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Fiona C. Lundy
Ecotherapists'
Perceptions about the
Efficacy of their Work

ABSTRACT

This qualitative, exploratory study sought to answer the question, what do ecotherapists think makes their nature-based therapy (NBT) work effective and for whom? Twelve American mental health clinicians who practice NBT's (including animal-assisted therapy (AAT), horticultural therapy (HT), nature-reconnection practices (NRP's), and wilderness therapy (WT)) regularly in their professional work were recruited using snowball sampling.

Semi-structured interviews revealed that practitioners explain NBTs' effectiveness by citing the biological, psychological, spiritual, and therapeutic power of the natural world, the different ways that NBT's are structured, and additional factors that are unknown. Participants shared varied views about whom ecotherapies best serve; some stated they could benefit anyone, while others identified groups based on age, gender, and mental health diagnoses. Those with severe mental health issues, medical contraindications, and objections or lack of access to NBT's were identified as not benefitting from them. In addition, half of participants expressed concerns about the accessibility of NBT's. Others nuanced this by pointing out that access is contingent upon how nature and NBT's are defined.

Findings highlighted a lack of consistency in NBT practice and a variety of opinions about what makes NBT's effective and about whom they best serve. This lack of universality makes discussing and measuring efficacy difficult. Though the building research base is promising, ecotherapy and its relationship with the natural world must be more clearly defined in order to solidify its research base. The accessibility of NBT's must also be considered.

**ECOTHERAPISTS' PERCEPTIONS ABOUT
THE EFFICACY OF THEIR WORK**

A project based upon an independent investigation,
submitted in partial fulfillment of the requirements
for the degree of Master of Social Work.

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2015

ACKNOWLEDGEMENTS

To my parents, for supporting me since they brought me into the world and consistently putting their children first. For their patience and support during the entire process of graduate school and for giving me space to garden.

To my sisters, for always being there for me and being my first and most fundamental companions.

To the rest of my family—some of whom I've met in this life and some of whom I will never meet-- for inspiring me with their histories of resilience and service. To K.L.D. for being the first social worker in my life.

To my dear friends/ found sisters at Smith and beyond, for the boundless moral support and love throughout this challenging process.

To my partner, for teaching me about things I would have otherwise never learned about, for accepting me as I am, and for taking me into the Sierra.

To J. A., for understanding me, accepting me, and always encouraging me to hold life's contradictions, to honor multiplicity, to speak my truth without judgment or doubt, and to inquire, and then inquire some more.

To my dog, for reminding me to play, stay in the present, and focus on what really matters.

To all the individuals who took time out of their lives to participate in this study. Your generosity of spirit, honesty, and vulnerability are truly appreciated. I only hope that my sincere efforts to honor what you shared with me come across.

To K.M, for her stellar, patient, thoughtful advising.

To the supervisors, mentors, and co-workers who have believed in me, guided my clinical

work, and helped form my identity as a social worker.

To my clients, whose wisdom, truthfulness, and resilience is ever humbling and inspiring.
Thank you for all you have taught me.

To the rest of nature, for inspiring and humbling me, giving me perspective, and always holding and supporting me unconditionally, despite my flaws.

To knowing that this thesis process is an organic one that always has room to grow and evolve.

To a healthier, more interconnected natural world.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	v
CHAPTER	
I. INTRODUCTION	1
II. LITERATURE REVIEW	5
III. METHODOLOGY	45
IV. FINDINGS	53
V. DISCUSSION	96
REFERENCES	121
APPENDICES	
Appendix A: Examples of Email and Social Networking Recruitment Materials	142
Appendix B: Recruiting Fliers	145
Appendix C: Demographic Form and Informed Consent Paperwork	149
Appendix D: Interview Guide.....	154
Appendix E: Volunteer or Professional Transcriber’s Assurance of Research Confidentiality..	156
Appendix F: HSR Approval Letter.....	157

LIST OF TABLES

Table

1. Participants' Demographic Information.....	54
2. Demographics of Clientele Participants Serve.....	57

CHAPTER I

Introduction

Nature exposure and nature-based therapy (NBT) techniques, including wilderness therapy (WT), horticultural therapy (HT), and animal-assisted therapy (AAT), have mounting anecdotal, theoretical and empirical evidence to support their effectiveness (Maller, Townsend, Pryor, Brown, & St. Leger, 2005). Research demonstrates the correlations between both nature exposure and such NBT techniques (also known as ecotherapy techniques, which will be used interchangeably henceforth) and overall, as well as targeted, improvements in mental health and physical disorders (Annerstedt & Währborg, 2011; Maller et al., 2005). As a developing field, existing literature highlights the need to strengthen the research base for NBT's. This study seeks to contribute to the field of social work by answering the question, what are clinicians' perceptions of what makes nature-based therapies effective and for whom?

For the purposes of this study, a practitioner of nature-based therapy was defined as a master's level or higher mental health clinician (M.S.W., L.C.S.W., L.I.C.S.W., M.F.T., Master's in Counseling, Psy.D., and Ph.D. and/or individual with a Master's Degree in Psychology) providing individual, and/or group counseling/therapy to clients in Canada or the United States using components of ecotherapy. Since existing literature does not provide insight into the amount of time clinicians spend doing this work, I did not require a certain percentage of work hours doing NBT's in order to participate in this study. However, participants had to provide some type of NBT as part of their professional clinical role on a consistent basis. To be included in the study, clinicians had to work with clients who are struggling with some kind of mental

health issue, including anything ranging from adjusting to the stressors of different life stages to more severe mental illnesses, like schizophrenia and major depressive disorder. In other words, those working in environmental education or vocational training with populations without mental health challenges were not included in this study.

Though the definition of nature has, and continues to, rouse much debate, I chose Maller et al.'s (2005) definition as a foundation for this research: "the spectrum of habitats from wilderness areas to farms and gardens. Nature also refers to any single component of the natural environment (such as plants, animals, soil, water, or air) and includes domestic and companion animals as well as cultivated pot plants" (Heinsch, 2012, p.310-311). Thus, nature is not just a wilderness area or national park, but can include natural components in urban areas as well. As NBT's are practiced differently in various settings and contexts, effectiveness cannot be easily defined. Therefore, each participant defined his or her NBT practice and its efficacy of subjectively.

The theoretical underpinnings for this study were those that provide the basis for ecopsychology as well as Markus and Kitayama's (2010) theory of mutual constitution. Ecopsychology asserts that the human psyche is deeply connected with the natural environment (Doherty, 2009). It provides the framework from which ecotherapy techniques originate (Buzzell & Chalquist, 2009). Markus and Kitayama's (2010) theory of mutual constitution states that humans are both shaped by and help shape their cultures and world.

A building body of research has explored the efficacy of interacting with nature and being exposed to nature in general populations as well as ecotherapy techniques in those with specific mental and physical health concerns and in vocational rehabilitation settings (Annerstedt & Währborg, 2011; Chalquist, 2009; Cimprich, 1993; Clatworthy, Hinds, & Camic, 2013;

English, 2006; Heinsch, 2012; Kam & Siu, 2010; Kaplan & Kaplan, 1989; Maller et al., 2005; Nielsen & Hansen, 2007; O'Brien, Burls, Townsend, & Ebden, 2011; Ottosson & Grahn, 2008; Prothmann, Bienert, & Ettrich, 2006; Stepney & Davis, 2005). Studies on ecotherapy, recreation habits, and perceptions about nature have primarily been conducted in the United States, parts of Northern Europe, Australia, and in a handful of Asian countries (Annerstedt & Währborg, 2011; Barton, 2012; Bixler & Floyd, 1997; Echeverria, Luan Kang, Isasi, Johnson-Dias, & Pacquiao, 2014; Heinsch, 2012; Kam & Siu, 2010; Kuo & Sullivan, 2001; Maller et al., 2005; Maas, Verheij, Groenewegen, de Vries, & Spreeuwenberg, 2006; O'Brien et al., 2011; Orren & Werner, 2007; Ottosson & Grahn, 2008; Parkinson, Lowe, & Vecsey, 2011; Rideout & Legg, 2000; Stepney & Davis, 2005; Thompson, Aspinall, & Montarzino, 2007; Wolsko & Hoyt, 2012). These studies consider components of participants' sociocultural identities in an often inconsistent or overgeneralized manner, sometimes recruiting populations that are lacking in diversity, listing participants' racial or ethnic identities but neglecting their socioeconomic statuses (SES's), assuming their class identities based on either where they live or on their educational level without considering any other components, or conflating their ethnicity and their SES (Ackley & Cole, 1987; Annerstedt & Währborg, 2011; Barton, 2012; Bixler & Floyd, 1997; Maas et al., 2006; O'Brien et al., 2011; Parkinson et al., 2011; Rideout & Legg, 2000; Ward Thompson, Aspinall & Montarzino, 2007). A review of this research reveals three main areas that necessitate further study: more substantive research to determine if a causal relationship can be determined between nature-therapy techniques and improvements in well-being, studies that explore which specific mechanisms of these interventions are effective, and research on the efficacy of these interventions with a variety of populations. Though the scope of this project was too narrow to facilitate the randomized control trials needed to determine

causality, I used this research opportunity to explore the other aforementioned holes in the literature.

Specifically, this qualitative, exploratory study examined American clinicians' perceptions of the efficacy of their NBT interventions. This study purposefully included a variety of different branches of ecotherapy (rather than just focusing on HT, for example) in order to gain *broader* insight into the way that mental health clinicians are both engaging with and helping their clients relate to/ with the natural world. I used a snowball sampling technique to recruit participants through the mediums of social networking websites and personal connections. Those who completed informed consent forms and met selection criteria provided qualitative data through semi-structured interviews in person or by phone in spring of 2015. Interview questions focused on what participants perceived as most effective about their ecotherapeutic interventions, whom they felt these approaches work best for, as well as issues of accessibility to these services.

Through this study, I aim to supplement existing ecotherapy literature with the specific perspectives of ecotherapeutic practitioners with clinical expertise. Besides helping to fill holes in existing research, I intend for this study to be an addition to the small body of existing social work literature that discusses nature-based interventions.

This study's results provide social workers, other mental health professionals, and especially ecotherapists with research on which to base both clinical and programmatic design decisions. Ultimately, I hope that this study's findings will help NBT's to be practiced more broadly and in a culturally humble manner.

CHAPTER II

Literature Review

The purpose of this study was to research what nature-based therapists believe is most effective about their work and whom they feel their work best serves.

This review overviews literature on the following themes: definitions and scopes of NBT's, theoretical bases for NBT's, empirical bases for NBT's, specific components which are believed to make NBT's effective, evidence critiquing and/ or contradicting NBT's, clinicians who practice NBT's, clients who may access NBT's, a critique of existing studies, and a commentary on areas that are missing from the ecotherapy research. Reviewing literature on the aforementioned areas will provide a conceptual base for the empirical study to follow.

Definition and Scope of Nature-Based Therapies (NBT's)

NBT's, also known as ecotherapies or nature-assisted therapies (NAT's), originated from the frame of ecopsychology (Annerstedt & Wahrborg, 2011; Buzzell & Chalquist, 2009). This term was first coined by Theodore Roszack in his 1992 book, *The voice of the earth*, but the concept has since grown and evolved (Doherty, 2009). According to Buzzell and Chalquist (2009), ecopsychology sees individual well-being and the well-being of the planet as inextricably linked. In other words, humans are rooted in the natural environment, and the world's well-being is also dependent upon its human inhabitants interdependently (Buzzell & Chalquist, 2009; Wolsko & Hoyt, 2012).

Ecotherapy is the application of the much debated “theoretical, cultural, and critical foundation” provided by ecopsychology (Chalquist, 2009). Wolkso and Hoyt (2012) distinguish

ecopsychology from ecotherapy, stating that the latter is the actual therapeutic practices, “in the contexts of human-nature relationships,” of ecopsychological thought (p.11). Similarly, Chalquist (2009) defines ecotherapy as “an umbrella term for a gathering of techniques and practices that lead to circles of mutual healing between the human-mind and the natural world from which it evolved” (p. 64). In this application of ecopsychology, the interconnected earth, not just the individual, is the client (Rust, 2009).

There are many different ways that NBT’s, or ecotherapies, are practiced. These techniques can include wilderness therapy, (WT) horticultural therapy (HT), and animal-assisted therapy (AAT). Annerstedt and Währborg (2011) add outdoor adventure therapy, a part of wilderness therapy, to this list, while Buzzell and Chalquist (2009) also include “nature reconnection practices [NRP’s]...time stress management...and various restorative methods” (p.18).

Here I will define and describe the scope of some of the more commonly practiced iterations of ecotherapy. Considering the scope of this project, I will not describe all the facets of NBT’s that are mentioned in the literature (Buzzell, 2009) as there are too many to thoroughly explore here. Instead, I will overview the most commonly written about branches of NBT’s: HT, WT, AAT, and NRP’s.

According to Söderback, Söderström, and Schäländer (2004), horticultural therapy, or HT, can be defined as:

...interventions mediated by nature-oriented views and spaces such as gardens and everything associated with them, the plants and materials related to them, garden tools and garden occupations performed among disabled people...for healing and for restoring health and well-being or for rehabilitation or simply for general benefit. (p. 245)

Though this definition problematically asserts that HT's are only for those who are "disabled," if one looks past this oversight to the breadth of the definition, it can be relevant to this discussion. Soderback, Söderström and Schäländer (2004) cite Zhou and Relf (1991) to assert that HT is now used in a variety of settings and with a variety of populations throughout the world. Studies from Europe, Asia, and the United States substantiate HT's use in at least these areas (Gonzalez, Hartig, Grindal Patil, Martinsen & Kirkevold, 2010; Kam & Siu, 2010; Parkinson, Lowe, & Vecsey, 2011; Wang & MacMillan, 2013; Wu, Chang, Hsu, Lin, & Tsao, 2008). HT's are practiced in a wide array of settings, ranging from hospital and healthcare settings to farms and community spaces (Clatworthy, Hinds & Camic, 2013; Parkinson et al., 2011; Söderback et al., 2004). Soderback et al. (2004) cite a variety of research to explain that therapeutic gardens have been used with patients who are receiving acute medical care (Marcus & Barnes, 1999) and hospice care (Wood, 1999), with those with visual limitations (Martin-Yates, 1990), with the aging and those with dementia (Bryant, 1991; Darbyshire, 1992), and with those with sensory issues and autism (Shirtliffe, 1996). Though similar, HT is nonetheless distinct from therapeutic horticulture; the latter does not involve facilitation by a mental health professional, but instead relies on the natural elements in the garden and the individual interacting with them to experience their therapeutic benefit (Annerstedt & Wahrborg, 2011; Clatworthy, et al., 2013; Kam & Siu, 2010; Sempik, Aldridge & Becker, 2003). Some examples of HT include cultivating and harvesting plants, herbs, and vegetables, doing garden maintenance and crafts from garden-grown materials, and sitting in the garden and taking in the surroundings (Gonzalez et al., 2010; Kam & Siu, 2010; Parkinson et al., 2011; Soderback et al, 2004).

In addition to HT, therapeutic wilderness programs are another form of ecotherapy. Rutko and Gillespie (2013) cite various terms for these programs; adventure therapy (Williams,

2000), Outward Bound (Bacon, 1983), wilderness challenge (Wilson & Lipsey, 2000), outdoor behavioral healthcare (Russell, 2005), and WT (Russell, 2001) are therapeutic wilderness programs with similarities and differences. The common threads between these are their use of wilderness (Beringer, 2004) and their therapeutic goals (Russell, 2001; Rutko & Gillespie, 2013). For the sake of this review, I will use the term wilderness therapy (WT), for many of these programs are colloquially referred to and understood as such (Hoag, Massey & Roberts, 2014; Russell, 2001). Rutko and Gillespie (2013) discuss the difficulty with defining a word as relative and culturally subjective as “wilderness,” and reflect how, in a Western paradigm, wilderness is often defined in contrast to what it is not: that which is inhabited, or damaged by human contact (Cronon, 1996; Lutz, Simpson-Housley & de Man, 1999). Of course, such definitions are laden with colonial and racist undercurrents that helped facilitate the uprooting of native people, the commodification of their land and resources, and in such, the founding of the United States. Despite the problematic way that wilderness is often conceptualized, it will be useful to understand that WT interventions are generally practiced in wild natural areas that are sparsely populated, where humans “do not dominate” (Greenway, 2009, p. 133).

WT can be distinguished from the aforementioned related programs by its therapeutic focus as defined by trained mental health staff (Russell, 2001; Rutko & Gillespie, 2013). It is non-intrusive, and thus is different than boot camp style interventions that have been associated with it (Russell, 2001; Rutko & Gillespie, 2013). Common goals include increasing social skills, self-esteem, and the ability to self-regulate (Russell, 2001; Rutko & Gillespie, 2013). According to Rutko & Gillespie, it can be offered via a base camp model wherein clients stay in one spot for the duration of their trip, or it can involve expeditions, where the group travels from location to location for the length of that treatment period (Russell, 2001). The length of treatment can vary

from less than one week to up to a few months shy of a year, and with varying degrees of urban exposure (Cason & Gillis, 1994; Rutko & Gillespie, 2013; Wilson & Lipsey, 2000). WT often includes both individual and group counseling and uses the challenges and changes associated with outdoor living as therapeutic material (Crisp, 1998; Davis-Berman & Berman, 1994; Gass, 1993; Marchand, 2009; Russell, 2001). Often, acting out teens use this therapy in lieu of more traditional therapies (Davis-Berman & Berman, 1994; Marchand, 2009; Miles, 1987).

Interestingly, according to Greenway (2009), wilderness provides a unique opportunity to help heal the dualism that is “the source of our current crisis with the natural world” (p.135).

In addition, animal-assisted therapy (AAT), sometimes known as pet-facilitated therapy, pet-assisted therapy, or animal-facilitated therapy, is another well-known branch of NBT (Connor & Miller, 2000; Marino, 2012). Using the precise language of Kruger and Serpell (2006), Berget, Greeperud, Aasland and Braastad (2013) define it as: “any intervention that intentionally includes or incorporates animals as part of a therapeutic or ameliorative process or milieu” (Kruger & Serpell, 2006, p. 25)’ (p. 284). As AAT has a broad spectrum of uses, clientele, and settings, its purpose varies. In fact, the purpose of the therapeutic “use” of animals can depend on whether AAT, or, as the research distinguishes, animal-assisted activities (AAA) are being practiced (Marino, 2012; Pet Partners, n.d, a,b). A professional, licensed practitioner facilitates AAT with particular therapeutic goals in mind (Marino, 2012; Pet Partners, n.d., b). On the other hand, AAA (also known as AAI, or animal-assisted interventions) aims to broadly improve quality of life and can be facilitated by professionals, volunteers or paraprofessionals (Marino, 2012; Pet Partners, n.d, a). Marino (2012) warns that although the literature distinguishes AAA and AAT, in lived experience, they often overlap (Pet Partners, n.d. a,b). Unlike HT or WT, they do not involve a natural setting; rather, both AAT and AAA rely on the

ostensible therapeutic benefits of the animal or animals involved with the client or patient. Berget et al. (2013) and Chalquist (2009) cite the benefits of AAT and AAA for a variety of populations, including those with mental health issues (Antonioli & Reveley, 2005; Nimer & Lundahl, 2007; Souter & Miller, 2007); those with special needs (Nimer & Lundahl, 2007); those recovering from medical issues (Nimer & Lundahl, 2007); children, teens (Nimer & Lundahl, 2007; Prothmann, Bienert, & Ettrich, 2006); adults (Nimer & Lundahl, 2007); and elders with memory issues (Churchill, Safaoui, McCabe, Baun, 1999; Filan & Llewellyn-Jones, 2006; Nimer & Lundahl, 2007). Chalquist (2009) also shares the research-based argument that AAT could be effective for survivors of stress and trauma (Lefkowitz, Prout, Bleiberg, Paharia, & Debiak, 2005).

Some examples of AAT and AAA include trauma survivors developing a relationship with wild horses as part of their recovery (DeMayo, 2009), people rehabilitating from their psychosis, mood, or anxiety disorders as they care for farm animals (Berget, Ekeberg, Braastad, 2008), and a mental health practitioner bringing his or her dog to work in a juvenile detention center, so that teens can feel understood and empathized with by a nonthreatening, animal entity (Chandler, Portrie-Bethke, Minton, Fernando, O'Callaghan, 2010). Less formally, AAT interventions might involve having a therapy dog present in a traditional psychotherapy hour and incorporating the animal to help facilitate a discussion of the client's relational patterns, to help build the client's self-confidence via teaching it tricks, or to help model appropriate behaviors (Chandler et al., 2010).

Lastly, nature reconnection practices (NRP's) and restorative methods have a variety of interpretations that are difficult to generalize about, as they appear to be the least streamlined and the least researched type of NBT. Scull (2009) describes himself as a previously practicing

cognitive behavioral therapist in a rural part of Canada who chose to enlist a variety of such strategies to help his clients connect with the natural world. Scull (2009) suggests using the following approaches for treating clients dealing with depression, anxiety, and trauma: holding weekly nature meditations, facilitating guided imagery of a soothing place or activity in nature, and accompanying a client to practice a soothing activity in nature. He also describes asking nature-based questions in his assessment, like if the client can recall a place of relaxation or wonder in nature or think of what his or her favorite outdoor activities are (Scull, 2009).

