to listen to them and even be aware of my own feelings instead of, sort of, separating and trying to figure out how am I gonna work with this person. – Participant 05

... I spend some time in session with people regarding myself. What's going on? Am I am I present, focused, paying attention, um am I looking for God's face in them, am I looking for where God's moving in this? And if I'm not, then I go

through an adjustment pretty, try to do that ... rapidly. But then they're going to be able to feel felt not just by me, but by the presence of God. And I think that's critical, whether they're Christians or not, so I ask them, you know, I usually ask people where they are, what spirituality and that's ... one of the things I always ask about and then I'll use whatever they whatever they bring because that's where they are and they're at the right place. They're at wherever they are on their path to getting to know God or knowing God better. But the idea of it was relatively new to me to actually have to verify that they're feeling felt because it wasn't enough for me to know that I'm feeling them. You know, I need to know that they're feeling felt. – Participant 01

Participants also indicated a difference in their personal and professional experience of their clients on a spiritual level. Several participants stated they are increasingly open to considering their relationship with clients in a different way. They indicated experiencing their clients more as people who are seeking increased depth and emotional engagement rather than a 'problem to be solved.'

... Um It is a spiritual piece and if we include God's presence and be present to one another in a much more self-to-self way instead of um intellect to intellect way their whole response is different. So in conceptualizing cases, I don't just listen to what they say because I full well know that they are not giving me everything right away. But I just spend more time paying attention to my experience of them. So I then figured out that well it really is the self-to-self piece, it really is the spiritual sense, it really is the integration across the spectrum. – Participant 01

Several participants indicated exposure to IPNB has changed their thoughts on treatment goals and pathways to change. They indicated they have shifted away from focus on the problem and moved toward assisting clients with identifying a core purpose and path to fulfillment, which generally involved inclusion of spiritual practice or awareness.

I just completely put [the presenting problem] aside and really pay attention to myself and the move with the Holy Spirit, and I call it their treasure. I did a seminar on treasure hunt but it's looking at the person and saying ok where is their purpose or their, you know, their calling, because where their purpose or their calling is where their identity is in Christ, and that, there is such an experience of not just emotion there but a sense of fulfillment, a sense of feeling alive, so I feel like as I'm, you know, spending time with them, listening to them, also spending time with the Lord and paying attention to, often times, a vision He'll show me or a word and I feel like I've gotten to that point where I can look at them and see their treasure whether it's their gift or call or a purpose. Something that they either don't think is possible, they spiritualize in some way, "Well this is God's will for me," or they minimize, you know, for whatever reason. So it's helping them identify, you know, what's their treasure, where is that place where they feel so alive and so fulfilled that for whatever reason that treasure has been buried or covered up. – Participant 05

I think traditionally treatment plans, you know, sort of have this tendency to shoehorn folks into, ok you gotta be this, and it's usually to be absent of symptoms

and um not that that's completely a bad thing. But I think that really misses the value of, you know, you call it the treasure hunt, I like that term but it's, you know, you were born for a purpose and you're not here by accident and um, you know. With folks who allow me to pray and we pray and a lot of times the prayer is, you know, help us to see what we need to see and take the steps the steps we need to take and um you know see the path that the Lord might want us to pursue.

– Participant 01

...Curt's work [with IPNB] is extremely helpful in going back to that core existential person, self, spirit that God made, and how is God calling that person into existence as they're transformed into Christ likeness? And it's a journey but it's a, to give them the hope of a of a calling into and God breathing into and coming forth and as a plan as not our clinical plan but as God's plan that we are joining. I think is a much more encouraging, hopeful model.

– Participant 01

Theme 2: Being Known. Several participants indicated that, since their exposure to IPNB and Thompson's class, they place great importance on helping clients "feel known" in the therapeutic process.

... So if I'm thinking something, if I'm feeling something, you know, I've learned to start, you know, sharing that or asking, "What do you think I'm feeling about this part of your story?" and really trying to let them experience being known in what they're sharing rather than I think my tendency prior to that was to already start to think about more from what the CBT method well, you know, what tools

am I gonna, you know, use with them, and just sort of stepping away from, you know, the spirit of the moment and really trying to listen to them and even be aware of my own feelings instead of, sort of, separating and trying to figure out how am I gonna work with this person. – Participant 05

Participants went on to discuss their perceived connection with clients through the use of modeling empathic reactions and helping them to feel truly understood through attunement and regard for the client's reality. One participant discussed this concept in the frame of IPNB by stating:

... Because um ... this whole idea that ... minds or brains need other minds or brains to help them regulate... Um And just keeping kind of reminding myself and then hopefully, I know, I'm a different kind of mind or brain than the other ones in the family that are just so distraught. So I think just the, you know, how we need those other minds or brains to help us has helped me sort of stay in [referring to continuing to work with the client]. – Participant 02

Participants went on to describe their use of their own awareness of feeling toward the client and assisting clients with reflecting upon their experience of “being known” or “feeling felt” by encountering the therapists feelings. Participants seemed to place increased importance upon the client's experience of being known and understood and less importance upon defining, diagnosing, and addressing a presenting problem.

