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## Literature Review Nature-Based Art Therapy Exploring Connections and Relationships

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Literature Review  
Nature-Based Art Therapy  
Exploring Connections and Relationships  
Lesley University

September 5, 2023

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Art Therapy

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### **Abstract**

Art therapy is a modality used in clinical psychotherapy. It is supported through both quantitative and qualitative research. Branching out from art therapy is nature-based art therapy. This branch of expressive therapies holds the potential to be beneficial as art therapy due to the interconnected access to the scientific fields of ecology, ecopsychology, art therapy, expressive therapies, and other nature-based therapeutic activities; this includes intersectionality in ecological theories such as ecofeminism and deep ecology as well. Through an exploration of literature, this paper will provide definitions and theory-based support through reviewing clinical psychotherapy, evidence-based practices, and art therapy theories. The literature review will also provide a window into studies utilizing nature-based activities and interventions, and how these studies demonstrate the impact nature-based activities have on mental health and overall well-being. There is also an exploration of the impact of climate change on mental health and how it affects People of Color, Indigenous Populations, and other populations who experience environmental challenges based on the locale of their homes.

*Keywords:* Nature-Based Expressive Therapies, Nature-Based Activities, Nature-Based Therapy, Nature-Based Art Therapy, Mindfulness, Veterans, Art Therapy, Ecology, Ecofeminism

*Author Identity Statement:* The author lives on land unceded by the Nipmuc Indigenous peoples and identifies as a white, queer, neurodivergent, disabled Veteran who recognizes the privileges they have on this planet and access to resources that enabled them to explore their personal connection to Nature.

## **Nature-Based Art Therapy: Exploring Connections and Relationships**

### **Introduction**

Humanity lives in a garden that is uniquely built to support what humans define as living. We say that Life is precious. Talking points in media and religious affiliations repeat this phrase in debates over abortion, gun rights, and other aspects of our culture implying the value in human life. Yet, human actions do not align with this statement. Human disregard for life today is observable by all in real time through social media; humans treat life as if it is a commodity for exploitation. Capra (1996) shared in his book *The Web of Life*, “life in society is a competitive struggle for existence” (p. 6) to describe the human tendency for exploitation. Western reliance on the belief that we are separate and above nature has driven our society into a disconnect with our natural environment, slowly turning our garden world into an industrial complex. On one hand, humans use the natural world for inspiration, to derive meaning and metaphor while also finding beauty; on the other hand, humanity exploits, destroys, separates, kills, subjugates, and oppresses the natural world. This allows for oppression of People of Color (POC), Indigenous Peoples, Women, and the Queer community.

Mental health is a current hot topic in society. The National Alliance on Mental Health (NAMI) reported in 2021, 22.8% of adults in the United States (US) suffered from mental illness (that equates to 57.8 million people or 1 in 5) (NAMI, 2023). Approximately 14.1 million people or 5.5% of Americans suffer from severe mental illness (SMI; NAMI, 2023). US children and adolescents with mental illness averaged 16.5% or 7.7 million young people (NAMI, 2023). There are also the added 19.4 million adults, which is approximately 7.6% of the US adult population, who suffer from both substance abuse and mental illness (NAMI, 2023). It is

interesting to note that this data reflects mental health and illness during a global pandemic and worldwide lockdown due to Covid-19. It will be important to see the impacts on data over the next several years post-covid. The field of expressive art therapies has a unique opportunity to support a burgeoning modality that has potential to get to the roots of dis-ease and pathology; offer a path back to healthy living; and slowing (potentially) the effects we have had on this living being we call Earth.

This literature review is a potential garden of interconnected theories offering a budding ecological nature-based art therapy modality (NBAT). NBAT has prospective ability to integrate into other expressive modalities that support a multicultural practice and promote social justice; it may also work in tandem with evidence-based practices (EBP), art therapy theories, and clinical counseling theories. NBAT is unique in that it connects to more than just one discipline. It is interdisciplinary with both ecological principles as well as clinical counseling and art therapy theories. The intended audience of this literature review is for all those who wish to explore their connection to nature, environmental identity, spirituality, and stand up to oppression of any living being on our planet.

### **Method**

The process for this literature review relied on research material from a wide range of sources surrounding ecology, ecopsychology, art therapy, expressive art therapies, and nature-based interventions to create fertile soil for growth and connection. Using the access provided by library services at Lesley University and prior research conducted surrounding ecopsychology and environmental literature enabled me to access literature utilizing the BOOLEAN search method.

The next step included reading and reviewing literature, creating a compilation and separation of the research that was then utilized to create separate sections. The sections consist of a path connecting each to one another through scientific literature, as well as peer reviewed studies from art therapy, expressive therapies, and environmental literature.

To finish, there is an exploration of the connections and potential practice of NBAT through an examination of peer reviewed literature of those utilizing nature-based (NB) interventions and NB expressive therapies in their own practices. The final steps were a short discussion on the limitations and concluding discussion. Once these steps were complete, an extensive editing process with the help of Lesley University's writing center and the Professor of the class. This enabled the literature review to be concise, flow, and meet the standards held for APA literature reviews.

## **Literature Review**

### **Definitions and Historical Context**

Definitions are the basis of the ecosystem that creates solid ground for NBAT. To define NBAT it is necessary to clarify the operational definitions of nature and life, and what makes them useful to art therapy through a theoretical perspective. The definition of life can be described from a variety of human experiences and perceptions of reality. American biologist Margulis (1995) offered a definition of life, stating, "life on Earth is more like a verb. It repairs, maintains, re-creates, and outdoes itself" (p. 14). Although seemingly simple, this definition acknowledges the complexities life has and recognizes that life is a process. Nature, by Margulis's (1995) definition, would then equate to life. NBAT, through this logic, could then be defined as a verb as well. A process by which clinicians incorporate life into their therapeutic practices.