Similarly, Buzzell (2009) recommends considering some key questions that will inform ecotherapeutic interventions, including “are you living in harmony with nature—your own nature as a human animal and the larger nature that embraces us all?” and “are your natural needs being met with your current career and lifestyle?” (p. 53). Buzzell (2009) also depicts her ecotherapy practice as involving the following: having clients make time diaries and facilitating interventions to address the pace of their lives; helping clients explore the relationship that they have with the natural world through their food; encouraging clients to explore their experience of community within the context of a society influenced by hyperindividualism; assessing “ecogrief” and “ecoanxiety” about the broader state of the Earth and intervening appropriately; pursuing natural methods of healing whenever possible prior to recommending psychiatric medications; and conducting psychotherapy outside.

Theoretical Bases for NBT’s

This study utilized ecopsychology, the specific theories that provide the basis for this, and the theory of mutual constitution (Markus & Kitayama, 2010) as theoretical lenses.

Ecopsychology is rooted in the idea that both the earth and the relationship that humans have with it are not well (Buzzell & Chalquist, 2009). Ecopsychology believes that mental

anguish and mental health issues are normative given the current context of planetary destruction (Buzzell & Chalquist, 2009). According to Roszak (2009), mass denial and dissociation become the typical response in a world where “environmental abuse has become the psychopathology” (p. 34). Through the lens of ecopsychology, healing looks different than conventional therapy (Buzzell and Chalquist, 2009). The mission of this type of work, as described by Roszak (1992), is to normalize having an emotional connection with the natural world, to liberate this repressed “ecological unconscious,” and to use this as a vehicle to enhance the environmental movement without using shame as a motivator (Doherty, 2009).

Interestingly, there are a variety of discourses in the field about the proper definition of ecopsychology (Sussman, 2014). Warning against getting too caught up in the details, Sussman (2014) presents “Five Common Factors” that she argues help to define the values and goals of ecopsychology while allowing for diversity in the field (p. 48). These factors are: 1) the idea that contact with nature promotes mental and physical health (Chalquist, 2009; Kahn & Hasbach, 2012); 2) the concept that humans have a connection with nature that is a “primary psychological relationship” that’s mutual and meaningful (Clinebell, 1996; Fisher, 2002); 3) the fact that people’s connection with the natural world has been deteriorating in quality all over the world (Kahn & Hasbach, 2012; Roberts, 1998); 4) the idea that this decline needs to be addressed by attending to broader systems which contribute to it and subsequently, by presenting different options about how to deal with this; (Fisher, 2002; Roszak, 1992) and, 5) the fact that social justice and those populations most affected by the deteriorating relationship with the natural world are at the peak of ecopsychological concern (Anthony & Soule, 1998; Chalquist, 2009; Smith, 2013; Sussman, 2014).

Ecotherapy's roots lie in three well-known theories: primarily, Wilson's (1984) biophilia hypothesis, as well as Kaplan and Kaplan's (1989) attention restoration theory, or ART, and Ulrich's (1983) psycho-physiological stress reduction theory (Clatworthy et al., 2013). Wilson's (1984) biophilia hypothesis avers that "humans have an innate need to affiliate with the natural environment within which they have evolved" (Clatworthy et al., 2013, p. 215; Wilson, 1984). This theory provided the basis for Kaplan and Kaplan's (1989) ART and Ulrich's (1983) psycho-physiological stress reduction theory (Clatworthy et al., 2013). ART argues that there are two main types of attention: that which is required for goal-directed, focused activities, and fascination, which requires no effort (Clatworthy et al., 2013; Kaplan & Kaplan, 1989). Goal-directed attention is finite and must be recharged through time spent in the mode of fascination (Clatworthy et al., 2013; Kaplan & Kaplan, 1989). The latter is facilitated by several components that natural spaces, like gardens, provide for their visitors. In other words, spending time in natural spaces restores people's directed-attention by allowing visitors to experience fascination (Clatworthy et al., 2013; Kaplan & Kaplan, 1989). In contrast, psycho-social stress reduction theory states that humans find natural settings which do not pose a threat as calming, and upon viewing such environments, the parasympathetic nervous system stimulates feelings of relaxation and improved well-being (Clatworthy et al., 2013; Ulrich, 1983). As these theories help provide the basis for ecotherapy, they help frame this study.

In addition, Markus and Kitayama's (2010) theory of mutual constitution can help provide insight into why ecotherapies were created and who may or may not access them. This theory asserts that "people are socioculturally shaped shapers of their environments" (Markus & Kitayama, 2010, p. 421; Shweder, 2003). In other words, humans are not passive recipients of their environment, nor are they exclusively formers of it; their decisions and actions are a

product of their surroundings and they help form these surroundings. Wolsko and Hoyt (2012) cite the theory of mutual constitution to help explain why ecotherapists pursue NBT, stating that there are “a variety of independent pathways” that lead individuals to want to practice ecotherapy, including factors such as their training, personal experiences with nature, the community where they live, and more (p. 20). It seems only logical to extend the use of this theory to the consideration of how sociocultural factors might affect the populations served by NBT’s.

The aforementioned, overarching theories support the idea that nature is therapeutic; however, they lack the detail necessary to explain why many of the specific interventions within the field of NBT’s (i.e. the combination of psychotherapy and being outside) are effective. Interestingly, even one of the most thoroughly researched branches of NBT, WT, lacks an overarching theory to support it (Rutko & Gillespie, 2013). Along that same vein, AAT also needs a unifying theory (Kid & Kid, 1987; Kruger & Serpell, 2006; Shubert, 2012). In fact, Shubert (2012) provides a list of theories to compensate for this lack of an overarching theory for AAT (Kruger & Serpell, 2006). These include theories that present animals as inherently therapeutic (biophilia hypothesis, learning theory, social mediation theory, attachment theory, object relations theory, social provisions theory, nondirective Rogerian theory) as well as those that present animals as “tools” that can be honed to benefit humans (cognitive and social cognitive theory, and role theory) (Kruger & Serpell, 2006; Shubert, 2012). All in all, the literature provides a theoretical basis for the therapeutic effects of nature but lacks an overarching theory to explain the efficacy of the various components of ecotherapy.

Empirical Bases for NBT's

Passive nature observation.

A building body of work validates the emotional, social, and physical health benefits of passive exposure to nature (Berman, Jonides & Kaplan, 2008; Churchill et al., 1999; Coley et al., 1998; Diette, Lechtzin, Hapotik, Devrotes & Rubin, 2003; Dijkstra, Pieterse & Pruyn, 2008; Heinsch, 2012; Kuo & Sullivan, 2001; Malenbaum, Keefe, Williams, Ulrich & Somers (2008); McNicholas & Collis, 2000; Milligan & Bingley, 2007; Mitchell & Popham, 2008; Nielsen & Hansen, 2007; Odendaal, 2000; Ottosson & Grahn, 2008; Sherman, Varni, Ulrich & Malcarne (2005); Van den Berg, Koole & Van der Wulp, 2003; Wood, Giles-Corti, Bulsara & Bosch, 2007). Studies of various populations depict nature's ability to lessen life's challenges. For example, Ottosson and Grahn's (2008) quantitative study explored the relationship between nature exposure and coping with crisis situations amongst Swedish nursing and medical students and elderly nursing home residents. Those with more exposure to the natural world were less negatively affected by crises, including divorce, death of a loved one, and other types of major loss, than those with little exposure to nature (Ottosson & Grahn, 2008). Heinsch (2012) highlighted several studies which attest to a link between nature exposure and stress reduction, including work by Milligan and Bingley (2007), by Nielsen and Hansen (2007), and by Odendaal (2000). Similarly, Van den Berg et al.'s (2003) research found that study participants demonstrated increased relaxation after watching less than a minute of video of natural scenes, while Dijkstra et al.'s (2008) research found a link between indoor plants in a hospital setting and lower rates of perceived stress (Heinsch, 2012). In addition, in a study of crime reports and nearby vegetation in randomly assigned public housing units in Chicago, Kuo and Sullivan

(2001) linked vegetation with decreased rates of crime amongst poor, predominantly African American populations. This was surmised as likely due to the restorative effects of nature on attentional fatigue, which in turn is connected with lowered rates of aggression (Kuo & Sullivan, 2001).

In addition to connections between nature exposure, stress management, and violence, studies have also linked nature exposure and improved cognition, socialization, and pain management. Research has shown that after looking pictures of nature, individuals demonstrated higher rates of cognitive functioning (Berman et al., 2008; Heinsch, 2012). In one study, patients in recovery from bronchoscopies who saw natural scenes and were given pain medications reported a greater ability to deal with pain than their peers given only conventional pain medications (Diette, et al., 2003; Heinsch, 2012). Similar results were reflected in research by Malenbaum et al. (2008) and Sherman, et al. (2005) (Heinsch, 2012). Heinsch (2012) also notes that nature exposure was linked with an increase in social interaction for those in both disadvantaged areas as well as affluent ones (Churchill, Safaoui, McCabe & Baun, 1999; Coley, Kuo & Sullivan, 1998; McNicholas & Collis, 2000; Wood et al., 2007).

Perhaps most impressively, access to green spaces has even been correlated with lower rates of mortality. Mitchell and Popham's (2008) English observational population study demonstrated that for those lacking resources, green space appears to be associated with lower rates of negative health outcomes associated with poverty. This study examined income from the 2004 English Deprivation Domain of the English Index of Multiple Deprivation as well as anonymous mortality statistics and mapped them onto geographic units throughout that country (Mitchell & Popham, 2008). In the population of those who died prior to their retirement, when controlling for confounding factors such as population density, deprivation of education, etc.,

Mitchell and Popham (2008) saw that across all types of mortality, those with access to nature who were most income deprived had lower mortality incidence rate ratios than those of the same level of poverty without access to nature. This association was seen across all types of mortality as well as with deaths by circulatory disease, an illness that is connected to a sedentary lifestyle and high rates of stress (Mitchell & Popham, 2008). Mitchell and Popham (2008) hypothesize that since nature access can help facilitate outdoor exercise and stress relief, this explains the lower rates of circulatory disease deaths, while rates of death by lung cancer, an illness whose incidence is not strongly connected with rates of exercise, did not change with an increase in nature exposure. This study shows that indeed, nature access has a negative correlational relationship with the health effects of poverty.

Active nature engagement: horticultural therapy (HT).

In addition to passively viewing natural spaces, actively engaging in HT also has documented benefits. Clatworthy et al. (2013) review a myriad of literature that highlights the effectiveness of gardening in the “emotional, social, vocational, physical and spiritual” health of adults with mental health issues (p. 214). The natural world has been seen as a “co-therapist,” (Berger & McLeod, 2006; Clatworthy et al., 2013; Stigsdotter, Palsdottir, Burls, Chermaz, Ferrini & Grahn, 2011), a safer and sensory-rich alternative to the human world (Adevi, 2012; Grahn, Tenngart Ivarsson, Stigsdotter, Bengtsson, 2010), a medium which lends itself towards discussing especially challenging topics (Relf, 1981), and a space which easily facilitates the use of metaphor (Kopp, 1995; Linden & Grut, 2002).

Specifically, Kam and Siu (2010), Stepney and Davis (2005), and Wu et al. (2008) conducted targeted empirical research that supports the effectiveness of HT with people with mental illness. Kam and Siu’s (2010) empirical study in Hong Kong with adults with psychosis,

major depressive disorder, or bipolar disorder demonstrates how involvement in a two- week long horticultural vocational program was associated with decreased anxiety, stress, and depression for participants (Kam & Siu, 2010). Semi-structured interviews and quantitative data (the Chinese versions of the Depression Anxiety Stress Scale and the Personal Well-being Index, among others) depicted experimental groups' decrease in symptoms and improvement in the "emotional, occupational, social and spiritual" arenas as compared to the control group, who received conventional vocational training (Kam & Siu, 2010, p. 83). This study highlights how horticultural vocational programming participants reported an improved sense of self confidence, connection with the natural world, social skills, sense of social standing, and social network (Kam & Siu, 2010). Similarly, Stepney and Davis' (2005) mixed methods study of English adults with a variety of mental health diagnoses provided quantitative data on how rates of anxiety and depression decreased after involvement in a 12-month horticultural vocational program. Their qualitative data also found participants' increases in confidence and sense of self-efficacy seemed to be related to participation in the program (Stepney & Davis, 2005).

Aside from vocational programs, Wu et al.'s (2008) quasi-experimental quantitative study examined the effects of a three month, indoor and outdoor HT intervention in two separate groups of inpatient schizophrenic clients at Taiwan's Bali Psychiatric Center. Twenty-four clients in the experimental group received 1.5 hours of HT once or twice a week. Twenty-three were in the control group (Wu et al., 2008). A variety of different tests in the first iteration of the study (Chu's Attention Test, Chu's Hand Dexterity Test, Comprehensive Occupational Therapy Exam) demonstrated an increase in different variables of the experimental group over the control group; however, none of these increases were statistically significant (Wu et al., 2008). A change of tests in the second iteration of the study showed the experimental group's significant

improvements in the areas of community survival skills, basic work skills, dealing with authority, orderliness/organization, and, communication (Wu et al., 2008). These results point to the seemingly positive effects that such activities as plant identification, crafting, harvesting produce, and plant propagation can have on severely mentally ill patients when compared to typical indoor activities (singing, drawing, cooking, etc.) (Wu et al., 2008). Even such, this study never explains how clients were assigned to the experiment and the control group. In addition, it allowed six clients from the first group to continue into the second group, which was tested using different instruments, and was provided with a more time intensive exposure to HT (Wu et al., 2008). Since the HT intervention was provided both indoors and outdoors (but primarily outdoors), the question of what the active component(s) of HT were remains unanswered. These methodological oversights and the lack of information about the rationale behind changing the instruments for the second group weaken the strength of this evidence about the efficacy of HT.

Active nature engagement: wilderness therapy (WT).

WT is often more thoroughly researched than other NBT's (Annerstedt & Währborg, 2011; Cason & Gillis, 1994; Hattie, Marsh, Neill & Richards 1997). Wilson and Lipsey's (2000) meta-analysis of 28 articles on wilderness challenge programs for delinquent youth ages 10-21 demonstrated that after wilderness programs, clients demonstrated "less antisocial and delinquent behavior than comparison groups" (p. 4). Similarly, Cason and Gillis' (1994) research showed that WT is helpful for both youth at risk and those with less risk factors (Rutko & Gillespie, 2013). Cason and Gillis' (1994) work found that those who had participated in WT were on average "better off than 62.2 percent of adolescents who...[did] not (p. 43)" (Rutko & Gillespie, 2013, p. 222). Though the basis for this assumption is unclear, the statistic is interesting

nonetheless. In addition, Russell (2000) found that 75% of one WT program's participants demonstrated improved behavioral issues and school attendance upon follow up a few months after their treatment (Rutko & Gillespie, 2013). Though the same percentage had relapsed into drugs and or alcohol, they were nonetheless working towards their sobriety (Rutko & Gillespie, 2013).

Active nature engagement: animal-assisted therapy (AAT).

Literature on the efficacy of AAT demonstrates both moderate levels of efficacy and the need for more rigorous studies to strengthen the research base (Berget et al., 2013; Marino, 2012; Nimer & Lundahl, 2007; Souter & Miller, 2007). For example, Shubert's (2012), Chalquist's (2009) and Heinsch's (2012) literature reviews highlight how interacting with animals has been linked with the following: decreases in stress response (Allen, Blascovich, Tomaka & Kelsey, 1991; Fine, 2000); improvements in health, recovery after medical problems, and an over all drop in health care costs (Allen, Blascovich, Tomaka & Kelsey, 1991; Anderson, Reid & Jennings, 1992; Freidmann, Katcher, Lynch & Thomas, 1980; Headey, Grabka, Kelly, Reddy, & Tseng, 2002; Odendaal, 2000; Siegel, 1990); increases in social skills and/or interactions (Fine, 2000; Kay, 1984; Wood et al., 2007); and decreases in anxiety, depression, and other mental health issues, as well as increases in emotional regulation (Antonio & Reveley, 2005; Barker & Dawson, 1998; Berget et al., 2008; Brickel, 1983; Churchill, Safaoui, McCabe, Baun, 1999; Goldmeier, 1986; Prothmann et al., 2006). Notably, the two meta-analyses that reviewed many of these studies found moderate efficacy of AAT in the following populations, respectively: 1) those with symptoms of Autism, those dealing with health issues, those navigating difficult behaviors, and those navigating difficult emotions (Nimer & Lundahl, 2007), and 2) those with depression (Marino, 2012; Souter & Miller, 2007). Several factors that detract

from the integrity of such studies include the small sample sizes, the difficulty determining effect sizes, and the challenge of isolating the effects of the animal from the effects of a) its human handler, b) an increase in client exercise connected to AAT, and c) other forms of therapy which AAT often accompanies (Marino, 2012; Nimer & Lundahl, 2007; Souter & Miller, 2007).

This difficulty in establishing the animal as the active agent in animal therapies is also visible in Berget et al.'s (2008) randomized control trial of psychiatric patients with long standing mental health issues experiencing AAT with farm animals in Norway. Ninety clients with a variety of diagnoses, including schizophrenia, affective disorders, and personality disorders, were split between a control group receiving their traditional treatment (which often included psychiatric medications and individual and/or group therapy), while the experimental group received these treatments and AAT. The AAT addition comprised of six hours a week of contact with and caring for various farm animals for 12 weeks (Berget et al., 2008). Results of the Generalized Self-Efficacy Scale (GSE) and the Coping Strategies Scale showed significant increases in self-efficacy and coping in the experimental group as measured between the time before the intervention and at six months after the end of treatment. However, there were no significant changes in quality of life (as measured by the Norwegian Quality of Life Scale (QOLS-N)) during or after this intervention and no significant changes were found in self-efficacy or quality of life between the beginning and end of the intervention (Berget et al., 2008). The efficacy of this example of AAT appears moderate but additional questions remain. These include why quality of life did not change as other variables did, why there was a lag in changes in self-efficacy and coping, and what effect, if any, the caretaking role had on participants.

Various definitions of efficacy.

As depicted by the previous overviews of the empirical research bases for HT, WT, and AAT, studies define and measure the efficacy of NBT's differently. As previously mentioned, Ottoson and Grahn (2008) use three existing scales to quantitatively measure participants' degree of crisis, recreation type, and mental or emotional fatigue. The efficacy of the natural intervention in this study was assessed in terms of its correlation with decreased emotional fatigue (Ottoson & Grahn, 2008). Kuo and Sullivan (2001), on the other hand, assess the efficacy of nature exposure via its correlations with decreased rates of violence. Ecotherapy studies have demonstrated efficacy in terms of decreases in quantitative scales of depression and anxiety, increases in subjective accounts of self-efficacy, social skills, and more. No one measure of NBT efficacy exists because the goals of NBT vary depending on the issues of the treatment population.

In addition, there are a myriad of different ways of practicing NBT's that have not been streamlined and linked with assessment tools. For instance, the efficacy of NBT for a mentally healthy population of adults could be based on stress reduction and/or attentional fatigue, but not on decreases in rates of negative ruminations, as it might for a clinically depressed population. Moreover, assessing a client's quality of life after doing psychotherapy outside might seem easily captured with a survey, but not all NBT practice is as straight forward. If an ecotherapist's intervention is keeping the human-nature relationship in mind during an initial assessment appointment with a new client, indeed, measuring the efficacy of this intervention would prove much more difficult. More directly put, a multitude of measures of NBTs' effectiveness exist because this developing field and its growing research base serve too many distinct populations with unique needs to have streamlined assessments or efficacy measures.

Specific Components of NBT's that Make them Effective

A variety of opinions and assumptions either extend or depart from existing theories to help explain what, specifically, about different modalities of NBT seems to be therapeutic.

Below, a number of possible explanations highlighting the lack of agreement in this arena are cited from the research.

Horticultural therapy.

Gonzalez et al.'s (2010) quantitative study of a convenience sample of 28 Norwegian people with major depressive disorder, dysthymia, and bipolar II disorder (in a depressive state) attempted to uncover the active components of therapeutic horticulture. Without a larger sample size and a randomized control trial design, Gonzalez et al. (2010) concede that their study is limited; however, their use of mediation analyses to measure depression symptoms (using Beck's Depression Index), attention (using the Attentional Function Index), brooding (using the Brooding Scale), being away, and fascination (both from the Perceived Restorativeness Scale) demonstrates the relevance of Kaplan and Kaplan's (1989) attention restoration theory as an explanation for the active components of nature (Gonzalez et al., 2010). Participants showed statistically significant decreases in depression, increases in attention, and decreases in brooding during their 72 hours of exposure to HT programming (12 weeks for six hours per week) on Norwegian farms (Gonzalez et al., 2010). This study demonstrates that getting time away and having healthy things for depressed people to effortlessly engage with may be connected with a decrease in symptoms of depression and an increase in attention (Gonzalez et al., 2010). In other words, limited research highlights that nature's ability to instill effortless fascination and to provide a refuge from daily troubles may be what renders it therapeutic.

Wilderness therapy.

Different opinions exist about which WT components cause it to be effective.

Orren and Werner (2007) cite research which attributes participants' role as a supportive group, their ability to learn about themselves experientially (Kiewa, 1994), and their opportunity to overcome fears through safe risk-taking (Bandoroff & Scherer, 1994; Davis-Berman & Berman, 1994) in addition to the wild setting (Weston & Tinsley, 1999), to explain WT's efficacy.