...Just you know it's funny I've even noticed with my clients, now that I'm really viewing this as a relationship, you know, a divine appointment, you know, I always pray with my new clients. I have a new client whether they are Christian

or not, I've learned to just really take that seriously and say that this is a relationship here and it's not just one sided. I find that now, you know, clients they seem to know more about me even when they first come in or when they leave. You know, they are asking me questions, "How was this with so and so?", or "You did this weekend?" You know, because I'm sharing a little bit more about myself when it's appropriate which I think is huge... - Participant 05

One participant expanded by indicating how he checks in with clients to ensure they are aware of his experience of them. He makes a point of expressing the emotion that is raised in the session to assist the client with "feeling felt" and thus, developing a better understanding of his own personal awareness of experience. The participant's statement was then reinforced by comments from another participant.

I really like the idea of feeling felt. A lot of people come ... not able to feel. So as a starting place, having them grow in their awareness and their ability to know what they're feeling and ... name it, so some of Curt's work goes back into Genesis and the call to name and rule. And so to encourage people to be able to name what's going on so that they can rule; so that they can be in charge of themselves. And so that's part of just the initial feeling piece but then feeling felt is also an internal experience... I think my discovery was that I need to engage in the dialogue to ensure that we each know that we're being felt. So it's not just feeling, it's not just feeling felt, but it's um participating in, I'm gonna say verifying, validating, naming, that we are being felt. That we are feeling felt because I'm perfectly capable of identifying and feeling, empathizing, whatever with who I'm sitting with and I rapidly go there ... but that doesn't mean that they

know that. So, just because I'm feeling them, doesn't mean that they feel that. And so I need to as a clinician or counselor, I need to verify that that is their experience. The idea of um it was relatively new to me to actually have to verify ... that they're feeling felt because it wasn't enough for me to know that I'm feeling them. You know, I need to know that they're feeling felt. – Participant 01

I like what you said (gestures toward other participant) though, you know, clinical path versus or the clinical plan versus God's plan. And you know, I think, for me as I am, you know, experiencing my clients and feeling what I'm feeling towards them that sort of allows me to access into God's plan versus just using my, you know, knowledge or intellect probably what I think I should do. – Participant 05

Theme 3: Feelings About Clients. When discussing the overall concepts of IPNB as well as the therapists perceived personal and professional reactions to the framework, the theme of respect and validation of clients was woven throughout participant responses. Participants referred to validation of the clients as “catch[ing] clients doing something right,” or “strengths based” and “non-pathologizing.” The following quotes include several participants describing their experience of working with clients from an IPNB framework:

It was at the end of the session, the intake session, which was a two hour session, and in there we had done some experiential, a little bit of experiential work, but most of it was just listening and um validating and being in relationship. –

Participant 01

I'm saying, ok, if we take this frame, if this frame makes sense to you let's think about where you are and where you could be you know and when things go good. And I think, you know, just even visually, that put's mental health front and center (laughs) as opposed to pathology and pathology is the way we tend, you know, to uh try to manage our difficult stuff. – Participant 03

The uh the client/patients ability to feel affirmed and recognized in value and I just think that that's sort of often overlooked and missed and can be lots of reasons why it is. And to share that with them and just sometime ask does it seem like I'm getting you, have I really captured it, have I appreciated it, is this really where it's at? And even just the desire, the motivation to go there and to know that they're worth pursuing that way is also that you're making that effort to really get them. – Participant 04

As participants discussed changes they have noticed in their case conceptualizations and treatment plans the theme expanded to include validation of the client's experience as paramount in helping the client "feel felt/be known" and thus experience themselves and their experiences differently.

... Uh It's me engaging the child and helping the parent engage the child and accept the fact that yes, this is a concern. I'm thinking of a little girl, many years ago, who was very fearful that she would hear her parents argue and they would say that nothing's wrong nothing's wrong. And after several sessions I remember

saying, “You have every right to be concerned. You know the two people you care about the most ... are arguing.” And she was an only child and so, you know, she didn’t know who to turn to, and um ... So I think, you know, helping parents, to be able to get to and have the child to be heard and to, you know, reframe the anxiety and the worry is something understandable and how can we appreciate it, how can we engage it, how can we collectively deal with it. – Participant 04

Participants also discussed a theme of increased respect for clients as a result of taking the perspective of IPNB and using the tools and concepts associated with the framework.

... And so I think that’s also um a way of respecting clients and Curt’s very big on respecting clients and being direct with them, not coddling them, or kind of keeping secrets from them and I really, that’s a take away for me as well; that he’ll tell them why he’s doing certain things or he’ll invite their curiosity about why this might work or why this might not work for them. And so he brings them on board, that way, eh in a really nice collaboration um collaborative relationship. – Participant 03

...to verbalize what I’m feeling that I find I’ll say “I’m so excited for you”, and to really mean it. To let them know that that is really exciting, That is a powerful revelation or “wow I just I think that’s incredible” and just to really show my passion or enthusiasm where I think before I would, you know, have a thought, well it’s about the client, you know, and I feel that this class is really given me the freedom to express myself and create that atmosphere for them. – Participant 05

Theme 4: Paying Attention. Attention is a key concept in IPNB and was also a theme in the responses of participants. They discussed changes in their ability to attend to their experiences of clients in the therapy room, as well as assisting clients with paying attention to their internal experience. Several participants also discussed the mind/body connection and how attention to the sensations experienced in their body, including defenses and subtle shifts, has been helpful in their clinical practice.