The fields of study used for connection and support NBAT from an ecological perspective are as follows: ecology, deep ecology, ecopsychology, and ecofeminism. Exploring these topics creates a basic understanding of how they can complement art therapy, clinical counseling, and evidence-based practices (EBP). These fields connect NBAT to ecology, art therapy and clinical counseling as an interdisciplinary practice.

### *Art Therapy*

Art therapy is a clinical practice derived from visual art making and clinical psychology theories. There seems to be as many ways to approach art therapy as there are clinicians who practice it. This literature review utilizes the post modernism definition for art therapy. Moon (2008) offered four perspectives on this definition. The first perspective is based on creating a rapport that equates to a “shared reality between therapist and client” (p. 30) connecting client and clinician. This reality creates its own unique communication and imagery that holds significance for both. (Moon, 2008). The second perspective holds that social constructs, and meaning making for symbols found throughout our society are not recognized by the therapist in the therapeutic relationship (Moon, 2008). The third perspective offered by this definition is as follows:

Every psychological theory and practice are specific to a culture and time in history; thus, therapists must always be aware of the multiple cultures that clients bring to as session, including family culture, religious culture, culture of origin, economic culture, and the culture of the community and society. (Moon, 2008, p. 30)

The last perspective offered by Moon (2008) states “social action is the underlying goal” (p. 30). What is important to understand about a post-modern definition is that it considers the diversity in human beings. In that diversity, when a therapist and client come together, they create a shared

reality and new culture between themselves. This definition can be applied to NBAT as well. With NBAT though, there is a third entity present in this reality, that is nature or life herself.

### ***Clinical Counseling***

The American Counseling Association (ACA) described clinical counseling as “a collaborative effort between the counselor and client” (ACA, 2023, What is Professional Counseling, para. 3). They go on further to explain that a counselor’s job is to support their clients in recognizing and setting goals, solving problems that create emotional dysregulation, gain better communication skills, improve confidence, and behavior modification in support of overall wellbeing (ACA, 2023). To practice clinical counseling, one must complete the required schooling, internships, state regulations, clinical hours, and testing to become a clinical counselor. The definition provided could also be utilized to describe an NBAT practitioner as well.

### ***Evidence Based Practices***

EBP is best described by Neukrug (2017). He stated that therapy is most successful when the practitioner is (1) knowledgeable in the approaches to counseling that have been investigated and verified; (2) relies on their clinical knowledge to actively listen to the client’s needs and determine the most appropriate action to take; (3) the practitioner supports their client culturally and honors their beliefs and principles (Neukrug, 2017). This translates into utilizing well researched practices that have been verified through stringent peer reviews and is accepted as successful treatment modalities by practitioners to use in clinical counseling. There is an important factor that applies to EBP. Any practitioner or clinician that chooses to work with active-duty military or Veterans will have to rely on EBP (Veterans Administration, 2018). EBP



is a useful tool as well in the civilian sector when looking to gain insurance approval (Cullen & Hanrhan, 2018). It is another tool in a therapist's toolbox to advocate for their clients.

### ***Ecology***

Ecology emerged as a field of study and as an academic discipline in the Western world towards the end of the 19<sup>th</sup> century. *Eco-* is a word component used to form the base of the word *ecology* and it refers to the environment and human relationship with it (Etymology online, 2023). The Greek word *-oikos* means "household" (Capra, 1996, p. 32). Hence the word *ecology*, house of humanity. German zoologist Ernest Haeckl laid claim to the word "*oecologie*" (Bianchi, 2012, p. 2), which he defined as "the scientific study of a world external to humans and not influenced by them" (Scott et al, 2016, p. 48). In 1892, chemist Ellen Swallow, who was also the first woman to attend the Massachusetts Institute of Technology (MIT), was first to use the word *ecology* in a more modern way, defining it as "the study of that which surrounds human beings, in terms of the consequences it produces in their lives" (Bianchi, 2012, p. 2). The difference between Haeckl and Swallow is Haeckl separated humans from the environment while Swallow is inclusive of humans. This may seem a small difference; however, it impacts social perspectives on our connection to the planet. Neither scientist considered Indigenous knowledge or experience in these definitions. Interestingly, Capra (1996) used a more inclusive take on the definition of ecology; he defined ecology as "the study of the relationships that interlink all members of the 'Earth Household'" (p. 7). Of these three definitions of ecology, Capra's definition resonates the most with NBAT. The inclusiveness in his definition allows space for a human from any culture to find themselves as part of the "Earth Household" (Capra, 1996, p. 7).

### ***Deep Ecology***

The deep ecology theory was formulated by a philosopher named Arne Naess (1972). Naess's (1972) approach to defining deep ecology was based on highlighting the differences between deep ecology and "shallow ecology" (Capra, 1996, p. 7). Shallow ecology's definition derives from an anthropocentric lens that places humans at the top of nature, attaches value upon the environment, and explores how it can be used to aid humanity versus coexisting with humanity (Naess, 1972). Modern science often views the world as a machine and animals to be soulless, a perspective that has roots in the 17<sup>th</sup> century writings of Rene Descartes (Margulis, 1995). Deep ecology is the opposite of this and is "based on respect for nature, the inherent worth of other non-human beings and experiencing ourselves as humans as a part of the living earth (Atkins & Snyder, 2018, p. 55). Taking this one step further beyond experiencing life as part of the planet would be to practice living as an extension of nature and recognizing the experience as a reality-based perspective. This means our belief that the world is a machine is based on faulty logic and that the interconnectedness and interdependence between humans, the planet, and non-human beings is more logical.