In addition, in their review of existing research around the efficacy of WT, Rutko and Gillespie (2013) described six components that make this modality effective: 1) the psychological and physical difficulty of living outside in the elements and how managing these difficulties successfully can increase personal sense of efficacy and motivate change (Bandoroff & Scherer, 1994; Russell & Phillips-Miller, 2002; Ungar, Dumond & McDonald, 2005; 2) the closeness of the therapeutic relationship with instructors (who share difficult experiences with clients), with peers whom clients have to rely on and adapt to, and with families, when they are included (Williams, 2000; Bandoroff & Scherer, 1994); 3) the uninterrupted time which omits scheduling conflicts, allows for personal reflection, and elicits spontaneous therapeutic material (Russell, 2006); 4) the fact that natural consequences teach participants about the effects of their behaviors and choices, which in turn can foster individual motivation to change those choices (i.e., if a client refuses to make a sturdy shelter, then, after processing this choice with a field instructor, he or she will have to consequently cope with being wet and cold, and may better engage with leaders' directives in the future) (Ungar et al., 2005); 5) the way that this modality can engage participants with different learning styles and address their needs flexibly, unlike traditional talk therapy (Williams, 2000); 6) the way that a wilderness environment can elicit metaphors which open up new possibilities and which can translate to various situations in clients' own

environments (Russell & Phillips-Miller, 2002; Russell, 2001, 2006; Rutko & Gillespie, 2013). Bandoroff and Scherer (1994) also state that it is likely a combination of different factors interacting dynamically that makes WT effective (Rutko & Gillespie, 2013). Interestingly, Rutko and Gillespie (2013) also question the role the wilderness itself has on the efficacy of WT, highlighting the need to research this important component. As they describe this hole in the literature, Rutko and Gillespie (2013) argue that often, wilderness is viewed as a mere setting for people to interact and heal, rather than another entity with which to engage.

Animal-assisted therapy.

Chandler et al.'s (2010) work shares the variety of ways that AAT can be practiced and fit into the therapeutic goals of various theoretical orientations. Research has shown that about 30% of the efficacy of various therapeutic interventions can be attributed to the therapeutic relationship, and that another 15% can be linked to the specific interventions and theoretical orientation that the therapist uses (Asay and Lambert, 1999; Chandler et al., 2010; Lambert & Ogles, 2004). According to Chandler et al. (2010) therapeutic animals can help facilitate interventions for various types of counseling, such as person-centered, cognitive behavioral, behavioral, Alderian, psychoanalytic, Gestalt, existential, reality, and solution-focused. By showing that AAT can be practiced in a myriad of different ways, and with various populations, facilitators, and animals, Chandler et al. (2010) link AAT's efficacy with its ability to support the therapeutic relationship and different theory-specific interventions. Though this article would be stronger with empirical rather than theoretical and anecdotal evidence, it nonetheless sheds light on which components of AAT could explain its efficacy. In addition, literature also states that AAT and AAA effectiveness may also be due to their ability to increase a client or patient's physical exercise, motivation, mental engagement, and physiological well being (Marino, 2012).

Evidence and Arguments that Contradict NBT's

Literature about NBT's is not exclusively positive; on the contrary, a handful of articles question these approaches and their benefits. In her literature review, Heinsch (2012) cites research that found that some people sometimes fear dark, wooded areas (Milligan & Bingley, 2007; Herzog & Kutzli, 2002). These authors reflected that if a natural stimulus is frightening, exposure to areas which include it could be emotionally triggering and, ultimately, non-therapeutic for clients (Heinsch, 2012; Herzog & Kutzli, 2002; Milligan and Bingley, 2007). In addition, Bixler and Floyd's (1997) empirical research on urban, rural, and suburban Texan middle schoolers' environmental and recreational preferences explored factors including disgust sensitivity, preference for modern comforts, and the expectation to fear outdoor experiences in this population. Unsurprisingly, this study found that those with negative perceptions of wild lands related to fear, disgust, and a desire to be comfortable were less likely to want to spend time outside (Bixler & Floyd, 1997). Although this study's common sense conclusion could cause a reader to question its value, it actually provides some evidence stating that there are varying degrees of interest in the natural world, and that for some, it may not be therapeutic. At the same time, this study appears to focus on those in rural areas and features language that could potentially elicit more negative responses from participants.

In addition, Orren and Werner's (2007) research highlights how program length, facilitation and client population can affect the efficacy of ecotherapy programming. Specifically, quantitative and qualitative research outlining teens' self concepts, internalizing and externalizing behaviors, and environmental attitudes before and after involvement in brief WT programs showed no significant improvement after completing the programming (Orren & Werner, 2007). Moreover, African American participants' self-perception rates after having

been involved in such programming were lower than before they were involved in the WT program. Orren and Werner (2007) offer the explanation that this is a result of participants feeling comfortable enough after the intervention to reflect more realistic self perceptions than they did at the outset of programming. This explanation falls short for me as they do not cite any literature to support this hypothesis. I wonder if perhaps this data reflects how a lack of culturally humble practices, institutional structure, and staff and/or peers reflecting these African American teens' identities seemed to nullify the therapeutic components of NBT. This study raises questions about the social identity of participants and facilitators, about the discourses that go on about natural spaces, and about if the types of experiences that individuals have had when involved in such programs can affect clients' sense of emotional safety and perception of nature as therapeutic.

In addition to studies on nature exploration and preference and WT studies, a handful of articles convey examples of the ineffectiveness of AAT and describe some of the risks associated with it. In her (2012) review, Shubert cites two studies that did not find that the presence of an animal was correlated with a decrease in physiological stress or an increase in social network (Grossberg, Alf & Vormbeck, 1988; Garrity, Stallones, Marx & Johnson, 1989). Three more studies found that participants with pets did not identify themselves as healthier or happier than those without pets (Miller & Lago, 1990; Ory & Goldberg 1983a & 1983b; Shubert, 2012; Zasloff & Kidd, 1994). Though pet ownership is clearly different than AAT or AAA, considering the dearth of literature on this topic, these articles are relevant because they discuss the effects of the loss of highly meaningful animals. In addition, Heinsch (2012) cites research that states that losing a therapy animal can be a traumatic experience worthy of weighing against the therapeutic benefits of an AAT or AAA intervention (McNicholas & Collis, 1995; Morley &

Fook, 2005; Toray, 2004). Moreover, the importance of determining if AAT is a good fit for each client and each animal involved is emphasized in the literature (Chandler et al., 2010). Ultimately, the psychological and physical safety of both the animal and the client is of the utmost importance (Chandler et al., 2010).

Besides these, studies questioning the efficacy of AAT have considered the use of real-life animal alternatives. Banks, Willoughby and Banks' (2008) study found that the presence of a robotic dog was linked to a decrease in seniors' reports of loneliness when compared with a control group that received no such intervention (Marino, 2012). Marino (2012) used this research to pose the question about whether or not live animals are, indeed, necessary for AAT. Expanding a research base and taking a critical eye of underlying assumptions can only help develop knowledge and evidence-based practice. However, since the effects of the robotic dog were not compared to those of a live dog, until such research is done, it seems premature to assume that live animals are therapeutically obsolete.

Beyond specific concerns related to any ecotherapy modality, a more universal question which could undermine NBT's is how bringing therapy outside affects the therapeutic frame. Though ultimately supportive of NBT's, Jordan and Marshall's (2010) article discusses how a lack of enclosed space can pose threats to confidentiality, cause difficulty containing therapeutic content, or cause shifts in existing power dynamics which will affect the therapeutic process. Weather and bodily safety can also cause concerns (Jordan & Marshall, 2010). Ultimately, some practitioners may see NBT as a threat to a traditional frame, while others may perceive it as a welcome opportunity to bring the treatment to life (Jordan and Marshall, 2010).

Practitioners of NBT's

To provide a basis for a study about ecotherapists' opinions, it is important to review the broader literature about the demographics, educational experiences, and perspectives of existing NBT practitioners. Since NBT is a developing field with many different branches, this section will review the limited information that exists on practitioners of the various modalities within ecotherapy.

Rust's (2009) non-empirical article argues that ecotherapists choose this field because of having a personally meaningful experience with a pet, a wild animal, or a natural place. Indeed, empirical research confirms this. Wolsko and Hoyt (2012) cluster sampled 231 therapists from all fifty states about their demographics and past experiences and found that a variety of different factors seem to come together to influence clinicians to practice NBT's. Specifically, the following attributes correlated with higher rates of participants' ecotherapeutic behavior (or incorporating the environment into assessment, diagnosis, or treatment): 1) female gender identities; 2) positive relationships with the natural world; 3) historical training in environmental psychology; 4) residencies in areas that are less densely populated; 5) residencies in states with higher rates of participation in outdoor sports and activities; and 6) agreement with ideas in the new ecological paradigm, a commonly used way to help measure pro-environmental attitudes (Stern, Dietz & Guagnano, 1995; Wolsko & Hoyt, 2012). Wolkso and Hoyt's (2012) lack of attention to the racial, ethnic, and socioeconomic backgrounds of ecotherapists in this study means that although this study aimed to research the specific demographics of practitioners of NBT, this effort was not complete. Though this article does not explicitly discuss the racial, ethnic, and socioeconomic identities of participating ecotherapists, the omission of these aspects

of identity implies that the researchers, the practitioners, or perhaps both, possess the agent status of being White and middle class (Miller & Garran, 2008).

Along this same vein, Smith (2013) addresses the lack of racial and ethnic diversity in the ecopsychological community. She argues that if the ecotherapy movement is to remain true to its social justice roots, it must engage more diverse voices and perspectives and specifically, commit to these four directives: 1) collaborating more with justice-centered movements, like the environmental justice movement and others that connect environmental degradation and social oppression; 2) reflecting about the blind spots in the movement and striving to incorporate the stories of leaders of Color who have been excluded from it; 3) broadening the scope of what counts as ecopsychology to incorporate diverse disciplines; and, 4) creating opportunities for students of Color to be supported in ecopsychology programs (Smith, 2013). Thus, despite the lack of demographic information in the literature about clinicians who practice NBT, the omission of this information, and Smith's (2013) call to ensure more inclusive approaches in the field point to a lack of racial and ethnic, and perhaps, socioeconomic, diversity amidst practitioners of ecotherapy.

Research on wilderness therapists upholds the relatively homogeneous picture of ecotherapists painted by Smith (2013) and Wolsko and Hoyt (2012). In a mixed methods study for a Ph.D. dissertation evaluating the job demands, stressors, and job satisfaction of WT field instructors, Marchand (2009) sheds light on the demographics of pre-master's level front line staff in the WT field. Of 151 respondents, 60% were male, 39% were female, 86% were White, 4% were Hispanic, 3% were American Indian/Alaskan Native, 3% were Black or African American, and 4% declined to state (Marchand, 2009). This sample of field instructors from eight different WT programs in the United States mirrors the broader demographic surveys of

WT field instructors (Marchand, 2009). Field instructors are not master's level or higher mental health clinicians, granted, but they work closely with them, and, considering the additional education required to become a clinician, the field instructor position is likely a more accessible profession. Because of how power and privilege intersect with SES, race, other aspects of sociocultural identity in the United States, it seems unlikely that demographic information about clinicians is more diverse than that of field instructors (Miller & Garran).

Indeed, those who practice NBT's are a minority within the field of mental health. For example, Risley-Curtiss, Rogge & Kawam (2013) asked clients about companion animals in their therapeutic work (Heinsch, 2012). Of a national sample of over 1,600 clinicians, Risley-Curtiss et al. (2013) found that only one third of clinicians ask about clients' animals in their practice, and all but 5% of them reported that they did not receive training on how to incorporate human-other animal connections in their professional work (Heinsch, 2012). Since the majority of American households have a pet in them, asking about companion animals seems like it would be an easy way to engage with NBT's (Heinsch, 2012; Risley-Curtiss et al., 2013).

Though only a minority of practitioners is trained in and is asking AAT-inspired questions, this may not necessarily reflect the overall interest in this field. In a quantitative study of general practitioners, psychiatrists, and psychologists in Norway, Berget et al. (2013) found that while most practitioners had never used AAT, two thirds of respondents knew something about this modality and expressed a desire to incorporate it into their practice. Berget et al. (2013) found that those with more experience were less likely to be interested in learning more about AAT, whereas those who had a history of positive experiences with AAT and those who believed in its effectiveness were more likely to want to learn more about it. Granted, this data was the product of asking a random sample of Norwegian practitioners their opinions, and my

study questioned clinicians in the United States; however, with much of the research on this field coming from Northern Europe, Berget et al.'s (2013) data likely reflects the lack of training on NBT's more broadly.

In light of the lack of literature on ecotherapists' perspectives, occupational therapy literature provides a helpful supplement. Research explores literature and case studies relevant to the field of occupational therapy (OT) and AAT. Their review of research by Ferrese, Forster, Kowalski, and Wasilewski (1998) highlights the following opinions of occupational therapists (OT's) about the effects of AAT on their senior patients in longer-term care: it improved their motivation to engage in therapy, it strengthened them physically, it improved their memory and sense of alertness, it increased demonstrations of positive affect and other signs of improved emotional health, it increased their likelihood to interact socially, it provided them with an opportunity to care take, and it helped make their facility feel more like home (Velde, Cipriani & Fisher, 2005). Though causality cannot be proven from qualitative research, and these providers are occupational therapists, not mental health professionals, Velde et al.'s (2005) review nonetheless demonstrates practitioners' perceptions that this intervention is effective.

Clients Who May Access NBT's

There is very little information on the population of clients who access NBT's. The dearth of literature in this area highlights the importance of researching the demographics of who has access to NBT and who does not. Broader data on the demographics of populations who access mental health services can provide limited context for this more specified, less commonly practiced treatment.

Approximately 30% of adults in the United States have either mental illness or substance use issues (Kessler, Demler, Frank, Olfson, Pincus, Walters, Wang, Wells & Zaslavsky, 2005;

Snowden, 2008). Those with mental illness are more likely to be poor due to what is likely a reciprocally reinforcing system; mental health issues make obtaining and maintaining a job challenging, and the cumulative stressors related to poverty can precipitate or worsen already present mental health issues (Greeno, 2008). In addition, racial and ethnic disparities of who has access to mental health treatment in the United States are glaring (Greeno, 2008). Specifically, Latinos, African Americans, and Native Americans with mental health issues are less likely to receive mental health care and are more likely to end treatment early compared to their peers of other ethnicities (Greeno, 2008; Mental Health: A report of the Surgeon General, 1999, 2001; Snowden, 2003). In other words, existing mental health structures are not effectively providing mental health care for many people of Color in need of services. Existing research highlights that financial need and experiences of prejudice may be part of the reasons for low rates of mental health treatment in these populations (Dana, 2002; Hollar, 2001; Snowden, 2003). Since ecotherapy is a newer field that is still on the periphery of mainstream mental health, it seems likely that only a small percentage of the population of those accessing mental health care are receiving this type of treatment (Doherty, 2009).

Though general statistics on who accesses mental health services do not address whether racially and socioeconomically diverse populations are accessing NBT's, literature clearly documents how demographics are often structurally connected to people's access to natural spaces. Mitchell, Astell-Burt, and Richardson (2011) stating that low-income areas are least likely to include large green spaces (Heinsch, 2012). In addition, Mitchell and Popham's (2008) cross-sectional general population study of a stratified sample of English people who died before retirement age found that those with access to natural spaces were least likely to be income-deprived. Though this study does not discuss the racial or ethnic identities of this

population, it nonetheless highlights how natural spaces are often most accessible to those of a higher SES. Racist policies and institutions that pervaded the founding of the United States have made it so that class is disproportionately connected to race in this country (Miller & Garran, 2008). In other words, People of Color are more likely to live in poverty than their White peers, and often in pockets of highly underserved areas (Miller & Garran, 2008; Rose, 2013). Houston, Wu, Ong, and Winer, (2004) astutely describe the confluence of structural factors that make poor neighborhoods of Color susceptible to environmental injustices. Though their research is specific to car pollution in Los Angeles, their broad perspective on how the “socioeconomic and political forces...create ‘riskscapes’ ...[that] frame...the geographical relationship between race, income, and the distribution of pollutants in the context of historic socio-spatial processes and the urban political economy in which the environmental inequities arise” provides invaluable insight into national trends in parallel communities (Houston et al., 2004).

Similarly, Byrne and Wolch (2009) use a geographical perspective to integrate research about parks from a variety of disciplines, stating that ultimately, these green spaces are another area of social inequity and environmental injustice outside the home. For example, Byrne and Wolch (2009) argue that Central Park was created as the application of a morally uplifting vision of White nature that directly contrasted with the profane, colored city which surrounded it, and the low income, (often) People of Color who were displaced in order for it to be built (Gandy, 2002; Rosenzweig & Blackmar, 1992; Schuyler, 1986; Young, 1995). Similarly, the formation of the National Park system displaced native people and seemed to help rationalize historical atrocities against them to form natural wild lands which preserved the idea of “pristine wilderness” which appealed to middle class, eugenicist values (Anderson, 2003; Byrne & Wolch, 2009; Cosgrove, 1995; Mels, 2002; Spence, 1999). In this sense, the natural spaces in local,

state, and National Parks are not devoid of their own sociocultural histories; in fact, their formation, allocation, use, and maintenance reflects broader social values, like racism, classism, and other types of oppression which are constant realities for low income People of Color (Byrne & Wolch, 2009).

In addition, several studies highlight the correlation between childhood experiences in green spaces and frequency of use of natural areas as adults. In their empirical study in five different British communities with varying degrees of urbanity and socioeconomic prosperity, Ward Thompson et al. (2007) found that the primary predictor of adults' use of green spaces was the time that they spent in them as children. Indeed, increased distance of green space from home also negatively correlated with its use (Ward Thompson et al., 2007). Asah, Bengston, and Westphal's (2011) research helps to nuance this idea by concluding that childhood experiences in natural spaces predict adult motivation to overcome obstacles to accessing green spaces. Since neighborhoods where poor People of Color reside often lack green spaces, it seems likely that many people in this community may have had less access to green spaces as children, and subsequently spend less time in green spaces as adults. Without specific information on the demographics of those who are receiving ecotherapies, only hypotheses rooted in the literature are possible. One hypothesis rooted in the literature would say that if clients were to have a choice, it could be possible that clients of Color and those with less historical access to green spaces may not seek out NBT's.

Notably, research suggests that certain populations may be more affected by the presence or absence of green spaces than others. For example, in their study of over 250,000 people in the Netherlands, Maas et al. (2006), found that individuals living near green areas had higher rates of self-perceived healthiness compared to their urban counterparts, and that those

living near green areas with a secondary level of education demonstrated this correlation more strongly than their neighboring peers of a higher level of education. Similarly, elderly people living a variety of proximities from natural spaces demonstrated higher rates of self-perceived healthiness than those of other age ranges living the same distances from green spaces. In addition, both the young and the elderly residing in highly urban areas with some proximity to green areas demonstrated higher rates of perceived healthiness than their adult peers who resided in neighborhoods with the same ratio of urbanity to green space (Maas et al., 2006). Maas et al. (2006) hypothesize that the commonality here was that those who spend the most time at home may experience the most influence from the effects of natural spaces (or lack thereof) on their mental health. This hypothesis is contingent upon those with fewer resources (as determined by their level of education) spending more time at home. Though this study is correlational and it includes a few assumptions that may not be thoroughly evidenced-based, it nonetheless suggests that those who may have the least access to natural spaces may actually be most able to benefit from them. This is a concerning suggestion with implications for various disciplines.

Though piecing together research studies helps one make an informed assumption about who may access ecotherapies, when it comes to WT that is not necessary. A 2014 empirical quantitative study by Hoag et al. that examined discharge summaries from over 900 clients across four different Second Nature WT sites through the United States reported that their sample matched the overwhelming prevalence of White clientele more broadly associated with this intervention. Moreover, when they grouped the DSM-5 discharge diagnoses of these teens and young adult clients into nine types, their findings helped to nuance existing research which emphasized that substance issues and behavioral issues are the primary reasons for WT treatment (Hoag et al., 2014). Alongside substance issues, these researchers found that clients have a

prevalence of mood disorders and complex clinical pictures (Hoag et al., 2014). Though WT is only one branch of NBT, its research base helps to provide some frame of reference for broader demographic information about NBT clientele.

In summary, with little research on the demographics of who accesses NBT, one must extrapolate based on existing statistics and studies on related topics. Existing research about who accesses WT shows that White people overwhelmingly make up its clientele (Hoag et al., 2014). Though demographic information about other types of ecotherapy is limited, it seems unlikely that AATs', NRPs' and HTs' client populations differ that dramatically from this better researched branch of NBT. Moreover, research indicates that People of Color are not able to access the mental health services that they need (Greeno, 2008; Snowden, 2008). According to Fong, McRoy, and Dettlaff, (2014), racial/ ethnic disparities exist in access, quality, and outcomes of mental health care which demonstrate that the mental health system is most effective at serving White people, who often have less social and financial barriers to services (Office of Minority Health and Health Disparities, 2007). Indeed, People of Color may experience the cost, lack of insurance, and social stigma around mental health issues as barriers to pursuing such care (Fong et al., 2014). In addition, a lack of culturally humble practitioners and a legacy of negative experiences with mental health and health care providers could also contribute to this (Fong et al., 2014; Yeh, McCabe, Hough, Dupuis, & Hazen, 2003). Furthermore, geography, fear of retribution over immigration status, and lack of services available to non-English speakers could also deter some members of such populations (Fong et al., 2014). To make matters worse, Borrell, Lane, and Fraser (2010) and Garnaut (2008) state that poor communities of Color are more likely to be negatively affected by environmental hazards (Heinsch, 2012; also Houston et al., 2004) and poor neighborhoods are less likely than

their more privileged counterparts to include green spaces (Heinsch, 2012; Mitchell et al., 2011). What is more, those who have less access to natural spaces as children are less likely to strive to overcome obstacles, like distance, to access green spaces (Asah et al., 2011). One hypothesis then, is that, if given a choice, low income People of Color may choose to not use NBT over other treatments.