In terms of some of the concepts that I found most helpful is the idea of paying attention, and that's a concept that I've had in many different con-texts and so I've really appreciated, sort of, Curt's "are you paying attention to what you're paying attention to", (group verbally agrees) and uh really helping and that helping people learn how to focus on the present moment, on their bodies, on their experiences, and really be there now and not somewhere else. – Participant 06

... and this idea of paying attention I think is, so critical particularly in this area because it's kind of easy in some ways to not pay attention to what our bodies are telling us or our emotions because it seems we're in an area where people need to accomplish a lot and accomplish it quickly. And it's actually helped me to at times in my response with clients because there are times when I can start feeling a little bit triggered like "Wow this is a really difficult case" and (chuckles) I need to really think quickly about ... you know, how I can help this person because... cause they are in a hurry... - Participant 02

And so really trying to help people learn to pay attention to themselves, to what they love, to using their imagination, and really incorporating other ways of getting information than just sort of the right brain, make your goal, get your smart goal of course, your smart goal, and work towards achieving it and keeping track of all of that. – Participant 06

Multiple clients discussed their “presence” with clients in the therapy room, including concepts around attunement and attention. Participants commented on changes in the way they attend to their personal experience as well as their ability to connect with clients through attention to their presentation.

...So it's helped me in, sort of slowing down my own uh concern about I need to have an answer to this and in this moment. (Verbal agreement from group). – Participant 02

...I have clients that come in with a presenting problem whether it's, you know, the husband had an affair, or it's an eating disorder, pornography addiction, or low self-esteem. Before I would I would sort of look at the behavior or the presenting problem and then case conceptualize around that, but now I've learned to sort of what you were talking about (gesturing toward other participant) is to really pay attention to myself, and like I said before, listening to their story. I found that I completely remove the behavior and presenting problem and I sort of walk them through what I am doing from the process. I just

completely put it aside and you really pay attention to myself and the move with the Holy Spirit, and I call it their treasure. – Participant 05

... I would just say for myself I just think I'm more attuned to myself as a result of having language and tools for paying attention. And so because I'm able to be more I'm just able to be more present. So I don't I don't know that it's that I'm any different, that it's I'm a different person, I think as I've developed more tools and as I've developed more awareness of myself so... just being able to notice, to learn from my body. I think our bodies give us a lot of information and I have in the past not paid attention to some of that information that I was receiving. And so learning to pay attention to the information that I am getting from my body about the situation, about my response to the situation, like paying attention to cautions where I might of just said, "That's just silly. You shouldn't ... that's silly of you to be worried about that." Or paying or noti like there are times when I um, you know, with our mirror neurons, we're reflecting what other people are feeling and so being able to be more sensitive to how someone else is feeling and noticing, "Oh, I'm feeling like this make..." and then also being able to be intentional about using that with people; using that awareness with people. So I, I mean, I just find that I'm more aware of myself and that helps me be more present with them. . – Participant 06

...it matters how I'm experiencing the relationship and so if I'm, and I really liked how you (gesturing to other participant) said that you are aware of what goes on and with you and then you bring that; you verbalize that. And I think that it's really important ... to do that. And at the same time I do that, I spend some time in session with people regarding myself. What's going on? Am I am I present, focused, paying attention... - Participant 01

I find this frame helpful in managing my own defenses when I get defended in a session or feel not helpful I become "the professor" (chuckles). My inner professor comes out and I start teaching (laughs); pulling out books and handouts... I use my breath so I'm usually tuned enough to start doing some breathing and bring myself back to center. – Participant 03

...my desire is to be more right brained with clients and so long before I came to this material some of my training was more in the moment to moment focus and moment to moment shift. So for me, Curt's work has ... helped me ... more in terms of being aware of my own responses to things rather than the focus of being more aware of the clients because I think I was, sort of, trained to be more aware of that way. – Participant 02

Participants then indicated that once they were better able to pay attention and attune to their own experiences in the therapy room, picking up on the client's experience became much less complicated.

... So in conceptualizing cases, I don't just listen to what they say because I full well know that they are not giving me everything right away. But I just spend more time paying attention to my experience of them. And just kind of watching them, almost out of body, watching our dynamic and seeing what that is looking like and feeling what I'm being pulled into cause I'm very experientially aware of being pulled in but I didn't have that understanding of what that meant. –

Participant 01

Theme 5: The Tools. A final theme that permeated the focus group was the importance of the tools provided by IPNB. The term “tools” refers to any elements of IPNB literature that assists in the creation and/or implementation of interventions with the goal of integration. Participants discussed how their personal understanding of brain structure and function was increased, thus allowing them to share that information in practical ways with clients. Several participants discussed the acronyms offered by Siegel (2007, 2010) and Thompson (2010) as being especially helpful in remembering key points to discuss with clients. The acronym F.A.C.E.S. speaks to the presentation of an integrated brain; one that is flexible, adaptive, coherent, energized, and stable. The acronym S.N.A.G., which refers to a means of healing and integration; to stimulate neuronal activation and growth.

