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ASSESSING THE PSYCHOLOGICAL BENEFITS OF BIOPHILIC DESIGN IN
THERAPEUTIC COUNSELING SPACES

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Philosophy

By

Andrew Graf

May 2024

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Andrew Graf

2024

ASSESSING THE PSYCHOLOGICAL BENEFITS OF BIOPHILIC DESIGN IN
THERAPEUTIC COUNSELING SPACES

By

Andrew Graf

Approved March 15, 2024

Dr. Matthew Joseph, Ph.D.
Program Director and Associate Professor
of Counselor Education Department of
Counselor Education and School
Psychology
(Committee Chair)

Dr. Yih-Hsing Liu, Ph.D.
Clinical Assistant Professor
(Committee Member)

Dr. Madeleine Stevens, Ph.D.
Clinical Assistant Professor
(Committee Member)

Dr. Gretchen Generett, Ph.D.
Dean, School of Education
Professor of Education

Dr. Elizabeth McCallum, Ph.D.
Chair, Counselor Education
Professor of School Psychology

ABSTRACT

ASSESSING THE PSYCHOLOGICAL BENEFITS OF BIOPHILIC DESIGN IN THERAPEUTIC COUNSELING SPACES

By

Andrew Graf

May 2024

Dissertation supervised by Dr. Matthew Joseph

This dissertation explores the intersection of biophilia and counseling, aiming to illustrate the potential benefits of integrating nature-based interventions into therapeutic practice. Biophilia, the innate human tendency to connect with nature, has garnered attention in various fields, yet its implications for counselors remain unexplored. This qualitative study employs a hermeneutic phenomenological approach to investigate the lived experiences of counselors who have incorporated biophilic elements into their practice and the perceptions of clients who have engaged with these interventions.

Through semi-structured interviews with licensed counselors, themes emerged regarding the impact and use of biophilic interventions on the therapeutic process. Findings suggest that integrating nature into counseling environments through the use of natural materials, views of outdoor settings, plant life, and organic patterns, can enhance clients' sense of safety in the counseling setting and increase rapport with counselors.

The research contributes to a deeper understanding of the potential benefits of integrating biophilia into counseling practice and underscores the significance of reconnecting individuals with nature as a means of promoting holistic well-being in the context of counseling.

DEDICATION

This work is dedicated to those who seek reprieve in nature. To those who relish quiet moments while deep in the woods or at pond's edge. To those who find solace and their breath while surrounded by tall grass, sturdy trees, and soil warmed by the sun.

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Chapter 1: Introduction

The Biophilia Hypothesis was first introduced by the American Biologist, E.O. Wilson, and posits human beings have an innate tendency and desire to interact with, and be surrounded by, elements of the natural world (Wilson, 1984). However, the term, biophilia, was first coined by psychologist, Erich Fromm. In his work, Fromm used the term to describe the psychological orientation of being attracted to all that is alive and vital (Fromm, 1964). In his 1984 book, *Biophilia*, Wilson describes his personal interaction with nature and hypothesizes its restorative qualities. Wilson considers the impact that physical space has on our mood, body chemistry, and overall well-being. He advocates for the thoughtful incorporation of identified elements of biophilic design, which will be explored in a subsequent chapter, in homes, parks, museums, hospitals, banks, and community gathering sites in order to improve individual functioning. Notably absent from Wilson's list, is reference to the environment in which clinical counseling occurs. If a connection to the natural world in places such as hospitals and museums can provide a therapeutic experience, and lead to improved well-being, as evidenced by Wilson and others, then there is not only value in applying this framework to the counseling setting, but an obligation to do so.

The American Counseling Association (ACA), defines counseling as a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals. Under the ACA, counselors have a Code of Ethics, which shape and guide their work. Section E of this code addresses the Evaluation, Assessment, and Interpretation of work with clients. Specifically, section E.7.b states that counselors must "...provide an appropriate environment for the administration of assessments (e.g., privacy, comfort, freedom from distraction)" (ACA, 2014). It is incumbent on the ethical counselor to

consider and employ all ways in which to offer effective clinical intervention and to establish an environment that is supportive and conducive to client growth. Furthermore, the moral principles of non-maleficence and beneficence were established and included in the ACA Code of Ethics in order to serve as cornerstones of the profession (ACA, 2014). The non-maleficence principle states that counselors should not cause harm to their clients and should not engage in potentially harmful acts. The principle of beneficence states that at all times, the counselor should work for the good or betterment of the client; counselors should work to promote and contribute to a client's improved state. In other words, counselors should first do no harm; second, do only good. If the physical environment of counseling can be designed or constructed in a way that lends itself to expeditious and meaningful treatment, to provide "good" therapy, then today's counselor has a duty to consider and implement those identified characteristics. To date, the application of a biophilic design framework applied to a clinical counseling setting, has not been thoroughly examined and an opportunity for counselors to increase their therapeutic efficacy remains.

In Biophilia, Wilson examines how physical proximity to natural elements contributes to a sense of "calm, comfort, and wellbeing" (Wilson, 1984). If we recognize and accept the tremendously valuable work that occurs within the physical setting of counseling, then we must also consider that the space itself may be composed of elements or characteristics that either contribute to, or reduce, the efficacy of therapy. Examining the benefit of bringing elements of biophilic design into the counseling setting could enable counselors to offer more effective intervention.

Statement of the Problem

Theories of the interface between physical design and health have transcended multiple professions for decades, but the field of counseling has wholly overlooked the potential benefit for their clients and the profession has not established clear and concrete guidance regarding the creation of a counselor's physical therapeutic environment. This author recognizes the closely related field of environmental psychology, which is a branch of psychology that explores the relationship between humans and their external world. The influence of natural and human-built surroundings is a major focus of environmental psychology (APA, 2009). As such, the invaluable work of several environmental psychologists will be referenced in forthcoming chapters. Another related branch of psychology is Transpersonal psychology. Transpersonal psychology examines the spiritual and transcendent aspects of human existence. It goes beyond traditional psychological theories and practices to explore the connection between the self and something greater than the individual (Miller, 1998). Transpersonal psychology views humans as having the potential for personal growth and transformation beyond the boundaries of the ego. It recognizes that individuals can have transcendent experiences, spiritual awakenings, or mystic experiences that expand awareness and understanding of themselves and the world (Walsh & Vaughn, 1993). Abraham Maslow believed that these "peak experiences" are high points in one's life and are achieved when an individual feels at harmony with themselves and their environment (1962). Indeed, Maslow felt that many "peak experiences" are experienced in, or facilitated by, exposure to the natural world. Despite these established branches of psychology, the field of counseling has largely overlooked the benefits of incorporating natural elements and nature into the counseling setting.

While environmental psychology advocates for increased exposure to nature and natural settings, there lacks research on the actual incorporation of those elements into the physical

space in which talk therapy occurs. Instead, much of the extant environmental psychology research explores the benefits of experiences with nature outside the bounds of the therapy session and encourages the client to bring those experiences with nature and natural settings into session for therapeutic discussion. The restorative effects of nature have led to the development of many practices that allow an individual to connect with nature such as horticulture therapy (Corazon et al., 2012), walking therapy (Revell & McLeod, 2016), and Shinrin-youki (or “forest bathing”; Morita et al., 2007) among others. While these practices have supported the positive health benefits attributed to exposure to nature, they all occur outside and not within a physical counseling setting. For example, Walking therapy is a form of psychotherapy that combines traditional talk therapy with physical activity – walking, usually outdoors. Walking is a gentle activity that can boost mood and reduce symptoms of anxiety and depression. Conducting therapy sessions outdoors has been found to enhance the therapeutic experience for clients. Again, this particular approach to therapy calls for the client to be outside within the physical natural environment and requires some amount of physical activity, which may not be suitable for all clients seeking assistance from counselors.

In 1984, the same year that Wilson published *Biophilia*, environmental psychologist Roger Ulrich published his groundbreaking study, *View Through a Window*, which measured the effects of a patient’s surroundings on the healing process (Ulrich, 1984). This study was the first to quantify and name the health benefits of exposure to a natural environment. Ulrich (1984) reviewed hospital data from 1972–1981 for 46 patients who had their gallbladders removed. Twenty-three patient windows had a view of a neighboring brick building wall. The remaining 23 patients had window views of a park-like setting including trees, grass fields, and shrubbery. Ulrich’s review of the hospital data indicated that patients who had a view of the natural setting

had, on average, shorter postoperative hospital stays, fewer negative evaluative comments in nurse's notes, less medication consumption, and were administered less potent medication overall. These findings imply that hospital design and layout can facilitate a patient's ability to successfully recover. Three years later, Ulrich's landmark finding was replicated (Verderber & Reuman, 1987), in a prison setting, where cell window views of nature were associated with lower inmate stress and physical illness.

In 1929, architect Alvar Aalto, was commissioned to design a tuberculosis sanatorium in Finland – the Paimio Sanatorium. Aalto stipulated that the hospital grounds must be “pleasant and tranquil in every respect”. In addition to ensuring that each patient room had ample natural light, he specifically designed furniture to increase the patient's comfort, minimize their distractions, and reduce the potential for frustration. This was done in effort to help the patient allocate all energy toward their physical recovery. Instead of the typical metal sinks that were widely used in hospitals at the time, Aalto installed wooden sink basins in each patient room to reduce noise that would be created when water ran and to increase the amount of natural material that patients were exposed to on a daily basis. In reflecting on his work designing Paimio, Aalto stated “the hospital itself is a medical instrument.” Aalto subscribed to the value of including nature and natural elements into his own homes as well. Of his summer home in Helsinki, architectural writer, Robert Shafer, wrote: “Villa Maiera exemplifies the architects understanding of the surrounding landscape and connection between house and garden. In this context, the garden should be, above all, be a place for the unfolding of nature, whose vital force is even allowed to overpower the architecture.” (Shafer, 2023). Aalto understood that physical space has capacity to facilitate health and should be called upon to do so. This is an important concept: the use of physical space as a tool to achieve a healthier state for individuals.

While clear differences exist between a hospital room and a room in which counseling occurs, why has the counseling profession not considered the potential of a counseling room as an instrument to achieve increased mental health well-being? Is it possible that Ulrich's, and others, identification of the health benefit of exposure to natural settings may transcend the physical constructs of a hospital recovery room and be applied to a counseling setting? Is it possible that Alto's belief in a patient's routine exposure to natural elements can reduce stress and contribute to a more expeditious recovery? If so, under the ACA principles of non-maleficence and beneficence, the ethical counselor has an obligation to consider and adopt the implementation of natural elements into their talk therapy setting to offer clients more effective care.

Ulrich noted that he first gained interest in the relationship between physical space and well-being after studying the foundations of modern architecture. He was interested in the work of preeminent Prairie School architect, Frank Lloyd Wright. Prairie School architecture was a late 19th – early 20th century architectural style that, among other elements, emphasized long horizontal lines, which was intended to mimic the wide, flat, expanses of America's native prairie landscape (Brooks, 1972). This basic design element alludes to several biophilic design tenants, but perhaps the most obvious is the "savanna preference." Research has shown that when people are provided with images of different types of natural environments – jungle, desert, dense forest, mountains, etc., participants tended to prefer savanna-like views (Falk & Balling, 1982). The preferred views were characterized by wide, open grassy areas. A theory behind this preference, and indeed the theory Wilson (1984) supports in Biophilia, is that our early East African ancestors, who made the move from forest to savanna, benefited from the survival advantage that the open views provided over the treed, limited-view forest (Falk &

Balling, 1982). This theory indicates that there is a biological drive to be surrounded by an area that would allow us to perceive possible incoming danger. It is easy to imagine that being in a physical environment that permits the early detection of a possible threat to life could reduce stress and anxiety.

Establishing rapport with clients is an essential goal for counselors. Building rapport helps to create a safe and trusting environment and when established, clients are more likely to be open and honest in their communication (ACA, 2014). A strong therapeutic relationship, underpinned by good rapport, is often seen as the foundation for facilitating change (Wampold, 2010). Clients who feel supported and understood by their counselor may find it easier to explore difficult topics and to consider changes in their thoughts, feelings, and behaviors. As a client prepares to meet with a therapist for their first counseling session, the client is more likely to experience increased anxiety centered around the first-time interaction with the helping professional (Nichols, 2013). Initial increased anxiety may be caused by the unknowns of the counseling exchange, by a previous negative experience with a counselor, fear of what questions might be asked, how the counselor might perceive the client, and/or concerns related to over-sharing or under-sharing of information., among others. The potential benefits of incorporating elements of biophilic design may have a direct impact on the establishment of rapport. If an image of a natural setting such as a prairie on the wall of a counseling room can help the client feel less anxious, it may result in more quickly building rapport and trust with a counselor, which ultimately could lead to the client's timely improvement and swift management of unwanted symptoms.

Frank Lloyd Wright also developed the theory of organic architecture, which promotes harmony between human habitation and the natural world. Perhaps Wright's most famous

example of this cohesion between a physical structure and nature is Falling Water, in Mill Run, Pennsylvania. In that space, elements of biophilia abound, as the structure seemingly blurs all lines between indoor and outdoor space. From nearly every room, inhabitants experience the surrounding outdoor environment. With an abundance of floor-to-ceiling windows, use of locally harvested timber and stone, and its position over a flowing creek, one feels as though they are outside, yet they enjoy a sense of protection as they are sheltered by the structure. The space provides a visual connection with nature, a connection with natural systems, thermal and airflow variability, material connection with nature, mystery, prospect, and refuge. All of which are addressed in biophilic design and will be further explored in a subsequent chapter. Falling Water leaves one feeling whole and deeply linked with nature; it is a restorative experience.

Richard Neutra, a Modernist architect who Wright looked to, went even further than Wright by stating that some psychoses could be cured by the thoughtful design of a home. Neutra was particularly interested in movement within a space and, similarly to Frank Lloyd Wright, believed in the value of creating a seamless connection between home and nature. Neutra (1954, p.43) argued, “the cure lies in the fluent relation between interior and exterior”. While Neutra did not conduct an empirical study to support this claim, his architectural style and approach to design has received international acclaim and has been a longstanding model example for the thoughtful incorporation of natural elements into the physical environment. One of his most popular projects, the Health House, is recognized as one of the most important homes of the 20th century (Lamprecht, 2021) in part because of its ability to invite the natural world in.

Another important theory that illustrates the health benefits of exposure to a natural setting is Attention Restoration Theory (ART). This theory suggests that mental fatigue and concentration can be improved by time spent in, or looking at, nature (Kaplan & Kaplan, 1980).