Critique of Existing Empirical Studies

Despite the solid, growing base of empirical evidence to support the efficacy of NBT's, many studies have substantial holes in them related to participants' sociocultural identities. Various researchers do not describe participants' racial, ethnic, and class backgrounds, or they do so inconsistently. In addition, several studies demonstrate a significant sampling bias because participants had already self-selected the nature-based groups that were being studied. For example, Barton (2012) conducted a qualitative study on northern Coloradan college students' interest in engaging in the natural world, their perceived barriers, and the role of technology in this. Her study demonstrated participants' strong interest in getting outdoors, as well as the fact that they perceived transportation, entrance fees, and time as barriers to this (Barton, 2012). Though Barton (2012) highlighted how this study may have been affected by geographical bias due to the prevalence of an "outdoor culture" in Colorado, she did not address other potential biases of the research design which led her to only sample White college students. Though this study mentioned age, student grade, and sex, it took a colorblind and classless approach to demographics (Rose, 2013). Similarly, O'Brien et al.'s (2011) qualitative research on green volunteering and HT programs in Scotland and England demonstrated how "marginalized" participants' sense of physical and emotional well-being improved in conjunction with volunteering in these programs. Though this paper disseminated the results of two studies on

“marginalized,” populations, one of the studies stated that only “a quarter of the volunteers could be classed as potentially marginalized either because they were unemployed, had emotional and behavioral difficulties, developmental delays, or mental health problems” (O’Brien et al., 2011, p. 76). What is more, O’Brien et al. (2011) targeted two different nature volunteering programs, one that was for the general public, and one that was specifically for those with therapeutic needs. Though the first program included exclusively White clientele and the latter had more racially diverse volunteers, both populations were considered “marginalized.” By placing these two studies side by side and calling participants in each “marginalized,” O’Brien et al. (2011) do not acknowledge how structures of oppression affect the experiences of people from different sociocultural locations. In addition, the researchers’ use of participants who had already elected to be involved in the nature-based programming automatically biases the study.

Similarly, Kam and Siu’s (2010) randomized control trial about HT also has important omissions. Kam and Siu (2010) discuss participants’ sex, age, level of education, and diagnosis, but neglect their SES. Level of education can be one component among several which help reflect SES; however, supplemental information, including income, and neighborhood of residence (not to mention specific ethnicity, like whether they are part of the Hong Konger majority or of an Indonesian, Filipino or other ethnic group minority) was omitted (Kam & Siu, 2010). Likewise, Stepney and Davis (2005) locate their study in an area of England with a high rate of unemployment, mention that their participants are involved in a social service program for people with mental health issues, and discuss their historical barriers to employment, but never explicitly comment on participants’ SES or other salient pieces of their social identity that might be connected with SES, like race. Additionally, the authors do not discuss if the participants in this quasi-experimental study have had a historical relationship with community

gardens, or whether their material resources and neighborhood geography affected their perceptions of this horticultural intervention. In fact, regarding the field of WT, Wilson and Lipsey (2000) admit that research which has provided its solid research base has primarily focused on populations of young, White males who have been convicted of crimes. Indeed, “the existing evaluation literature does not provide sufficient instances of challenge programs applied to other types of participants to permit an examination of their effectiveness with girls, members of minority groups, or predelinquent youth” (Wilson & Lipsey, 2000).

Just as sociocultural identity is consistently neglected in a variety of studies, many studies on NBT’s seem to lack the methodological rigor to provide substantive data. For example, in a (2013) review of literature supporting HT, Lin (2013) states that the literature agrees that HT is a non-threatening, non-discriminating way to support people, and that plants benefit from anyone’s care, regardless of his or her identity. Though Lin (2013) overviews a series of studies in this peer-reviewed article, the sample sizes, methodologies, and limitations of these studies are skimmed over or omitted. The reader therefore finishes the article wondering what evidence provided the basis for the conclusion that is stated in the article’s abstract. This is yet another example of the need for more rigorous research and review systems in this developing field.

While Mitchell and Popham’s (2008) English population study is methodologically rigorous, it makes some broad assumptions about the income, mortality, and access to green space of its sample. As described previously, this study demonstrates that in pre-retirement, income-deprived populations there are lower rates of mortality for those who have access to nature than those who do not (Mitchell & Popham, 2008). Though this study controls for confounds, it does not look at rates of nature usage for those who have access to green spaces,

how perceived quality of green space affects usage, and how quality of mental health, particularly, plays into these lowered mortality rates (Mitchell & Popham, 2008). It compares overall mortality rates with those by lung cancer, circulatory disease, and self-inflicted injury (Mitchell & Popham, 2008). The authors explain that the statistically significant relationship between lower rates of circulatory disease and increased access to green space is likely connected to an increase in exercise and a decrease in stress (Mitchell & Popham, 2008). However, these researchers fail to address how self-inflicted injury did not have a statistically significant relationship with access to green space, or how this could relate to rates of stress and overall well-being. This study shows a significant correlation with nature as a protective factor for low-income people, but it does this without any attention to other components of sociocultural identity (Mitchell & Popham, 2008). In addition, it does this with language that comes uncomfortably close to seeming causal (Mitchell & Popham, 2008).

In addition to the lack of rigor, the ecotherapy field seems to overwhelmingly make the assumption that most everyone has positive associations with nature. Scull(2009) depicts his last NBT practice and that he used to encounter clients who had a history of both positive and negative experiences in the natural world and how he typically would not recommend NBT for an individual with a negative association with nature. Despite this important commentary, Scull (2009) leaves the reader wondering whom this might privilege, whom it might leave out, why, and what kind of support such individuals might want or need. The answers to these questions have implications for the accessibility of ecotherapy and to my knowledge, they are often unanswered in the literature.

Commentary on Holes in the field of NBT's

Considering these holes in ecotherapy research regarding racially and socioeconomically diverse populations, it is no wonder that several studies point to the need to research the efficacy of nature-based therapies with a variety of populations (Maller et al., 2005; O'Brien et al., 2011). Studies also point out the need to help pinpoint *what* specific elements of the natural world seem to be therapeutic (Annerstedt & Wahrborg, 2011; Clatworthy et al., 2013; Maas et al., 2006) and the role that wilderness plays in WT (Rutko & Gillespie, 2013). In addition, Heinsch (2012) highlights the dearth of literature discussing how ecotherapeutic practices are incorporated into social work.

A lack of research documenting the effects of NBT's with diverse populations is not the only hole in NBT literature. Indeed, the research identifies a need for more rigorous studies (i.e. randomized control trials and quantitative studies) to assess the effectiveness of NBT's which can provide the evidence for causality (Annerstedt & Wahrborg, 2011; Clatworthy et al., 2013; Kuo & Sullivan, 2001; Parkinson et al., 2011). It also highlights a series of other areas which need to be explored further, including: the effects of varying lengths of interventions and different facilitators (i.e., professionals versus volunteers, people of different sociocultural identities) (Clatworthy et al., 2013; Kam & Siu, 2010; Orren & Werner, 2007); the social conditions that make kids more likely to engage in nature activities (Asah et al., 2011); the relationship between age and nature use with a particular focus on the elderly, people with dementia, and Millennials (Barton, 2012; Ward Thompson et al., 2007; Wang & MacMillan, 2013); the reasons why ethnic "minorities" may associate natural areas with discomfort and fear of discrimination (Rideout & Legg, 2000); the effects of using NBT's like HT with those with traumatic brain injuries (Söderback et al., 2004); the beliefs associated with community gardens

(Zoellner, Zanko, Price, Bonner & Hill, 2012); the relationship between natural spaces and gender (Byrne & Wolch, 2009; Parkinson et al., 2011); the possible connection between the motivation to become involved in HT and an increase in access to fresh foods (Parkinson et al., 2011); and the effects HT has on vocational performance (Kam & Siu, 2010).

Summary

In summary, NBT's can include, but are not limited to: AAT's, WT's, HT's, and NRP's. These types of ecotherapy are practiced in a variety of ways. Research demonstrates a correlation between clinicians whose values and experiences have been "eco-friendly" and those who practice ecotherapies (Wolsko & Hoyt, 2012). There is less information on those receiving ecotherapies, but research on populations accessing mental health services more generally paints a racially disparate picture (Fong et al., 2014). Existing literature highlights the physical, psychological and emotional benefits of both active engagement and passive exposure with/to the natural world (Annerstedt & Währborg, 2011; Chalquist, 2009; Cimprinch, 1993; Clatworthy et al., 2013; English, 2006; Heinsch, 2012; Kam & Siu, 2010; Kaplan & Kaplan, 1989; Maller et al., 2005; Nielsen & Hansen, 2007; O'Brien et al., 2011; Ottosson & Grahn, 2008; Prothmann, Bienert & Ettrich, 2006; Stepney & Davis, 2005). However, many empirical studies' methodologies privilege White participants and omit the SES and race of their participants and/or how these components of sociocultural identity intersect to affect their experiences of and access to nature and NBT's (Barton, 2012; Kam & Siu, 2010; Lin, 2013; Mitchell & Popham, 2008; O'Brien et al., 2011; Stepney & Davis, 2005). Research points to the importance of helping determine what parts of NBT's are most effective, of assessing the effectiveness of such approaches with a variety of diverse populations, and of helping expand ecotherapy research in

social work literature (Annerstedt & Wahrborg, 2011; Clatworthy et al., 2013; Heinsch, 2012; Maas et al., 2006; Maller et al., 2005; O'Brien et al., 2011).

CHAPTER III

Methodology

The purpose of this study was to answer the question, what are ecotherapists' perceptions of what makes NBT's effective and for whom?

As this study's aim was to gain insight into the efficacy of a relatively new clinical practice, it was qualitative, exploratory, and it relied on semi-structured interviews (Steinberg, 2004). Though a quantitative approach would have greatly increased the number of participants, such a survey would not have permitted the level of detail and flexibility necessary to research a field as new as NBT. At the same time, the time-intensive nature of qualitative research and semi-structured interviews meant only 12 participants were able to be included in this study. Nonetheless, a qualitative approach was ideal because it allowed the collection of deep, rich information on participants' perceptions (Engel & Schutt, 2013).

I enlisted a variety of strategies to ensure the validity and reliability of my methods. First, I phrased various interview questions so that multiple questions addressed similar content, but in different ways, thus asserting internal consistency (Engel & Schutt, 2013). In addition, I made every effort to keep my interview presence as grounded and neutral as possible. This way, I was less likely to sway interviewees with my own reactions to their responses. Negative case analysis was also conducted by using results found in beginning interviews to determine which questions to emphasize in subsequent interviews. I also left an audit trail so that methods were transparent and this study could be easily replicated, thus ensuring reliability.

Sample

The population this research aimed to study was mental health clinicians who practice NBT's in the United States and Canada. Specifically, the sampling frame for this study included those with an M.S.W., L.C.S.W., L.I.C.S.W., M.F.T., or a master's, Psy.D., or Ph.D. in psychology, social work, or counseling who provided individual and/or group therapy/ counseling in their work. These individuals needed to identify as practitioners of ecotherapy, practicing HT, WT, AAT, NRP's, or other forms of NBT's. To qualify for this study, participants' NBT work could be done in any setting, from private practice to residential treatment. Participants' work could be with any population or populations with mental health concerns. These could range from adjusting to life's typical stressors to coping with schizophrenia. As literature does not specify a certain number of hours that clinicians practice NBT's, no specific number of hours of NBT practice were required for individuals to participate. Rather, to qualify for the study, individuals needed to practice NBT's in a consistent manner as part of their regular therapeutic practice. Bachelors' level social workers, lay counselors, naturalists, vocational rehabilitation staff and outdoor educators were not included in the sampling frame, as this study aimed to draw conclusions about formal psychotherapy.

I recruited 12 participants and aimed to recruit those whose socioeconomic, racial and ethnic, cultural, and ability backgrounds were diverse. The limited number of articles on sociocultural identity and NBT's and the omissions present in existing literature implies that most practitioners of ecotherapy are White and middle class. I hoped to interview a diverse sample in order to gain a variety of perspectives on ecotherapeutic practice. I hoped that recruiting people with a variety of different experiences would create richer data about participants' perceptions of efficacy, inclusivity, and cultural humility in NBT practice.

Additionally, as this study aimed to contribute to social work literature, I tried to have as many social worker participants in the sample as possible.

Clinicians who met the aforementioned selection criteria made up the pool from which I recruited my participants. I used a snowball sampling technique. I recruited via Facebook groups including “Ecopsychology” and “Ecotherapy,” as well as through the Ecotherapy Association Google Group, the Ecopsychology Network, Holos Institute, and through additional networking from the aforementioned contacts (See Appendix A for examples of email and social networking recruitment materials). In an effort to recruit a diverse sample, I also posted flyers in community clinics and organizations with racially and ethnically diverse clinical staff in the San Francisco Bay Area (See Appendix B for recruiting flyers). These combined poster and electronic recruiting methods allowed me to reach those with varied degrees of access to and comfort with computers. These flyers had my Smith email address and phone number on them, which I used to follow up with potential participants who initially contacted me.

The following was my screening protocol: when I reached out to potential participants via email and online forums, I included the aforementioned selection criteria. When potential participants responded, I mailed them the informed consent paperwork and demographic form to confirm that they 1) qualified for the study, and 2) consented to participate (See Appendix C for Demographic Form and Informed Consent Paperwork). This package of information was sent via United States Postal Service with a stamped, addressed return envelope. I asked that participants return the informed consent and demographic forms within two weeks of receipt and I provided follow up emails, phone calls, or Facebook messages, as necessary.

Once I received signed and completed consent and demographic forms in the mail, I scheduled in-person, Skype, phone, or Google Hang Out interviews with participants at a time

that was convenient for them. If participants preferred a face-to-face interview, I scheduled it at a time and place that was somewhere private but safe, (i.e. a coffee shop, library, or their professional office) and of the participant's choosing.

In order to ensure feasibility, I gained access to the various aforementioned Facebook groups and networks before I began recruiting participants. I also received written permission to recruit through the Holos Institute, the Ecopsychology Network for Clinicians and the Ecotherapy Association Google Group. Since my sampling frame spanned the United States and Canada, and this is a small but growing field with clinicians who seem eager to contribute to its development, I felt confident that I would reach an adequate sample size.

Ethics and Safeguards

I conducted this research in accordance to the ethical guidelines of beneficence, justice, and respect for all persons. The Human Subjects Review Committee of Smith College reviewed the research design and made recommendations to ensure that the study met criteria of ethical research prior to approval. I adjusted my methods and instruments accordingly (See Appendix F).

In order to ensure confidentiality, I recorded interviews without any identifying information on the recordings and assigned each participant a number. Each participant's number was the only identifier that was recorded and no participants' names were mentioned on the recordings. I then transcribed these interviews, removed all identifying information (i.e., any names mentioned were transcribed with only the first letter of the name), and password protected each Word document with a transcribed interview in it. I enlisted one volunteer transcriber to assist in this process. I coached this individual about confidentiality requirements and had her sign a confidentiality agreement (See Appendix E). Lastly, I password protected my computer.

Written consent forms and demographic forms have been kept in a locked file that was separate from the recordings and from the document with the transcribed interviews in it. Written consent forms and demographic forms do not have participants' numbers listed on them, so that no link will be able to be made between the consent forms and the recordings and transcriptions. All research materials including recordings, transcriptions, analyses and consent/assent documents will be stored in this secure location for three years according to federal regulations. In the event that materials are needed beyond this period, they will be kept secured until no longer needed and then they will be destroyed. All electronically stored data is being password protected during the storage period.

This study has had a variety of benefits for participants and may still have other benefits for the field of social work and for broader society. Participants have had an opportunity to share their perceptions about their ecotherapy work and reflect on its efficacy and significance for them and for their clientele. This experience may have contributed to their sense of purpose, support, and confidence in this developing field. Another benefit is that participants will contribute information to a development field of research and practice. Lastly, by being asked questions that consider their work from a new or different perspective, they may have had an opportunity to consider both components of their current practice that they would like to maintain and components of their current practice that they would like to change.

In addition, the benefits to social work and society from this research may have included or will continue to include the following: helping develop best practices for nature-based therapy work, identifying which populations this field effectively serves and which populations, if any, are not benefitting from these interventions, and pointing to areas for further research and development. This project has suggested areas for future research by highlighting components of

practice where more questions exist than answers. For example, this study pointed to the need for stronger research focused on the active components of the natural world and the efficacy of such interventions with a variety of populations. Ultimately, such research could lead to projects piloting ecotherapy programs with underserved populations and to then conducting program evaluation. Thus, this study has pointed to future directions for additional research that could ultimately have programmatic implications.

I did not discuss sensitive material or interview a high-risk population I did not foresee any distress or risk for participants as a result from being in this study.

Data Collection

This qualitative study involved data collection via semi-structured, individual interviews with participants who qualified and consented. To have participated, interested parties must have either contacted me via Facebook, Google group, email, or by phone, or have responded to my initial contact via Facebook, Google group, flyer, or email (See Appendices A and B for recruiting materials). Once I determined each participant met the eligibility criteria, he or she received a letter in the mail consisting of the informed consent form, demographic form, and a self addressed, stamped envelope. Each participant then completed the informed consent and demographic forms and either sent them back to me (if the interview was to take place via webcam or phone) or brought them to the interview (if the interview was take place face-to-face). Once I received informed consent paperwork, the interview was scheduled at a time and place convenient for each participant.

Before each interview began, I reviewed the informed consent form with each participant and asked if he or she had any questions. I also asked participants if they agreed to have their interview taped. Each participant was given a copy of the consent form that included my contact

information if participants had any additional questions about the study or their participation (See Appendix C for Informed Consent Paperwork). Each participant then spent approximately 60 minutes talking with me about his or her NBT practice (See Appendix D for Interview Guide). I audio recorded interviews using Garage Band in podcast setting on my Mac Book computer and also took written notes on participant responses. If they did not consent to being recorded, I instead took handwritten notes throughout the interview. Handwritten notes are being kept in a locked file with the transcriptions for the federally mandated three years or until they are no longer needed and then they will be destroyed.

Interviews took approximately one hour and were based on an interview guide (See Appendix D for Interview Guide). Questions related directly to the main research question and built on demographic information that was asked in the demographic form (See Appendix C for Demographic Form). They were open-ended and in laymen's terms to ensure comprehension and to improve their validity. Multiple prompts addressing the same central question were included to ensure reliability.

Data Analysis

Research data were analyzed using a variety of forms. First, demographic data of participants and their clientele were analyzed using descriptive statistics that were summarized using Tables 1 and 2. Descriptive statistics provided insight into the specific demographics of the sample and their clients.

Thematic analysis was used to analyze the data from qualitative interviews. Specifically, during the beginning of the transcribing process, I reviewed each of the verbatim-transcribed interview scripts and began to identify themes that I noticed in the manifest and latent content. During this process, I linked these themes with codes and created a tentative draft

of a codebook. As I continued the transcribing process and re-read and reviewed the transcriptions multiple times, I honed my codes. I checked that each code was appropriate by looking at the trends within each interview as well as the trends across different interviews, in what Steinberg (2004) calls an intratranscript and intertranscript analysis. As I coded my transcriptions and notes, I considered the role of the codes within the broader context of the literature about NBT's. I referenced the existing research, the frequency of the same responses from different participants (and thus, of their respective codes) as well as any content/ themes that seemed omitted in order to determine which themes to highlight. I kept my own positionality in mind as I searched for themes and coded them. This helped me to maintain as much objectivity as possible during the potentially subjective process of qualitative research.

The aforementioned combination of descriptive statistics and qualitative data analyses allowed me to gather and process important demographic and qualitative information, and in so doing, to answer the research question optimally.

CHAPTER IV

Findings

The purpose of this study was to explore what nature-based therapists believe is most effective about their work and whom they feel their work best serves. This qualitative, exploratory research was conducted through semi-structured interviews in order to best capture the depth of participants' perceptions. The findings provided in this chapter are based on interviews with 12 mental health professionals practicing ecotherapy on a regular basis as part of their professional work in the United States. Interviews were conducted in the spring of 2015 in person or over the phone. They were fully transcribed and the data was then analyzed for emerging themes. Interviews began by reviewing or completing a brief demographic form which had been distributed to participants earlier, and then going through five main questions on the following topics: 1) clinician's motivation for becoming involved in NBT's; 2) clinician's NBT interventions/ practices; 3) the demographics of the clientele they serve; 4) what about their practice they believe is most effective, how they measure efficacy, and what is the ultimate aim of their work; and, 5) those who were best and least served from such practices. This chapter follows a similar flow to the interviews by addressing each of the five primary questions outlined above as well as themes discussed in response to subquestions. It ends by outlining concepts that participants discussed of their own accord, outside of the five primary questions.

Demographic Data

This section will review the demographic information that participants provided in their demographic forms and in interviews. The following table (Table 1) reflects the personal and professional demographic information of all 12 participants in this study.