... I saw myself using some very specific, short little acronyms um like SNAG, Stimulate Neuronal Activation and Growth. And so I notice myself doing that and sort of explaining what new experiences do and helping to grow or heal the brain, depending on how you want to view it, and also have used many times Curt's, I think of it as those three step process, the three things that really help your brain; daily exercise, mindfulness, and learning something new. So it's been kind of fun

to see the use of the broader concepts as well as having the short little conceptual packets of information that can be shared. I started even talking to people about, and I don't do this well, about how mindfulness helps change those six, sort of, levels of brain cells if you will, but I know I need more help on doing that. The other kind of mindfulness meditation and body scan and progressive relaxation, I do fairly regularly with clients ... but I still need, you know, there's more I need to really be able to conceptualize with some of the brain stuff. – Participant 02

The tools were discussed as being helpful in the sense of assisting clients with re-thinking the cause of distress as well as helpful for clinicians as they conceptualized cases. The participants indicated utilizing the concepts of implicit and explicit memory to assist clients in guided imagery or simple memory tracking exercises to provide opportunities for re-wiring of neural networks with new sensations and awareness of the effect of those memories.

Implicit and explicit memory was really important as a concept and as something that I think clients can understand and relate to, especially for when they discount early experience or things that happened, “Well I'm over that” yea but your brain might not be. – Participant 03

Participants continued by sharing their utilization of “right brained” or special techniques aimed at engaging emotion centers when clients had difficulty moving away from the linear and rational thought of the left brain. They indicated they would ask different types of questions, or exclude language altogether and do an experiential exercise such as a sand tray or art activity to allow other parts of the brain some dominance as opposed to language.

... I think that it has, for me, a lot of appreciation about how the brain works. Um And I think a lot of times, you know, therapy has been much more in that cognitive behavioral realm of thoughts, being rational, and sort of linear and progressive, and I think we very easily get stuck there we camp out there and we kinda go round and round it. It's been very helpful to sort of set that content aside and just say let's look at how we deal with that and, you know, and accessing different parts of the brain, trying to encourage folks to respond differently to those issues ... to engage them differently outside of the therapy hour... and shift that focus and kind of get them out of those loops, if you will. – Participant 04

The conversation continued to develop as participants referred to metaphors presented by Thompson (2010) as ways to assist client's with developing a deeper understanding of the work on which they are embarking. Several participants alluded to the hope and empowerment they observed when client's were able to understand they had some power and control over how their brain wired and re-wired as opposed to feeling as though an outside force was acting upon them without their permission.

The other concept that's been most helpful for me is just that metaphor of what I think you were referring to (gesturing to other participant) about how our neural pathways develop, and I love the image of the jungle that starts out as, you know, you have to chop through with a machete to get a little path and then you start walking on the path and then, you know, the roller comes in and you get a superhighway and just how the neural pathways develop and how we develop responses that over time that get more and more entrenched and just the idea just that image of that jungle what it takes to create it and what it takes to break It

down if there is one created that needs to change. It's been very helpful for me and working with people, who are trying to bring about change in a positive way.

– Participant 06

...I think that what's most helpful for me, there's several concepts that I think that the primary one ... uh was understanding the difference between the left brain and the right brain... I've learned with each individual client how to help them access their right brain, their intuition, their imagination, emotion, and helping them ex experience God rather than just intellectually knowing about Him. –

Participant 05

Participants reported an increase in confidence as a result of learning more about the brain. They also referred to techniques of mindfulness and meditation that were initiated to assist clients with noticing the sensations within their body and how that is important for neural change.

The class really helped me to understand a bit better brain wiring and brain events and to be able to more confidently (chuckles) make those recommendations to clients that they perhaps could think in those terms and slow them down, introduce some pacing, and talk about memory. – Participant 03

I was able to talk to [a client] about integration, and how if her left brain can be engaged and she could put it into language some of the struggles even if that doesn't solve the problem, then at least she's, you know, collaborating with her

husband and moving toward a space where they might be able to have a talk. –

Participant 03

I started talking to people about how mindfulness helps change those six levels of brain cells, but I know I need more help in doing that. The other kind of mindfulness meditation and body scan and progressive relaxation I do fairly regularly with clients. – Participant 02

Siegel (2010) describes IPNB as an “umbrella framework” to be applied to all other types of clinical practice and is not to be used as a model in and of itself. Participants reiterated this concept as they discussed the use of IPNB and its concepts as adjustments to and improvements upon classic models of psychotherapy.

I think that there's an integrated component just as we're... a goal of clients. A client's goal would be a goal of integration. Right/left brain, body- mind integration similarly IPNB to me is integrative of the models that I have learned. Particularly Bowen- family of origin work, um and CBT because why CBT works is because of our brain wiring, you know, and our capacity to take a different stance to our thinking, which is also similar to mindfulness. So it's almost like it it's almost become the umbrella under which, you know, I can pick and choose from anything that I learned. – Participant 03

Most participants made some indication of differences in their case conceptualization and intervention with clients based on new information and new tools utilized to increase neural change. While participants discussed some specific interventions such as use of acronyms,

reframing change, meditation and relaxation techniques, and guided imagery, most of the change described in utilizing the different tools and concepts of IPNB was an internal shift for the participant. They indicated changes in the way they conceptualized cases and interacted with clients based upon the information provided by the concepts of IPNB.