ART proposes that exposure to a natural environmental encourages effortless brain functioning, thereby allowing it to recover and replenish its directed attention capacity. According to the Kaplans, the natural environment must have four properties in order to provide the restorative effect: (1) Extent (the scope to feel immersed in the environment); (2) Being away (providing an escape from habitual activities); (3) Soft Fascination (aspects of the environment that capture attention effortlessly); (4) Compatibility (individuals must want to be exposed to, and appreciate, the environment). These four properties that will be further reviewed in a subsequent chapter offer therapists an opportunity to introduce additional paths toward growth and healing for their clients.

Findings from the aforementioned studies and excerpts above highlight the health benefits of exposure to nature and natural settings, but what lacks is a clear understanding of how exposure to natural elements within the physical space of a counseling setting may impact the way in which a client receives mental health intervention. It is exciting to consider that the intentional incorporation of identified natural elements into the physical setting of therapy may lead to more successful counseling interventions.

Purpose and Research Questions

The purpose of this research is to gain an understanding of how physical space may impact the therapeutic efficacy of counseling services. This study aims to uncover and identify the elements of Biophilic design that, if incorporated or referenced within the physical space that counseling occurs, may increase the effectiveness of those services by enabling the client to feel more relaxed during therapy sessions. There are 14 identified elements of Biophilic design categorized within three primary domains (Wilson, 1984). Although the researcher of this study would like to explore all 14 elements, that task would prove daunting and likely exceed the time

constraints of a dissertation. Instead, the researcher will focus on the first domain identified within the theory of Biophilic design—Nature in the space, which consists of seven categories: visual connection with nature; non-visual connection with nature, non-rhythmic sensory stimuli, thermal and airflow variability, presence of water, dynamic and diffuse light; connection with natural systems. The following research questions will serve as foundational inquiries:

1. How does the presence of natural elements within the physical space of talk therapy influence providers' experiences of counseling services?
2. How does the presence of natural elements within the physical space of talk therapy influence a providers' case conceptualization and treatment plan for clients?

Statement of Potential Significance

The identification of observable benefits of incorporating elements of biophilic design into the physical setting of counseling would have a profound impact on the profession. It could reshape the way that therapists offer meaningful treatment and provide a robust set of additional “tools” to employ in therapy, which may result in clients feeling more comfortable during their sessions and experiencing a more expeditious reduction of unwanted symptoms. This research could identify simple steps for therapists to transform the space in which they conduct therapy to a more accessible and supportive environment for all clients. Of note, many of the seven categories that will be explored in this study would have little to no financial implication for the provider or respective agency.

Theoretical Foundations

The author will employ several theoretical foundations to develop and facilitate understanding both in terms of the research construction and theoretical application. In terms of

research construction, this study will examine phenomena through the lens of Max Van Manen's (1990) Hermeneutic Phenomenology. Van Manen's view of hermeneutic phenomenology builds upon the works of philosophers, Martin Heidegger and Hans Gadamer. Van Manen places a strong emphasis on the lived experience of individuals and the subjective meaning they attribute to those experiences. He believed that understanding human experience requires a deep exploration of the experiential world.

In Van Manen's approach, the researcher should engage in a reflective and interpretive process to grasp the essence of the phenomena that is being studied. This involves a movement of understanding between the researcher and the lived experience of each participant. Here, the researcher strives to access the meaning of the lived experiences as they are understood by the participant. To achieve this, Van Manen suggests several methodological strategies including phenomenological reduction, which aims to limit preconceived assumptions; imaginative variation, which is exploring alternative perspectives, and intuitive synthesis, which is the finding of connections and patterns that emerge within the data.

A key concept is "lived experience" as Van Manen emphasized that human experiences are not isolated events but rather embedded within a broader lifeworld, influenced by cultural, historical, and social factors. Van Manen encourages researchers to engage with the complexities of these lifeworlds and to uncover the underlying meanings and interpretations that individuals bring to their life experiences. This approach to research can yield rich descriptions and insights into the experience of individuals, recognizing that meaning is not fixed but constantly evolving and situated within specific contexts.

Van Manen also established the four lived existentials which are concepts that are used to describe fundamental dimensions of human lived experiences. According to Van Manen (2016), the four lived existentials are described as:

1. Lived Space: The experience of physical and spatial aspects of our surroundings. It encompasses our relationship with the environment, our perceptions of distances, boundaries, and the way we navigate through spaces. Lived space is about how we engage with, and make sense of, the places we inhabit.
2. Lived Body: Pertains to our bodily experiences and sensations. It involves the awareness of our physical presence, sensations, movements, and the ways our bodies interact with the world. The lived body is central to our experience of the world and how we engage with it.
3. Lived Time: Concerned with the temporal aspects of our experiences. It involves our awareness of the past, present, and future, as well as the rhythms and durations of our experiences. Lived time influences how we remember, anticipate, and immerse ourselves in the moment.
4. Lived Relation: Addresses our relationship with others, as well as our social and emotional connections. It encompasses how we engage with others, form connections, experience emotions, and understand the social dynamics that shape our lives.

Van Manen's phenomenological approach encourages a deep exploration and understanding of these dimensions to gain insight into the meaning and significance of everyday experiences.

Evolutionary psychology, which is rooted in Charles Darwin's theory of natural selection, is a theoretical framework that seeks to understand human behavior and cognition through the lens of evolutionary principles. It proposes that many aspects of human psychology, including cognitive processes, emotions, and social behaviors can be explained by examining their adaptive functions in ancestral environments. A premise of evolutionary psychology is that over millions of years, natural selection has shaped human psychological traits and behaviors in response to the challenges and opportunities encountered by our human ancestors. These adaptations were selected because they increase the likelihood of survival and reproduction (Cosmides & Tooby, 2005). According to evolutionary psychology theory, various psychological mechanisms, often referred to as "mental modules" have evolved to solve specific adaptive problems. These modules are believed to be the result of natural selection acting on our ancestors' genetic predispositions (Cosmides & Tooby, 2005).

An additional theoretical framework that was employed for this study is Urie Bronfenbrenner's bioecological systems theory (1979). Bronfenbrenner used the framework to emphasize the importance of understanding human development within the context of various interconnected environmental systems. The theory recognizes that individuals are influenced by multiple levels of their environment, and these levels interact and shape their development. Bronfenbrenner proposed a model consisting of five environmental systems, or "ecological systems," that influence an individual's development. Bronfenbrenner (1979) proposed the following organization of systems:

1. **Microsystem:** The microsystem refers to the immediate and direct environments in which an individual lives, such as the family, school, peer group, or neighborhood. It involves the relationship and interactions that occur within these immediate contexts.

2. Mesosystem: The mesosystem encompasses the interconnections and interactions between different microsystems. It refers to the ways in which the various settings in an individual's life are interconnected and influence each other. The mesosystem highlights how events and experiences in one microsystem can have consequences in another.
3. Exosystem: The exosystem includes settings or institutions that indirectly affect an individual's development, even though the individual may not be actively involved in them. The exosystem influences an individual's development by shaping the conditions and experiences of the microsystem in which they are involved.
4. Macrosystem: The macrosystem encompasses the broader cultural and societal contexts that influence an individual's development. It includes cultural values, laws, social ideologies, and economic conditions. The macrosystem influences the way other systems operate and shapes our values, beliefs, and expectations of individuals within a particular culture.
5. Chronosystems: The chronosystem recognizes the role of time and historical context in shaping an individual's development. It refers to the changes that occur over time in the various environmental systems and how these changes impact personal development.

Bronfenbrenner's theory emphasizes the interplay between an individual and their environment. It supports the value of considering multiple levels of influence and the dynamic nature of human development. The following diagram illustrates the framework of the bioecological system:

Summary of the Methodology

This study aims to explore the lived experiences of counselors who incorporate elements of Biophilic design into their clinical practice and how they believe that practice has impacted their clients' experience of talk therapy. As such, the researcher has identified a qualitative approach to exploring the research questions. Further, the in-depth interviews will be conducted under a Hermeneutic phenomenological lens, as information is explored and interpreted to identify the meaning and essence of lived experiences as perceived by individuals (Heidegger, 1962).

Limitations

The researcher acknowledges that there is a level of subjectivity regarding the perception and experience of natural elements. For any number of reasons, clients may have an aversion to a natural setting, variability in temperature of a space, or exposure to natural elements, etc. For example, natural images that may evoke a sense of peace and tranquility for one individual may cause another individual to feel anxious or could potentially serve as a trigger for the individual, causing them to experience increased symptomology.

Definition of Key Terms

Biophilia –Humans possess an innate tendency to seek connections with nature and other forms of life; the urge to affiliate with other forms of life (Wilson, 1987).

Biophilic Design – The practice of connecting people and nature within our built environments and communities (Kellert, Heerwagen, & Mador, 2013).

Counseling – A professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals (ACA, 2014).

Counsel for Accreditation of Counseling and Related Educational Programs – Accreditation program responsible for setting standards for counseling education programs (CACREP, 2016).

Organic Architecture – a philosophy of architecture which promotes harmony between human habitation and the natural world that is achieved through design approaches that aim to be sympathetic and well-integrated with a site in an effort for buildings, furnishings, and surroundings to become part of a unified, interrelated composition (Wright, 1954).

Hermeneutic Phenomenological - an approach to personality theory that places questions of individuals' current experiences of themselves and their world at the center of analyses of personality functioning and change.

Chapter II: Literature Review

This chapter provides a comprehensive review of literature that examines the benefit of including elements of nature and natural settings within a physical space and various theories that have been developed to help identify what natural elements are most impactful for individuals. As mentioned in the previous chapter, there is a gap in the literature that examines the specific benefit of including elements of Biophilic design into the physical space in which counseling occurs. The following articles and books are reviewed as they serve to provide a foundational understanding of the explored, observed, and supported psychological benefits of exposure to nature and natural settings. However, these supported benefits have yet to be translated and applied to the field of counseling and more specifically, to the physical environment in which counseling is held.

The idea that human beings benefit from exposure to nature and nature-like settings has been around for thousands of years. Perhaps one of the earliest references to this health benefit was made by the ancient Greek physician, Hippocrates. Hippocrates, who is considered to be the father of modern medicine, is thought to be the first to have rejected the previously, and widely held, belief that illness and disease were a form of punishment from the gods. Instead, Hippocrates took a more pragmatic and evidence-based approach when conceptualizing disease and wellness. He advocated for holistic health, highlighting the importance of understanding not only the patient's health, but also the independence of the mind, and the need for harmony between the individual, social, and natural environment, which we see reflected in the Hippocratic Oath (Kleisiaris et al., 2014).

Hippocrates ran a hospital on the island of Kos and would often prescribe garden stays and forest walks to his recovering patients. It is Hippocrates who (at least apocryphally) coined the phrase, “Nature itself is the best medicine.”

In Japan, the practice of Shinrin-Yoku, or forest bathing, means giving oneself completely to nature and feeling nature with five senses. In other words, forest bathing is an approach that uses the innate healing effects of forests to improve the health of humans and to prevent disease through forest walks (Li & Kawada, 2014). The term was first coined in 1982 by Tomohide Akiyama, Director General of the Japan Ministry of Agriculture, Forestry and Fisheries (MAFF). In 1999, Prof. Dr. Iwao Uehara from Tokyo University identified another term called forest therapy, or Shinrin-Ryoho, and emphasized that it is an ideal therapy for people with diseases that originate from their lifestyle.

There are also studies in the literature examining the effects of forest-based impacts on various aspects of mental health. In a meta-analysis examining the effects of forest bathing and forest therapy on mental health, the practice was reported to be effective for treating depression, chronic stress and anger, with particular benefit related to the reduction of anxiety symptoms (Kotera et al. 2022). In a similar systematic review, studies with different sociodemographic groups, such as university students, workers, and middle-aged women, it was stated that forest bathing and forest therapy have a therapeutic effect on mental health (Rajoo et al. 2020).

The benefit of exposure to nature is not only limited to experiencing it while immersed within or while enjoying it through the view from a window. Some studies suggest that exposure to natural elements like water and trees—whether it is simulated or actual—can mitigate anger and reduce stress. Incorporating still images in the form of photographs or painted art has been found to provide important health benefits. For example, Byoung et al. (2008) explored the

impact of having landscape posters in an office setting on an employee's anger and stress levels. The researchers noted that one out of four American workers report themselves to be chronically angry, which has been linked to negative outcomes such as retaliatory behavior, revenge, interpersonal aggression, poor work performance, absenteeism, and increased turnover (Gibson & Barsade, 1999). The researchers hypothesized that people who work in office environments decorated with aesthetically engaging art posters would experience less stress and anger in response to task-related frustration. To test this, four office conditions were created: an office with abstract posters on the wall, an office with nature posters on the wall, an office with both abstract and nature paintings on the wall, and an office with no posters on the wall. Two hundred and ten college students were randomly assigned to these different office conditions and performed four mild-anger provoking computer tasks and were then asked to report their levels of state anger and stress. The researchers found that different office conditions had a significant influence on state anger for males but not for females. Males experienced less state anger and stress when art posters were present. The researchers also found that increased proportions of nature paintings decreased state anger because of decreased levels of stress (Byoung et al., 2008). While this study suggests that gender may impact a reduction in state anger and stress, it is clear that benefits exist for males and future studies should include different environmental stimuli that may impact females differently.

Balling and Folk (1982) examined human visual preferences for slides of five natural landscapes or biomes-tropical rain forest, temperate deciduous forest, coniferous forest, savanna, and desert. Subjects were third graders, sixth graders, ninth graders, college students, adults, senior citizens, and a group of professional foresters. A series of 20 slides, 4 examples of each biome, was shown twice to each group of subjects. On one pass through the slides, subjects

judged how much they would like to live in an area similar to the one represented; on the other pass, subjects rated the slides for how much they would like to visit an area similar to the one shown. Judgments were made on a 6-point Likert scale (Balling & Folk, 1982). The researchers found age-related difference in scene preference, with the third and fifth grade participants rating the savanna scenes significantly higher than the deciduous or coniferous forests (Balling & Folk, 1982). The mid-adolescent and adult group's mean preference for savanna, deciduous forest, and coniferous forest were statistically indistinguishable (Balling & Folk, 1982). The researchers acknowledged that these findings may provide limited support for the hypothesis that people have an innate preference for savanna-like environments; however, they believe the underlying preference seems to be modified through experience of the lifespan. As the subjects become more familiar with certain non-savanna biomes, or at least the floristic elements of such biomes, either through living in or near them, the overall preference for savanna seen in childhood seems to dissipate (Balling & Folk, 1982). The researchers believe a simple familiarity hypothesis would argue that people like those things with which they are familiar, in this case, deciduous and conifer forests and dislike those things with which they are relatively unfamiliar, namely tropical rain forests, deserts, and savannas (Balling & Folk, 1982). In this study, the researchers acknowledged two primary limitations—a single cultural group was included as the sample and all participants hailed from one-geographic area.