Table 1

Participants' Demographic Information

Part. #	Practice				Years of Experience		Identity/ies		
	Field	Setting	Location	Types	In Mental Health	In NBT's	Gender	Racial & /or Ethnic	Class
1	MFT	CMH	The West	NRP's	4	4	Female	European American/ Caucasian	Middle
2	MFT	Private practice	The West	NRP's, urban ecoth.	26	3	Female	Caucasian	Middle
3	Social Work	School-based	The South	NRP's, WT, ecoth., adventure th.	19	19	Female	White	Middle
4	MFT	Private practice	The West	NRP's, WT, wilderness rites of passage work	12	25	Male	Caucasian & Jewish	Middle
5	MFT	Private practice	The West	NRP's, HT, indoor & outdoor ecoth.	40	15	Female	North American of European Descent	Middle
6	MFT	School-based	The North-east	WT, adventure th.	20	35	Male	White	Upper middle
7	Psych.	Private practice	The West	AAT, equine th.	16	6	Female	White	Middle class
8	Social Work	Private practice, CMH	The Mid-west	NRP's, AAT, equine th.	9	15	Female	Caucasian	Working, middle, & upper middle

9	Psych.	Private practice	The North-west	NRP's, psychoth. outdoors	8	1.5	Female	Caucasian	Middle
10	LPCC	CMH	The South-west	AAT	1.5	2.5	Female	Caucasian	Working
11	MFT	Wilderness rites of passage org.	The West	WT, wilderness rites of passage work	13	13	Female	Caucasian	Middle
12	Psych.	Private practice	The North-east	NRP's, WT, psychoth. outdoors	26	16	Male	White	Middle

Note. (Part #) participant number; (MFT) Marriage and Family Therapy; (Psych) psychology; (LPCC) Licensed Professional Counselor Candidate; (CMH) community mental health; (wilderness rites of passage org) wilderness rights of passage organization; (ecoth.) ecotherapy; (adventure th.) adventure therapy; (equine th.) equine therapy; (psychoth.) psychotherapy.

Thus, the sample contained a majority of MFT's, followed next by psychologists, social workers, and LPCC's. Participants' years of experience in the mental health field ranged from one and a half to 40, with a mean of over 16 years (16.21) of experience. The group was relatively divided by when they began their NBT work: one quarter of them (25%) began practicing ecotherapy at the same time that they started mental health work, a third of them (33%) started this practice after having been in the mental health field for some time, and the final third of them (33%) began this work before getting their mental health degrees.

Eleven out of 12 (92%) participants identified at least two different names for their work, with the most people calling their work NRP's (58%), followed by a solid portion (42%) saying they provide WT, and one quarter (25%) stating they facilitate AAT's.

The ratio of clinical hours participants spent providing NBT's relative to their overall time doing mental health work varied widely. Participants reported spending anywhere from 11% to 100% of their clinical hours practicing NBT's. Thus, participants may have misinterpreted this question, confusing their total number of work hours in a week with the portion of their overall work week that they actually practice therapy with clients. Unfortunately

then, the data about the ratio of time spent practicing NBT's relative to the rest of their mental health work may not be accurate.

The majority of participants are in private practice (58%), followed by a quarter of the sample (25%) that practice in community mental health, and the remaining participants who work in school-based and in excursion-based settings. One third of the sample (33%) not only practices NBT's but also supports the field with research and/or teaching. Four out of 12 (33%) participants work only with adults while the remaining participants (67%) work with two or more ages from the following categories: children, adolescents, adults, and seniors. Similarly, the vast majority (83%) of participants work in more than one group size modality, including individuals, couples, families, and groups. Only a small portion (17%) works with individuals exclusively.

Half of participants (50%) reside in the West but the other half live in a variety of states throughout the United States. One quarter of participants were male identified (25%), three quarters were female identified (75%) and no participants shared a gender non-conforming identity (0%). Participants' ages ranged from their 20's to their 70's, with the mean age being 47 years old. The entire sample (100%) identified as Caucasian, White, or "European American," with one participant additionally identifying as Jewish. The fact that this sample did not include any People of Color is a serious limitation of this study.

Demographics of Clientele

The following table (Table 2) succinctly captures the demographic information that participants provided about the clients they serve. As this information was provided in response to an open-ended question about the demographics of their typical clientele, percentages reflect

information which participants volunteered. Therefore, many percentages do not add up to be 100%.

Table 2

Demographics of Clientele Participants Serve

Demographic Information				Clinical Information	
Gender Identity/ies	Race/s / Ethnicity/ies	Socio-economic Backgrounds	Language/s Spoken	Level(s) of Fx. ^c	Diagnosis/ Diagnoses ^d
<ul style="list-style-type: none"> • 25% mostly female • 8% mostly male 	<ul style="list-style-type: none"> • 67% mainly White^a • 33% racially diverse 	<ul style="list-style-type: none"> • 42% diverse • 42% homogeneous middle class 	<ul style="list-style-type: none"> • 50% speak English primarily^b 	<ul style="list-style-type: none"> • 50% high • 25% a mix of high & low • 17% low 	<ul style="list-style-type: none"> • 58% depression, anxiety, relationships, grief, ADHD, & refer out for psychosis • 17% PTSD & TBI's

^a 50% explained the Whiteness of their clientele as a reflection of the demographics of the area where they work.

^b Others did not mention the language/s spoken by their clientele

^c (Fx) functioning

^d(ADHD) Attention Deficit and Hyperactivity Disorder; (PTSD) Post Traumatic Stress Disorder; (TBI's) Traumatic Brain Injuries.

Thus, when asked to talk about the clients they typically serve, most participants (50%) volunteered that they serve high functioning, relatively homogeneous White-identified populations who are a mix of those who are homogeneously middle class/ upper middle class (42%) and those who come from diverse class identities (42%). Since the question I asked about participants' demographics was so open-ended, participants' responses about the racial/ethnic backgrounds of their participants varied so much that it was challenging to summarize their answers except for in this binaried way. Racially diverse is a term that means that some of their

clients are White and some of People of Color. In addition, when I prompted each participant about a myriad of different components of identity, including ability status, ability was not often directly discussed. However, one quarter of participants (25%) mentioned that their facilities were wheelchair accessible.

Motivation For Becoming Involved in NBT's

Three themes emerged from the data concerning participants' motivation for becoming involved in NBT's: meaningful personal experiences, spiritual experiences, and professional/educational experiences.

Meaningful personal experiences.

Almost all participants (92%) cited personal reasons as their primary motivation for becoming involved in NBT's. In fact, half of all those interviewed (50%) described meaningful nature connection experiences from childhood as their source of inspiration. For example, Participant Number Eight stated,

I grew up across from a wooded area...Audubon Society, so we were always in the woods playing...it's always been peaceful and I could never see... how people could walk around on sidewalks...So it really helped us a lot and it, it was my motivation to get people out there in the woods.

Although Participant Number Five did not talk about fully recognizing the healing power of nature until later in life, personal experiences were what helped changed the trajectory of her career: "I was amazed that being in nature had these radical effects on me. I found that it lowered anxiety, it improved my mood, I just felt so much better when I was spending time in the garden."

Spiritual experiences.

Five of out 12 participants (42%) described spirituality as helping motivate their work. Spiritual reasons cited by participants varied from feeling called to practice ecotherapy to feeling better connected to their own spiritual practice by providing NBT's. For example, Participant Number Two described feeling a sense of spiritual calling:

...I was on one of my walks....and I got this kind of a really strong sense from this particular grove of redwoods....that I had been... on and off and I felt a callingto bring other people out onto the land and...to teach them, kind of movement inspired, meditation inspired work.

Participant Number Three described her experiences as less of a calling and more of a strengthening of her existing faith:

...I would be remiss if I didn't talk about my spirituality.... I'm Christian... and I identify with kinda seeing God in all things... and definitely for me, as seeing God as like, creator.... when I'm out in nature, it's the place that I feel actually closest to my faith... versus, like church (laughing). It doesn't quite do it for me....but when I'm out in nature, I think it's very strengthening of my, and very affirming of my spirituality as well.

Professional/educational experiences.

The majority of participants (75%) also cited past professional or educational experiences as a primary motivating factor for providing NBT's. Those interviewed referenced specific nature-based trainings, mentors, readings, and internships, along with work experience prior to acquiring their Master's degrees, as influential in their pursuit of clinical NBT work.

NBT Practices/Interventions Used

Those interviewed described a myriad of different clinical interventions/ best practices that they use in their NBT work. Due to the breadth of interventions used, they will be briefly

overviewed here according to the following themes: 1) traditional approaches, including: psychotherapy outside; psychoeducation; role modeling; and dream analysis and free association; as well as 2) non-traditional approaches, including: developing an interactive, experiential relationship with components of the natural world; developing mental intimacy with nature; interacting with nature as metaphor; and doing rites of passage work.

Traditional approaches.

The following three subthemes arose as examples of traditional approaches participants utilize: psychotherapy outside, psychoeducation, role modeling, and dream analysis and free association.

Psychotherapy outside.

Two thirds of participants (67%) stated they do psychotherapy outside: "...I often will hold the sessions with the client and parent's permission outdoors in the near park....so they would do therapy as usual, focusing whatever the presenting problem is, be it anxiety, depression, trauma... but we would do it outdoors." Though the majority of these participants also enlist additional approaches, two participants (17% of total sample) explained that moving traditional therapy outside was their main NBT practice.

Role modeling.

In addition, five participants (42% of the sample) talked about role modeling and embodying healthy and appropriate behavior for clients. One participant explained that she provides a corrective experience for clients through equine therapy by modeling how clients can be assertive and lead their horse in a way that helps teach these clients how to translate these qualities to their personal life. Still another participant explained that her presence as an embodied therapist is, in and of itself, therapeutic:

... it's interesting because I really don't differentiate between _____ the therapist and _____ the nature lover, _____ the whatever other role I have. It's just my state of being. And so, I think I model a lot to them...the things I want to see in them... that is mindfulness, and awareness, and...being, I guess what the word is, what is the word I'm looking for?...being respectful and grateful for the world around them.... So just my being there is part of hopefully that healing process.

Psychoeducation.

Two participants (17% of the sample) shared a similarly conventional role when they discussed providing psychoeducation as an intervention. This often takes the form of discussing the benefits of nature exposure:

I often psychoeducate parents...that this stuff is *free*. You just have to be able to access getting to that local park because a lot of the families that I work with, they don't have yards... if they're lucky- they have a patio or a balcony....so just kind of enlightening them on what the benefits are....and, how it is accessible and they can make it happen.

The role the above participant described is a classic one; through attending behavior, active listening, feedback, and ultimately, presence, clinicians aim to model how to cope with life's challenges in a healthy way.

Free association and dream analysis.

In addition to providing traditional psychotherapy outside, embodying healthy functioning, and educating clients about their health and wellness, one participant described using dream analysis and free association as part of her ecotherapy practice. According to this participant, these approaches help clinicians and clients access "wild psyche" or a less civilized, more animal part of human experience, thus qualifying it as an NBT practice:

Well people talk about ecotherapy not egotherapy....So what you're looking at is what aspects are being controlled by the conscious ego... and then what aspects of the self, for instance, are not controlled by that. So, there's many aspects of our bodies that are not controlled by our conscious mind....So getting out of your conscious mind is part of the ... idea of de-domesticating...or getting back in...touch with wild body and wild psyche...And of course wild psyche can be all kinds of things. From the very beginning of psychotherapy, with Freud and Jung, we were talking about free association...you know, dream analysis, I mean this was all part of let's see what the unconscious, or the other-than-conscious has to say...about your life and your situation...because obviously you're not fixing the problem just with your conscious willpower.

Thus, though free association and dream analysis are more traditional psychodynamic approaches, this participant considers them to be part of her NBT practice because of how they help access a less domesticated human experience.

Non-traditional approaches.

In addition to more classic psychotherapeutic interventions, every participant (100%) also described a series of non-traditional interventions that make up their NBT practice. These include: mindfulness, sensory-based, body-based and experiential techniques, enlisting nature's metaphors, and having clients interact with animals and natural objects as actors in therapy.

Mindfulness and mental connection with the natural world.

The majority of participants (67%) cited using mindfulness techniques like silent walks, journaling, meditation, reflection, and more. Participants' descriptions of their practice indoors often involved having clients connect with nature mentally: "...grounding meditations, so

visualizations that include nature...for support, for resource... for during working with trauma, if they have like a power animal next to them...”

Interestingly, connecting with nature mentally was not just an approach that participants encouraged their clients to do. Indeed, one participant explained that her primary intervention as an ecotherapist is the way that *she* mentally reconceptualizes the client as an inextricable part of the rest of the natural world. She practices ecotherapy by working with the *relationship* between nature and the human in front of her. Thus, the human-nature relationship is her client, not the individual:

I think the most important shift that I do is in my own head....I no longer see any client as separate from the rest of nature....so... it comes up in many different ways depending on why the client comes to see me....So, for instance...you know, somebody might come to me about...career issues, ‘cause I’ve done a lot of career counseling work...I talk about asking different questions...in intake sessions...And...when you ask questions like that, almost any therapy session becomes... an ecotherapy session...Even if it’s not the typical nature-reconnection idea, you know, of going outside, and by the way I do see people outside...

Though this approach differs greatly from more conventional therapeutic interventions, this participant emphasized its importance in light of the fact that that separating humans from the rest of nature is a fundamental reason, she shared, for the environmental issues that our planet faces. This will be discussed in more detail later in this chapter.

Body-based, sensory-awareness techniques.

The same number of participants who used mindfulness approaches (67%) also identified with encouraging somatic experiencing, sensory awareness, and/ or techniques that increase awareness of the body. One participant captured the role the body plays in NRP's:

...it needs to be bod[y] oriented, 'cause that's, I just think any good therapy is best done that way...and that is the piece of nature that we're all most familiar with...This is the immediate place that we experience nature. 'Cause it's part of nature that we are.

In fact, Participant Number Five cited the fact that clinicians already use their bodies—as the “human animals” that they are—to assess, sense, and treat their clients. In addition, half (50%) of all participants described the importance of NBT's being experiential. One participant explained the importance of this somatic experiencing:

...I make it very explicit that, that these experiences outdoors are very embodied...Experiential and very embodied. That what's happening to the nervous system, you know, is, is pretty profound, like, I really think that the nervous system of each individual body is getting rewired...You know, rewired to a place of.... more centeredness, more groundedness, more stability, more calm, more peace.... you know...And so this rewiring that happens ... I really put an emphasis on it because...I do nature-based meditation practices, movement practices, helping people really connect through their senses.

Interactive, experiential relationship with components of nature.

Another NBT technique that participants emphasized was having their clients experientially interact with components of nature. Specific interventions described below include using natural objects, interacting with animals, and spending personal time on the land.

Use of objects.

The majority of the participants who identified as practicing NBT's indoors (67%) cited using natural objects like rocks, shells, or plants in this practice. One participant stated, "I have big, heavy rocks, sometimes people hold them to feel...more grounded and to come back... from a dissociative state...I'll use the wall for... a tree, for the support... I mean, you know, a lot of the same things, but they're indoors."

Interacting with animals.

In addition, two practitioners of AAT talked about how clients' care taking of animals helps them gain a sense of purpose and meaning outside of themselves. One example follows:

I guess just the relationship with the animal, in general, is—can be really positive. I think it helps, um, clients have motivation to continue coming to therapy...I have kids who help me, you know, feed the rats whenever they come, so they go, "Oh, I can't miss. I want to come back. I need to feed the rats."

In this example, clients' relationship with the animals in AAT helps motivate them to come to therapy. Animals were also reported as being used as additional participants in the therapeutic relationship. One participant cited the ways that interacting with a cat can help convey vital lessons about social skills for children:

We also do a lot of... social skills work, so...some of our animals are really good with boundaries, especially cats. Cats don't like when, you know, kids run up and get in their face...So they can...kind of learn because the motivation is there. They want the cat to like them, so they can kind of learn to calm down and approach them in a nice way, the same way they might do with friends at school.

This same participant explained that it can be helpful to observe horses with a client and then project that client's clinical material onto them because it provides a safer way to explore therapeutic material than through conventional talk therapy. She went on to say that playing fetch with therapeutic dogs helps teach people with mood disorders that *they can* feel happy again and is therapeutic because it is just good old plain fun.

Personal time on the land.

In addition to using components of nature indoors and having clients interact with animals, three participants (25%) described encouraging clients to spend personal time on the land either through nature homework or rites of passage work. For example, one participant shared that she offers sessions via phone, email, and Skype, and will assign nature homework, where clients are instructed to immerse themselves in an element/ elements of the natural world and then process that experience with her afterwards. Two other participants (17%) shared that a fundamental intervention for them is following a rites of passage framework with their clients, including closely or more loosely following the steps of 1) severance, or helping their client separate from their everyday life; 2) "stepping into threshold space," in which clients spend individual reflecting and experiencing in the natural world; and 3) "coming back through that threshold...reincorporation...the integration phase," in which clients return to the therapist or group and have their experience mirrored back to them, or reflected back and enhanced from the clinician's embodiment of their experiences.

Nature as metaphor.

Whether nature metaphors take the form of synchronicity, are a more deliberate choice to encourage clients to attune to nature's messages, or enlist the natural world to express clients' own clinical material, two thirds of participants (67%) cited the significance of these practices to

their clients' treatment. Of those, 63% explained that clients ask questions of the natural world and find answers in their experiences with nature:

...I'll do silent hikes with clients... Where I will have them ask a question of the natural world, something that they are struggling with or wrestling with. And to kind of have them hold that question in their hearts... And as they hike to figure out what they're naturally drawn to or repelled by in the natural world and to ask if there's any kind of connection with those feelings with the situation that they're struggling with.

Another participant explained that when he was helping a client process some challenging material during an outside session, a baby rabbit came and sunned itself a few yards from he and his client. The animal then proceeded to do this for several consecutive sessions while they continued to process this material. This participant shared that this seemed to provide a meaningful metaphor for the client about how to handle this tough situation by approaching it with fearlessness, just as the rabbit had. In addition, one individual interviewed cited the way that nature can be a great venue to seek out parallel processes whose resolution can also provide resolution of therapeutic issues. For example:

I was invited to work with...combat soldiers... that had just come back from Afghanistan... many of these men were just burdened by the weight of what they had done and what they had experienced... I talked about how I had observed this and it seemed like they just seemed to be carrying a lot... So I invited them to kind of take a look around them and pick up a rock that represented the weight of what they were carrying around with them and, and to find an appropriate rock. So some of them picked up a pebble and others of 'em picked up a huge rock and they put it in their backpack. And I said on our hike if there was any time that they wished to kind of let go...of these

experiences...that they could stop the group and talk to the group about that. And we had hiked basically, about a mile and half, and one young man asked to stop the group and he discussed about this weight that he was carrying because he was blaming himself for the death of another soldier...and basically he said this rock represented what he was carrying then and the group....started dialoguing with him and they talked about the care that they had for him and how...his belief was maybe... partly true but a lot of times it was not his fault...and they, and they gave him permission to leave the rock behind...and that was a huge therapeutic moment for him.

Ways to Measure the Efficacy of Their Work

When I asked how participants knew whether or not their work was effective, I consistently heard the same handful of answers, provided here in order of frequency: 1) through feedback from clients (83%) and their communities, especially with participants who work with children; 2) through clinical observation (75%); and 3) through clients accomplishing their previously determined goals (42%). As participants' responses to this question were fairly straightforward and richer responses were elicited when they discussed *what the ultimate goals of their work are* and *why* they believe their practice is effective, this section will be kept brief.

Client feedback.

One vivid example of the importance of client feedback follows:

...one client that...was scared—when she first came in, she was scared to go outside, she had a lot of trauma outside and inside...So we did several months indoors, a lot of ecotherapy support, and several power animals and you know, she would come back every week and tell me that, you know, she felt better and she was able to confront her boss... Three to six months down the ways, she wanted to go outside, do a, an outdoor

session... So when she went through the trigger of being cold that brought her back to a traumatic memory.... so we went back to this childhood memory, and processed that, and then...towards the end of the session, she said, this is the safest I've ever felt being outdoors.

In addition to getting verbal feedback, three participants (25%) also talked about using more formal means of data collection by administering satisfaction surveys or outcome measures.

Clinical observation.

Three quarters of participants stated that they know their work is effective from what they witness from observing and interacting with their clients in the process of treatment. One vivid example is provided below:

“Oh, I can just see it in people. I can see their whole face light up and change...their, just the way they're expressing themselves...like you can see someone who maybe at first came into a trip and they might be pretty shut down...kind of contracted, maybe they're locked in some sort of self-doubt or fearI can see over the course of the time, they just loosen up and lighten up and they're in themselves... you can just see it in their face and their energy and how they're speaking about themselves and their experience.....

Yes! The witnessing their expression and then I am mirroring it back to them. I'm seeing it, I'm loving it, I'm saying, hey, I see you. Here you are! Like, kinda midwifing people, like hey, I see your soul coming through.

Goal accomplishment.

More than a third of participants (42%) identified that they know their NBT practice works because of clients reaching goals that they had mutually identified. One example that

Participant Number Three provided was the ability of her college-aged clients to stay in school in spite of their many barriers to retention.

Ultimate Goals of NBT Work: Heal the Individual and/or Heal the Planet

In addition to asking about the ways that NBT practitioners know their work is effective, I also asked what their ultimate goals are in this practice. Responses included more individualistic mental health goals like anxiety and stress relief as well as broader aims like improving a client's ability to function in their relationships with themselves, with others, and with nature. Thus, although participants have relatively similar views about how to judge whether or not their treatments are working, their ideas of what "working" means differ greatly. The quotation below demonstrates one participant's broad conceptualization of the aims of her NBT practice:

Well you know, therapy, the word itself, means healing...so people come to a healer because they're hurting.... And...the goal of any healing is to get to the bottom of what's causing the pain... and helping the person feel better and be in less pain. And I think ecotherapy can do that!... if you're talking about healing a larger human-nature relationship, you have to sort of look at the current human-nature relationship... And you realize that if a client walked into a therapy office...showing the symptoms...that... humans have...vis-à-vis the rest of nature, you'd have to call emergency services and...have them arrested... We're talking Certainly....suicide, right?...we're killing our own support systems...so we've got a suicidal patient. And they're also...homicidal because they're destroying the life support systems of many other people...Matricidal, fratricidal, if you consider all our relatives being all the other sentient beings on the planet, and ecocide...Matricide 'cause we're killing off our mother...I mean, it goes on

and on, and you realize that if you really look at the human-nature relationship as the client... you realize that we're about... two minutes away from doing ourselves in and taking a whole lot of other people with us...we can't just view ecotherapy as some sort of equivalent to psychotherapy.