CHAPTER 5: DISCUSSION

Influence of Interpersonal Neurobiology as a Framework

IPNB is an overarching framework intended to create a platform upon which previously separate fields of study can collaborate in a mutually intelligible language and begin to share insights aimed at furthering the scope and power of these fields. By incorporating IPNB in psychotherapeutic practice, therapists have the opportunity to utilize concepts from neurobiology, sociology, and anthropology in new ways that benefit the growth and healing of clients. Prior to the introduction of IPNB as a framework for psychotherapy, models and movements were largely disparate; attempting to prove their focus was more valid or accurate than other schools of thought. For example, cognitive psychology focusing on thought patterns versus behaviorism focusing only on what is directly observable. The goal of IPNB is not to replace models or schools of thought, but rather to enhance the conversation by providing a unique organizing principle for seemingly contrasting schools and disciplines to be able to join in conversation for the benefit of clients and furthering the field in general. The data reflected in this study provides some evidence that the use of IPNB in psychotherapeutic practice provides both clients and therapists with unique experiences (as observed by therapists) within the therapeutic relationship. The use of education related to brain functioning and structures, experiential integration exercises, attention and attunement training, mindfulness practice, as well as exposure to an experience of “being known,” all contribute to the unique experience of psychotherapy from an IPNB perspective.

Siegel (2010) states that the elements including the brain, mind, and relationships mutually influence one another. The idea of social regulation of emotion, as described by Coan

(2008), indicates that the basic construction of the human brain suggests that it will be in relationship with other brains in order to assist with emotion regulation. Several participants confirmed their experience of these concepts by relating how their stance in the room with clients had shifted. Specifically, participants discussed feeling more connected to their clients as they allowed themselves to be aware of and acknowledge the feelings they experienced while clients shared their narratives. Participants described their relationships with clients shifting from a “one-sided” interaction to a relationship in which clients could share and receive reflection that could ultimately influence neural connections and provide healing.

In his publication, Thompson (2010) makes a distinction between “knowing about” those with whom we are in relationship and “feeling known” in those relationships. Strictly fact based knowledge is described as valuable in some regards, however limiting in terms of growth and development. Thompson (2010) asserts that it is only by experiencing the process of allowing others to truly connect in vulnerability that a person can truly know themselves and others. Two of the themes that seemed to be consistently linked throughout the analysis were the themes of “being known” or “feeling felt” and the category related to validation of the client and the therapist’s feelings toward clients. A recent *Psychotherapy* special issue on evidence-based therapy relationships stated “The therapy relationship makes substantial and consistent contributions to psychotherapy outcome independent of the specific type of treatment” (Norcross & Wampold, 2011, p. 98). The research on the importance of the therapeutic relationship aligns with participants’ reports of enhancing the therapy relationships through attunement, attention, and connection in this study. Participants indicated that as they attempted to connect with their clients with the intention of helping them to “feel felt” and understood, the necessity of pathology and focus on the presenting problem decreased. This finding was again supported by

Norcross and Wampold (2011) through their assertion that therapeutic practice should explicitly attend to therapists' behaviors and qualities that promote an effective therapeutic relationship.

Participants provided examples of clients experiencing healing as the therapists increased intentionality toward genuine connection and “knowing” the clients, and decreased their focus on “fixing” the presenting problem. Those same participants reported that, after this shift in intentionality, clients' “presenting problems” dissolved without ever being directly addressed. Research on the effect of empathy on the therapy outcome supports this statement (Elliot, Bohart, Watson, & Greenberg, 2011.) Several studies have explored the importance of empathy as a factor in successful outcome in therapy. Most have found evidence that empathy is a significant predictor of positive outcome as defined by both therapists and clients (Elliot, Bohart, Watson, & Greenberg, 2011; Burns & Nolen-Hoeksema, 1992). Participants indicated a decrease in focus on diagnosis and pathology; rather they report these as secondary issues to establishing a relationship with clients that ensures they are feeling “known” by the therapist.

All participants indicated or affirmed an increase in confidence with utilizing tools and providing explanations of neurobiology and brain functioning. The acronyms introduced by Siegel (2007b) such as F.A.C.E.S. (Flexible, adaptive, coherent, energized, and stable) and S.N.A.G. (Stimulate neuronal activation and growth) were specifically referenced by participants who reported using them with clients on a regular basis. Participants indicated they would like more education on the topics of brain structure and function; however, they indicated feeling more confident educating their clients with information about how their brain and body operate and interact. Participants also seemed to link the use of these tools with the validation of client's experiences. They reported that clients often indicated feeling empowered by knowledge that their brains are plastic and able to change, as well as by the information related to neural

networks and pathways and having the ability to transform through intentional shifts in experience. In essence, participants reflected on the validation clients report as they realize the “problem” they are experiencing has an explanation rooted in science and consequently, a possible solution that is just as valid.