### ***Ecofeminism***

Ecology has been defined in the past from a patriarchal lens. Ecofeminism is the opposite of this. Around the same time as the French philosopher Naess (1972) was developing his theory of deep ecology, a French counterpart named d'Eaubonne (1974) drafted a book in which the term *Ecofeminism* first appeared. She highlighted the impact of economic growth on our environment and made the case for women being the catalyst for future change. While her essay did not take off in France, it heavily influenced the United States and Australia so much so that it led to ecofeminism as a supported theory outside of ecology (Bianchi, 2012). It is impossible to

discuss the oppression and exploitation of nature without connecting it to the oppression and subjugation of women throughout history. This became clear in the Eighties when American feminist philosopher Merchant (1980) wrote *The Death of Nature: Women, Ecology, and the Scientific Revolution*. Merchant (1980) argued that science supported man's supremacy by showing that men have historically broken the connection humans have with nature and shifted the perspective to view humanity and the earth as a machine. This allowed a patriarchal society to dehumanize and debase life enabling them to oppress, subjugate, and exploit women, POC, Indigenous Peoples, and nature (Bianchi, 2012).

The central theme surrounding ecofeminism is relationships. This is the most important factor in therapy, the client-therapist relationship. There is no therapy without it. Ecofeminism supports this by considering the relationship between women and nature; pointing out how as a patriarchal society, nature and women are perceived as synonymous in their ability to serve the needs of men (Bianchi, 2012). Ecofeminism enables practitioners to form a multicultural lens and allows them to use NBAT as tool for social justice.

### ***Ecopsychology***

Fisher (2013) expressed ecopsychology in such a way that it resonates with Indigenous teachings in this manner:

Ecopsychology, then, would approach the psyche in relation to its earthly or natural home, its native abode, and explore the basic shifts in our patterns of identity and relationship that occur when we include our connection to the web of life around us as essential to human well-being. (p. 4)

The case can be made using the definitions provided that ecopsychology creates connections to ecology, deep ecology, and ecofeminism and argues that humans are as intrinsic to the planet as

any other living and non-living entities. Earth is a living system that relies on the web it has evolved into for survival. This system also affects human mental health and overall wellbeing, which will be covered in an upcoming section.

The definitions presented have been necessary to lay the groundwork needed to support NBAT in its potential role in clinical psychology. This foundation also applies to the role our environment plays on mental health, further connecting NBAT to art therapy theories, clinical counseling theories, and EBP.

### **Nature Based Art Therapy: Connecting Theory**

NBAT, art therapy, clinical counseling theories, and EBP's can connect in support of one another. Relationships create connections. Jordan (2018) points this out when discussing the history of relational-culture theory (RCT). The author utilized feminist theory to take apart the perspective of an impartial psychology and suggested that "power and dominance" (p. 11) play a dominant role in personal growth (Jordan, 2018). Extrapolating this perspective further, it implied relationships were the most important aspect of RCT, and the idea of a unique "self" (p. 11) was not as important when considering the role of women (Jordan, 2018). This is a direct correlation to the idea of NBAT being a modality that creates connections and develops relationships.

Relationships are the foundation of the therapeutic process (Gussak & Rosal, 2016). They include the relationship of therapist with the client, the relationship of therapist and the materials being used, the relationship of the client with the materials, the relationship of therapist with nature, and the relationship the client has or does not have with nature. Relationships are complex, nuanced, and deeply personal. Art therapists share a relationship with psychoanalytical theories to support itself as modality since it entered the psychology arena in the 1940's (Gussak

& Rosal, 2016). It is necessary to approach NBAT in the same manner. Creating a strong clinically based relationship with psychotherapeutic theories and branching out, as art therapy did with Hinze's expressive therapies continuum (ETC), NBAT practitioners can develop a relationship with the ETC (Hinz, 2019) as well. This section will examine the potential relationship NBAT could have with the ETC, existential theory, RCT, clinical ecopsychology, and mindfulness.

### ***The Expressive Therapies Continuum***

The ETC was influenced by early theorists and practitioners of art therapy (Hinz, 2019). However, it was through the vision and work of Kagin & Lusebrink (1978b) as cited by Hinze, (2019). to create a unified theoretical approach to understanding how art therapy affected cognitive processes. Hinz (2019) continued by stating "the ETC organizes media interactions into a developmental sequence of information processing and image formation from simple to complex" (p. 4). Using the relationship to materials and the creation of imagery, the ETC theoretically connects this process to the brain from a developmental lens and a ladder that can be used top down or bottom up (Hinz, 2019). It can also be helpful to consider developmental stages: developmental arrangements such as sensorimotor play, preoperational play, and concrete operational and formal operational thinking bring a cooperative foundation for describing and selecting numerous arts and experiences: properties of the media, structure, and intricacy of the task (Graves-Alcorn & Kagin, 2017).

This ladder is as follows: kinesthetic/sensory level, perceptual/affective level, and cognitive/symbolic level (Hinz, 2019). Approaching NBAT from the lens of deep ecology and ecofeminism, it is easy to see how ETC is relational and encourages connections from the top down and from the bottom up. For a future practitioner of NBAT, using the ETC is helpful when

considering directives. Technically the materials an art therapist uses come from the earth. Using materials such as clay, found objects, or practicing photography, is a kinetic and sensory based experience that encourages mindfulness and focus. Which in turn, encourages perceptual and affective levels (Hinz, 2019). Meaning, creatively the perceptual level has focus on form, while the affective is more emotional with less care paid to the form (Hinz, 2019). This leads to cognitive or intellectualizing information and symbolically creates meaning from experience of the creative process (Hinz, 2019). NBAT incorporates all of these through the act of being in the natural world.