Other participants, on the other hand, see their work as a direct equivalent to psychotherapy.

When asked what the ultimate goal of her work was, one participant stated: "...just for them [my clients] to have a higher quality of life...I think the goal of all therapy is just for them to feel better about themselves and better about their life." These differences are significant because they mean that there is a split in the way NBT's are conceptualized and practiced, and, it could be deduced, in who most benefits from them.

Participants' Perceptions of What Makes Their Work Effective

Participants' perspectives about what makes their work effective also spanned a wide range. The main themes participants provided to explain the efficacy of their work were: 1) the therapeutic and physical benefits of the natural world; 2) the different setup in NBT's which a) presents clients with helpful challenge, b) helps bypass resistance, and c) can help catalyze groups; and 3) a combination of different factors, including those which may remain unknown.

Nature itself as biologically and therapeutically beneficial.

First, a theme that came up in the vast majority of interviews (83%) was the therapeutic and/ or physical benefits of interacting with components of the natural world. Participants discussed this idea in different ways.

Biological benefits.

Many spoke of nature exposure as biologically beneficial to the human central nervous system:

... that sense of spaciousness is much more tangible when you're in a much bigger physical space and one in which your psyche and your nervous system and your body...have co-evolved with over millennia... We didn't co-evolve with nice Persian rugs... They're really nice, but they don't—they move us in a different way...

Others called nature physically calming or relaxing. When asked about why his practice of NBT's was effective, one participant said that he provided ecotherapy in a community where it would not otherwise be offered. Earlier in the interview, he stated, "I think we were built for being in nature;" this implies that his practice is effective because exposure to nature is a therapeutic modality that was naturally made to work for humans. Still another participant talked about how being in natural settings promotes wellness, appealing to the "physiological self-care mechanism" it provides.

Psychological, spiritual, and therapeutic benefits.

In addition to the biological effects of NBT's, those interviewed highlighted their psychological, spiritual, and therapeutic benefits of NBT's. For instance, one participant described that the benefits of ecotherapy include its positive effects on holistic physical and mental health:

...I think that there's a wellness component to it... I think that as we facilitate on a kind of..... psychosocial spiritual level a connection with nature, inevitably there becomes...more consciousness around balance and wellness and health and...people will begin to develop a more holistic sense of how to live in the world... in a way that is.....you know, healthy and whole...

Another participant gave an example of those with anxiety or depression playing with dogs and realizing that they actually had the capacity to feel happy and present because of that experience.

In addition, a participant reflected on how her own personal research experiences highlighted the key role that *just being in nature* plays:

I was so thrilled that...my research participants, they drew my attention to that so that now... I actually think... I don't...underestimate the power of just an unstructured... experience just being in the natural world. That I don't always have to even harness the power of a clinical intervention in the natural world. That for sometimes, for people, just being there is enough.

Nature as the ultimate therapist/ therapeutic environment.

The sentiment that the natural world is the “ultimate therapist,” “the ideal caretaking surround,” something that provides “a larger holding environment” or “a bigger container” was shared by half of my sample of participants (50%).

Specifically, one participant conceptualized the natural world as the therapist, and saw her role as connecting clients with *that* therapist:

...Well, in ecotherapy...one of the strong feelings is that nature is the therapist...So, putting the client in contact with any aspect of the rest of nature, that's what the research is showing is effective... I help clients find a way of connecting with that... effective therapist... that's part of what the therapist is doing...is helping, not only helping the client connect with the rest of nature, but then helping them process what's happened...As they're making that reconnection and what it's stimulating in them and how it changes how they feel if it does.

An additional, interactive member of the therapeutic relationship.

Another participant shared the idea that when the clinician involves a component of nature in the therapy, he or she provides his or her clients with the opportunity to develop a therapeutic relationship with the clinician *as well as* with that component of nature:

...because they're not only having [a] relationship with me and their own psyche, and their own process, they're also having the support of whatever element in nature we are relating to....And so...when they go back out into nature...they have me and they have that...there's much bigger of a container.... that they can feel supported.

This additional relationship expands the therapeutic “container” or “holding environment” for the client, providing support and safety outside of a relationship with one individual professional.

When the client is interacting openly with the natural world, nature adds its own input and “magic” to the treatment which is unlike what can be “manufactured” in an office:

A huge difference I think is that there's the possibility of input from this much larger holding environment...In that some bird may fly up, the wind might come in. The elements and organisms of that place can play directly into the therapeutic change...That's needed or wanted and...there's a collaboration of something larger than ourselves that's clearly part of it that a lot of people are pretty *desperate* for, in this very-- we're more and more living in a culture that is self-reflexive, that is we're living within the human-made world and considering that to be what's **real**...and that's such a diminishment of what's actually out...in the world.

Unconditional positive regard.

Indeed, the holding environment that gets created in relationship between the clinician, nature, and the client provides unconditional positive regard or a sense of belonging and

interconnectedness for clients which is incredibly healing, especially for those who have experienced rejection, prejudice, or abuse in their interactions with other people:

...I do think...like a place where you feel kind of held...is an important concept and I think that's as good as...the attachment issues people have or even the way that people feel marginalized. I've had GLBTQ students say to me, you know, the great thing about nature is it doesn't judge me for being gay... Like.... that plant or that animal is not gonna be...judgmental... And... that sounds a little quippy and kinda cliché, but man, for someone who has felt that... to find again a caretaking surround in which they don't experience that... Is so powerful.

This idea also helps clients gain confidence that they are not alone in the world, and that they have the support they need in nature, even if they do not currently have it, or have not historically had it, from their human community.

The different setup of NBT's.

In addition to the idea that nature is biopsychospiritually beneficial in and of itself, subthemes also emerged which highlight that the unique structure of NBT's adds to their efficacy. The following subthemes emerged from the data 1) NBT's create helpful challenges, 2) NBT's help increase social supports and help gel groups, and 3) NBT's help bypass resistance.

NBT's create challenges that are therapeutic.

Three participants (25%) explained that the challenges which nature experiences present for clients help make this modality work. One participant explained that if a client gets wet in a storm or stung by ants when he or she is out in a wilderness area, there is no quick fix, and that this challenge provides a great opportunity to practice dialectical behavioral therapies to cope with the uncomfortable feelings that can accompany such situations. In addition, another

participant stated that this “eustress” needs to be supported enough so that it is not *distressing*, and not so de-emphasized that the client returns to a place of homeostasis. In fact, this challenge, and a clinician’s ability to help take clients to places of change safely, can show clients what they are capable of, and can be very therapeutic.

NBT’s strengthen group dynamics.

Because of how routine it is for such challenges to arise in natural environments, the way that therapeutic groups can help clients get through these intense shared experiences was highlighted as another important component of NBTs’ efficacy. This was explained by how the intensity of wilderness experiences can make it harder to hide one’s needs:

...in an outdoor experiential setting, especially if you’re doing...more wilderness and adventure therapy, there are opportunities for helping one another... And so our needs in that natural setting, we can’t hide them, you know... So my clients hate asking for help because they’ve been... betrayed and, and no one’s been reliable in their lives forever...

Thus, without any other resources besides themselves and their peers, those who may not like to ask for help must practice this skill in outdoor ecotherapy. This practice helps to increase clients’ social supports and sense of connection with others. Separate from challenges, participants also explained that the group itself helps deepen therapeutic progress when the session is outside:

If I do group, and we do it in the office... you know, in one of the buildings on campus, it’s meaningful, and...it’s important and it goes well, but...how connected they feel to one another is greatly enhanced by being outdoors doing something together, like hiking or paddling down the river...and so I feel like the level of group cohesion and social connectedness is facilitated on a much deeper level in a natural setting.

NBT's help bypass resistance.

In addition to the way that challenge and the role of a group help make ecotherapy work, two participants (17%) cited this modality's ability to help bypass resistance as another explanation of what makes it effective.

More than cognitive: affective and behavioral.

One participant explained that NBT's and adventure therapies allow clients to engage the behavioral and the affective more than traditional therapies do. He stated that traditional therapies mainly focus on the cognitive, and, to some degree, the affective. Clients are able to engage more holistically with things that do not feel "therapiz[ing]" but which are, indeed, therapeutic and which, in turn, have tangible implications for the challenges that bring them to therapy:

The idea of looking at holistic change...And finding ways to bypass resistance and believing in clients as agents and authors of their own change and that self education is the best... part of therapy one can reach as a therapist for clients...and that big part where you know, when they successfully accomplish an adventure experience that's... metaphorically related to their client issue that gives them successful resolution to their issue.

Put succinctly by another participant, "If I had to boil it down, it would be that people don't stay in their head." In AAT, specifically, interacting with animal co-therapists, for example, can provide opportunities for physical movement, non-verbal communication, connection, and anxiety reduction.

Supports the therapeutic relationship.

One participant cited the viscerality of witnessing the animals and the circle of life in her practice as helping to present both herself and “real life” to her clients, which helps break down any potential barriers related to class or education between client and clinician:

I’m not somebody with a degree just sitting there telling somebody or listening to somebody or giving advice...I think there’s a lot of clinicians that hide behind...their education... I’m a real person...And its real life right here. I have had a client out in the barn watching a chicken hatch out of an egg...And then I’ve also had the same client out there as I’ve looked in the chicken coop and said, ah, she died....and they’re like going, aw, and so I can explain to them, this is what happens, it goes from birth to death. It’s the reality here...You know.... the dogs chase the cats, the cats chase the rabbits, the rabbits eat off the ground...And it’s what happens.

Thus, another factor which participants cite to explain the efficacy of NBT’s is their ability to bypass resistance through engaging with the affective and the behavioral and breaking down barriers related to anxiety or power differentials.

Different factors, many of which are unknown.

The final explanation that participants gave of why their practice of NBT’s is effective was that a series of different factors came together which may not be fully knowable. One participant whose program’s aim is social connectedness articulately explained,

...it’s this interplay of like support and the intensity of the shared experience and the beauty of the natural world, I think it’s really, a... it’s kind of a black box. Like it’s a combination of all of those things, in my mind that I’ve noticed leads to that deeper... social connectedness.

Another participant cited NBT's efficacy as due to "the magic between the person and the horse," while a different participant explained that nature is somehow catalyzing for her clients, but that she also has more questions than answers about why the intersection of nature exposure and more traditional therapeutic interventions seem to work. Though there is solid evidence for the efficacy of both nature exposure and psychotherapy, the research that this participant found to substantiate the effectiveness of these interventions being combined lacked the validity of the evidence-base of each of them separately. Indeed, one participant's words seemed to effectively narrate the sentiment that I heard in a variety of these comments: "I've just been doing it because I like it and it makes sense."

Who Benefits Most from NBT's

When asked for whom they feel NBT's are most effective, participants described four main themes about who could benefit: 1) uncertainty, 2) anyone, 3) those with mental health diagnoses, and 4) specific demographic populations.

Uncertainty.

Firstly, when asked whom they felt NBT's were most effective for, over a third of participants (42%) initially hesitated, conveyed a lack of certainty, or, over the course of the interview, provided contradictory information. Responses included such statements as: "Oh my gosh, I don't know that I can even answer that," asking what *other* participants in the study had stated, and reflecting information that they had heard from colleagues or supervisees rather than speaking about their own experiences.

Anyone.

Secondly, half of participants (50%) stated they believed NBT's could be effective for anyone or almost anyone. They stated that everyone can engage with the natural world using

their senses and our common humanity means all people can benefit from nature exposure. In addition, nature supports health and wellness across the board and it helps bypass barriers to mental health treatment. One participant stated:

...it can be effective for many people in many different circumstances. I wouldn't want to see it as something that should be limited to only a particular demographic...Anyone who's feeling these different sorts of pain that I've described, whether it's an issue that doesn't seem connected to the human-nature relationship, but maybe at its core is, or people that are overtly concerned about the human-nature relationship...all of those people could benefit... I guess what I'm saying is it doesn't have to be just people who are environmentally minded.

As Participant Number Five shared above, though certain more “environmentally-minded” people may seem like those who would benefit most from NBT's, in her experience, such attributes are not needed to feel the positive effects of this therapeutic modality. Regardless, one third of participants (33%) cited that those who are interested in nature or enjoy the natural world can benefit from NBT's:

I think really, just some willingness and openness to it even if you've got a few generations of disconnection from nature, you've still got... hundreds of thousands of years of evolution...as the same species...in the natural environment. It's just, it's so innate given that survival needs are taken care of and you feel safe enough in the moment, I think it would be beneficial.

Conversely, two participants (17%) even stated that with the appropriate preparation, it could be good for those who are less interested in nature or in the modality: “...I think it's...could be

good for people who don't have a relationship with outdoors if you go slow, you know, with it, and they're ready enough. You do some work inside with them before you do that..."

Yet another participant highlighted that indeed, NBT could be used with anyone, but that staying with each client's experience is critical:

I wouldn't say that there's a particular group that ecotherapy is not appropriate for, but I think that the practitioner has to be very culturally...humble ... and start where the client is around what is nature for the client, what experiences both positive and negative...has the client had with the natural world...and what are ways that the therapist can help the client have a positive connection with the natural world, including things like...paying attention to basic needs and their comfort level in the natural world, are you cold, hot, tired... hungry, is the sun in your eyes, are you itchy, you know the allergies... Do you feel anxious, you know, all of those things.

While half of participants said NBT's could be effective for anyone or almost anyone, a third of the sample (33%) said that it was important to respect clients' interest level in this modality and explained that it is a clinical decision whether or not to use ecotherapy with clients. In fact, two participants (17%) mentioned that being outside during treatment can be distracting, not containing enough, or can provide insufficient privacy for certain clients' needs. Thus, though not every participant reported feeling that the use of NBT's was dependent upon each individual's clinical presentation, a solid minority of participants reported this because of the importance of meeting each client's unique needs.

Those with certain mental health diagnoses.

Another theme that arose in more than a third of interviews (42%) was that those with certain diagnostic profiles could benefit most from NBT's. These diagnoses included trauma,

substance use and abuse issues, depression, anxiety, and attention deficit and hyperactivity disorder (ADHD). Specifically, those with trauma and substance abuse issues were cited as benefitting from these interventions because of the way NBT practice can engage the senses, help build internal resources, and provide rich metaphors that come to life in the natural world:

And the kids just love the fact and they use... a lot of rituals of letting go and, and how the natural world can absorb and hold our grief and our loss and our trauma is really powerful. But it also goes to the issue of ecological metaphor because nature, in and of itself sustains a ton of trauma... And gives us all kinds of like amazing beautiful metaphors for how we have this built in back up system and ...this natural... movement towards growth and renewal, you know... So I think that humans who have experienced trauma that feels...like they won't recover from it, when they see how the natural world has these built in mechanisms in place for healing.

Participants also cited nature's ability to help facilitate mindfulness and relaxation for clients as well as existing literature that substantiate the efficacy of natural interventions for depression and anxiety.

Specific demographic populations: women and children.

The final theme that arose from asking participants who they felt most benefitted from NBT's was specific populations, and namely, women and children. Five out of 12 participants (42%) stated that children seem to particularly benefit from NBT's. Explanations for this included that kids like trying new things, research that substantiates NBTs' effectiveness with young people with executive functioning issues, personal experiences, and the experience of supervisees to help explain why. One participant explained that children with disabilities have particularly benefitted from the non-verbal components of AAT because of animals' ability to

provide direct feedback that such children may not receive elsewhere because of their challenges with communication:

one of the students I work with works with... horses and children—equine therapy....It's super great working with these children who don't have a lot of...verbal capacity and some of them don't have as much....ability to express themselves... and when you're actually with a horse, a physical, you know, something that's giving direct feedback that they could get hurt if they don't pay attention and ... then it's like they're learning on a very holistic, visceral level.

Though only one participant (8%) answered this question by stating that women particularly benefit from NBT's, another participant stated women in her program seem much more engaged than men. The first participant who stated that women seem to especially benefit from NBT's substantiated this with research and shared his hypotheses about why this might be:

What we're finding that's really amazing is that women experience much more change, positively than men do, from natural experiences...And it's not that men don't, statistically men do, but women just experience more, and statistically more than men do.... two hypotheses I have that I don't know if they're true or valid or not, is that women have not had access or identifiable...Experiences...as afforded or accessible to them as men...And the second one is...that.... Women see nature not so much as a competition...[they] see it more...as a healing and a place to join...with others in such a way so it's not like we're gonna to conquer the peak, it's like we're going to experience what the peak has to offer for us.

Although these hypotheses cannot be thoroughly explored here, this participant's research and theories provide several areas for further study. Indeed, such research is needed because this

participant shared that despite his own theories, “it’s still not clear as to exactly why that happens.”

Who Does Not Benefit from NBT’s

When asked about which populations NBT’s are not effective for, participants’ responses elicited four main themes, as follows: 1) those with too high of acuity, 2) those with physical issues that can contraindicate strenuous activity or exposure, 3) those who either by inclination or by theory dismiss NBT’s, and 4) those for whom NBT’s are inaccessible.

Those with too high of acuity: psychosis, self-harming and aggressive behavior.

First, one third of participants (33%) shared that they believed that those with too high of needs would not benefit from NBT’s. Specifically, those who are psychotic were repeatedly mentioned as not being a good fit for this modality. Participants cited colleagues’ opinions, literature, and their own experiences to help explain this. In addition, those with histories of violence against others or violence against animals were mentioned by a quarter of the sample (25%) as being inappropriate candidates for AAT because of the risk they could pose to animals. In addition, one participant shared that being outside seems to not be a good fit for people with more severe mental health issues due to the fact that “it’s not enough containment because there’s some people who dissociate...” Thus, those whose psychic lack of containment and those who pose a risk to themselves or others were deemed to have too high of needs to benefit from NBT’s by one third (33%) of this sample.

Those with medical contraindications.

Secondly, one participant (8%) stated that clients who have eating disorders and/ or who are taking certain psychotropic medications may not be appropriate candidates to benefit from NBT’s. This is because certain medications can affect the body’s heating and cooling regulation

systems and eating disorders can cause malnutrition, each of which can cause excessive risk for clients. This statement manifests a primarily outdoors, strenuous understanding of NBT practice. As such, the definition of NBT's affects who can benefit from them.

Those who object to NBT's.

In addition, those whose expectations for therapy or aversion to nature mean that they object to NBT's were cited as not benefitting from these interventions. For example, two participants (17%) explained that they believed that those who have more rigid expectations for what therapy should be might not benefit from NBT's:

...I think there's some people that are so geared to this is what it needs to be-- you need to be in four walls and this is how it's supposed to be and you're supposed to lay on a couch...and trying to convince them to, to go sit outside on a step is difficult. So I don't know if it would work for them, but I think eventually if they would give it a try it would.

The same percentage (17%) of those interviewed also cited that those who do not enjoy nature may not be good candidates for this approach. As noted earlier, two participants (17%) also said it could benefit those who are not initially interested in it. Participants also disagreed about whether or not a fear of being outside was a reason to avoid this treatment.

Those who do not have access.

When asked about who may currently be left out of NBT practice, participant responses highlighted that the accessibility of NBT practice varies depending on several factors. For example, half (50%) of those interviewed conveyed that there are some issues related to the accessibility of NBT's, citing such factors as the cost and time of transportation, the price of treatment, the prevalence of NBT modality in their area, and any space issues that may arise with certain treatments (i.e., equine therapy). Participants also stated that the manner in which

specific providers manage these factors affects how accessible NBT's are for clients in different settings. Indeed, while three participants mentioned potential barriers, they stated they felt they were not concerning: "...you know, cost and accessibility, those are just case dependent, you find the right provider, and those can be addressed, so I don't, I don't see that...as an issue..." In addition to the aforementioned barriers, one participant also shared that her wilderness rites of passage work is really only accessible to those who are able bodied. Moreover, the intersectionality of race, class, and access to NBT's came up in three interviews (25%). For example, one participant stated:

Well, so look at kind of the ... more recent history of ecotherapy, it is predominantly, like who are the ecotherapists that I know, they're predominantly middle to upper class...Caucasian...at least that's just the demographics I'm familiar with, of course there's others...but it does seem to favor people who do have more access to resources and are able to... get outdoors or go on these retreats.... or go on these...group outings as opposed to the kids and families I work with that are very low income... and that's why I'm grateful that I can incorporate ecotherapy with them because they really need it a lot.

Indeed, an additional participant cited that most practitioners of NBT's are White, and that this affects who hears about such therapies:

...yeah, it's like, who's not hearing about this...I said it's kind of like a word of mouth, and I think it's spread in these circles and there's a whole, whole bunch of people who are not even hearing about it I guess, for whatever reason.... you know, it's for the people...who don't have, who aren't in these circles of kind of whatever you want to call it, alternative...You know, alternative things...I guess people might be, I don't want to say exactly all, like, like.....sure, I guess poor people, people in real urban areas,

people.....who primarily are I guess, aren't White, who just don't know that this stuff exists, yeah.

Participants identified that there seems to be a lack of access to ecotherapy in impoverished communities of Color and presented different possible explanations why. Participant Number One explained this as connected to a lack of resources necessary to attend certain retreats, etc.. Participant Number 11, on the other hand, cited a lack of information about these modalities outside of "alternative" well-resourced, often White communities.