Kabat-Zinn (2003) defines mindfulness as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment to moment” (p. 145). Several participants reported or affirmed the use of mindfulness-based practice, including mindful breathing and meditation, and associated the practice with their exposure to IPNB. Several participants indicated their practice having started or increased as a result of being introduced to it in the IPNB class. Badenoch (2008) speaks to the idea of mindfulness and its implications for the increase of compassion with clients and in personal relationships. Participants who indicated participation in this practice (meditation, mindful breathing, or contemplative prayer) all indicated some positive relationship to their ability to remain present in the therapy room, or an increase in compassion and empathy with clients. The theme of attention and mindfulness was closely linked to the theme of spirituality as well as the theme of “being known.” Participants reported an increase in their ability to connect with clients and understand their experiences as they were able to increase their own attention and “presence” with the client in the therapy room. Several participants indicated an increased connection with God and the Holy Spirit as a result of increased attention to their personal/bodily/mental experiences. They went on to associate an increase in their ability to interpret messages from God and the Holy Spirit for/with the clients with whom they were in session.

All participants, at some point during the focus group, discussed a spiritual component of their use of IPNB. It should be noted that Thompson recently increased the discussion of spirituality in his courses and this may explain the participants' reports and focus on spirituality during the course of the focus group session. Thompson's publication *Anatomy of the Soul* (2010), a book addressing the connections between neuroscience and spiritual practices, was also a part of the teaching material in the 2010-2011 course from which several of the participants were recruited.

Initially, participants reported feeling an increased freedom to assess for spirituality and to bring a spiritual component to the healing process as a result of taking Thompson's IPNB course. Siegel (2010a) alludes to spirituality through discussion of connection with clients through openness to experiences and validation of clients through education and empathy. He refers to a "universal connection" between humans and a "seventh sense" each person has to consider aspects of the mind and relate to that aspect in others. He also addresses the common concern about uncertainty and mortality. While not a Christian perspective, Siegel does consider aspects of the mind that may be considered in the realm of "spirituality" in his descriptions of IPNB. It is important to note that each of the six participants ascribed to an explicitly Christian spirituality, however the explanation of why this is true should not negate the information provided.

Participants indicated feeling increased freedom to pray with clients as a way of increasing connection and providing an experiential exercise in connecting with an entity, God, who is believed by Christians to be "all-knowing" and available for a personal intimate relationship. Participants also described exercises with clients designed to assist clients in "feeling felt" or "being known" by God including imagery, journaling, and meditation.

Participants described intense reactions from clients that were followed by a deeper sense of connection to self and others, a deeper sense of personal purpose, and a reduction in reported “symptoms” of presenting problems. In conjunction with the theme of spirituality, participants reported on an increased feeling of respect for clients and their position in the therapeutic relationship. Spiritually based interventions were not reported to be intrusive or imposed on clients, but rather available if desired and appropriate.

The research question for this study sought primarily to address the case conceptualization and implementation of interventions in psychotherapy. However, the information provided by therapists went beyond these concepts and also spoke to the personal experience of therapists as they conducted their practice through the lens of IPNB. Reflections of the participants indicated that exposure to IPNB had an effect in altering their experience of practicing in the mental health field. All participants indicated some shift in stance, even if that shift was to strengthen or reaffirm the practice in which they were currently engaged. Woods (2009) indicates that a teacher’s embodiment of “attitudinal elements” of mindfulness such as attention, compassion and receptivity, all important concepts of IPNB, can affect the utilization of said concepts by the student. Therapists utilizing IPNB teach concepts, such as mindfulness, to clients as a means of increasing neural integration. It is important, as mindfulness teachers, that therapists personally cultivate increased attention, awareness, and connection. All participants indicated or affirmed experiencing some direct benefit in the utilization of IPNB in their personal and/or professional lives including increased attention to and awareness of personal reactions to their own experience, increased mind body connection, increased attention and attunement to clients and their needs, increased confidence in relaying information to clients about the brain and neurobiology, as well as an increased emphasis in healing through a more

relational connection with clients aimed at increasing neural integration. Blow et al. (2007) suggest that attunement and alignment with clients may be more important in the healing process of clients than the models used. Most participants indicated an increase or change in connection with clients, as a result of their exposure to IPNB, which they thought resulted in healing change for those clients. It should be noted that participants all indicated practicing through differing perspectives and models prior to their exposure to the framework of IPNB and all participants indicated an enhanced experience as a result of that exposure.

Limitations

There are several important limitations to this study that should be considered. First, because all participants received their primary exposure from Thompson's course, their exposure to IPNB is limited to the information provided in the course including reading materials assigned. Ideally, participants would have been chosen from several different courses to provide an added richness to the dataset. However, due to the limited number of resources currently available to those seeking training in IPNB, there was no other option for expanding the breadth of the sampling pool while also ensuring the quality of the IPNB training received.

A related limitation is the spiritual perspective held by the participants in this group. All participating clinicians indicated coming from a Christian perspective and incorporating spirituality as a practice either personally, in practice, or both. While this was an important theme expressed in the focus group for this study, it is important to note that this theme is specific to this sample and may not be generalizable to a larger population.