To address these limitations, Folk and Balling (2010) conducted a follow-up study to examine a different cultural group and included participants from varying geographical locations. Individuals residing in the rainforest belt of Nigeria were shown photographs of five biomes: rain forest, deciduous forest, coniferous forest, savanna, and desert. The subjects overwhelmingly selected savanna scenes as representing the most desirable place to live. These results support the

hypothesis that humans possess an innate preference for savanna-like settings, which then is modified through experience and enculturation (Folk & Balling, 2010). In the study, two sample populations were from secondary-schools. Sample A was taken from a co-educational facility and was comprised of students ranging from 12 to 18 years old and who resided in a primarily upland rain-forest area with the local vegetation largely consisting of slash and burn agriculture interspersed with scattered patches of rainforest (Folk & Balling, 2010). The other secondary school sample, sample B, was from a girls' parochial school located in a small fishing village on a small island in the Niger Delta. There, the dominant local vegetation was mature tropical rainforest and mangrove forests with very little land being under cultivation. A total of 87% of subjects from both samples A and B had been born in and had never traveled beyond areas comparable to their hometown area. Each participant was individually interviewed and asked to examine 45 pairs of 3"× 5" photographs of landscapes representing all possible unique binary combinations of 10 scenes, two each of tropical rainforest, temperate deciduous forest, temperate coniferous forest, tropical savanna, and mid-latitude desert. The participant was asked, for each pair, to indicate which photo looked most like a place where they would like to live. Sample C consisted of participants aged 20-39 years old and was taken from a class of students at a technical college. These students' homes were located throughout delta and upland areas. A total of 73% had never traveled outside of the rainforest belt of West Africa. This sample was shown 20 randomly ordered slides, representing four replicates of each of the five biomes previously mentioned. This was the same procedure used with the American-based population that was used in their 1982 study. Subjects were asked to indicate on a 5-point Likert-type scale the degree to which the scene depicted appeared to be a favorable place in which to live. For samples A and B, the total number of times each slide was preferred to every other slide was calculated and

savanna was highly preferred relative to all other biomes. Sample C revealed that savanna was again significantly preferred over all other biomes (Folk & Balling, 2010).

Both their 1982 and 2010 studies support the theory that humans have an innate draw to observe savanna-like scenes. These findings further support the prospect-refuge theory, first proposed by Geologist, Jay Appleton. In his book, *The Experience of Landscape* (Appleton, 1975), he proposed that humans seek to satisfy an innate desire when viewing a space—to have opportunity [prospect] while being safe [refuge]. Appleton believed this tendency stems from evolutionary survival, where the predator must be able to see their prey without being seen.

Ulrich's (1991) Stress Recovery Theory focuses on the impact of nature and natural environments on stress reduction and the restoration of physiological and psychological well-being. The theory proposes that exposure to nature has a positive effect on stress reduction, leading to improved recovery from stress-related physiological and psychological arousal is based on the premise that the human body has developed physiological responses to stressors, known as the stress response. When individuals experience stress, their sympathetic nervous system is activated, leading to increased heart rate, blood pressure, and the release of stress hormones such as cortisol (Ulrich, 1991).

According to Stress Recovery Theory, exposure to nature can help mitigate the negative effects of stress by inducing relaxation responses and promoting physiological and psychological restoration. Ulrich (1991) noted that the following features are impacted by natural environments and can contribute to stress reduction and recovery:

1. Attention Restoration: Natural environments offer a restorative effect by capturing attention effortlessly and allowing directed attention to rest. The calming and

- aesthetically pleasing qualities of nature provide a positive distraction from stressors, reducing mental fatigue and promoting relaxation.
2. **Stress Reduction:** Exposure to natural settings has been shown to elicit physiological responses associated with stress reduction, including decreased heart rate, blood pressure, and levels of stress hormones like cortisol. Nature's calming influence and the absence of urban stressors contribute to a decrease in physiological arousal and a shift toward a more relaxed state.
 3. **Psychological Restoration:** Natural environments provide an opportunity for psychological restoration by promoting positive emotions, reducing negative affect, and enhancing mood. The tranquility, beauty and serenity of natural landscapes contribute to a sense of well-being, calmness, and rejuvenation.
 4. **Biophilic Connection:** The Stress Recovery Theory suggests that humans have an innate affinity for nature, known as Biophilia. This connection to nature is rooted in our evolutionary history and is thought to contribute to stress reduction and overall well-being. Being in natural environments aligns with our biological and psychological makeup, promoting a sense of harmony and tranquility.

Hartig et al. (2003) set out to analyze the hypothesis of enhanced restoration that occurs in natural environments. In particular, the researchers noted few experiments have compared restoration in natural and urban environments following the controlled imposition of psychological demands that induced a potential for restoration to occur (Hartig et al., 2003). In this study, the researchers compared psychophysiological stress recovery and directed attention restoration in natural and urban field settings on blood pressure, emotion, and attention on young adults. In the study, the researchers had half of the subjects begin the environmental treatment

directly after driving to the field site, where the environmental treatment was to occur. The other half of participants completed additional attentionally-demanding tasks before being exposed to an urban setting. After the drive or the tasks, sitting in a room with tree views promoted more rapid decline in diastolic blood pressure than sitting in a viewless room (Hartig et al., 2003). Walking in a nature reserve initially fostered blood pressure change that indicated greater stress reduction than afforded by walking in the urban surroundings. Performance on an attentional test improved slightly from the pretest to the midpoint of the walk in the nature reserve, while it declined in the urban setting. This opened a performance gap that persisted after the walk. Positive affect increased and anger decreased in the nature reserve by the end of the walk; the opposite pattern emerged in the urban environment (Hartig et al., 2003).

Nature therapy, or ecotherapy, is a therapeutic approach that utilizes nature and natural environments to promote healing, well-being, and psychological growth (Roszak, 1992). It recognizes the connection between humans and the natural world and leverages the therapeutic benefits of being in nature. Nature therapy can take various forms and approaches, depending on the specific goals and needs of the client. Roszak provided the following common practices and techniques:

1. Nature immersion: This involves spending time in natural environments, such as forests, parks, gardens, or waterfronts. It encourages individuals to engage their senses, observe the natural surroundings, and connect with the sights, sounds, and textures of nature.
2. Horticulture therapy: This involves engaging in gardening or plant-related activities as a means of therapy. It can include planting, nurturing, and tending to plants, which

can promote relaxation, improve mood, enhance a sense of responsibility, and provide a sense of accomplishment.

3. Wilderness therapy: This involves participating in outdoor adventure activities such as hiking, camping, or wilderness expeditions, under the guidance of trained professionals. These experiences often involve physical challenges and opportunities for personal growth, self-reflection, and building resilience.
4. Animal-assisted therapy: This incorporates interactions with animals, such as therapy dogs or horses, to promote emotional well-being and provide a sense of comfort and companionship. These interactions can help reduce stress, improve mood, and facilitate emotional expressions.

The work of Rachel and Stephen Kaplan was cited in the previous chapter and is largely referenced in this study, as the researchers have provided robust insight into the health benefits of exposure to natural settings. Their Attention Restoration Theory (ART) (Kaplan & Kaplan, 1989) proposes that exposure to nature or natural environments can help restore and replenish our cognitive resources, enhancing attention and mental well-being. According to this theory, spending time in nature provides a restorative experience that allows individuals to recover from mental fatigue and improve their capacity to concentrate and focus.

Attention Restoration Theory is based on two types of attention: directed attention and involuntary attention. Directed attention is a conscious, effortful process that we use to concentrate on tasks, make decisions, and filter out distractions. Involuntary attention, on the other hand, is a more effortless and automatic form of attention that occurs when we are captivated by natural or aesthetically pleasing stimuli (Kaplan & Kaplan, 1989). The Kaplans argue that directed attention requires effort and can become depleted over time, leading to

cognitive fatigue and reduced performance. In contrast, exposure to natural environments can invoke involuntary attention, which does not require as much effort and allows directed attention to rest and replenish.

According to the Kaplan's, ART possesses four key characteristics that contribute to attention restoration:

1. Fascination: Natural environments often have qualities that capture our attention effortlessly, such as gentle sounds, flowing water, or intricate patterns in the landscape. These stimuli provide a sense of fascination that helps shift our attention away from the demands of daily life.
2. Being away: Natural settings provide an escape from the urban or built environment that often demand directed attention. Being away from these environments reduces exposure to distractions, interruptions, and cognitive overload, allowing individuals to disengage from mentally demanding tasks.
3. Extent: Natural environments often offer expansive and open spaces that provide a sense of freedom and a wider field of view. This sense of spaciousness promotes a feeling of relaxation and enhances a person's sense of being away from constraints.
4. Compatibility: Natural settings tend to be perceived as harmonious and in line with our evolutionary history. The human brain has evolved in nature, and exposure to natural stimuli is believed to be compatible with our cognitive processes, reducing mental effort and promoting a sense of coherence and balance.

The Kaplans argue that spending time in natural environments can lead to attention restoration and subsequent benefits such as improved cognitive performance, increased creativity, reduced stress, and enhanced overall well-being.

Nature deficit disorder is a term developed by Richard Louv in his book, *Last Child in the Woods* (2005). It is used to describe the negative consequences of children's limited exposure to nature in today's modern, technology driven society. Although it is not a clinical diagnosis, it is used as a metaphoric term to illustrate the potential impacts of reduced time spent in nature. The concept suggests that the growing disconnection between children and natural environment can lead to a range of physical, emotional, and cognitive challenges. Louv identified several effects of nature deficit disorder:

1. **Reduced physical activity:** Spending less time outdoors in nature can contribute to a sedentary lifestyle, leading to health problems such as obesity and decreased physical fitness.
2. **Increased stress and mental health issues:** Lack of exposure to natural environments may contribute to higher levels of stress, anxiety, depression, and attention deficit hyperactivity disorder (ADHD) symptoms. Interacting with nature has been shown to have a positive impact on well-being.
3. **Impaired cognitive development:** Limited exposure to nature may hinder cognitive development, including attention, problem-solving, and creativity. Nature experiences can enhance cognitive abilities and promote healthy brain development, especially in children.
4. **Decreased environmental awareness:** Without regular contact with nature, individuals may have less understanding and appreciation of the environment, leading to a decreased sense of environmental responsibility and stewardship.

Addressing nature deficit disorder involves promoting and facilitating opportunities for individuals, especially developing children, to engage with nature. Encouraging outdoor play,

creating green spaces in urban environments, incorporating nature-based education, and fostering a culture that values and protects natural environments helps to counter the negative effects of reduced time spend in nature.

As noted in the previous chapter, Wilson's (1984) Biophilic hypothesis refers to the innate and instinctive affinity humans have for the natural world. It suggests that humans have a deep connection with nature and that our well-being is influenced by our relationship with the natural environment. Wilson proposed 14 elements of biophilia that capture different aspects of our connection with nature:

1. Environmental and landscape features: the presence of natural elements such as plants, trees, bodies of water, and other features that evoke a sense of nature.
2. Natural light and views: Access to natural light and views of the natural world, such as trees or green spaces, enhance well-being and productivity.
3. Non-human life: The presence of animals and other living organisms in our environment, whether wild or domesticated, evokes feelings of connection and interest.
4. Naturalistic shapes and forms: Design elements that mimic patterns and forms found in nature, such as fractals and other organic shapes, can elicit positive responses and promote a sense of biophilia.
5. Natural materials and textures: The use of natural materials like wood, stone, or bamboo and incorporating textures that resemble those found in nature can create a sense of warmth and connection.
6. Natural patterns and processes: Natural patterns, such as spirals and waves can be visually appealing and have calming affects in our minds.

7. Biomimicry: Drawing inspiration from natural systems and processes when designing products or solutions can enhance their functionality
8. Natural sounds and rhythms: Exposure to natural sounds, such as birdsong or flowing water, can have a positive impact on our mood and well-being. Rhythms and patterns found in nature can influence our sense of connection.
9. Sense of place: A sense of place involved creating environments that are unique, locally grounded, and reflective of the natural characteristics and identity of a specific location.
10. Evolutionary connection: Recognizing our evolutionary heritage and understanding the ways in which our ancestors interacted with nature can help deepen our sense of biophilia.
11. Exploration and discovery: Encouraging exploration and discovery of natural environments can foster a sense of wonder and curiosity about the world around us.
12. Natural complexity and diversity: Experiencing and appreciating the complexity and diversity of natural systems, such as ecosystems and biodiversity, can elicit feelings of awe and stewardship.
13. Risk and adventure: Opportunities for healthy risk taking and adventurous experiences in nature can enhance personal growth and well-being.
14. Biophilic design: Incorporating biophilic design principles into architecture and urban planning involved intentionally integrating nature-inspired elements to create environments that promote well-being and connection with nature.

The aforementioned articles, books, and theories illustrate the clear indication that humans experience a number of health benefits from routine exposure to nature and natural

surroundings. However, absent from the research is an examination of those health benefits inside the physical setting of counseling therapy.

Theoretical Framework

As previously noted, Biophilia refers to the inherent human affinity or and connection to the natural world (Wilson, 1984). Bronfenbrenner's Ecological Systems Theory, on the other hand, is a framework that outlines the various layers of influence that shape human development. Biophilia can be understood through the lens of Bronfenbrenner's Ecological System's theory. Bronfenbrenner's theory consists of several interconnected systems that influence an individual's development, ranging from the immediate microsystems to the broader macrosystem. By applying the previously discussed systems (Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem) to Biophilia, we gain a comprehensive of how an individual's connection to the natural world is shaped by a complex interplay of various systems, spanning from immediate personal interactions with nature to broader cultural and biological contexts. This framework emphasizes that the development of Biophilic tendencies is not solely an individual process but is deeply embedded within a network of interacting influences.

Similarly, Attention Restoration Theory (ART) and Bronfenbrenner's Ecological Systems Theory provide complimentary perspectives on how human well-being and development is relation to the environment. ART suggests that spending time in natural environments can help restore cognitive resources and improve attention. According to ART, natural environments are particularly effective at capturing involuntary attention (soft fasciation), which allows directed attention (required or tasks and concentration) to replenish. This restoration of attention has positive impacts on mental fatigue, stress reduction, and overall well-being. Bronfenbrenner's Ecological Systems Theory, as previously described, focuses on the

various systems that influence human development, ranging from the intermediate interactions to broader societal and cultural contexts. By integrating ART into Bronfenbrenner's Ecological Systems Theory, we recognize that the availability and quality of natural environments influence attention restoration at multiple levels and in multiple ways. From personal interactions to societal trends, each ecological system interacts to shape an individual's potential for cognitive rejuvenation and overall psychological health through exposure to nature.