In addition, Participant Number Five stated that she felt it was critical for ecotherapy to be aware of social justice issues and how they affect this field: "it's particularly important that ecotherapy be inclusive in terms of social justice....And....that is an issue. You know, in terms of the accessibility of green space...Especially nearby green space. That's a huge issue....In many communities, especially disadvantaged communities."

In sum, half of participants expressed concerns about how accessible NBT's are, with only one participant citing issues related to physical disabilities and access. Participants noted that those practicing NBT's are primarily White and middle class, and that those who access NBT's seem to be primarily demographically similar.

Additional Themes

In addition to the questions that I asked participants directly, many participants discussed adjunct topics rich with thematic material. Barriers to practice, how NBT's are perceived, the definition of nature, and how humans fit into the broader natural world are the additional themes presented below.

Barriers to practice.

Participants discussed barriers to developing their NBT practice including a lack of infrastructure when they were in school or were first interested in this modality (50%) as well as challenges related to practicing ecotherapy in bureaucratic community mental health settings (17%). Thus, this modality's newness means that its practitioners have experienced challenges related to its growth and development. In addition, its differences from more conventional therapies have led to difficulties practicing NBT's in certain settings.

How NBT's are perceived.

Two participants (17%) discussed the additional theme of the way their work may be interpreted by the broader community. Specifically, one participant talked about how certain populations may not receive NBT services when practitioners of these therapies call themselves ecotherapists. Though she did not specifically speak about the reason why those populations might miss out on NBT services, by discussing *who* ecotherapy *does seem* to appeal to, she implied that other populations might not hear about or be interested in these services when they are presented as ecotherapy:

...there may be some practitioners that say, oh I'm an ecotherapist, or there might be social workers that say, I'm a clinical social worker, but this is one modality that I might use to help you figure out what's going on in your life. And I, I kinda like that better... Because I think if we, if we say, oh I'm an ecotherapist...we might **miss a big** group of clients. We're gonna get like the hippy dippy, like you know, clients that are already kinda progressive and cool and wanna, you know, delve into that part of, you know what I mean?... They kind of already get it... but we might miss this whole swathe of clients who are the most disconnected... And need these practices.... Not... dogmatically like

thrown at them...but really, where we can really empathically meet the client where they're at and then kind of gradually and maybe gently reintroduce some of these ideas to them... that they haven't been connected with in a while.

This participant pointed out that how a practitioner of NBT's identifies his or her practice and professional identity can cause clients to either engage or shy away from him or her as a clinician. In fact, she implied that those who are least interested in ecotherapy when it is presented as such might most benefit from this modality, and that any such distancing from therapeutic work would not be helpful for those individuals. Both participants who discussed this topic implied that mitigating potentially negative associations with NBT's is important in promoting this work to clients. This implies that societal, communal, and individual perceptions of NBT's affect who currently accesses them and who does not.

Definition of nature and where humans fit in the broader natural world.

In addition to discussing barriers and client's associations with NBT's, participants also talked about the definition of nature, the dichotomy implied in different definitions of the natural world and the problems associated with it, and how accessibility varies depending on how one defines nature and NBT's.

Nature as intrinsically encompassing humanity.

Interestingly, one third of participants (33%) talked about humans as being part of nature. Specifically, one participant shared that when working with children in a community health setting

...I teach them that they are nature, like they have rivers of blood coursing through them... They inhale the oxygen the...oxygen between the trees and such, and so I kind of let them know that they are as close to nature as they can get.

As such, she sees a link between individuals' mental health and the broader health and well-being of the planet:

... how we use or abuse the planet is indicative of our inner psyche..... so when a person cares about their environment, in a way, they really are showing that they care about themselves... And vice versa. If they pollute their bodies or their relationships and the environment...there's a huge disconnect there.

This conceptualization of nature implies that those who are mentally healthy care about themselves and their environment. Practice that is aligned with this definition might emphasize interventions about connection with nature as the therapist, might have broad goals and versions of what efficacy means, and might target a breadth of populations as benefitting from this modality.

Nature as a setting for therapeutic benefit.

In contrast, one participant depicted nature as something to use for the benefit of the client because of the challenge it presents. A clip from our interview captures this sentiment exactly:

Participant: for me...[eustress] takes priority. However, nature encompasses...so many of the archetypes that we're looking for people to achieve that people can just pull naturally ...Naturally allows us just to gather that... as a paradigm for clients to hold onto in a natural way.

Researcher: ...So for you, nature is...a setting, that allows for...different kinds of opportunities than...what would happen in a chair?

Participant: Yes.

Thus, while a solid minority of participants (33%) described humans as deeply interconnected with the natural world and/or a part of nature, this was not the case across the board. Nature was presented as an interconnected part of humanity and, in contrast, as a setting that could be used for therapeutic benefit. The latter definition of nature seems to imply that individual mental health is separate from the well-being of the planet. Practice aligned with this definition might emphasize interventions which elicit challenge from the natural world in order to promote therapeutic change, might have more individualistic ultimate aims and visions of efficacy, and might target specific demographic populations as benefitting from this modality, compared to the broader human population. That being said, both this and the former supposition about the potential implications of a broader definition of nature represent a binary. This risks being essentializing, so perhaps a spectrum would better represent participants' views on the role of nature, the goals of the work, and the populations who might most benefit from ecotherapy.

Dichotomy in the definition of nature as problematic.

The previously depicted tension between different perspectives on how humans relate to/interrelate with the natural world was also captured when two participants (17%) expressed concerns about my choice of the term “nature-based therapies” for this study. These participants stated that the phrase NBT reflected a broader split between humans and nature that was deeply problematic. Specifically, Participant Number Five described two levels of ecotherapy; the first of which extracts humans from their interconnectedness with the rest of nature, which has

... that western, modern dualism in it... That separates out the individual or the self from the rest of nature....artificially...in my view, and... so when we talk about those nature-therapies, there really still is the idea that *I'm going to connect with some kind of nature out there and it's gonna to make me feel better...*

as well as that which sees humans as part of nature and their healing as more interconnected and holistic. This distinction, argued Participant Number Five, is incredibly challenging to step outside of because of cultural constructs of self, nature, and even language. Participant Number Four's concerns mirrored those of Participant Number Five:

Well, just even the phrasing nature-based therapy that you're using--- this is nature (holding his face)—like your psyche is part of nature, there's not something else, it's kind of, even the way that we talk about it presupposes a split...and that split is a lot of the issue, so...And just part of, we are nature, right?...It's hard to even talk about it in this way in some regards.

Thus, these participants view the split between humans and nature as the basis for the environmental issues that the world is suffering from. Additionally, while several participants expressed that humans are a part of nature or are inherently interconnected with the natural world, one participant viewed nature as a setting for optimal therapeutic use.

How nature and NBT's are defined affects their accessibility.

Two participants (17%) reported that how nature and NBT's are defined affects how readily available such interventions are to clients. One participant contrasted the idea of nature being “out there” in wild, pristine places with the idea that nature can include such close by components, as, for example, a potted plant or a dog. She stated that considering Heinsch's (2012) inclusive definition of nature that I cited at the beginning of each interview, accessibility should not be an issue:

Well, given...the definition of nature that you're starting with, I don't feel like accessibility is an issue. I mean if you think about the private pay wilderness therapy

programs going on in the rocky mountain west, those are certainly inaccessible to a lot of people, right?

This implies that if nature is defined as more remote and wild, and thus NBT's involve traveling to such places, this modality may be less financially and geographically available to many.

In addition, another participant disagreed with Maller et al.'s (2005) and subsequently, Heinsch's (2012) definition, instead advocating for a broader interpretation of the meaning of NBT's which included any kind of thoughtful engagement with a natural element, with or without a therapist present. Though this participant conceded that traditional nature-based psychotherapy may be less accessible, when defined more generally, ecotherapy presents much less access issues:

...I mean there are certainly, but now we're talking in a very conventional therapy... mode, but that's not the way all ecotherapy is practiced...I mean, some of it has, has nothing to do with any cost whatsoever...Ecotherapy can happen when a family goes to, up, you know, a National Park...And...ecotherapy doesn't always have to require a human therapist...except as some kind of catalyst or as someone who recommends it...

Thus, the way nature and ecotherapy are defined are key components in considering NBTs' accessibility, efficacy, and the populations for whom they are effective.

Summary

This findings section overviewed data collected from 12 qualitative, exploratory, semi-structured interviews with actively practicing ecotherapists from the United States. The data presented here followed the trajectory of the interviews I conducted in which several questions were asked, including what participants feel makes their practice effective, whom they feel it is most effective for, and why.

This exclusively White identified, primarily MFT, and mostly female sample enlisted a variety of NBT interventions. Perceptions about what made participants' work effective differed from interviewee to interviewee. Primary explanations for the efficacy of their practice included the healing power of nature, the different ways that NBT's are structured compared to more traditional therapies, and a combination of different factors, some of which remain inexplicable.

When asked whom they felt ecotherapy was most effective for, participants answers differed greatly and even directly contradicted each other. For example, some expressed uncertainty, others said it could be effective for anyone, and additional participants said it could be effective for those most interested in it or gave answers based on demographics or diagnoses. Participants cited those with severe mental illness or violence-related issues as not being a good fit for NBT's. They also said that those with physical issues that would affect their ability to deal with physical stress or exposure and those who object to NBT's would not benefit from these interventions. Some participants described the decision to use NBT's as a clinical one based on each unique client's needs, while others feel that NBT-related techniques are always in the back of their minds with every client.

Those without access were also cited as not benefitting from this intervention. Participants stated that clients' ability to receive services depends on a variety of factors including cost, transportation, prevalence of modality in their local area, etc. Half of participants expressed some concerns about how accessible NBT's are as they are currently practiced. Only one participant cited access issues for those with physical disabilities, but a handful of others cited the intersectionality of race, class, and access. In fact, one participant highlighted the need for ecotherapy to align itself with social justice causes.

Access to nature and NBT's, participants pointed out, depends on how one defines nature and on how one defines ecotherapy. Two participants expressed concerns about the choice of language (NBT's) and the definition of nature used in this study. Though this was not the case across the board, a small minority identified this as an issue and advocated for a more holistic definition of nature that includes humans as an indivisible part of the natural world.

CHAPTER V

Discussion

The purpose of this study was to uncover what practitioners of NBT's believe make their practices effective and for whom.

Key Findings

Twelve semi-structured interviews with nature-based therapists living in the United States revealed several main themes about what makes their ecotherapy work: 1) the biological, psychological, spiritual, and therapeutic power of the natural world; 2) the different structure of NBT's which helps to a) create challenge which is therapeutically beneficial, b) increase social supports and gel groups, and, c) bypass client resistance; and, finally, 3) different factors, some of which may remain unknown. The same responses kept arising about how participants knew their approaches were working. These included client feedback, clinical observation, and client goal accomplishment. However, participants revealed a variety of perspectives about the ultimate goals of their work. In other words, though they all measured efficacy relatively similarly, how they defined efficacy varied greatly. Some saw the ultimate goal of their work as improving individual mental health while others viewed this as healing the human-nature relationship and indirectly supporting environmentalism.

When asked about whom NBT's are most and least effective for, participants provided a variety of different perspectives, including 1) uncertainty, 2) that NBT's could be effective for anyone, 3) that NBT's are effective for certain demographic populations, as well as 4) that NBT's are effective for those with certain diagnoses. Varying numbers of participants felt that

those with more severe mental health issues, medical contraindications, objections to this modality, or lack of access to ecotherapy would not benefit from this modality. Those interviewed shared a variety of opinions about the accessibility of NBT's, including several participants stating that barriers to access could be easily overcome with the right practitioner, and half of the sample expressing concerns about how easy it is for participants to access NBT's as they are currently practiced. Barriers mentioned included the cost of and time spent on transportation, the cost of treatment, the prevalence of NBT modality, and the lack of accommodations for people with physical disabilities. Participants also talked about how race, class, and access intersect to limit low-income People of Color's access to this modality. They cited a lack of information, a lack of resources, and the Whiteness of NBT practitioners as factors affecting access.

Besides providing these answers to my primary research questions, participants also volunteered additional information that elicited three rich themes: barriers to practicing NBT's, effects of perceptions of ecotherapy on who uses this treatment, and interventions and accessibility depending on the definition of nature and NBT's. Specifically, participants defined nature as inextricably including humans, and, conversely, as a location to be used for therapeutic benefit. Some participants felt that this dichotomy and the phrase "nature-based therapies," problematically separates humans from their position as a part of the natural world.

Relevance to Existing Literature

As the field of ecotherapy is relatively new and is constantly developing, existing research on this modality lacks the solidity and topic saturation of other more thoroughly tested mental health interventions. The literature review presented earlier in this paper therefore pieces together a variety of studies from different fields about AAT, HT, WT and NRP's, the therapists

who provide NBT's, and the clients who may access NBT's. The following discussion of the findings of this study and their relationship to the research literature will be similarly divided into smaller units of research.

Demographics of practitioners and motivations for becoming involved in NBT's.

The demographics of my sample reflected the female-dominated, pro-environmental, mostly homogenously White populations that research by Wolsko and Hoyt (2012) and Marchand (2009) shared practice NBT's and WT. Almost all participants (92%) cited meaningful personal experiences as spurring their interest in pursuing this professional practice, just as Rust (2009) and Wolsko and Hoyt (2012) stated in their work. In fact, the half of participants cited meaningful experiences in childhood as motivators for their pursuit of NBT's. This fact aligns with both Ward Thompson et al. (2007) and Asah et al.'s (2011) research, which stated that childhood exposure to green spaces predicted adult motivation to be outside (Ward Thompson et al., 2007) and motivation to overcome barriers to being outside (Asah et al., 2011).

Demographics of clientele.

Though there were a dearth of studies on clients who receive NBT's aside from WT, various literature sources informed my hypothesis that between the racial and ethnic disparities in access to mental health care and the fact that NBT's are peripheral to mainstream therapy, it seemed likely that most individuals receiving NBT's were fairly racially homogenous and White (Doherty, 2009; Fong et al., 2014). Indeed, data on participants' clientele revealed that two thirds (67%) are mostly White and one third (33%) is racially diverse (a term which means that participants caseloads have a mix of White people and People of Color). Since the question I asked about participants' demographics was open-ended, participants' responses about the racial/ethnic backgrounds of their participants varied so much that it was challenging to

summarize their answers except for in the aforementioned binaried way. In addition, participants' clients' diagnoses did not reflect the more complicated clinical picture of WT clientele painted by Hoag et al.'s (2014) research. This makes sense because practitioners of WT with potentially parallel clientele were one fraction of many participants in this study. Overall, the populations served by practitioners of NBT's interviewed were consistent with the limited literature on this topic.

Interventions used.

The interventions or practices that participants cited using in their work varied as much as existing literature suggested (Berget et al., 2008; Buzzell, 2009; Cason & Gillis, 1994; Chandler, et al., 2010; Crisp, 1998; Davis-Berman & Berman, 1994; DeMayo, 2009; Gass, 1993; Gonzalez et al., 2010; Kam & Siu, 2010; Kruger & Serpell, 2006; Marchand, 2009; Parkinson et al., 2011; Russell, 2001; Rutko & Gillespie, 2013; Scull, 2009; Söderback et al., 2004; Wilson & Lipsey, 2000).

For example, Söderback et al. (2004) describe HT interventions as including viewing nature in gardens and relating to plants and their materials “for healing and for restoring health and well-being or for rehabilitation or simply for general benefit” (p.45). Similarly, the one participant who practiced HT cited providing psychotherapy in her permaculture food garden, thus incorporating natural views and other nature-based sensory experiences into each session. Similar to HT literature, Rutko and Gillespie (2013) describe WT interventions as helping clients experience wilderness, which utilizes challenges that arise in living in nature for therapeutic benefit (Bandorff & Scherer, 1994; Russell, 2001; Russell & Phillips-Miller, 2002). Indeed, Participant Numbers Three and Six both identify as practitioners of WT, and both talked about how the challenge and intensity of wilderness experiences can help promote therapeutic change.

Participant Number 11 spoke less about the challenges nature provides and more about the relationship each individual creates with the wilderness. These answers, though varied, are consistent with the literature.

AAT interventions described in research were relatively consistent with participants' responses as well. Literature describes AAT practice as involving some of the following activities/interventions: exposing the client to the animal(s) or "living other/[s];" allowing clients to take care of the animal(s); helping clients develop a relationship with the animal(s) through play, contact with, or by confiding in the animals (Berget et al, 2008; Chandler et al, 2010; DeMayo, 2009; Marino, 2012); conducting traditional psychotherapy with the animal(s) present; having the presence of the animal(s) help promote the therapeutic relationship; using interactions with the animal(s) to discuss/ role play/ re-enact the clients' human relationships and model appropriate behavior; and finally, teaching the animal(s) tricks or commands to promote client self esteem (Chandler et al., 2010; O'Callaghan, 2008). The different practitioners of AAT who were a part of this study mentioned enlisting each of these interventions.

The last type of NBT explored in the literature was NRP's. The varieties of iterations described were mostly captured in participants' responses. Scull (2009) included nature meditations and guided imagery as well as accompanying a client to do a soothing hobby in nature as part of his practices. While meditations and guided imagery were enlisted by a variety of different participants, no one expressly mentioned going with a client to practice a nature-based hobby. In addition, both Scull (2009) and Buzzell (2009) talked about asking ecotherapeutic questions in their assessment, a sentiment that was reflected in Participant Number Five's interview. Indeed, this participant and others reflected additional techniques also described by Buzzell (2009), including: conducting psychotherapy outside, assessing for ecogrief

or ecoanxiety and treating this appropriately, and encouraging clients to engage with community rather than upholding society's hyperindividualism. The only approaches described in the literature not explicitly mentioned in interviews were conducting assessments of how clients use their time and the pace of their lives, exploring how clients' diet connects to the natural world, and promoting natural healing over pharmaceutically-based healing.

Thus, both the literature and the participants in this study described using a wide variety of different interventions as part of their NBT practice. These two sets of reliable sources emphasize the lack of consistency in how ecotherapy is done, even within certain branches of the field, like HT. What is more, Participant Number 11 seemed to feel uncomfortable with labeling her work "interventions," instead preferring the word "practices." This may reflect the fact that some NBT participants see nature as the ultimate therapist, and thus may want to defer to the natural world as the agent of change or as the primary therapist. This language may also feel too clinical, and thus, could clash with how certain practitioners see themselves in relationship with their work and with the rest of nature. Interestingly, the lack of consistency of interventions is the only thing that seems to be universal about these practices.

Connections to theory.

Kaplan and Kaplan's (1989) attention restoration theory (ART), Ulrich's (1983) psycho-physiological stress reduction theory, and Wilson's (1984) biophilia hypothesis were indirectly or directly substantiated by multiple participants' perspectives (Clatworthy et al., 2013, Kalan & Kaplan, 1989; Ulrich, 1983; Wilson, 1984). Participants spoke about nature being biologically healing and relaxing for humans, which affirmed that people are soothed by and need the environments in which they have evolved. This is a central part of Wilson's (1984) biophilia hypothesis and Ulrich's psycho-physiological stress reduction theory. In addition, participants

cited nature's, and particularly, animals' ability to help clients stay in the moment. Often described in the context of discussing those with ADHD, this indirectly substantiates Kaplan and Kaplan's (1989) ART. Moreover, Markus and Kitayama's (2010) theory of mutual constitution was evidenced by the majority of participants' (92%) discussion of how they became involved in NBT's (through meaningful experiences which shaped them). Evidence for this theory was also provided by the additional portion of participants who talked about overcoming obstacles like a lack of information or infrastructure in order to develop their NBT practice (50%), and even to help build and develop the field (33%). Participant Number Three also provided evidence for this theory when she talked about how individuals who are not in "alternative" circles may not hear about NBT practice. This highlights how potential clients have been affected by their social and cultural experiences and, that the manner in which providers of NBT's shape and present their work can affect clients' likelihood to pursue therapy with them. This also shows how the client will, in turn, influence his or her therapeutic experience by eliminating or selecting NBT's as a therapeutic treatment.

In addition, Rutko and Gillespie's (2013) identification of the lack of an overarching theory to support WT was reflected by several participants' comments. This lack of clarity was revealed when participants could not fully identify what about NBT practice was effective, used phrases such as "magic," expressed uncertainty about who ecotherapy most benefitted, and explained that they had more questions than answers about why the intersectionality of psychotherapy and nature exposure was effective.

Indeed, both the interventions participants use and the theory they base their work on is lacking in universality. As such, it appears that many individual practitioners are doing what "makes sense" to them rather than leaning on clearly delineated NBT practices/interventions in

their therapeutic work. Though the grassroots feeling of this modality seems to facilitate clinician creativity, it also makes for a more muddled definition of ecotherapy, it promotes more iterations of NBT practice than what can be effectively measured, and thus, it creates serious difficulty with establishing the efficacy of the combination of nature and other more traditional psychotherapeutic interventions.

Perceptions and explanations of efficacy.

The literature lacked an overarching consensus about what makes NBT's effective, and instead overviewed what makes each branch of NBT practice work. Though I was unable to find any literature describing mental health practitioners' perceptions of what about their work is most helpful, research about occupational therapists' (OT's) perspectives was helpful. This revealed that in addition to helping promote physical benefits particularly relevant to that field, AAT interventions were also seen as providing caretaking opportunities and improving clients' motivation to engage in therapy, alertness, emotional well-being, and likelihood to interact socially (Velde et al., 2005). In addition, research shows that AATs' efficacy can be explained by its support of the therapeutic relationship and theoretically specific interventions (Asay & Lambert, 1999; Chandler et al., 2010; Lambert and Ogles; 2004). Similarly, Participant Number 10 emphasized how in her practice of AAT, she has seen increased buy-in to attend therapy, improved emotional health, and the benefits of caretaking. Indeed, practitioners of AAT spoke about how interactions with animals improve the therapeutic relationship. ,Notably, it was another participant, who does not practice AAT, who cited exposure in the natural world as somehow enhancing mindfulness and other specific interventions. In a parallel example, Kam and Siu (2010) referenced that clients participating in an HT vocational program seemed to experience a broader social network. Although no practitioners of AAT mentioned increased

socialization to help explain the efficacy of their work, Participant Number Three, who practices wilderness and adventure therapy, cited this as a result of her work. Thus, though efficacy studies were often conducted on separate interventions, the reasons for efficacy described about one branch of NBT mirrored in more than just that specific sub-branch of NBT's.