Another limitation to the study is the pool of participants. Nearly all participants were private practitioners with only one clinician practicing in an agency setting. The data was limited

to the experience of the participants, many of whom have had experience in homogeneous settings, offering perspectives only from that frame of reference. Also to be noted, all participants were Caucasian and worked with clients who were primarily able to maintain a “self-pay” arrangement for therapy. Therefore the perspectives of clinicians of different ethnicities and/or those who were working with clients from different socioeconomic levels were unavailable. Additionally, due to the limited sample pool the study included six participants. It would be ideal to conduct multiple focus groups including different participants, however only six total participants volunteered to participate, thus limiting the data available.

Finally, the study was limited in that the participants self-selected into the course and into the study. It is important to note that all participants indicated IPNB had a useful and beneficial framework and the responses were almost entirely related to the positive utilizations of IPNB and positive experiences as a result of incorporating the framework. There were no participants who indicated feeling the framework was not useful or beneficial to them. It would be ideal to also study participants for whom the framework was not useful, or possibly therapists who had attempted use of IPNB only to discover it was not a good fit and abandoned its practice.

Future Research

The implications for future research are numerous considering the response of participants in conjunction with the limitations of this study. A secondary purpose of this study was to provide an empirical foundation upon which future research could be built. By exploring clinician’s experiences of the use of IPNB in psychotherapy, the definition of IPNB is better established for continued research in this area. A next step for IPNB research may be to explore the experience of clients being seen by therapists who ascribe to IPNB as a framework and

examine if the framework contributes to outcome. Research could then identify key factors for change. A related implication for future research would include investigation of the client's experience of "feeling felt" by their therapist. Thompson (2010) asserts that one of the most healing and integrative experiences in the life of a human is to "be known" by another and "feel felt" in their circumstances. Participants provided case examples of how client's lives shifted dramatically when they began to work toward "knowing" their clients as opposed to "fixing" presenting problems.

In order to develop a well-rounded dataset, identifying clinicians who have had different training across therapy modalities, clinical settings, and client populations would enrich the data and produce a more comprehensive perspective. Again, the scope of the sample used in this study was limited due to availability of participants, however including therapists from different ethnic backgrounds or those working with different populations of clients would work to enrich the data as well.

Another suggestion for future research may be seeking feedback from therapists who have had exposure to IPNB in a structured setting, but chose not to utilize the framework. It would be interesting to understand the experience of those who did not find IPNB useful as a framework and determine some of the reasoning for this outcome. Similarly, investigating the experience of clients for whom this approach was not helpful could create increased opportunity to identify the limitations of IPNB as a framework or suggestions for improvement in its utilization.

Finally, the common benefits described by participants may suggest validation of IPNB as a clinical tool that could be helpful for therapists experiencing any level of burn-out or

difficulty with self care around work with clients, those seeking new avenues to healing and change, and especially those seeking to communicate with professionals from other disciplines such as sociology, neurobiology, and anthropology. Continued research would be suggested toward the end of inciting rationale for increased training opportunities in IPNB around the country.

Clinical Implications

In summary, the framework of IPNB appears to have an effect on the overall experience of the therapists who utilize it, including in case conceptualization and interventions. With the knowledge presented in this study, it may be helpful to find new ways to implement the different aspects of IPNB in psychotherapeutic practice as a way of enhancing current models. It appears utilization of IPNB's basic principles has implications for the spiritual, emotional, and pragmatic experience of therapists in the room. It also appears there may be a potential benefit to clients with whom these therapists interact.

The utilization of the tools and concepts presented by IPNB were described as helpful in assisting clients with viewing their current state of being in a different frame. Rather than clients feeling powerless against a force or illness which is acting upon them, the concepts of IPNB provide hope and empowerment by describing the process of neural networking in a way that is practical and easily understood. The practical application of IPNB tools such as guided imagery aimed at rewiring neural networks, mindfulness and meditation with the purpose of engaging the parasympathetic nervous system and connecting mind and body, and acronyms created for the seamless transition from psychoeducation to neural healing, all provide new ways to empower clients and support change on a neurobiological level.

Further, if future research continues to support the benefits of utilizing IPNB in clinical practice, there would be implications for continued development of training techniques for therapists interested in integrating the practice of IPNB in the therapy room and with their clients.

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APPENDIX A

Virginia Polytechnic Institute and State University

**Informed Consent for Participants
in Research Projects Involving Human Subjects**

A Qualitative Study of Clinicians' Experiences of the Application of Interpersonal Neurobiology as a Framework for Psychotherapy

Dr. Eric McCollum, Principal Investigator
Kelsey Myers, Co-Investigator and Focus Group Leader

I. Purpose of the Research

The purpose of this study is to gain an understanding of the experience of mental health clinicians who have been exposed to the framework of interpersonal neurobiology and utilize that framework in case conceptualization and direct interventions with their clients in psychotherapeutic practice. It is the hope of the researchers that the information collected in this study will add to the current body of research on the practical use of interpersonal neurobiology as a framework and provide information for clinicians currently questioning the practical utilization of this framework. Ultimately, it is the hope of these researchers that this study will provide information that will positively impact client care.