Chapter III: Methods

This chapter provides an overview of methods and research process as they relate to this study. The researcher restates the purpose of the study, reviews the epistemology and theoretical perspective that shape the study and outlines the methodological approach that was used to collect and analyze data.

Restatement of Purpose

As evidenced, theories of the interface between physical design and health span multiple professions, and research has broadly supported the benefits of incorporating natural elements into these physical spaces; however, the field of counseling has largely overlooked these benefits and there remains an opportunity for mental health providers to increase their therapeutic efficacy by introducing elements of Biophilic design into their clinical practice. While it is true that the closely related field of Environmental Psychology is dedicated to the exploration of the relationship between humans and their external world, limited research exists that looks at the benefit of incorporating elements of the natural world into the physical space in which counseling occurs. Instead, a review of the existing research in Environmental Psychology uncovers a majority of studies that aim to explore how humans interact with nature while immersed within it. From there, these studies have invited participants to reflect on those experiences while in a therapeutic counseling session and or through expressive practices such as journaling, poetry, or drawing.

This researcher believes that if elements of the natural world—which have been identified as preferred or therapeutic by individuals in nature through a myriad of existing literature—are introduced into the physical space of counseling, those preferences will translate to a more therapeutic and supportive experience of counseling. Further, the ethical counselor of

today, under the ACA Code of Ethics (2014), has a professional obligation to consider all ways in which they, as the provider, may be able to deliver the most effective and equitable care to clients.

The purpose of this research is to develop an understanding of how physical space of therapeutic settings, namely those informed by Biophilic design, may impact the efficacy of counseling services. As such, the following serve as the study's two interconnected research questions:

1. How does the presence of natural elements within the physical space of talk therapy influence providers' experiences of counseling services?
2. How does the presence of natural elements within the physical space of talk therapy influence a providers' case conceptualization and treatment plan for clients?

Rationale for Qualitative Research

The goal of this research is to explore the lived experiences of counseling professionals who employ elements of Biophilic design into the physical space in which they conduct counseling and to explore how they believe their clients have benefited from the practice. With this in mind, the researcher relied on Constructivist philosophy to approach and consider information that was collected within semi-structured, open-ended question interviews.

Constructivism is an educational philosophy that focuses on how individuals actively build knowledge and understanding based on their experiences and interactions with the built world (Piaget, 1964). The philosophy suggests that learning is a process of constructing meaning rather than passively receiving information. According to Piaget (1964), there are six principles of constructivism:

1. Active learning: Constructivism emphasizes the importance of active engagement in the learning process. Learners are encouraged to participate, explore, and interact with their environment to construct their own knowledge.
2. Prior knowledge: Learners bring their existing knowledge, beliefs, and experiences to any learning situation. New information is connected to the prior knowledge and from there, learners modify their existing mental models to accommodate new information.
3. Social interaction: Collaborative learning, discussing, and group activities are seen as valuable ways to enhance understanding.
4. Cognitive development: Learners actively construct their understanding of the world.
5. Context and culture: Learning is influenced by culture and contextual factors. Different cultures may have unique ways of understanding and approaching knowledge, which must be recognized and respected within the learning process.
6. Reflection: Learners are encouraged to think about their learning process, routinely evaluate their understanding, and make connections between new and existing knowledge.

In recognizing these six principles, the researcher believes that constructivist philosophy is an appropriate way to approach the gathering of perspectives and understanding from the study participants. This approach acknowledges the subjective nature of reality and aims to understand how individuals interpret and make sense of their experiences within their social and cultural context. In a constructivist approach, participants are seen as active co-creators of knowledge.

Interviews are seen as collaborative conversations rather than one-sided data collection. The interviewer sought to deeply understand the participant's perspective and allowed the conversation to evolve organically, exploring themes that were relevant and meaningful for the participant. The approach embraces subjectivity, collaboration, and the co-construction of knowledge between researchers and participant. The researcher believes this philosophy of learning works well under a qualitative research framework and will provide in-depth and holistic data.

Research Methodology

Hermeneutic phenomenology was identified by the researcher as an appropriate methodological approach for this study which aims to uncover the lived experiences of counselors who incorporate elements of Biophilic design into their clinical practice. Under a Hermeneutic phenomenology lens, information is explored and interpreted to identify the meaning and essence of lived experiences as perceived by individuals (Heidegger, 1962). The method is rooted in the understanding of ways in which people experience and make sense of the world around them. According to Van Manen (1990), understanding human experiences requires going beyond mere objective observation and delving into the subjective meanings and interpretations of individuals. Van Manen emphasized the need to be attentive in the "lived world" and acknowledged the richness and complexity of experiences.

Research Design

The data collection process for this study was modeled after John Creswell's numerous publications on research design. In his work, Creswell (2017) identified and defined several characteristics of qualitative design. For the purposes of this study, in-depth interviews were held. In-depth interviews involve conducting one-on-one conversations with participants to

explore their perspectives, experiences, beliefs, and attitudes. These interviews were semi-structured, allowing participants to elaborate on their responses and share their rich narratives. In addition to general questions about the participants' experiences with counseling in the context of therapeutic environments that incorporate natural elements, additional interview questions related to van Manen's Four Lived Existentials (1990) framework and Bronfenbrenner's Biological Systems Model (1977) were included to provide the participants with opportunities to share their experiences in relation to those frameworks. Creswell emphasized the choice of data collection is dependent on the type of research questions, the nature of the phenomena, and the researcher's theoretical framework. Creswell encourages qualitative researchers to be flexible and adapt their data collection strategies as information and insight emerges.

Role of the Researcher

In qualitative studies, researchers play a crucial role in designing, conducting, and interpreting research (Denzin & Lincoln, 2005). Researchers need to be aware of their own biases, assumptions, and experiences that might influence the research process and interpretation. This researcher acknowledged his bias on this topic and dutifully employed the previously mentioned techniques to limit how that bias impacted the process of gathering and interpreting data. The researcher recognized the presence of his preference for nature, to be outside surrounded by a natural environment, exposure to animals and wildlife settings, to be near water, and while inside, to be in an environment that contains elements that are reminiscent of a natural setting. The researcher also believes that human behavior can be affected by the built environment and elements of our physical environment can impact our perception of experiences.

Because the researcher's beliefs, perspectives, and preconceptions could have influenced data collection and analysis, the researcher routinely engaged in two primary practices to ensure validity and credibility:

- Bracketing was used to acknowledge assumptions and preconceptions about the research topic and to set aside those observations during data analysis in order to have prevented them from influencing interpretations (Tufford & Newman, 2010).
- Member checking, which is the act of sharing interview findings with participants to ensure accuracy and validity, was also performed and participants were encouraged to provide feedback and clarify any misunderstandings (Candela, 2019).

By employing these practices, the researcher remained vigilant regarding bias, which enhanced the rigor and credibility of the findings.

It is also imperative to address the concept of trustworthiness of the researcher. In their seminal work, Lincoln and Guba (1985) introduced a framework for assessing the trustworthiness of qualitative research with an aim to enhance credibility and rigor of qualitative findings. The framework was designed to address the unique challenges and characteristics of qualitative research and to establish a set of guidelines to ensure quality research outcomes.

Lincoln and Guba (1985) provide four criterion points which contribute to the overall trustworthiness of the research:

1. **Credibility:** Corresponds to internal validity in quantitative research. Concerns the believability and truthfulness of findings from the perspective of participants.
2. **Transferability:** Corresponds to external validity in quantitative research. It relates to the extent to which findings can be transferred or applied to other contexts or settings.

3. Dependability: Similar to reliability in quantitative research. It concerns the stability and consistency of findings over time and across different researchers.
4. Confirmability: Analogous to objectivity in quantitative research. It refers to the degree to which the findings are influenced by the researcher's biases and perspectives.

These criteria provide qualitative researchers with a systemic approach to ensuring the quality and credibility of research. The criteria recognize the importance of transparency, rigor, and thoughtful consideration of the challenges that are specific to qualitative inquiry. The researcher employed these criteria, which have been identified as meaningful measures to enhance the trustworthiness of qualitative research.

Population and Sampling Approach

Purposive sampling was used to identify study participants as specific qualifications and experiences were relevant to the research objectives and were prerequisite for participation.

Purposive sampling is a technique in which the person conducting research relies on their judgement to choose the members who will be part of the study (Likert, 1959). In recognizing that providers who take a similar approach to the counseling relationship with their clients may themselves work together or create professional “communities” of like-minded providers, snowball sampling was also used to recruit participants. In snowball sampling, the researcher may ask a participant if they are able to recommend other individuals who may be suitable for the study. The recommendations are often based on the participants' connections, affiliations or knowledge about others who share similar characteristics or experiences (Goodman, 1961). Participants were required to hold a master's (M.A. or M.S.) degree or doctorate (Ph.D. or Ed.D.) degree in counseling, or counselor education, and be actively providing in-person and

individual counseling services. As previously noted, the researcher is enrolled in a doctoral counseling program and while findings from this study may be applied to mental health professions at large, the researcher is motivated to contribute directly to the profession of Counseling, as counselors have a unique professional identity. Additionally, as stated within the ACA Code of Ethics, “Counselors who conduct research are encouraged to contribute to the knowledge base of the profession and promote a clearer understanding of the conditions that lead to a healthy and more just society. Counselors support the efforts of researchers by participating fully and willingly whenever possible.” (ACA, 2014, p. 15). While participants were not excluded from participation if they offered telehealth services, they must have also provided in-person therapy, as only in-person sessions were discussed within the interview. A primary goal of this research was to discuss and identify biophilic elements within the physical space of counseling, as such telehealth sessions were excluded from interview discussion and were not considered in the data analysis. Further, the researcher was only interested in discussing individual therapy sessions with participants. Group sessions were excluded as they often take place in settings outside a standard counseling space to accommodate the larger number of participants. All participants were required to hold licensure in their respective state of practice. There was not a requirement related to the amount of time that a participant had been engaged in practice.

Participant Recruitment Process and Site Location

The researcher’s place of employment, The University of Texas at Austin, was used as a site to gather possible participants as the University has large and well-established graduate programs in counselor education and counseling. The online resource of Psychology Today was also used as a resource to consider and recruit prospective participants. In particular, the “Find a

Therapist” page, was used, as it provided a list of thousands of providers and their educational background, licensure information, and overview of how the provider approaches the clinical relationship with clients. The researcher scanned profiles for an indication of the provider’s propensity to integrate biophilic design into their practice. Key terms such as “biophilic,” “natural,” “nature,” and “plants” were used to hone the participant selection process. Interviews were conducted via Zoom to increase the potential participant pool. As such, participants were selected from anywhere in the United States.

Generating and Collecting Data

In-depth interviews were held via Zoom and served as the sole method of collecting data for this study. Through a combination of the literature review and the researchers lived experiences and interest on the topic, interview questions and structure were established. The semi-structured interview approach was used to create a safe, supportive environment for participants to share their responses and to collect as much relevant data as possible. Interviews were expected to last approximately 60 minutes. The interview questions were open-ended and developed with a goal of gaining insight on the topic at hand and to encourage and facilitate shared reflection and open thinking. Saturation was used as a method to determine when enough data had been collected to develop a comprehensive understanding of the research topic. Achieving saturation signifies that collecting additional data is unlikely to yield substantially new insights or information (Saunders et al., 2017).

Data Collection Procedures

All Zoom interviews were video and audio recorded. The recordings were stored on a password-protected laptop. As a secondary backup to data collection, all interviews were also recorded on an audio recorder, which was kept in a locked file cabinet in the researcher’s work

office. Handwritten notes were also taken throughout the interview and were kept within a locked file cabinet. After a participant had been selected and agreed to participation, they were emailed a link to access the Zoom meeting. Participants were asked to enable the camera feature on Zoom throughout the meeting in order to provide the researcher with an opportunity to view particular physical items that may be referenced by participants such as art, office plants, or other décor. At the start of each interview, the researcher verbally reviewed each portion of the consent form and gained verbal consent for participation. Participants were asked if they had any questions about the study and were reminded that they could ask questions at any time or disrupt the interview if they began to feel uncomfortable.

Data Analysis

The researcher allocated time after each interview to transcribe the participant's responses. To assist with this task, Otter.ai was used. To ensure accuracy, the produced transcript was read against the audio recording from Zoom. After each interview transcript was reviewed for accuracy, it was uploaded to Atlas.ti for coding.

Establishing coding in qualitative research is a fundamental step in categorizing and labeling segments of text, audio, or visual data to identify patterns, themes, and concepts (Lincoln & Guba, 1985). Inductive coding was used, as it allowed for themes to emerge from collected data. To consider data from a holistic perspective, both broad and more detailed, sub-themes were identified. Thematic analysis was used to identify, analyze, and report patterns, themes, and meaningful categories within the data. This approach to analyzing helped the researcher uncover underlying meanings, experiences, and perspectives of the participants. In their article, "Using Thematic Analysis in Psychology," researchers Braun and Clarke (2006) provided a detailed framework for conducting thematic analysis which included the following:

1. Familiarization with data: The first step is to immerse yourself in the data. This involves reading and re-reading the data with a goal to become intimately familiar with the content.
2. Generate initial codes: Researchers start to generate initial codes, which are labels that are assigned to segments of data that capture specific meanings, concepts, or patterns.
3. Search for themes: Codes are organized and sorted into potential themes. A theme is a pattern that captures something meaningful in relation to the research question. Themes are intended to be broader and more abstract than individual codes.
4. Review themes: Researchers review and refine identified themes to ensure coherence within the context of the data.
5. Defining and naming themes: Each theme is given a clear and concise name, and a description that summarizes what it represents in the data. The themes should capture the essence of the data and provide insight into the research question.
6. Writing the report: Researchers write a narrative or report that presents the themes, supported by quotations from the data.

Ethical and Multicultural Considerations

Institutional Review Board (IRB) approval was gained to ensure that the ethical guidelines of working with and researching human subjects were met. To receive IRB approval, a researcher must illustrate how they will ensure participant's privacy and confidentiality, how the client may benefit from participation in the study, and how a participant will not be harmed by participation in the study. There was minimal risk associated with participation in this study, as participants were provided with a general overview of the purpose of the study and the

interview questions were exploratory rather than interrogative in nature. Participants were also informed that they could disrupt the interview at any point in time if they felt uncomfortable.