### ***Existential Theory***

The history of Existential theory is attributed to Frankl (Neukrug, 2017). His experience in the death camps of Auschwitz during World War II were horrific and highlights what directions fear can lead humanity. Frankl's experience and choice in how he would process what he experienced gave existential thought validation and in turn became a theoretical psychodynamic approach in psychology (Neukrug, 2017). Existential theory implies the human condition is one of being alone. It is in the choices we make, the relationships we develop, and acceptance of being born alone and dying alone we find true freedom (Neukrug, 2017).

NBAT relies on meaning making through connections to nature and the metaphor it represents in our lives. Existential theory is similar in exploring meaningful life through choice (Neukrug, 2017). Choice in how we respond rather than react to things we cannot control. NBAT practitioners can use this connection successfully by applying this through metaphor when engaging with natural materials such as clay. Clay is simply dirt. Dirt that allows growth. Growth can be a metaphor when exploring existential meaning in therapy. Working with clay is also supported through the ETC, especially through the kinesthetic/sensory level (Hinz, 2019).

Existential theory can connect through mindfulness and support NBAT through sensory based guided meditation (Anderson, 2022). This allows the client to slow down and recognize sensations in the body and how they affect them mentally and physically (Anderson, 2022). Slowing down with mindful attention when engaging in NBAT lets the client practice responding to stimuli versus reacting to it (Anderson, 2022).

### ***Relational-Cultural Theory***

Around the same time ecofeminism and deep ecology were developing, a new psychotherapy theory was being developed. It began with a psychiatrist named Miller and her book that examined psychology and women. (Miller, 1976 as cited by Jordan, 2018). Miller set out to break down the idea of a “neutral psychology of the individual and proposed instead that hidden forces of power and dominance play a major role in shaping social and individual development” (Miller, 1976 as cited by Jordan, 2018, p. 11). For perspective, try to connect this to an ecological framework. The world as a machine dominated scientific thought from the 17<sup>th</sup> century to present times (Capra, 1996). Though now we are challenging this successfully. This dominating power structure places ‘man’ on top of nature and disconnected humanity from nature itself, allowing for the exploitation of nature and the dehumanizing of POC, Women, Indigenous People, and anything other than the white male (Bianchi, 2012). Through the definitions shared earlier in this paper, ‘man’ is not the pinnacle of evolution nor is he on top of nature. Humans are intrinsically part of a system that relies on layers of systems to work successfully (Capra, 1996). RCT can have a relationship with systems thinking because its premise:

Arose from an effort to better understand the importance of growth-fostering relationships in people’s lives. It seeks to lessen the suffering caused by chronic

disconnection and isolation, whether at an individual or societal level, to increase the capacity for relational resilience, and to foster social justice. (Jordan, 2018, p. 27)

RCT offers a way to connect ecological theories, psychological theories, and art therapy theories that support NBAT in a unique way by focusing on connections and relationships. These relationships can be rebuilt from reconnecting with nature through NBAT.

### ***Clinical Ecopsychology***

When exploring ecology, ecopsychology has been defined as the study of the human soul and its relationship with the environment (Toma et al, 2021). This definition for some may come across as very philosophical, even spiritual. They would be right. In keeping with the spirit of academia and western patriarchal ideas of academia, a discussion of clinical ecopsychology and how it connects to art therapy, and other clinical theories to support NBAT will be further investigated. Toma et al. (2021) does an excellent job of exploring clinical ecopsychology and how it can be further researched and used alongside clinical psychology. The authors offer a definition of clinical psychology to be “the motivation to understand the complex nature of the etiology of mental ill-health as well as the determination to optimally diagnose psychopathology” (Toma et al., 2021, p. 2). Their definition of ecopsychology is further defined as:

Ecopsychology can be described as the research field dedicated to the study of the connection between human-caused changes to and destruction of the natural world and the spiritual or psychological crisis resulting from our increasing experience of separation from the more-than-human world. (Thoma et al., 2021, p.3)

Both definitions are excellent and offer a clinical perspective that carries (seems to) weight when striving to be heard in the halls of academia. Toma et al. (2021) further stated clinical



ecopsychology to “set out to examine the underlying pathways that lead to the development of mental ill-health in the face of ecological adversity” (p. 3). They go on to note that clinical ecopsychology is a subset of clinical psychology and ecopsychology (Thoma et al., 2021). What makes this useful is the further validation needed to support those practicing NBAT.

The *clinical* in ecopsychology suggests using EBP’s such as cognitive behavior therapy (CBT) or dialectical behavior theory (DBT). The reason they are referred to as EBP is due to the quantity of quantitative and qualitative research that supports them as successful forms of therapy (Huisman & Kangas, 2018). They have been validated by peers and now are commonplace among practitioners. The Veterans Administration (VA) uses them amongst other EBP’s in their mental health clinics across the country (Cully et al., 2020). The VA has taken this a step further and created a clinical handbook to support nature-based activities (NBA) that include NBAT (Anderson, 2022). The author of this handbook, Anderson (2022), used SMART goals that were developed using EBP practices to measure specific, measurable, achievable, relevant and time limited goals to support the Veteran in their therapeutic process (Anderson, 2022). This is not only EBP, but also practicing clinical ecopsychology as well as NBAT.

### **Natural Environment and Mental Health**

This section contains studies and reviews focused on the human influence on the natural environment and how it impacts mental health. There were more negative impacts discovered in researching this topic than positive effects. However, the positive influences offer hope that the natural environment holds a credible impact on mental health.