II. Procedures

As a participant in this study:

- a. You agree to participate in an audio and video recorded interview about the experience of incorporating interpersonal neurobiology in your psychotherapeutic practice.
- b. You can expect the interview to last approximately 90-120 minutes. You will have the information you provided combined with other participants' responses into a report. The report will be about the participants' experience of incorporating interpersonal neurobiology into psychotherapeutic practice.

III. Risks

- a. There is some potential risk of emotional distress or discomfort for study participants as you will be asked to discuss your personal thoughts and opinions in a group of other participants.
- b. The researcher has referral information for mental health resources should you wish to further process any difficult thoughts or emotions evoked during the interview process. Payments associated with counseling referrals will be the responsibility of the subject, not the research team or Virginia Tech.

IV. Benefits

- a. It may be considered a benefit to discuss your experiences in a group of other professionals as a way to enhance your thoughts and experiences around the subject matter.
- b. You will be helping add to the body of research regarding the use of interpersonal neurobiology in psychotherapeutic practice.

V. Anonymity and Confidentiality

- a. All of the information provided during the interview and over-the-phone or email screening is confidential.
- b. All identifying information provided during the audio/video recorded interview will be removed and replaced with aliases in the typed transcript and study report.
- c. The only individuals with access to the audio/video recording and original transcript will be the Principal Investigator and Co- Investigator.
- d. The audio/video tapings will be destroyed as soon as they have been transcribed and checked.
- e. Portions of your interview text may be used verbatim in the report of the project and/or in subsequent publications. No identifying information will be associated with any part of your interview that may be used.

VI. Compensation

- a. There is no compensation for taking part in this focus group.

VII. Freedom to Withdraw

- a. You have the right to refuse to answer any question at any time.
- b. You have the right to withdraw from this study at any time without penalty.

VIII. Participant Responsibilities and Permission

- a. I voluntarily agree to participate in this study. In agreeing to participate, I understand that I have the following responsibilities: to discuss, to the best of my ability, my experience of utilizing interpersonal neurobiology as a framework for psychotherapy.
- b. I have read this consent form and have had all of my questions answered. I hereby acknowledge the above and give my voluntary consent:

Participant Signature

Date

If you have any questions about this research in an capacity, research subjects rights, and/or whom to contact in the event of a research-related injury, you may contact:

Dr. Eric McCollum.....Telephone: (703) 538-8460 Email: ericmccollum@vt.edu
Principal Investigator

David M. Moore.....Telephone: (540) 231-4991 Email: moored@vt.edu
Chair, Virginia Tech Institutional Review
Board for the Protection of Human Subjects
Office of Research Compliance
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, VA 24060

APPENDIX B

Exploration of Interpersonal Neurobiology through the Nine Domains of Integration

Instructor: Curt Thompson, MD
September, 2010- June, 2011

Class 1: First Domain of Integration: Consciousness

- Discussion and experiential exercises
- Discuss Ch. 1-4 of *Anatomy of the Soul*

Class 2: Second Domain of Integration: Horizontal Integration (Left/Right Mode)

- Discussion and experiential exercises exploring “Left/Right Mode”
- Discuss Ch. 1-4 of *Anatomy of the Soul*

Class 3: Third Domain of Integration: Vertical Integration

- Discussion and experiential exercises regarding the “Triune Brain”
- Discuss Ch. 1-4 of *Anatomy of the Soul*

Class 4: Fourth Domain of Integration: Memory Integration

- Discussion and experiential exercises around implicit and explicit memory
- Discuss Ch. 5-6 of *Anatomy of the Soul*

Class 5: Fifth Domain of Integration: Narrative Integration

- Discussion and experiential exercises exploring storytelling and attachment
- Discuss Ch. 7-8 of *Anatomy of the Soul*

Class 6: Sixth Domain of Integration: State Integration

- Discussion and experiential exercises regarding states of the mind
- Discuss Ch. 9-10 of *Anatomy of the Soul*

Class 7: Seventh Domain of Integration: Interpersonal Integration

- Discussion and experiential exercises exploring integration between people
- Discuss Ch. 9-10 of *Anatomy of the Soul*

Class 8: Eighth Domain of Integration: Temporal Integration

- Discussion and experiential exercises around integration over time
- Discuss Ch. 11-13 of *Anatomy of the Soul*

Class 9: Ninth Domain of Integration: Transpiration Integration

- Discussion and experiential exercises
- Discuss Ch. 11-13 of *Anatomy of the Soul*

Assigned and Supplemental Reading for the Course:

Doidge, N. (2007). *The brain that changes itself: Stories of personal triumph from the frontiers of brain science*. New York, NY: Penguin Books.

Siegel, D. J. (2010). *Mindsight: The new science of personal transformation*. New York, NY: Bantam Books, a division of Random House, Inc.

Thompson, C. (2010). *Anatomy of the soul: Surprising connections between neuroscience and spiritual practices that can transform your life and relationships*. Carol Stream, IL: Tyndale House Publishers, Inc.