Multicultural considerations were important for the researcher to recognize. In 2019, non-Hispanic white adults were found more likely than non-Hispanic black and Hispanic adults to have received any mental health treatment (Terlizzi & Zablotsky, 2020). Also in 2019, it was estimated that approximately 198,000 individuals are employed as licensed therapists in the United States. Of that, roughly 76% are non-Hispanic white, 4% are Black, 11% are Asian or Pacific Islander, and 6% are Hispanic or Latino (Diena, 2023). These statistics illustrate that not only were the study's participants likely representing different backgrounds, but also the information that these participants shared during their interviews hailed from a diverse population. The researcher carefully considered and reflected on how cultural differences may have impacted the experience of a space and exposure to nature and natural settings.

Methodological Limitations of the Study

Although qualitative research provides a valuable perspective, limitations do exist. Qualitative research consists of smaller sample sizes. This type of research involves a limited number of participants, as it focuses on in-depth exploration rather than statistical generalizations. While this approach provides insights into individual experiences, it may not fully represent the diversity or complexity of larger populations (Denzin, 1994). Denzin highlights several concerns related to limitations with qualitative design: due to this smaller sample size, findings cannot be easily generalized to broader populations or to different settings. Additionally, the use of purposive sampling may further reduce the generalizability of the study findings. However, the goal of most qualitative studies is not to generalize, but rather to provide

a rich, contextualized understanding of some aspect of human experience through intensive study of specific cases (Polit & Beck, 2010).

Despite these limitations, the researcher believes that this was the best research method for this study as qualitative research is essential for exploring complex social phenomena and gaining in-depth insights into human behavior and responses and for generating hypotheses for further investigation.

Chapter IV: Findings

This chapter presents the study findings through cross-case analysis. Each of the six participant interviews were thoroughly reviewed and analyzed. Important findings were summarized and charted within.

The purpose of this research is to develop an understanding of how physical space of therapeutic settings, namely those informed by biophilic design, may impact the efficacy of counseling services. The research was guided by the following research questions: (1) How does the presence of natural elements within the physical space of talk therapy influence providers' experiences of counseling services? and (2) How does the presence of natural elements within the physical space of talk therapy influence a providers' case conceptualization and treatment plan for clients? A Hermeneutic phenomenological approach was used to explore the phenomena of counselors who incorporate elements of biophilic design into their physical therapeutic setting. Hermeneutic phenomenology explores lived experiences of individuals. Under this approach, information is examined and interpreted to identify the meaning and essence of lived experiences (Heidegger, 1962). The method is rooted in the understanding of ways in which people experience and make sense of the world around them. Further, Piaget's Constructivism philosophy was used to consider information that was collected within the semi-structured, open-ended question interviews. The philosophy suggests that learning is a process of constructing meaning rather than passively receiving information (Piaget, 1964). Bronfenbrenner's bioecological model (1977) and Van Manen's lived existentials (1990) served as theoretical foundations to understanding and interpreting the collected data.

Participant Demographics

Six licensed counselors (three with M.A. degrees and three with Ph.D. degrees) who identified as incorporating elements of biophilic (nature-centered) design into the physical space in which they offer therapy volunteered to participate in this study. Saturation was used as a method to determine when an adequate amount of data had been gathered to provide an understanding of the research topic. As a result of consistent and thorough analysis of participant interviews, the researcher identified that themes were being repeated by the last two interviews (this observation is illustrated in Table 8, which indicates the last two participants provided data that touched on all of the identified themes. Further, as evidenced in Table 8, each participant spoke to all but one of the themes). Member checking was conducted as a measure to ensure accuracy and validity of information. Participants were provided with opportunities to clarify or correct information that was shared. There were no instances when a participant requested changes to the information that was collected by the researcher. The participants represented a diverse population in terms of age, agency type, professional credentials, state of practice, and amount of time served as a licensed counselor; however, the participants were less diverse in terms of racial and gender identity (See Table 1). Participant 1 identified as Caucasian female, holds an M.A. degree in counseling and works at a large (125+ mental health professionals) agency where she incorporates elements of biophilic design into her counseling space. She has been in practice for approximately 6 years. Participant 2 identified as Caucasian female, holds an M.A. Degree in counseling and also works at a large mental health treatment center and has been in practice for over 11 years. Participant 2 indicated that she has a longstanding practice of incorporating natural elements into her therapy space. Participant 3 identified as Caucasian male, holds a Ph.D. in counseling, works at a small, private agency (5 counselors on staff) and is a full-time faculty member in CACREP accredited graduate counseling program. Participant 3 has

been in practice for over 25 years and has endorsed the implementation of natural materials into the physical space of his therapeutic setting. Participant 4 identified as Caucasian female, holds an M.A. degree in counseling and is the sole counselor at her private practice in addition to working at a university in ADA compliance. Participant 4 indicated that she incorporates elements of biophilic design into her private practice and has had that practice for 21 years. Participant 5 identified as a black female, holds a Ph.D. degree in counseling and works in private practice with 7 other counselors and psychologists. She has been practicing for 9 years and incorporates natural elements into the physical space in which she provides therapy. Participant 6 identified as Caucasian female, holds a Ph.D. in counseling and has worked in a small private practice for 15 years. She identifies as a provider who incorporates natural elements into her counseling setting.

Table 1

Participant demographics and educational background

Alias	Gender	Ethnicity	Degree held	Years in practice
Participant 1	Female	Caucasian	M.A.	6 years
Participant 2	Female	Caucasian	M.A.	11 years
Participant 3	Male	Caucasian	Ph.D.	25 years
Participant 4	Female	Caucasian	M.A.	21 years
Participant 5	Female	African American	Ph.D.	9 years
Participant 6	Female	Caucasian	Ph.D.	15 years

Participant Interview Analysis

The following section highlights key contributions from each participant interview. Participant responses are provided with the corresponding interview protocol questions. In addition to a brief written summary, key concepts are charted for each interview. Of note, the researcher had initially anticipated that participants would hold these interviews via Zoom within

their physical therapeutic setting. As noted in Chapter 3, the researcher and participant could have observed and discussed specific elements within the physical space that the participant believed to be of value to the therapeutic relationship. Due to time constraints and availability, all participants chose to schedule their interviews while not at their office setting.

Participant Interviews

Participant 1

The interview with participant 1 was held via Zoom. The participant received an informational email regarding the study and replied to express her interest in participation. The interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if she had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received her verbal consent to participate in the study. The interview lasted approximately 95 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant)

Participant 1 shared that she had not previously heard the term, biophilia. After a brief definition was provided, participant 1 indicated that she has been incorporating natural elements into the physical setting of her therapeutic space but had just not previously heard of the term, biophilia. She shared, “The concept doesn’t feel new to me, but the term is. To put a name to it, again, this is what I feel like we do in therapy. Once you can name something, you are able to see more of the patterns. So now that you are talking about this, now that we are talking about this, I see how this is coming up with my clients and in my personal life.”

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 1 shared that she has always “loved nature” and enjoys a lot of outdoor activities. She shared, “Talking about the outdoors has always been a good conversation starter for me because so much of my time is spent outside. I’ve used those conversations to engage with clients who might strike me as a little reluctant to engage in therapy or when I’m first getting to know a client. It’s been helpful to establish some rapport.” Participant 1 also noted that incorporating elements of nature felt intuitive to her because it was something that she enjoyed and made her feel more comfortable while working at her agency.

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 1 shared that she believes counselors should consider how their physical office setting appears because it impacts how clients feel and their attitude toward the therapeutic relationship. Participant 1 shared, “The physical space is a conversation starter, which helps us get into building rapport especially with first time clients and there is something about being out in nature that I have noticed – when I’m out in nature, my phone gets put away, everything gets put away and I am on that hike or I am on that walk. Nature for me has an adventurous but also calm aspect about it and I think that’s what we need in the therapy room. We need to be brave and step into spaces or think and talk about things that are really scary or make us feel vulnerable to talk about and we have to have that adventurous spirit that nature inspires us to have, but then we also want to maintain a sense of calm, a sense of containment so that we know we can talk about these things and feel a certain safety element.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 1 shared that she does feel that the space she has created impacts her ability to provide effective mental health treatment. She shared, “My clients, many of whom have complex trauma, don’t often feel safe sitting with another person, but they might feel safe in nature or in a setting that reminds them of nature. So, I like to ask myself how I can create an environment that makes as many people as possible to feel comfortable and safe. Where someone can feel safe enough to step out of their comfort zone and take therapeutic risks.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 1 shared that her clients have pointed out artwork that depicts state parks and nature settings. She also shared, “The client couch is a deep green color with textured patterns of leaves and trees and clients will often comment on how they like the pattern and I will see them run their fingers over the pattern throughout our sessions.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 1 felt shared that having these elements within the physical setting has contributed to her ability to get to know clients and to bring up topics that are of personal interest to her clients. Participant 1 shared, “I sometimes feel like clients are sizing me up when they share an activity or hobby that takes place outside and that I indicate I’m interested in as well. It serves as a safe, neutral topic for us to each get to know each other.”

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 1 shared that she feels the way that her clients respond to and discuss the environment of her therapeutic space or how nature and natural settings are discussed has helped share her case conceptualization of her clients. Participant 1 shared:

Physical space plays a huge role in my case conceptualization. For example, something as basic as paying attention to where the client chooses to sit in the therapy room each time we meet may provide me with a little insight into how they are feeling or their attachment style. This may change overtime and as they become more comfortable with me as their provider or less comfortable with what we are discussing that day.

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 1 shared that she believes her clients with complex trauma, PTSD, and anxiety and depression may respond more favorably to therapeutic environments that contain elements of biophilic design. Participant 1 shared:

Clients with these diagnoses present with different attachment styles. They may not feel that I am safe person because for so long they have been told and they have learned that people are not safe, but maybe nature is safe and so I think incorporating natural elements into my space helps them to connect with me and feel some level of trust. Or, if they can't yet trust me, can they trust this space.

Table 2*Analysis of interview with Participant 1*

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
“Talking about the outdoors has always been a good conversation starter for me because so much of my time is spent outside. I’ve used those conversations to engage with clients who might strike me as a little reluctant to engage in therapy or when I’m first getting to know a client. It’s been helpful to establish some rapport.”	Establishment of rapport	Lived relation
“Nature for me has an adventurous but also calm aspect about it and I think that’s what we need in the therapy room. We need to be brave and step into spaces or think and talk about things that are really scary or make us feel vulnerable to talk about and we have to have that adventurous spirit that nature inspires us to have, but then we also want to maintain a sense of calm, a sense of containment so that we know we can talk about these things and feel a certain safety element.”	Nature as a support	Lived space
“My clients, many of whom have complex trauma, don’t often feel safe sitting with another person, but they might feel safe in nature or in a setting that reminds them of nature.	Specific diagnosis benefit	Lived space
“I have always felt comfortable in nature and being outdoors, so it was obvious to me that I wanted me workspace to remind me of that.”	Self-in-place experience	Lived body; Lived space

Participant 2

The interview with participant 2 was held via Zoom. The participant received an informational email regarding the study and replied to express her interest in participation. The interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if she had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received her verbal consent to participate in the study. The interview lasted approximately 70 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant)

Participant 2 shared that she had not previously heard of the term, biophilia. After a brief definition was provided, she shared that the act of incorporating elements of nature into her physical setting is something that she believes strongly in and has done since she became licensed. She shared, “My agency uses a hoteling model for reserving rooms and all of the rooms have a window except for one room. Overtime, I have been in that room without a window and several clients have requested that we do not meet there again and have requested to be in rooms with natural light.”

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 2 shared that on a personal level, she likes to be surrounded by nature and in order for her to feel like she’s in the moment and being her authentic self, she needs to cultivate a space

that is connected with nature. Participant 2 shared, “I am my best self in certain spaces and I owe it to my clients to be fully available. I feel aligned when I’m in nature.”

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 2 shared that she believes there are no cons to counselors who consider the design of their physical setting as making a space safe and comfortable for clients should be a goal of counselors. Participant 2 shared, “I think counselors should be considering space – it’s a very useful tool and can help to build rapport.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 2 shared that the space in which she provides therapy has enhanced her ability to provide effective mental health treatment. Participant 2 shared, “of course – it’s like one of my tools – I fill it with items, objects that my clients might connect with. More often than not, they seem to connect with the items that represent nature.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 2 shared that in her experience, clients have addressed or inquired certain aspects of her physical setting. Participant 2 shared, “I’ve found that clients will inquire about objects or images in my physical space, especially if they are reminiscent of nature or the outdoors as a way to ensure that I’m safe – that I’m legit and not just this therapist who feels that they have everything figured out.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 2 shared that the presence of natural elements, natural light in particular, has a substantial impact on the way she approaches the therapeutic relationship and she feels compelled to be in spaces that she feels comfortable in in order to be more available to her clients. Participant 2 shared, “Physical space is so important for me as an individual and so I found that when clients have requests related to the physical space – like asking for future sessions to be in rooms that have windows, I don’t really interrogate those requests or therapatize them like I might with some client requests.”

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 2 shared that she does feel that the built environment of her therapy impacts her case conceptualization. Participant 2 shared, “I might have a little more information from a client who makes the statement that having time outside is very important to them. With a client like that, I might encourage them to be spending time outside in meaningful ways.

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 2 shared that she feels there are certain diagnoses that may benefit more to this type of environment. Participant 2 shared, “A lot of my folks with substance abuse disorder also experience anxiety and depression and so having for example natural sunlight or encouraging exposure to natural light can be helpful in mitigating those symptoms.”

Table 3*Analysis of Interview with Participant 2*

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
"I am my best self in certain spaces and I owe it to my clients to be fully available. I feel aligned when I'm in nature."	Self-in-place experience	Lived body
"I think counselors should be considering space – it's a very useful tool and can help to build rapport."	Establishment of rapport; Recognition of training in profession needed	Lived relation
"...it's like one of my tools – I fill it with items and objects that my clients might connect with. More often than not, they seem to connect with the items that represent nature."	Establishment of rapport; Nature as a support	Lived relation
"Physical space is so important for me as an individual and so I found that when clients have requests related to the physical space – like asking for future sessions to be in rooms that have windows, I don't really interrogate those requests or therapatize them like I might with some client requests."	Self-in-place experience	Lived space
"A lot of my folks with substance abuse disorder also experience anxiety and depression and so having for example natural sunlight or encouraging exposure to natural light can be helpful in mitigating those symptoms."	Specific diagnosis benefit	Lived space; Lived relation

Participant 3

The interview with participant 3 was held via Zoom. The participant received an informational email regarding the study and replied to express his interest in participation. The

interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if he had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received his verbal consent to participate in the study. The interview lasted approximately 80 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant)

Participant 3 shared that she was not previously aware of the term, biophilia. After a brief definition was provided, participant 3 indicated that she did actively incorporate natural elements into her private practice setting. Participant 3 shared, “I practice inside a century home, but there is also a courtyard that I like to practice in when the weather is good, so I definitely can understand and appreciate this approach to designing the physical space of therapy.”