#### ***Mindfulness-Based Stress Reduction***

Mindfulness-based stress reduction or MSBR is a major tool the VA uses in their Whole Health structure, especially in the mental health department (VA, 2023). Choe et al. (2020)

conducted a study in the United Kingdom to examine whether a natural environment could increase the positive impact of MBSR. They acknowledged the development of research that is being conducted to support the impact that nature plays on mental health in prevention and maintenance, citing a study that showed green space in urban neighborhoods decreased the impact on stress from life experiences (Van den Berg et al., 2010). Choe et al. (2020) offered two theories with potential to support their study: stress reduction theory (SRT) and attention restoration theory (ART) (Choe et al, 2020). SRT is evidence based, while ART needs more quantitative research to show clear EBP.

Choe et al.'s (2020) study was created as an experiment using three different settings consisting of natural surroundings, constructed outdoor setting, and a classroom. Volunteers were invited to take part for six weeks and separated into three groups based on the number of volunteers. The initial 113 participants were chosen from students and staff from the University of Sheffield (Choe et al, 2020). The researchers found the volunteers all gained positive impacts on their mental health from MBSR. However, there was substantial evidence that participants found more connection to nature, less rumination, less reflection, and improved stress relief when groups sessions were conducted in natural or semi-natural environments; their study also supports that MBSR offers better results when held in nature (Choe et al., 2020). The researchers note only 56% of their volunteers finished the sessions completely, limiting the efficacy of the experiment. Regardless, it does show there are benefits to using nature as a tool to support MBSR (Choe et al, 2020). Other limitations would be lack of diversity, gender differences, and acknowledging lack of access to nature experienced by urban populations.

### ***Industrial Impacts***

Highlighting the positive impacts that nature has on mental health and overall wellbeing is important to gain support and funding for further research. The negative affect of industrial pollution impacts the lives of the poor, blue collar, Indigenous, and POC by polluting neighborhoods and land that these populations occupy near industrial areas by producing hazardous waste, air pollution, and noise pollution (Downey & Van Willigen, 2005). Authors Downey & Van Willigen (2005) ran statistical analyses to examine the impact of environmental pollution on mental health of those in neighborhoods with proximity to industrial areas. They then examined the stressors associated with living in these areas and how they affect “perceptions of neighborhood disorder, feelings of personal powerlessness [and found] the negative impact of industrial activity upon mental health is more pronounced for minorities and the poor than it is for whites and wealthier individuals” (Downey & Van Willigen, 2005, p. 2). The authors used data from the 1995 Community, Crime, and Health Survey, the 1990 U.S. Census Data, and the 1995 Toxic Release Inventory by sourcing random phone numbers from a list that identified English-speaking people in the area (Downey & Van Willigen, 2005). The authors were then able to extrapolate from data gathered and found a correlation between mental health, specifically depression; feelings surrounding views on community disarray; and lack of individual influence (Downey & Van Willigen, 2005).

The authors, (Downey & Van Willigen, 2005), utilized validated quantitative data to show disparity from these findings in the experience of POC, poor, and blue-collar neighborhoods versus white and wealthier individuals. This highlights the necessity of more research by clinical practitioners on the interactions of industrial pollution and in mental health. Which is especially true for demographics that are affected by the contamination generated by these companies and

who experience inequalities based on economics, systemic racism, and disregard of Indigenous People's rights to their lands. Mindful practitioners could benefit from considering this data to be relevant for use with these populations. Relationships are the beginning and NBAT fosters this as well as reconnecting this demographic back to nature.

### ***Flint, MI a Case Study***

Water is a fundamental aspect of life and an inalienable right for all living beings. Yet, humans have exploited water for material wealth and use this resource as a political and financial tool that alongside climate change, will have impacts on all living beings' future existence. The United Nations (UN) has predicted that people in urban areas dealing with scarcity of water could "expand from 930 million people in 2016 to 1.7 and 2.4 billion people in 2050 (UN News, 2023). It is evident that the outlook of access to clean drinking water will be dire (UN News, 2023).

In Flint Michigan, 2014, the city switched from the water supplied by Detroit's water system to pulling their drinking water from the Flint River (Denchak, 2018). Soon after, Flint residents began complaining of rotten smelling, off colored, bad tasting water. (Denchak, 2018). Denchak (2018) further discussed reports of hair loss, rashes, and irritated skin problems that continued for eighteen months. Denchak (2018) shared researchers would not find out until much later, the impact of lead levels in Flint's children blood work. Mulvihill (2023) reported lead levels in 2016 were found to double in children's blood-lead amounts. Lead in water can cause serious developmental issues in children and can impact adults' cardiac wellness (Mulvihill, 2023). Knowing that mental health and physical health are intertwined, it is no surprise that this impacted the overall physical and mental wellbeing of adults and children in Flint, MI.

As discussed in Choe et al. (2020), manufactured environments directly influence mental health through the location of homes and the quality of natural environment surrounding it. These environments also influence people's feelings surrounding control over their life and situations that affect them in their living spaces. Low-income communities and POC are most likely to live in areas exposed to industrial toxins. This was clear in the water situation that altered Flint, Michigan populations mental and physical health.

Cuthbertson et al. (2016) conducted a study of the consequences on mental health due to the toxic water in Flint, MI. The authors ran a survey involving key participants whose expertise included health services, substance abuse, health organizations not related to the government, disability services, schools, and local scholars (Cuthbertson et al., 2016.) The data generated from the twelve months of surveys was evaluated through a technique called grounded theory. Grounded theory is taking information and creating a theory gained from experimental discoveries and connecting them to known information (Cuthbertson et al., 2016). Because of the data driven process, the information gained has quantitative merit. The authors found through using grounded theory and investigation that the situation in Flint caused elevated stress and anxiousness, which in turn led to increases in substance abuse, depression, physical and emotional abuse, and anxiety throughout the city of Flint (Cuthbertson et al., 2016).