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 3 shared that as a result of the Covid-19 pandemic, she began to offer sessions outdoors to clients who preferred to meet in person or who may have not had the required technology to participate in Zoom meetings. Participant 3 shared, “The pandemic really provided me with the initial motivation to expose my clients to an outdoor setting more often. Out of necessity, I began to spend more time outdoors and really enjoyed it and saw that it was working for my clients. It gave us a lot to talk about and it provided conversation prompts when needed.”

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 3 shared that mental health professionals have an obligation to consider the space that they provide therapy in. She noted that having a space that is ready to meet the needs of the client helps the client to feel that they are working with a professional and someone who takes their care seriously. Participant 3 shared, “I always want to take the client’s lead and ensure that they their needs are met in the physical counseling setting.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 3 shared that she strongly believes creating a physical environment of therapy with natural elements has improved her ability to provide effective mental health treatment.

Participant 3 shared, “I thought about doing 100% tele-therapy, but I just couldn’t because space is so important to me as a provider and because of Covid, I’ve taken more active steps to incorporate nature into my setting and having done that and seeing the positive response from clients, I just don’t think I could offer only tele-therapy.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 3 shared that many of her clients have acknowledged some of the natural elements within her office space and the objects or elements have served as a way to build rapport.

Participant 3 shared, “Several clients of mine that are working through the loss of a loved one have really responded favorably to the use of clay during session. They seem to enjoy the ability to mold specific objects or to just feel and manipulate the earthy material in their hands. It has really led to a lot of great conversations that help me as their counselor identify where they are at with their grief.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 3 shared that the presence of natural elements in her physical therapeutic space does impact the way she approaches therapeutic relationship. Participant 3 shared, “I look forward to being in the space, too, which I feel is apparent to the client and it helps me to be more authentic and to really listen to what is being shared. If I want to be in the space, my clients probably pick up on that.”

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 3 shared that she feels that because the built environment is something that many of her clients discuss at least initially, those comments or discussions do help to provide her with additional insight as to how her clients operate outside of therapy and can provide her with more options to suggest participant or engagement in certain activities as a way to combat certain symptomology related to anxiety and depression. Participant 3 shared, “In my experience, clients who express an interest in nature and who seem to engage more with their surroundings seems to be a little more open or available to the therapeutic relationship.”

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 3 shared that she does feel individuals with a certain diagnosis or diagnoses may benefit more from an environment that contains elements of biophilic design. Participant 3 shared, “Clients with PTSD, clients who are receiving EMDR, clients with anxiety – I think those folks in particular really benefit from an environment that has these elements that we’ve

talked about. I think individuals with these diagnoses may really be seeking comfort even if it's for a short duration – a 50-minute therapy session – just some comfort and escape.”

Table 4*Analysis of Interview with Participant 3*

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
“I thought about doing 100% tele-therapy, but I just couldn’t because space is so important to me as a provider and because of Covid, I’ve taken more active steps to incorporate nature into my setting and having done that and seeing the positive response from clients, I just don’t think I could offer only tele-therapy.”	Self-in-place experience	Lived space; Lived relation
“Several clients of mine that are working through the loss of a loved one have really responded favorably to the use of clay during session. They seem to enjoy the ability to mold specific objects or to just feel and manipulate the earthy material in their hands. It has really led to a lot of great conversations that help me as their counselor identify where they are at with their grief.”	Nature as a support	Lived relation
“I look forward to being in the space, too, which I feel is apparent to the client and it helps me to be more authentic and to really listen to what is being shared. If I want to be in the space, my clients probably pick up on that.”	Self-in-place experience	Lived body; Lived relation
“Clients with PTSD, clients who are receiving EMDR, clients with anxiety – I think those folks in particular really benefit from an environment that has these elements that we’ve talked about.	Specific diagnosis benefit	Lived relation
“In my experience, clients who express an interest in nature and who seem to engage more with their surroundings seems to be a little more open or available to the therapeutic relationship.”	Establishment of rapport; nature as a support	Lived relation; Lived space

Participant 4

The interview with participant 4 was held via Zoom. The participant received an informational email regarding the study and replied to express her interest in participation. The interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if she had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received her verbal consent to participate in the study. The interview lasted approximately 90 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant)

Participant 1 shared that he was not familiar with the term, biophilia. After a brief definition was provided, he noted that he did incorporate many natural elements into the physical space that he offers therapy. Participant 4 shared, “I haven’t heard of this particular term, but from your definition, it sounds very Jungian to me – the idea of attraction as part of the archetypes. Most often when people do some sort of mental imagery exercise, they choose to imagine a natural setting – mountains, river, the woods. It’s really very common.”

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 4 shared that many of the therapeutic exercises that he employs namely Jungian, invite or call the client to explore natural settings. Participant 4 shared, “In guided imagery, I invite the client to relax, close their eyes and imagine a space, which always seems to result in some sort of natural setting.” He shared that he assesses the client’s predominate perceptual set – if the client chooses to visualize the sea, he noted that he would employ more visual techniques

and if the client chose or focused on the sound of the sea, the crashing waves, then more auditory techniques would be used in terms of hypnotic induction and or treatment intervention.

Participant 4 stated that he believes it was important to incorporate a wide variety of images in his therapeutic space to meet the needs of clients and after the predominate perceptual set was identified, he could reference it within the physical space.

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 4 shared that he believes the first interview and physical space of the first interview set the tone for the therapeutic relationship. Participant 4 shared, “It’s not just the emotional space I create and the relationship that I start with a person, but also do they feel comfortable in the physical space? So, if I have a tiny little closet of an office with no window, that’s going to make it more difficult to establish the therapeutic relationship – to establish rapport.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 4 shared that he never received formal educational or application-based training on how to design or consider his therapeutic setting, which he noted as feeling odd to him.

Participant 4 shared, “I always felt that my academic graduate programs were missing a class or two on how to think critically about our counseling setting, to me some things just felt right and so I included those in my space and overtime, I learned what seemed to work for clients and what didn’t. Much of the time, things that did work, were elements of nature.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 4 shared that many of his clients have asked about artwork, exercises, or objects in his office that represented nature and natural systems. Participant 4 shared, “I feel that my clients have exhibited a sense of curiosity about why I incorporate so much nature into my practice. Whether it’s the exercises that ‘take place’ in nature or the stones, artwork, fossils, or water feature that I have in my office – they all seemed to be talked about at least once with each client.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 4 felt that the presence of these identified biophilic elements enhances the therapeutic relationship. Participant 4 shared, “These objects – pictures, images, stones, patterns – they are all adjuncts to enhancing the basic relationship that needs to be performed.”

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 4 shared that the built environment enables him to observe cues from his clients which helps shape his way of being. Participant 4 shared, “I would go back to Erikson – follow the client, stay out of the way. How does the client present to me? Physically, verbally – how is the environment shaping their response and what am I, as the counselor, doing with that information?”

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 4 shared that he believes some individuals with specific diagnoses would benefit more from being in a therapeutic space that is built with biophilia in mind. Participant 4 shared

that he feels clients in crisis or active psychosis may not fully absorb all elements of the environment as they are largely focused on the counselor and less interested in periphery externals. Participant 4 shared, “High-functioning individuals who are interested in maybe interested in resolving some type of situation issue or seeking growth.

Table 5*Analysis of Interview with Participant 4*

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
“In guided imagery, I invite the client to relax, close their eyes and imagine a space, which always seems to result in some sort of natural setting.”	Nature as a support	Lived body
“It’s not just the emotional space I create and the relationship that I start with a person, but also do they feel comfortable in the physical space? So, if I have a tiny little closet of an office with no window, that’s going to make it more difficult to establish the therapeutic relationship – to establish rapport.”	Establishment of rapport	Lived relation; Lived space
I always felt that my academic graduate programs were missing a class or two on how to think critically about our counseling setting, to me some things just felt right and so I included those in my space and overtime, I learned what seemed to work for clients and what didn’t. Much of the time, things that did work, were elements of nature.”	Recognition of professional training needed	Lived space
“These objects – pictures, images, stones, patterns – they are all adjuncts to enhancing the basic relationship that needs to be performed.”	Nature as a support	Lived relation
“High-functioning individuals who are interested in maybe interested in resolving some type of situation issue or seeking growth”	Specific diagnosis benefit	Lived relation

Participant 5

The interview with participant 5 was held via Zoom. The participant received an informational email regarding the study and replied to express her interest in participation. The

interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if she had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received her verbal consent to participate in the study. The interview lasted approximately 65 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant)

Participant 5 shared that she had not previously heard of the term biophilia. After a brief definition was provided, she noted that she has been incorporating natural elements into her office setting since she began practicing (9 years).

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 5 shared that she has always had a personal interest in being outdoors and has found that being outside is a primary stress reliever for herself. Participant 5 shared, “Looking back on my own experiences, when I wasn’t feeling great - nervous, stressed, sad, feeling depressed, I always felt drawn to be outside and even when I was feeling good, I always wanted to be outside, so for me, it just made sense that my work environment would need to reflect nature or the outdoors. It’s where I feel good.”

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 5 shared that she believes there are no cons for counselors to consider the design of their physical therapeutic space. Participant 5 shared, “I think it’s just as important as what we

learn in our graduate programs – it’s an extension of our technique and helps us be with our clients in the most authentic way.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 5 shared that she strongly believes the physical environment in which she practices has increased her ability to provide effective mental health treatment. Participant 5 shared, “I feel so comfortable in my own space – surrounded by photography from my travels to national parks, the huge window in my office that overlooks a creek, and my plants and because I feel so comfortable, I think my clients pick up on that and we both sort of get each other a little more. I think this is particularly apparent when I’m working with a new client and we are in the early stages of building rapport.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 5 shared that many of her clients have discussed specific biophilic elements within her office. Participant 5 shared, “I think the plants in particular are brought up a lot. I have 6 different potted plants in my office and a couple of them are pretty large and bloom often. It’s really amazing when one of them is in bloom and the client points it out. I always use that as an opportunity to draw a parallel between what they may be experiencing at that time, if I can.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 5 shared that she feels her connection with nature and the inclusion of natural elements into her physical therapeutic space helps her to connect with her clients and enhances her ability to relate with her clients. Participant 5 shared, “Again, I would go back to the fact that

because I'm comfortable in this space because it reminds me so much of nature, I can be a better therapist for my clients."

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 5 shared that conversations with her clients related to her office setting can provide her with clues on how her clients may act outside of therapy. Participant 5 shared, "If I hear from a client that they like a certain picture in my office of a natural scene, I can bring that into future conversations and discuss exercises that may allow them to experience that kind of setting more often. Or, when a client ends therapy, I can bring that information into our last session and encourage their exposure either physically or mentally when they may feel overwhelmed again at some point in the future. It can be a very helpful grounding technique."

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 5 felt that there are certain diagnoses that may benefit more from having therapy in a setting that includes elements of biophilic design. Participant 5 shared, "I think clients who have anxiety and depression can really benefit from time spent in these types of spaces. Having the ability to feel safe, nurtured, and supported by nature is hugely important and restorative."

Table 6*Analysis of Interview with Participant 5*

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
Looking back on my own experiences, when I wasn't feeling great - nervous, stressed, sad, feeling depressed, I always felt drawn to be outside and even when I was feeling good, I always wanted to be outside, so for me, it just made sense that my work environment would need to reflect nature or the outdoors. It's where I feel good."	Self-in-place experience; Nature as a support	Lived space; Lived body
"I think it's just as important as what we learn in our graduate programs – it's an extension of our technique and helps us be with our clients in the most authentic way."	Recognition of professional training needed	Lived space
"I feel so comfortable in my own space – surrounded by photography from my travels to national parks, the huge window in my office that overlooks a creek, and my plants and because I feel so comfortable, I think my clients pick up on that and we both sort of get each other a little more. I think this is particularly apparent when I'm working with a new client and we are in the early stages of building rapport."	Self-in-place experience; Establishment of rapport	Lived relation
"I think clients who have anxiety and depression can really benefit from time spent in these types of spaces. Having the ability to feel safe, nurtured, and supported by nature is hugely important and restorative."	Specific diagnosis benefit	Lived relation

Participant 6

The interview with participant 6 was held via Zoom. The participant received an informational email regarding the study and replied to express her interest in participation. The interview was scheduled, and the informed consent was sent via email. The participant was notified that the informed consent would be reviewed during the interview. At the start of the interview, the participant was asked if she had any general questions about the study and the informed consent was reviewed in detail. In addition to the signed document, I received her verbal consent to participate in the study. The interview lasted approximately 75 minutes.

Interview Protocol Questions

Q1: Have you heard of the term, biophilic design? (If no, define and describe the term for the participant).

Participant 6 shared that she had not previously heard of the term, biophilia. After providing a brief definition, she noted that she has been incorporating natural elements into her counseling setting since she began practicing.

Q2: What led you to incorporate elements of biophilic or nature-centered design into your professional practice?

Participant 6 shared that she wanted to create a safe and supportive environment for her clients and she felt nature was the best way to do that. Participant 6 shared, “I remember not really talking about it how to design our therapy space in my grad programs and that always struck me as odd, so I just did what I felt was best – what I liked and new to be comforting, which was a lot of pictures of the outdoors, soft lighting, and having references to bodies of water.”

Q3: What do you feel are the pros and cons of mental health professionals who consider the design of the physical space in which they offer therapy?

Participant 6 shared that she did not believe there are any cons to counselors considering their physical therapeutic space. Participant 6 shared, “Counselors should consider their space – it can be used as a tool to make our clients feel better and to build rapport. Having natural elements can provide talking points for clients – a way to establish common and safe ground with one another.”

Q4: Do you feel that creating a specific physical environment has increased your ability to provide effective mental health treatment? Explain.

Participant 6 shared that she does feel that the physical environment of her therapeutic setting impacts her ability to provide mental health treatment. Participant 6 shared, “My therapy setting enhances my ability to be with my clients during difficult times and helps me to establish rapport with them.”

Q5: Have your clients acknowledged or discussed any specific elements of biophilic design within the physical space that you provide therapy? If so, what examples can you provide?

Participant 5 shared that many of her clients have talked and inquired about many objects in her therapy space. Participant 6 shared, “So many of my clients, especially at the start of their therapy with me, ask about my space. They want to know if I’ve been to all of the places that are shown in the pictures on my wall and it serves as a great discussion point.”

Q6: How do you feel the presence of these identified elements has impacted the way in which you approach the therapeutic relationship?

Participant 6 shared that the identified elements of biophilic design that she discussed during the interview have had a big impact on the way that she approaches the therapeutic relationship.

Participant 6 shared, “It’s difficult to even put into words because my office – the physical space of it – is an extension of me and who I am as a person and a helping professional. So many

elements of it come into play all the time – even if it’s not directly being referenced, it’s always there – existing and impacting me and the client.”

Q7: How has the built environment of your therapeutic setting informed your case conceptualization of client care?

Participant 6 shared the physical setting of therapy facilitates insight into how her clients function and what might be a good or effective treatment plan for them. Participant 6 shared, “Because of discussions about certain aspects of my therapy setting, things that have been talked about and explored together with my clients, I know things about them – what they like, what they enjoy and that helps me to be able to recommend certain activities such as walking near a body of water and journaling about that experience.”

Q8: Do you feel that clients with a particular diagnosis or diagnoses may respond more or less favorably to a therapeutic environment that contains elements of biophilic design?

Participant 6 shared that she feels clients who present with anxious or depressed symptoms may benefit most from a therapeutic setting that is biophilic informed. Participant 6 shared, “Nature has a calming effect and so I think it just makes sense that people who are managing depression and anxiety would really benefit from routine, thoughtful exposure to these types of environments.”

Table 7

Analysis of Interview with Participant 6

Significant Statement	Identified Biophilic Themes/Connection to Counseling	Lifeworld existential theme
“I remember not really talking about it how to design our therapy space in my grad programs and that always struck me as odd, so I just did what I felt was best – what I liked and new to be comforting, which was a lot of pictures of the outdoors, soft lighting, and having references to bodies of water.”	Recognition of professional training needed	Lived space
Counselors should consider their space – it can be used as a tool to make our clients feel better and to build rapport. Having natural elements can provide talking points for clients – a way to establish common and safe ground with one another.”	Establishment of rapport	Lived relation
“It’s difficult to even put into words because my office – the physical space of it – is an extension of me and who I am as a person and a helping professional. So many elements of it come into play all the time – even if it’s not directly being referenced, it’s always there – existing and impacting me and the client.”	Self-in-place experience	Lived space
“Nature has a calming effect and so I think it just makes sense that people who are managing depression and anxiety would really benefit from routine, thoughtful exposure to these types of environments.”	Specific diagnosis benefit	Lived relation

Cross Case Analysis

The table below illustrates themes that emerged from the analyzed data and the participants that expressed them (see Table 8). The identified themes illustrate the lived

experiences of counselors who incorporate elements of biophilic design into the physical setting of their therapeutic space and the impact they believe it has on their clients. Analysis of the interviews uncovered key similarities between the six participants. Recurring themes of use of biophilic space to establish rapport, nature as a support, recognition of the need for graduate level training regarding the uniformed identification and implementation of biophilic elements into therapeutic settings, recognition of self-in-place experience within biophilic-informed environments, and the identification of certain diagnoses that may benefit more from exposure to a biophilic-informed therapeutic space.

Further, the repeated expression of themes (lived spaced, lived body, and lived relation) supported by Van Manen's four lifeworld existentials (1990) also provided valuable insight to the meaning and significance that the counselors bring and associate to their interactions with clients on a regular basis. The application of Bronfenbrenner's Bioecological Model (1979) was limited, having only observed data that directly referenced the Microsystem. The following chapter will explore these themes in detail and discuss broader implications for the field of counseling.

Table 8*Cross Case Analysis of Participants*

	Themes	Part. 1	Part. 2	Part. 3	Part. 4	Part. 5	Part. 6
Identified biophilic theme/ Connection to counseling	Est. of rapport	•	•	•	•	•	•
	Nature as a support	•		•	•	•	
	Identified need of graduate-level training		•		•	•	•
	Self-in-place	•	•	•		•	•
	Specific diagnosis benefit	•	•	•	•	•	•
Van Manen's Lifeworld Existentials	Lived Relation	•	•	•	•	•	•
	Lived Space	•	•	•	•	•	•
	Lived Body	•	•	•	•	•	•
Bioecological Model	Microsystem	•	•	•	•	•	•

Chapter V: Discussion

This chapter provides a brief overview of the study and a discussion of the findings. A connection between physical design and health have transcended multiple professions for decades, but the field of counseling has largely overlooked the potential benefit for clients and the profession has not established clear and concrete guidance regarding the creation of a counselor's physical therapeutic environment. The researcher believes that there is both a duty and opportunity for counselors to think critically about the physical space in which they offer therapy. Specifically, the researcher believes incorporating elements of biophilic design into a counselors' therapy setting can increase the efficacy of mental health treatment. To investigate this, the following research questions were established: (1) How does the presence of natural elements within the physical space of talk therapy influence providers' experiences of counseling services? and (2) How does the presence of natural elements within the physical space of talk therapy influence a providers' case conceptualization and treatment plan for clients?

Overview of the Study

The goal of this research was to explore the lived experiences of counseling professionals who employ elements of biophilic design into the physical space in which they conduct counseling and to explore how they believe their clients have benefited from that practice. To research this, 6 semi-structured, open-ended interviews were conducted. The researcher relied on Constructivist philosophy to approach and consider information that was collected within the interviews. A Constructivist approach, which embraces subjectivity and the co-construction of knowledge, enabled the researcher to work collaboratively with participants and to explore meaning and interpretation of their experiences.

Hermeneutic phenomenology was identified by the researcher as an appropriate methodological approach for this study, as it calls for information to be explored and interpreted to identify the meaning and essence of lived experiences, as perceived by individuals (Heidegger, 1962). Additionally, the researcher considered the shared lived experiences of participants under two frameworks: (1) Van Manen's four lifeworld existentials and (2) Bronfenbrenner's Bioecological Systems Model (1977). While Van Manen's lifeworld existentials proved to be a helpful framework for this study at least in part, Bronfenbrenner's Bioecological Model appeared to be less applicable as a meaningful framework for the study. A possible reason for this is that interview questions did not, in a concise way, ascertain a sense of all the ecologies Bronfenbrenner's Model discusses. However, the researcher did feel that enough data was gleaned to reference the Microsystem, as outlined within the Bioecological Model. These observations are discussed later in the chapter.

Participants were required to hold a master's (M.A. or M.S.) degree or doctorate (Ph.D. or Ed.D.) degree in counseling, or counselor education, and had to be actively providing in-person and individual counseling services. The researcher's place of employment, The University of Texas at Austin, was used as a cite to gather possible participants as well as online resource of the "Find a Therapist" page on psychologytoday.com. All interviews were conducted via Zoom and lasted between 65 – 95 minutes. Interviews were recorded and transcribed via Otter.ai. After transcription, each manuscript was uploaded to Atlas.ti for coding. Braun and Clarke's (2006) thematic analysis framework was used to identify, analyze, and report patterns, themes, and meaningful data categories.

Discussion of Themes

The following section offers a review of each theme that arose during data analysis and a description of the participant's expression of Van Manen's, lifeworld existentials. Themes are defined, a summary of participant statements that support the theme is provided, and its connection to counseling is examined.

Theme #1: Establishment of Rapport

The ACA defines rapport as a close and harmonious relationship in which the people or groups concerned understand each other's feelings or ideas and communicate well. All 6 participants expressed views that the presence of biophilic design elements helps to establish and build rapport. The researcher believes this is a very important finding because the profession of counseling has recognized that the establishment of rapport is critical to not only create a safe and supportive therapeutic relationship, but also to increase consistent engagement with clients, which is necessary for clients to experience improved mental health well-being (ACA, 2014).

Within their interviews, participants highlighted experiences they have had with clients who actively engage with and discuss natural elements within the physical therapeutic space. For the participants, this seemed to be particularly evident when they are working with a new client and counselor/client are getting to know one another. For example, Participant 4 shared:

I've noticed that talking about the items in my office seems to feel safer for a lot of my new clients. They can ask me about what a picture means or why I have it in my office. It's a neutral topic for both of us. They learn a little about me each time I respond. I learn a little about them when they respond. I have a lot of natural or nature inspired objects and art in my office, so much of their initial questions relate to those items. With each response, they are learning about me – learning that they can feel safe in this space together.

Rapport can be further enhanced if a question regarding a natural element leads to the recognition of a mutual experience or preference. For example, Participant 1 shared an experience that she had with a new client who appeared to be anxious while in an early therapy session. Participant 1 shared that she enjoys hiking and takes several hiking trips a year and as a result of this hobby, has become familiar with various hiking apparel and footwear brands. She noticed that this client was wearing a brand of hiking shoes that she found favorable and inquired if the client enjoyed hiking. Participant 1 stated:

It really changed the whole trajectory of that session – me asking if she enjoyed hiking.

At first, I think we was a little weirded out and asked why I asked that, but when I told her that I noticed her shoes and that I myself prefer that particular brand for my own hiking excursions, it was as if she immediately felt that I was a normal person not a judgey therapist.

From there, Participant 1 shared that the two began talking about the different hiking trips they have made and their favorite places to hike.

The inclusion of biophilic elements in physical therapeutic spaces seem to provide counselors with safe, neutral items and elements of discussion. These discussions and conversations can provide a platform from which counselor and client get to know one another and to identify commonalities, which may allow the client to feel more comfortable during therapy sessions.

Theme #2: Nature as a Support

The researcher defines this theme as being the identification of nature/natural elements or images of nature/natural elements in a physical setting that provide comfort or relief for an individual. A majority of participants (4) identified this phenomenon while working with their

clients. In recognizing that engaging in talk therapy can be uncomfortable for many individuals, the researcher believes this is an important concept to consider when working with clients, as counselors have a duty to establish an environment that is comfortable and accessible for all.

Within her interview, Participant 1 shared:

Nature for me has an adventurous but also calm aspect about it and I think that's what we need in the therapy room. We need to be brave and step into spaces or think and talk about things that are really scary or make us feel vulnerable to talk about and we have to have that adventurous spirit that nature inspires us to have, but then we also want to maintain a sense of calm, a sense of containment so that we know we can talk about these things and feel a certain safety.

The researcher found this to be a powerful and deeply meaningful statement that directly relates to the benefit of incorporating biophilic elements into the therapeutic setting. Here, participant 1 named an experience that is commonly had by clients, which is that working with a therapist can be a scary and make one feel vulnerable. Participant 1 provided a descriptive and helpful metaphor of this experience. Within our discussion, Participant 1 referenced a large photograph that she has in her office. She shared that the picture was taken after she scaled a large peak in the Amargosa Range in California. The image is an outward view of other nearby peaks and the sprawling foothills. For her, the image represents a sense of risk and reward. She noted that she was feeling anxious when hiking to the lofty peak but felt a consistent sense of comfort and support by nature all around her on the path as she climbed higher and when she ultimately reached the top, she was awarded with a grand view which she felt was worth the trek. She drew a parallel between the risk of climbing that peak and the risk that clients may feel when they engage in counseling and the reward of ultimately having a beautiful, grand view and

achieving a therapeutic goal or sense of personal improvement as a result of working with a counselor. This anecdote also seems to offer further support for Kaplan and Kaplan's (1980) Attention Restoration Theory, which postulates that exposure to nature and natural environments can help to restore cognitive resources, attention enhancement, and mental health well-being.

Recognition that nature can be used as a support for clients can help counselors provide robust and meaningful interventions that pull in or incorporate natural elements such as plants, stones, and views of nature. Interestingly, Participant 1's comments on this topic also directly relate to an established pattern of biophilic design that was not explored in this study or previously mentioned during their interview prospect and refuge. In Biophilia, Wilson (1984) describes prospect as the sense of openness or expansiveness that a view has. We have an innate desire to see beyond our immediate surroundings. Having this perspective served as a survival tactic in early human development. However, Wilson states that to appreciate the sense of excitement that a view can provide, humans also need to experience a sense of protection with that view. Refuge is defined as the sensation one experiences while being in a space that is separate from its surrounding view. It allows one to view the surroundings but from the safety of a perceived protected position. Without knowing it, participant 1 alluded to this biophilic pattern as a result of her comment related to experiencing a sense of both adventure and calmness while in nature. This particular pattern was not addressed in this study, but the researcher feels it could be an interesting and promising consideration for future research.

Theme #3: Need of graduate-level training

This theme highlights the participants' identified support of uniformed CACREP training regarding the use and benefits of biophilic informed environments in counseling settings. The theme was discussed by all participants. An interesting observation was that none of the six

participants had heard of the term biophilia before participating in this study, but all had identified the intentional use of biophilic or nature centered items within their counseling space. When asked if they had received graduate training on how to incorporate these items or training that highlighted why incorporating these elements may be helpful for clients, all participants noted that they had not previously received graduate-level training on the subject but felt that it should be something CACREP programs are addressing in a systematic and organized manner. Despite formal training on the matter being absent, these participants identified a personal interest and appreciation of nature, which they felt should be incorporated into their office setting.

Of note, in my own graduate-level practicum and internship experiences—during both my master and doctoral programs—the environments in which I was assigned to work with clients did not incorporate any of the aforementioned biophilic items or aspects. In fact, they physical spaces felt entirely devoid of comfort. These spaces did not have window, had no artwork, had uncomfortable furniture, and only abrasive overhead lighting. Because of my status as a counselor-in-training, I was also not encouraged to bring in items to make the space more appealing or comfortable, as my time at the agency was considered temporary and I was seen as transient. I can recall observing that clients were not comfortable in this space and a high level of personal discomfort in that setting and often reflected on how that environment may have restricted my ability to establish a sound therapeutic relationship with clients. At that time, I also wondered if my experience was unique or if my academic peers, too, were experiencing site placements that did not seem to value clients or counselors. In the absence of formal training on the matter, it is not unreasonable to speculate that if practicum and internship students, counselors of tomorrow, are learning in these lackluster environments, perhaps they may believe

that counseling environments do not need to be developed in a thoughtful and supportive manner and may not realize that incorporating biophilic elements can improve their ability to provide effective mental health treatment.

The identified need of graduate-level training on the subject is important and should be explored in future research. As noted above, all participants identified this need yet none of the participants were familiar with the term of concept of biophilia. I am reminded of the quote from philosopher, Ludwig Wittgenstein, “The limits of my language mean the limits of my world” (Tractatus, 1922). This statement refers to Wittgenstein’s belief that if one cannot describe something in words, then effectively it does not exist. For counselors who may not have considered how their counseling space can be a vehicle for improved client functioning, having training on this topic—naming the theory and highlighting its benefits for clients—can mean that more counselors will adopt this approach and begin to think more critically about their physical setting. Further, the ACA Code of Ethics includes language that I believe provides an obligation for counselors to consider how their physical space may be used to enhance treatment interventions with clients. Sections C.2.d and C.2.f (ACA, 2014) of the code refers to monitoring effectiveness and Continuing Education and state “Counselors continually monitor their effectiveness as professionals and take steps to improve when necessary” (p. 8); and “Counselors recognize the need for continuing education to acquire and maintain a reasonable level of awareness of current scientific and professional information in their fields of activity” (p. 9).