There were limitations to Cuthbertson et al. (2016) research. Specifically, the surveys were limited to who the authors refer to as 'key informants' (Cuthbertson et al, 2016, p. 901). While the data was informative, it did not come from the populations directly affected by the water in Flint. However, it was a glimpse into the surface of the serious consequences the city of Flint faced by allowing their residents to consume toxic water. The effects on mental and physical wellbeing of those exposed will be ongoing for years to come (Cuthbertson et al., 2016).

### ***Impact on Indigenous Peoples***

Madden (2021) delved into the changing landscape of Arctic Indigenous People and how global warming is affecting traditional ways of life, especially for young people and their mental health. Because of the damage to their ecosystem, substance abuse and depression are on the rise in Indigenous adults, which in turn affects their young people. According to Madden (2021), in 2009 approximately 120 Inuit and Alaskan native young people committed suicide, per 100,000 people. 89% of Greenland's population consists of Inuit People (Madden, 2021). These numbers reflect the seriousness and disruption to the Inuit's way of life. There are underlying issues as well impacting the Inuit people. Due to climate change, the knowledge passed down from their elders is no longer true in a world with less ice (Madden, 2021). This creates a shift in how the Inuit continue to follow in their ancestors' footsteps (Madden, 2021). The other factor playing a role in the vulnerability of the Inuit people is the lack of consistent health care (Madden, 2021).

It is a logical leap to posit that this could be reflected around the world's populations of Indigenous People. Madden's (2021) focus was on the Arctic Indigenous. This research captures a fraction of the struggles the Inuit population face in Greenland. Madden (2021) does not have the bandwidth in this study alone to address the scope of effects that colonization and assimilation has triggered in the loss of culture and language among the Inuit population. As a practitioner of NBAT it will be paramount to recognize influence Indigenous cultures have had on our approach and to be advocates and allies in support of Indigenous cultures.

### **Practicing Nature Based Art Therapy**

#### ***Using Found Objects and Nature Herself***

Practicing NBAT is not a complicated process. Incorporating nature into art therapy is inherent because materials come from nature herself. Paper is derived from trees and plants.

Pigments have an ancient history dating back to before Ancient Egypt and Greece (Taggert, 2022). The use of sand, lime, and copper begat Egyptian Blue, which was a pigment used by Ancient Egyptians (Taggert, 2022). Today, we rely on synthetic paint due to advances in chemistry. However, Indigenous artists are returning to the natural world for their pigments (Harvey, 2022). This is an important note when discussing NBAT and the practice of it. Materials are fundamental in the practice of NBAT.

### ***Nature-Based Expressive Therapies***

Atkins and Snyder (2018) are both teachers and practitioners of expressive therapies and nature based expressive therapies. Atkins founded the expressive arts therapy program at Appalachian State University and is core faculty at the European Graduate School in Switzerland. Snyder is the director of the expressive arts therapy program at Appalachian State College and teaches the European Graduate School as well (Atkins & Snyder, 2018). These professors worked together to draft the book *Nature-Based Expressive Arts Therapy: Integrating the Expressive Arts and Ecotherapy* (Atkins & Snyder, 2018). Their book offers an in depth look at the fields of expressive therapies, ecotherapy, ecological sciences, ecological philosophy, and Indigenous Cultures they have developed relationships with (Atkins & Snyder, 2018).

Atkins & Snyder (2018) give the clinician who is looking to integrate their practice with nature-based (NB) practices a starting point in which they can begin to explore, research, and try their hand at NBAT. Their book offers connections that show how ecotherapy and expressive therapies can benefit and grow alongside each other (Atkins & Snyder, 2018).

The authors take the time to recognize the influence and learning they experienced from Indigenous teachers and do a credible job explaining the differences between appropriation and expropriation (Atkins & Snyder, 2018). It is important to note this because of the resonance with

Indigenous practices when working with NBAT. Research shows Indigenous Peoples recognized the importance of nature when modern culture lost connection to it (LaDuke, 1999). In finding nature again, we often look to Indigenous Peoples for inspiration and knowledge. Inspiration and appreciation are fine, it is a problem when practitioners do not acknowledge Indigenous research and history, or they appropriate it and claim it for their own ideas. Atkins & Snyder (2018) discuss their field as a major perspective in regard to “life itself” (p. 50). They go on to express that “this is a systems orientation to life, a way of seeing the world as based ultimately on processes rather than fixed substances” (Atkins & Snyder, 2018, p. 50). This supports the NBAT perspective of viewing life as a connection of systems and not as a machine.

While Atkins & Snyder (2018) supply a great base, research into the benefits of nature-based expressive therapy and NBAT are limited. There is literature that supports the effects of NB activities that in turn can be used to contribute to a platform for NBAT.

### ***Veterans and Nature***

This is especially true in collaborating with Veterans. Anderson, through the support from the VA, created a manual for both clinicians, practitioners, and a separate manual for Veterans themselves to begin “engaging with nature” (Anderson, 2022, p. 2) The manual is called *The Great Outdoors: Engaging with Nature for Mental Health* (Anderson, 2022).

Anderson’s (2022) clinician’s manual presents two goals. The first goal is “to increase the quantity of time that Veterans spend doing positive activities in nature” (Anderson, 2022, p. 4). The second goal is “to increase the quality of Veterans’ time in nature and to build their sense of connection to nature” (Anderson, 2022, p.4). He goes further to clarify how these goals will be achieved. To undertake the first goal, Anderson (2022) turns to psychoeducation giving Veterans insight into how spending time in nature is good for them. He then gauged Veterans motivations,



values, goals, and engagement with nature (Anderson, 2022). Anderson's (2022) basis for this is behavioral activation by zeroing in on encouraging NB undertakings. He directs us to Boswell et al (2017) and Jacobson et al (2001) to support the theory behind behavioral activation. Anderson concluded from those two studies "psychological distress is due to a lack of engagement in and/or avoidance of reinforcing activities and relationships" (Anderson, 2022, p. 4).

The second goal Anderson (2022) presented is supported through offering tools based on "mindfulness, savoring, and guided imagery exercises" (p. 4). He further extrapolated that "if the goals of the manual are met, Veterans will learn new strategies to manage their psychological distress and improve their well-being" (Anderson, 2022, p. 4). The approach Anderson (2022) took to support this manual was strategic in that it fell into the VA's promotion of using whole health methodology in Veteran health care. The VA's whole health care style considers "changing lifestyle behaviors, focusing on broadly improving health and well-being, and prevention" (Anderson, 2022, p. 5). The use of this manual targets specific areas of the whole health circle the VA employs as an approach to care for Veterans. Those areas include surroundings; working your body; recharge; spirit & soul; and family, friends & coworkers, to name a few (U.S. Veterans Administration, 2023). The limitation to this manual is the lack of empirical evidence and the need for more testing on the Veteran population to support Anderson's (2022) work.

Clinicians and practitioners could benefit from using this manual as guidance when creating art therapy directives or expressive therapy directives. In doing so, this gives reliable methods to begin using to support NB activities and NBAT. This is clear in a qualitative study done by Poulsen et al. (2016) in Denmark that explored experiences Veterans with post-traumatic stress disorder (PTSD) have when engaging in NB activities in a "forest therapy garden" (Poulsen et al., 2016, p. 2).

The authors created a 10-week program and requested eight Danish Veterans to take part (Poulsen et al, 2016). Their goal was to understand how NB therapy affects PTSD and to develop a better grasp of the potential positive impact through the Veteran's point of view (Poulson et al., 2016). They incorporated "qualitative interviews and analyzed using the interpretative phenomenological method (Poulson et al., 2016, p. 1). The authors found that in the beginning of the study, Veterans gravitated towards parts of the garden that presented shelter and seemed to be safe to enjoying the more accessible areas that encouraged social interaction with their fellow Veterans. This is an apparent sign of the supportive reaction felt when including natural environments into therapy. There are limitations to this study. Because of the qualitative design with few participants, results can't be generalized. However, it did have diversity in age, time in service, and severity of PTSD symptoms. Due to the thoroughness of the study, the design lends itself to replication using NBAT and other NB activities to offer support of findings and its validity.

Poulsen (2016) utilized a literature review as well to support the use of NB therapy and NB activities as a possibility for collaborating with Veterans with PTSD. They took an in-depth look and analysis of literature that examines Veterans, the identification of PTSD, and using NB therapy for healing (Poulsen, 2016). The author found substantial support in the studies analyzed, expressing the finding of "positive impact on PTSD symptoms, quality of life, and hope" (Poulsen, 2016, p. 15). Again, the limitations to this are the lack of quantitative studies done on this subject. Poulsen (2016) did point out the economic value of pursuing research in this area by noting the impact Veterans have on society that suffer from PTSD. This is an important point when it comes to funding and supporting the whole health outlook for Veterans.

### *Acquired Brain Injuries*

Switching demographics to adults that have experienced Acquired Brain Injuries (ABI). Vibholm et al. (2020) offered a review of literature that supports positive effects of NB rehabilitation with this population. The authors examined the definitions of quality of life and the impact ABI has on this. The World Health Organization (WHO) defined quality of life as follows: “Individuals’ perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns” (WHOQOL-Group, 1998 as cited by Vibholm et al., 2020, p. 661).

The authors sought to learn whether NB rehabilitation could improve upon “the sensory-motor, psychological, cognitive, behavioral and emotional consequences of ABI in adults” (Vibholm et al., 2020, p. 663). They further explain they appear to have conducted the first literature review into this demographic (Vibholm et al., 2020). The literature review found positive results related to motor-functions in two reports; positive results in three reports related to cognitive function; two studies found positive results in relation to anxiety and depression (Vibholm et al., 2020). In relations to quality of life the authors found studies that implied NB rehabilitation could be beneficial (Vibholm- et al., 2020).

There is hope for any demographic that experiences ABI. Especially for Veterans that have traumatic brain injury (TBI). This literature review demonstrated significant validation for conducting more studies on the impact of Nature in relation to both ABI and TBI. It is apparent that this could support using NBAT in support of rehabilitation from ABI and TBI to be a logical next step when considering quality of life, motor-functioning, anxiety, and depression in these populations.

### *Nature-Based Art Therapy and Materials*

Chang & Netzer (2019) offered a small qualitative study that supports the use of natural materials in therapy to support stress reduction (Chang & Netzer, 2019). The authors' approach is to support urban populations that may not have access to natural environments (Chang & Netzer, 2020). Their qualitative study sought to explore the effects of utilizing natural materials when conducting therapy inside (Chang & Netzer, 2020). The population chosen were high functioning adults who had no health or mental health issues but had high stress careers and did not have time to devote to experiencing nature (Chang & Netzer, 2020).

Chang & Netzer (2020) invited their volunteers to make two pieces of art. For the first piece, they offered traditional art materials. For the second, they offered various natural materials that included charcoal, flowers, rice, beans, cinnamon sticks, etc. The authors facilitated the sessions as well as supplied all materials. They encouraged the volunteers to be intentional with their focus and consider their experiences in work or school (Chang & Netzer, 2019). The authors found that using natural materials allowed the volunteers to experience more memories and metaphors that took the participants in a different direction than their work experience (Chang & Netzer, 2019). The method and directive for this study were interesting in that they brought nature indoors versus the earlier studies that explored NB therapies and activities outside in nature.