Theme #4: Self-in-place

This theme is defined as the participant’s personal recognition that they feel better in spaces that incorporate elements of biophilic design and as a result of that improved state, feel as though they can be a better therapist for their clients. The experience is discussed by a majority

of participants (5). This is an important observation of the participants because it offers further support for the central theory behind this dissertation—humans’ preference to be surrounded by nature and natural elements. It also further supports Ulrich’s (1991) Stress Recovery Theory, which indicates that exposure to natural settings can decrease stress and increase psychological well-being. Not only are the participants able to identify their client’s propensity to enjoy these biophilic-informed spaces, but they themselves recognize that they prefer this type of space, too. Many of the participants discussed a personal affinity for being outside and surrounding themselves in the living world. Many participants identified exposure to nature and natural settings as a stress reliever and indicated that moments spent in nature have provided a sense of calm, comfort, and reflection. For example, Participant 5 shared:

I feel so comfortable in my own space – surrounded by photography from my travels to national parks, the huge window in my office that overlooks a creek, and my plants and because I feel so comfortable, I think my clients pick up on that and we both sort of get each other a little more.

This shared response illustrates the connection humans have with their built environment and how when we feel comfortable in that environment, we can be fully available in the moment, which is vital for counselors to achieve when working with clients.

Theme #5: Identification of Specific Diagnosis Benefit

This theme is defined as the participant’s identification of specific diagnostic profiles that may benefit from exposure to a counseling setting that incorporates biophilic elements. All participants identified certain diagnoses that they felt may benefit from working with a therapist who incorporates elements of biophilic design into their counseling setting. This is an important theme to recognize as counselors often have specific training or experience in working with a

type or types of diagnosis/diagnoses and may advertise themselves as being well-versed in that particular area of counseling intervention and if that is the case, that counselor should consider all ways in which to offer that client the most robust and well-rounded interventions, which, as supported by these participants, includes the built physical environment of a counseling setting. An example of this theme was captured in a response provided by Participant 1:

My clients, many of whom have complex trauma, don't often feel safe sitting with another person, but they might feel safe in nature or in a setting that reminds them of nature. If they can be in an environment that is calm and supportive, they will feel more relaxed and hopefully take comfort in that while they are getting to know me and how our therapy relationship might look and feel.

In addition to this statement providing support for the Nature as a support theme, it also clearly identifies a specific clinical population, those with complex trauma, as possibly benefiting from therapy in a biophilic-informed environment. Complex trauma, or developmental trauma disorder (DTD), is a diagnosis for children who have been exposed in early life to multiple adverse interpersonal events, such as sexual or physical abuse, parental substance abuse, domestic or community violence, neglect, and abandonment and have a pervasive and long-range influence on children's emotional, cognitive, behavioral, and psychobiological functioning (APA, 2013). Six domains of potential impairment related to complex-trauma exposure have been identified. Of those domains, domain 'b' refers to information processing, including difficulties with attention, concentration, learning, and consciousness. Understanding how this diagnosis can impact an individual's functioning, in particular, as outlined in domain 'b', participant 1's identification of a biophilic environment as possibly benefits individuals with this diagnosis seems to again offer further support for Kaplan and Kaplan's (1980) Attention

Restoration Theory, which suggests that mental fatigue and concentration can be improved by time spent in, or looking at, nature (Kaplan & Kaplan, 1980).

Lifeworld existential #1: Lived relation

This addresses our relationship with other individuals, how we connect with them, and how we understand social dynamics within those relationships. Lived relation was the existential most often expressed by participants. Through detailed discussion, each participant shared how they have used nature, or their experiences in nature, as a tool to enhance their therapeutic relationship with clients. Participants commonly referenced a mutual appreciation and interest in nature with clients and felt that it provided a platform from which they could initiate a safe and supportive professional relationship.

Lifeworld existential #2: Lived space

This is the experience of physical and spatial aspects of our surroundings and it encompasses our relationship with the environment around us. This was expressed by each participant as they described their perception of their therapeutic space and how they, along with their clients, engage with it. Participants were highly attuned to not only their physical therapeutic space, but also to their own rejuvenating experiences in nature and identified elements in nature that they found connections with such as mountains, trees, rocks, views of water, and plant life. Remembering these elements, provided them with a sense of safety and grounding while in their office setting. For example, participant 3 discussed his use of guided imagery with clients and how most often, the environments that the clients preferred were based in nature and provided them with a sense of calm and comfort.

Lifeworld existential #3: Lived body

This is the experience of bodily sensations and recognition of how our body interacts with the world. All participants expressed this within their interviews. Many of the participants referenced a sense of excitement and wonder that they felt while in nature. The interviews seemed to uncover an almost somatic expression of awe induced by being in the outdoors. As a result of that personal experience, of feeling nature within their own body, one participant shared how she began providing her clients with a small, smooth river rock at the conclusion of their therapeutic journey to serve as a grounding tool. Her clients are encouraged to hold the rock during difficult times and to remember their personal strength and value. To, in a way, gather a sense of strength and perseverance from the rock.

As referenced in Chapter 1, Van Manen proposed four lived existentials: Lived relation, lived space, lived body, and lived time. Analysis of the data collected provided clear support for three of the existentials reviewed above. The researcher did not feel the existential of lived time was concretely expressed or supported within any of the participant interviews and therefore did not warrant inclusion as a theme in this study. However, the researcher did observe some participant expression related to how biophilic elements may, to some extent, facilitate their sense of immersion into the here and now, which seems to provide an example of a connection to lived time. The researcher acknowledges that the interview protocol could have included questions that more directly provided participants with an opportunity to address and describe this existential. For example, participants could have been asked how they feel elements of biophilic design may facilitate the passage of time for clients during tense or emotional exchanges.

Bronfenbrenner's Bioecological Model: Microsystem

As noted in Chapter 4, analysis of the collected data provided limited support for Bronfenbrenner's Bioecological Model (the researcher believes this was at least in part because the interview protocol may not have sufficiently elicited such data). However, all participants did consistently express responses that referenced the microsystem. According to Bronfenbrenner, the microsystem refers to the immediate and direct environments in which an individual lives, such as the family, school, peer group, work environment, or neighborhood. It involves the relationship and interactions that occur within these immediate contexts. The study called for all participants to discuss their work environments in depth and to share how they believe that environment impacts their ability to provide meaningful interaction with clients. Most participants discussed their own experiences of being in their therapy space and how they feel they benefit from the biophilic informed environment. Many participants expressed a sense of calm and comfort that they feel while in their office, which they believe is established, at least in part, by the inclusion of nature or natural elements. This shared information from participants also relates to the identified theme of Self-in-place. For example, participant 6 shared:

It's difficult to even put into words because my office – the physical space of it – is an extension of me and who I am as a person and a helping professional. So many elements of it come into play all the time – even if it's not directly being referenced, it's always there – existing and impacting me and the client.

This statement illustrates how closely participant 6 relates to the immediate environment of her counseling environment and how that connection shapes her way of being and feeling in the space. The participant seems to describe an intrinsic connection with the environment and states that it is an extension of herself.

Research Questions and Identified Themes

This study consisted of two primary research questions and as a result of the interview analysis, 5 themes were identified: (1) Establishment of rapport (2) Nature as a support (3) Need of graduate-level training (4) Self-in-Place and (5) Identification of a specific diagnosis/diagnoses benefit. The first research question was: How does the presence of natural elements within the physical space of talk therapy influence providers' experiences of counseling services? The themes that best address this inquiry are (1) establishment of rapport (2) Nature as a support and (4) Self-in-place. Interview analysis supported the consistent participant belief that the presence of natural elements in the physical setting of talk therapy helped to establish rapport with clients in that it offered a safe and neutral point of conversation that appealed to a broad population of people. Natural elements were also commonly identified as offering a sense of support and security for clients that might otherwise be anxious or unsettled as they engage in the therapeutic setting. The majority of participants also acknowledged a personal sense of peace and comfort in these types of settings, which they believed help them to be more effective counselors and better able to remain attune to client needs during session. These themes seem to indicate that the presence of natural elements within the physical space of talk therapy have a positive impact on both client and counselor experience of the therapeutic exchange.

The second research question was: How does the presence of natural elements within the physical space of talk therapy influence a providers' case conceptualization and treatment plan for clients? The themes that best address this inquiry are (1) Establishment of rapport (2) Nature as a support and (5) Identification of a specific diagnosis/diagnoses benefit. Interview analysis supported the consistent participant belief that the presence of natural elements in the physical space of talk therapy does influence a providers' case conceptualization and treatment plan for clients. Through the establishment of rapport, that was often noted as involving nature or natural

elements, participants indicated that they were able to learn about their clients and their hobbies and interests and as a result of that information, were able to better understanding their clients situation and maladaptive patterns, which increased their ability to guide and focus training and served as a helpful tool in equipping clients with stress-management tool and techniques.

Through the identification of nature as a support, counselors were again able to learn more about their clients and what they find helpful as they navigate experiences. The recognition that a particular diagnosis or diagnoses may benefit from having therapy in nature-informed settings also helped counselors to be intentional when designing their office setting.

Limitations

The researcher recognizes the limitations of the study. The researcher acknowledges both the cultural and gender homogeneity of the participant sample. All but one participant identified as Caucasian and all but one participant identified as female. In order to provide more well-rounded and representative data, the study would have benefited from having a more diverse participant pool.

The researcher also acknowledges that the study may have benefited from requesting that participants held their Zoom interviews within their physical counseling office. While establishing the study methodology, the researcher had anticipated that participants would hold their interview while in their office. As such, language within the informed consent requested that participants keep their camera on for the duration of the interview. This language was included to as to provide a visual of their therapeutic environment and to facilitate reference to specific items that may have been mentioned during the interview. While each participant was willing to keep their camera on during the interview, none of the participants were actually in their office during the interview. Instead, all participants were at their place of residence. This

was likely a result of limited schedule availability and a need to see clients while in office.

Related future studies may benefit from the explicit request that ask participants to schedule their interviews during a time that they are in their place of practice.

The identified theme—specific diagnosis benefit—which is defined as the participants belief of a particular diagnosis or diagnoses benefit more from working with a counselor who incorporates elements of biophilic design into their counseling does not maintain consistency between the identified diagnoses. While each participant did name a specific diagnosis or diagnoses, there was little consistency between what was identified among the participants.

To more thoroughly incorporate and consider Bronfenbrenner's Bioecological model, future related research should include interview protocol questions that more directly aim to provide participants with an opportunity to identify and elaborate on the interrelated systems and complex interactions that have shaped their growth and behavior. Understanding the benefits of biophilic-informed spaces on clients in counseling settings under this framework could contribute helpful information in this field of research.

Implications, Future Directions, and Questions Generated from the Study

The connection between biophilia and counseling has several important implications. In terms of clinical practice, the findings can inform counselors about the potential benefits of integrating nature-based design into their practice. Considering how exposure to nature or nature-related stimuli can positively impact clients' well-being and build rapport between counselor and client can enhance treatment outcomes. In terms of treatment planning, counselors can incorporate biophilic interventions for clients that may express an interest in being surrounded by nature and natural elements can be brought into the environment of counseling to create a more calming and therapeutic atmosphere. In regard to client-counselor relationship,

understanding the role of biophilia in counseling may deepen the client-counselor relationship. Counselors who are attuned to their clients' biophilic tendencies can tailor interventions to align with clients' preferences and strengths. The research could have implications for the design of counseling spaces and mental health facilities. Incorporating biophilic design principles, such as including natural light, views of nature, and natural materials, can create more healing environments that promote well-being. Educators in counseling programs can integrate discussion and trainings on biophilia into their curriculum to raise awareness among future counselors regarding the potential benefits of nature-based therapeutic settings. In particular, further research on this topic could contribute to the development of a set of "best practices," which organizations such as the American Counseling Association and the Association for Counselor Education and Supervision (ACES) may identify as being helpful for counselors as they consider how their physical space impacts the therapeutic relationship. A synthesis of this study and other relevant future research in the form of a brief handout or linked page on the ACA and ACES websites could serve as a valuable and convenient resource for counselors and help them to think more critically about this important topic. First, identifying and defining the term biophilia is necessary and would be helpful, as noted by all participants in this study. In addition to defining the term, briefly outlining its use and benefit in physical counseling settings would illustrate its value to counselors. Second, providing an outline of what specific elements of biophilic design have been found favorable such as views of natural settings, the incorporation of natural elements (i.e. clay, rocks, water, and plants) can help counselors to concretely consider their counseling spaces and to ensure that these items are incorporated. Additionally, providing examples of substitutions would be helpful, as not all counseling spaces are created equally. For example, some counseling spaces may not have windows or windows that provide a view of

nature and counselors who work in those spaces, should be aware that they can (and should) incorporate art that references or depicts nature and natural elements. Additionally, in the absence of natural light, these counselors would also benefit from knowing that if live plants cannot be sustained in the space, faux plants are an acceptable alternative (future research could more thoroughly investigate whether differences exist between the presence of live vs. faux plants). Lastly, the document should also address cultural differences and clearly state that while the benefits of biophilic elements are thought to be broadly held, some clients may present with a dislike for particular elements for various reasons (such as a client who was raised in an urban setting, has had little or no exposure to natural settings, and expresses a disinterest in being exposed to those elements) and because of that, counselors should ensure that the physical space in which they provide therapy is dynamic in nature in that if an elements or item is recognized as being unfavored by a client, it can be removed with ease. Having this quick reference guide would serve as an additional tool for counselors to offer effective counseling intervention.

This study opens several avenues for future research, particularly in exploring the specific elements of biophilia that most significantly impact therapeutic outcomes, the long-term effects of biophilic interventions in counseling, and the applicability of these findings across diverse populations and settings. As the field of counseling continues to evolve, integrating biophilic principles offers a promising path forward, one that aligns with holistic approaches to healing and underscores the interconnectedness of humans and the natural world. This research not only contributes to the academic discourse on biophilia and mental health but also offers practical insights for enhancing the efficacy and experience of counseling through the power of nature.

Conclusion

This dissertation illuminates the significance of biophilia in counseling settings and offers supportive evidence that integrating natural elements into therapeutic environments can enhance therapeutic outcomes. Through investigation that spanned theoretical exploration, empirical research, and practical application, the study has demonstrated that the innate human connection to nature is not only fundamental to our well-being but also a powerful tool in the realm of mental health counseling. The findings suggest that by harnessing the biophilic connection, counselors can foster stronger rapport and increased healing among their clients. The practical implications of this research underscore the need for a paradigm shift in the education and design of counseling environments, advocating for spaces that embody and promote the intrinsic bond with nature.

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