The results of the participants' experience of nostalgic memories and metaphors during this study imply a deeper connection with nature than the participants realized. There were limitations to this study. The demographic was young, healthy, mentally stable human beings who experienced high stress due to school or work. The authors did do well in diversity among

their participants. This continues to highlight the need for more research to show the benefits of NBAT being used indoors or outdoors.

### *Awe of Nature*

The next example of NB activities explored in this section is referred to as the awe humans experience in nature and the possibilities NB therapies may have for inhibiting and healing depression (Owens & Bunce, 2022, Anderson et al., 2018). During my internship at Edith Roger's Memorial Hospital, otherwise known as Bedford VA in Bedford, MA, I witnessed the inspiration and awe the Veteran's had for nature. One Veteran, who was a prolific painter, traveled the North American Continent and painted landscapes. I was honored to have them share their experiences with me. This experience leads to Anderson et al. (2018) study that explores the sense of awe felt in nature and how it can support wellbeing in Veterans, vulnerable youth, and students (Anderson et al, 2018). The authors note they seem to be the first to try connecting awe felt in NB experiences and how that affects mental health (Anderson et al, 2018). They did so by gathering a sample of the above demographic and looked at experience with white water rafting combined with journaling to include having the participants journal their everyday experiences with nature (Anderson et al., 2018).

The authors found that emotional awe in both scenarios led to an increase in wellbeing and stress-related symptoms. They do acknowledge the limitations of this study by recognizing that more research is necessary to confirm the fact that awe and emotion, when experienced in nature, seems to reduce stress, and increase wellbeing. From an NBAT perspective, creating a directive that utilizes awe in nature and then offers a creative outlet to express it could be developed.

### ***Nature- Based Therapy and Depression***

The last study explored in this section originated from Owens & Bunce's (2022) study of conceptual analysis using NB therapy in treating and deterring depression. Their approach seems a more mechanistic way to understand why NB interventions (NBI) work and on whom it works successfully (Owens & Bunce, 2022). It is necessary at times to break things down to understand their parts, however, recognizing how pieces work together as a system should be the end goal when looking to understand mechanisms behind theory. The authors made a case for applying clinical psychology to examine the ability of NBI to ease "the large burden associated with poor wellbeing and psychopathology" (Owens & Bunce, 2022, p. 1). It could also be useful to suggest examining the disconnect with nature and how this has impacted psychopathology as well. The authors defined NBI and how they can impact depressive symptoms from stress and rumination to mindfulness, sleep, and exercise (Owens & Bunce, 2022).

Through their analysis, they recognize NBI to be a valid treatment or support for other therapy modalities to help with depression (Owens & Bunce, 2022). NBAT could be a potential route for treatment of depression based on the authors' analysis, with potential to lessen the use of pharmaceuticals. An art therapist practitioner could use this to advocate for their clients to receive clinical treatment through insurance enabling it to be provided as a valid mental health treatment. The authors note there is a limitation to the number of studies available to support their argument (Owens & Bunce, 2022).

### **Discussion**

This literature review is a stepping off point for further research and practice of NBAT to continue validating the efficacy for potential positive change in mental health and overall wellbeing in my career moving forward. Roszak (1995) stated in his essay *Where Psyche Meets*

*Gaia*, “ecology needs psychology, psychology needs ecology” (p. 5). NBAT has both. This short foray into exploring the potentiality of NBAT has emphasized the perspective offered in Roszak’s (1995) quote. The research has linked multiple different paths due to the interconnectedness it shares with other modalities and fields of study. The self-inflicted harm through exploitation of both humans and non-human beings is clear from the research shared in this literature review. This observation of exploitation in the research supports the side effect NBAT has in advocating for social justice. NBAT practitioners have a potentially unique view into the lives of those most affected by climate change and human-caused natural disasters such as Flint, Michigan. This perspective has potential to empower the clinician as an advocate for the communities most affected by climate change. This is what I have gained the most from my time at Lesley University. The knowledge that as an NBAT practitioner, I can help advocate for and empower the communities I will work with in the future.

Ironically, this literature review was meant to make a case for NBAT as a separate entity or modality like art therapy. Instead, through the help of my instructor and feedback from peers, it morphed into an exploration of connection with interdisciplinary subjects ranging from environmental literature to clinical psychology, ecopsychology and art therapy. This further supports the systems theory Margulis (1995) demonstrated through her research that shows the interconnectedness humanity has with the planet, non-human life, and with each other.

The last big impact this literature review has had on my education is allowing me to finally acknowledge the theoretical leanings I prefer to utilize with clients and Veterans. Substantiating the interconnectedness of the research showed me that relationships are paramount in practicing NBAT. Curiosity plays an important role as well. This leads me back to existentialism. By questioning the purpose of life, accepting responsibility for my own life

experiences, in turn, helps me to understand how to apply existentialist theory in therapeutic relationships (Neukrug, 2017). The bonus in this endeavor was researching how practitioners are attempting to apply this across demographics.

### ***Limitations***

The limitations to this literature review are the lack of sufficient research in the use of NB and NBAT therapies. There are qualitative studies, but very few in the realm of art therapy or expressive therapies. Furthermore, there needs to be more interconnected work done between ecopsychology and clinical theories. NBAT offers exciting potential to be a valid and useful interdisciplinary modality in the mental health field.



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**THESIS APPROVAL FORM**

Lesley University  
Graduate School of Arts & Social Sciences  
Expressive Therapies Division  
Master of Arts in Clinical Mental Health Counseling: Expressive Arts Therapy, MA

**Student's Name:** Janell Lopez-Curtis

**Type of Project:** Thesis

**Title:** Nature-Based Art Therapy: Exploring Connections and Relationships

**Date of Graduation:** January 24, 2023

In the judgment of the following signatory this thesis meets the academic standards that have been established for the above degree.

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