Similarly, the reasons why HT was cited as effective in the literature were mirrored in participants' responses, though not necessarily from practitioners of HT. For example, Clatworthy et al. (2013) cite HT research that describes the natural world as a "co-therapist," (Berger & McLeod, 2006; Stigsdotter et al., 2011), which was a sentiment mirrored by Participant Number Five, who practices HT and NRP's as well as Participant Numbers 10 and Seven, who both practice AAT. In addition, Clatworthy et al. (2013) reference research by Adevi, (2012) and Grahn et al. (2010) to explain that HT provides a safe and sensory-rich alternative to the human world. Participants' discussion of how NBT's offer a safe way to build intimacy and reduce barriers to therapy reflects this same sentiment. Moreover, Clatworthy et al. (2013) reference research that reflected the perspectives of 67% of participants in this study. Specifically, these researchers found that nature is a medium which lends itself towards discussing especially challenging topics (Clatworthy et al., 2013; Relf, 1981). Research by Kopp (1995) and Linden and Grut (2002) also connects to these findings stating that the natural world easily facilitates the use of metaphor.

The explanations of efficacy for the most thoroughly researched branch of NBT's, WT, were also reflected in interviews with participants of this study. For example, Orren and Werner (2007) cite research that describes the wild setting (Weston & Tinsley, 1999); the role of the group (Kiewa, 1994); the ability to practice safe risk taking (Bandoroff & Scherer, 1994; Davis-Berman & Berman, 1994); and the ability for clients to learn about themselves experientially as

reasons why this modality is effective (Kiewa, 1994). Rutko and Gillespie (2013) cited many similar factors known in the WT field and referenced specific researchers to explain this phenomenon: the challenge presented in wilderness settings (Bandoroff & Scherer, 1994; Russell & Phillips-Miller, 2002; Ungar et al., 2005); the role of the therapeutic relationship with the therapist, the group, and, if relevant, the family (Williams, 2000; Bandoroff & Scherer, 1994); the uninterrupted time for reflection (Russell, 2006); the way the modality facilitates clients experiencing natural consequences (Ungar et al., 2005); WT's ability to engage interactive learning styles (Williams, 2000); and its ease with use of metaphor (Russell & Phillips-Miller, 2002; Russell, 2001, 2006). Participant Number Six particularly highlighted the role of challenge while Participant Number Three emphasized the need for reflective time, the role of the group, and natural consequences (what she called "distress tolerance"). A majority of the sample explained the efficacy of their NBT practice by talking about nature as psychologically, spiritually, and therapeutically beneficial, a sentiment which seems reflective of the use of metaphor.

No studies on the efficacy of NRP's were available since there are so many different iterations for such practices. However, literature on passive nature exposure provides a solid basis for their efficacy (Churchill et al., 1999; Coley, Kuo & Sullivan, 1998; Diette et al., 2003; Dijkstra et al., 2008; Heinsch, 2012; Kuo & Sullivan, 2001; Malenbaum et al., 2008; McNicholas & Collis, 2000; Milligan & Bingley, 2007; Mitchell & Popham, 2008; Nielsen & Hansen, 2007; Odendaal, 2000; Ottosson & Grahn, 2008; Sherman et al., 2005; Van den Berg et al., 2003; Wood et al., 2007). Indeed, the idea that nature itself seems to be therapeutic is a sentiment shared by the majority (83%) of the sample.

In addition, while some of the concerns and questions about efficacy that were described in the research were reflected in participants' responses, other such comments were not. For example, research stated that some people are uncomfortable or dislike being in nature (Bixler & Floyd, 1997; Heinsch, 2012; Herzog & Kutzli, 2002; Milligan & Bingley, 2007). Participants' responses mirrored this. Similarly, Chandler et al. (2010) emphasized the importance of determining if AAT is a good fit for each client and each animal involved. In addition, Jordan and Marshall (2010) stated that taking clients outside can threaten the therapeutic frame, that this can cause confidentiality issues, and it can shift power dynamics in a way that is not helpful. This was shared by animal-assisted therapists who were interviewed. Though participants generally felt like taking clients outdoors helped provide a stronger therapeutic frame, some participants highlighted the lack of containment it could cause for certain individuals. Notably, Participant Number Eight directly contradicted Jordan and Marshall's (2010) statement that some feel taking clients outside could result in negative power dynamic shift. This participant talked about the leveling of power that happens when the clinician and client are outside. In addition, confidentiality issues were also cited as potential concerns by Participant Number Two.

Certain themes from the literature were not mentioned in interviews, including research that discussed how program length, facilitation and client population can affect the efficacy of NBT programming (Orren & Werner, 2007), as well as research about risks associated with AAT, including animal loss or death (Heinsch, 2012; McNicholas & Collis, 1995; Morley & Fook, 2005; Toray, 2004). Thus, while the main ideas about the efficacy of NBT's were consistent in both the literature and in data collected for this study, some smaller concepts did not surface in participants' interviews.

Populations that can and cannot benefit.

Participants' responses about who could and could not benefit from AAT, HT, WT, and NRP's was generally consistent with existing research. However, some participants' belief that those of too high of acuity would not benefit from ecotherapy was not consistent with the literature.

For instance, research cites the benefits of AAT and AAA for a variety of different populations, including those with mental health issues (Antonioli & Reveley, 2005; Nimer & Lundahl, 2007; Souter & Miller, 2007); medical issues (Freidmann et al., 1980; Nimer & Lundahl, 2007); people with symptoms of autism (Nimer & Lundahl, 2007; Redeker & Goodman, 1989); those with troublesome behaviors (Nagengast, Baun, Megel & Leibowitz, 1997); people of all ages (Nimer & Lundahl, 2007); and elders with memory issues (Churchill et al., 1999; Filan & Llewellyn-Jones, 2006; Nimer & Lundahl, 2007). In addition, a review by Chalquist (2009) suggested that AAT could help survivors of stress and trauma (Lefkowitz et al., 2005). AAT was also connected with decreased rates of depression and anxiety (Antonio and Reveley, 2005; Barker & Dawson, 1998; Brickel, 1983; Chalquist, 2009; Goldmeier, 1986; Heinsch, 2012; Shubert, 2012). Participants' responses mirrored what was cited in literature, sharing that in their experience, NBT's were effective for those with anxiety and depression, trauma, children, and those with special needs. Adults with memory issues, however, were not cited by participants as beneficiaries of NBT's.

HT literature asserts that mental health populations seem to benefit from this intervention (Clatworthy et al., 2013; Kam and Siu, 2010), a sentiment that was also reflected in participants' responses. However, Kam and Siu's (2010) study of Hong Kongers with psychosis, major depressive disorder or bipolar disorder seemed to assert the opposite of what many participants

stated: that those with more severe mental illness or risky behavior profiles would not benefit from this modality. This contradiction was again replicated by Wu et al.'s (2008) study linking Taiwanese people with schizophrenia and benefits associated with HT. This was the only notable inconsistency that arose between participants' responses and the literature.

In addition, research on WT highlights the efficacy of this intervention with teens of all levels of risk and delinquency (Cason & Gillis, 1994; Marchand, 2009; Rutko & Gillespie, 2013). Though not WT specific, over a third of participants in this study (42%) stated they felt that children and youth could benefit from ecotherapy. Thus, participants' perspectives mirrored the variety that is captured in research on this field.

In addition, Scull (2009) stated that NBT's are not a good fit for those with negative associations with nature. Though 17% of participants agreed with this, the same percentage disagreed(17%). No research spoke directly about how access affects which populations can receive NBT's, but literature did address barriers to mental health care and how People of Color in particular often have less access to these services (Fong et al., 2014; Office of Minority Health and Health Disparities, 2007). A lack of culturally humble practitioners, historically negative experiences with mental health and health care providers (Yeh, McCabe, Hough, Dupuis, & Hazen, 2003), cost, lack of insurance, social stigma around mental health care, geography, fear of retribution over immigration status, and lack of services available to non-English speakers were all listed as barriers (Fong et al., 2014). This study's participants described such factors as cost, distance, historical experiences, and geography, but did not mention the others cited in the literature. Three participants (25%) talked about the intersectionality of race, class, and access. This seems to reflect a need for increased awareness in the field about factors that likely affects the accessibility of NBT practice.

In addition, Participant Number Five talked about the importance of ecopsychology staying true to social justice values, a concept that was reflected in both Smith's (2013) and Sussman's (2014) work. Smith's (2013) article emphasizes the need to broaden the scope of who is perceived as practicing ecotherapy and the fields that are considered a part of it. This implies that a relatively homogeneous, White population provides ecotherapy. Indeed, such homogeneity was reflected in comments by Participant Numbers 11 and One. In fact, Participant Number 11 cited the lack of diversity of NBT practitioners as part of the reason for the lack of diverse clientele receiving NBT's.

Problematic dualism.

Interestingly, concerns about the dualism between people and the rest of nature is reflected in the literature, but was only described by two participants (17%). Rutko and Gillespie (2013), Buzzell (2009), Buzzell and Chalquist (2009), and Greenway (2009) are among many to write about such concerns. Greenway (2009) passionately argues:

If we view the kinds of transformation we can see during a short few weeks in the wilderness through the lenses of history, anthropological knowledge, and depth psychology, we can see that our culturally prized cognitive differentiation has become a disjunction, a rupture that shows up in nearly every culture today. Although this divisiveness may be illusory, it still manages to wreak havoc psychologically, politically, ecologically, and spiritually. We simply cannot live as if we are separate from nature and therefore from each other. (p.138)

The "cognitive differentiation" that Greenway (2009) talks about is the split between humans and the rest of nature that two participants described. After listing different ways to practice NBT's, Buzzell (2009) similarly states,

Each of these modalities addresses in its own way the core delusion that underlies so many of our difficulties: the mistaken belief that we humans are somehow separate from the rest of nature. When we joyfully connect with nature and recognize in ourselves the natural beings that we are, true healing will follow. (p.54)

All in all, this data supports the main ideas from literature about why NBT's are effective and whom they are effective for. One difference noted between participants' responses and the literature is that published research did not agree with participants' perceptions that psychotic or severely mentally ill people should not receive NBT's. Also noteworthy is the fact that most articles are about specific interventions rather than NBT's more generally, and that participants cited reasons for efficacy that often aligned with literature about different modalities than the ones that they, themselves practiced.

Variability in the field.

In addition, in my recruiting process, I encountered a couple of different potential participants whose practice may not have been defined as "clinical" and thus, who either did not meet inclusion criteria for the study or who had to wait while I consulted with my advisor to determine if they met these criteria. This process seemed to deter both of these individuals from participating in this research. Indeed, the idea that nature is the therapist, and that "ecotherapeutic interventions tend not to emphasize intrusive 'interventions' or other authority driven impositions" is one cited in the literature (Buzzell & Chalquist, 2009, p. 20). Another participant's perception that NBT's do not need to be practiced with a trained therapist present, and that, in fact, any kind of mindful nature exposure is ecotherapy highlights all the various types of practices (i.e., environmental education, outdoor recreation guiding, etc.) that could fall under a broader definition. These examples highlight how my own choice to define my sample

clinically excluded a variety of practitioners of nature-based work, and arguably, NBT. My choice of clinical language in my recruiting flyers and in my interview questions (“clinicians,” “interventions”) may have deterred certain practitioners from participating in this study. In addition, after receiving feedback from participants that the phrase “nature-based therapy” seemed to imply the very split between humans and the rest of nature which some had identified as the root of the problem, it is possible that that, too, could have deterred certain potential participants from becoming involved. In my efforts to create inclusion criteria for this study, I may have reified some distinctions which many in the field find problematic: that which is clinical and that which is not, and the separation between humans and the rest of nature. Smith (2013) explains how important it is that ecopsychology engage more diverse voices and perspectives by specifically broadening the scope of what counts as ecopsychology to incorporate diverse disciplines, including those that work for environmental justice. This imperative is relevant for the field of ecopsychology, those who practice clinical ecotherapy, those who engage in such practices by working for broader social and environmental justice, and future researchers as they consider how to frame their studies.

For clinicians who identify as practicing ecotherapy, the split between those who embrace the clinical and those who seem to have an aversion to it is yet another division in this relatively new, developing field. In addition to the inconsistency of theory and the lack of universality of practices/ interventions, this paints a picture of a modality with great promise, but which lacks the unity to be consistently applied and measured. These inconsistencies highlight the need for the field and its practitioners to come together and clarify more universal ideas about definitions, practices, and practitioners.

Inconsistencies across all aspects of this modality seem to create an atmosphere in which it is difficult to really fully know *what* about NBT's makes them effective and whom NBT's are effective for. The grass-roots structure of this field seems to also contribute to participants defining accessibility very differently. The data presented in this study is rich; however, the sample size is small, and I have emerged from this project with as many questions as answers. Ultimately, the way that NBT's are defined and practiced seems to be inextricably tied to how accessible they truly are. Though the evidence base for NBT's is lacking, the growing body of research is bolstering this modality. More research in this field is vital, and to do this, more consistency about what interventions entail, how NBT's are defined, and who "can" and who does practice ecotherapy will be critical.

Strengths and Limitations

The qualitative nature of this study allowed me to gather in-depth information about participants' perceptions of what makes their work effective and to honor the ways that they expressed themselves by quoting their words. Semi-structured interviews provided enough of a general framework to answer my research questions as well as enough flexibility to hear each individual practitioner's unique perspective.

As this study is qualitative, the findings from it are not generalizable. This provides an additional reminder that the participants interviewed only spoke about their own perspectives, not those of their colleagues or their broader field. It is hard to say whether or not this sample represents the broader community of ecotherapists in the United States and Canada, because studies only provide statistics on portions of that population (i.e. the demographics of WT clinicians or the demographics of ecotherapists in the United States). Furthermore, the small

sample size (N= 12) reflects the time limitations of the thesis process at Smith College School for Social Work.

As many of the participants in this study were very busy, they often only left one hour for their interviews. Since qualitative research is time consuming, this left some of the final questions of my interview guide feeling less thoroughly addressed. Thus, the rushed nature of certain interviews was another limitation of this study.

The most concerning limitation of this study is the racial/ethnic homogeneity of the sample. Though I advertized in community mental health settings and on various ecotherapy Facebook groups and list-serves with the intention of recruiting practitioners of a variety of different sociocultural backgrounds, I nevertheless got a relatively homogeneous, exclusively White-identified sample. As I am a White woman and many of the members of my community, and particularly, my therapist community, are White, this study's snowball sampling technique may have begun with a non-representative sample of the various clinicians who practice NBT. In addition, while I did have participants from the South, The Midwest, and the Northeast, half of this study's participants live in the West, which is where I also reside. Just as my sociocultural location as a White woman from the West who loves the natural world has affected each of my decisions in my role as a researcher, the sociocultural locations of each of the participants whom I spoke with also informed each of their responses.

Though I was able to use my methodology to answer my research question, participants' responses to a subquestion about the number of hours per week they practice NBT's out of their total hours of mental health work had such varied answers that I doubt its validity. Moreover, phrases describing SES and geographical location on the demographic form also seemed to elicit less than consistent responses than I had hoped.

Implications and Conclusions

This qualitative, exploratory study provided in-depth answers to the question, what are NBT practitioners' perceptions of what makes their work effective and for whom? Responses to the query about what made their work effective were clearer than the latter part of this question. They appealed to personal experiences, theoretical and empirical research, visible changes in their clients' presentations, and client feedback to help justify their modality's efficacy. Nonetheless, some of them still had questions about how exactly combining psychotherapy and nature exposure exactly caused therapeutic change. Furthermore, the question of who is best served by this practice elicited the broadest range of contradictions and uncertainties.

The implications of this study include the need to further research what about NBT's makes them effective, to further explore which populations most benefit from NBT's, and to have a clearer delineation of what each ecotherapy intervention entails. The myriad of different ways NBT's are practiced makes establishing enough consistency between interventions to compare and measure them difficult. Without this uniformity of interventions, efficacy studies are lacking. Without strong research proving the efficacy of this modality, fewer clinicians will be willing to embrace ecotherapy, and it will remain peripheral to mainstream psychotherapies.

In this way, this study implicates that practitioners should clarify how nature and NBT's are defined in the field so as to shed light on what each intervention entails. Respondents highlighted that the access of this intervention is largely dependent upon how it is defined and how it is practiced. Literature and participants' perspectives stressed the fact that differences of opinions about the definitions of ecotherapy and the scope of NBT work have been divisive and ultimately harmful for this practice (Sussman, 2014). Thus, an additional implication is the need for the field to come together to better delineate what ecotherapeutic work really means and how

this field can move forward together. While half of the practitioners in this study expressed concerns about the access of their current practice, half did not. Both these responses and the literature highlighting access disparities have strong implications for the need to expand culturally humble, accessible services.

Though some might feel it is appropriate for NBT to be on the sidelines of most psychotherapy practice, the relationship between humans and the planet seems too fundamental to only be thought about and discussed by a small minority of practitioners. Just as one participant reminded me, considering the family system helped revolutionize individual psychotherapy; thus, fully considering each person in their environment, and, in such, their relationship *with* (and arguably, as a part of) their environment is a critical next step for the field of psychotherapy and the well-being of our planet.

Even as I advocate for additional research and the broader use of ecotherapy, I recognize that tensions may exist between these recommendations and some sentiments in the field. Firstly, there may be mixed feelings about the desire to rigorously quantify and measure something that may feel immeasurably deep and even sacred. It could seem irreverent or even obsessively empirical to try to make a planet that helps meet our needs for survival fit into socially constructed measurements that are then called immutable. Indeed, Roszak (2009) identifies the “ecological unconscious,” or “our sympathetic bond with the natural world” (p. 36) that he calls *part of human nature*, while Rust (2009) borrows a term from philosophy, “ecological self,” to describe the sense that our identity as humans is incorporated into the living planet in a spiritual way (Macy, 2009; Rust, 2009). A combination of spiritually and the science of systems theory and cybernetics inform Joanna Macy’s (2009) idea that there is no “self” and “other,” but that humans are included in the natural world and the natural world includes

humans. One might ask, if we are a part of the natural world, can the effects of the natural world on us ever be truly knowable? If those in the field conceptualize the self as part of nature in a spiritual way, how do they relate to the push by researchers to expand the scientific basis for NBT's through empirical studies? Chalquist (2009) addresses this dilemma by highlighting the dangers of both the idea that we can "truly know" and the idea of dismissing research all together. He ultimately advocates for thoughtful, humble research focused on the relationship between humans and the rest of nature:

The key is keeping the focus steady on the center, the lived relationship between us and the rest of nature, a relationship neither only subjective nor only objective, but overarching and irreducibly alive: what could be called a "transjective" reality co-created in the very acts of researching, conserving, analyzing, and healing. Taking priority over any more partial view, sustained contact with this ever-mysterious, undomesticatable, in-between reality provides ecotherapeutic methods with their power to heal. (Chalquist, 2009, pp. 69-70)

Secondly, these ideas directly conflict with much of the way mental health is currently conceptualized, diagnosed, and treated. The existing system is deeply invested in homeostasis. The broader social ecology of mental health work in the United States is influenced by the values that have been ever present in this nation since its formation: individualism, capitalism, and the more commonly problematized "-isms" such as racism, sexism, homophobia, and ableism, to name a few. They are present regardless of whether counseling or psychotherapy is conducted in private practice, in community mental health settings, or outdoors. They provide the context for the view that mental health problems originate within the individual and can be diagnosed and treated by experts who rely on evidence-based practice within a managed care system. This way

of understanding and addressing mental health in the United States is remarkably entrenched. The risk of trying to encourage NBT's to be more broadly accepted is that they could be misinterpreted and commodified. Buzzell and Chalquist (2009) stress that

...ecotherapeutic practices cannot be used to lasting effect from within the old colonial-consumer mind-set. Animals are not mere tools, nor is the Earth a gigantic breast to be heedlessly sucked to exhaustion. Using nature as a mere tool for human healing perpetuates the very self-world splits responsible for both our ecologically resonant maladies and a deteriorating biosphere. (p. 20)

In other words, ecotherapy should not be an equivalent to psychotherapy, but should instead be a way to heal humans and the planet. If it is to be embraced more broadly, it will be important to beware of the deleterious effects of franchising it (Buzzell & Chalquist, 2009).

Neither the current dearth of methodologically rigorous studies that integrate the various components of nature nor the promotion of this modality without careful consideration of the roles that humans play in/ as a part of the environment is appropriate. Instead, methodologically rigorous studies need to seek out the solid evidence base to promote NBT's while mental health practitioners, environmental educators, community gardeners, docents, and others who work and engage intimately with the rest of nature need to thoughtfully begin a ripple of conversations with each other and the public about humans' role and relationship to/ with /in the trajectory of the planet. In other words, both developing the science to validate NBT's and considering the philosophical and spiritual elements of these relationships are vitally important.

In looking to the future, a series of studies may help strengthen the research base for ecotherapies, a movement which can help us change the trajectory of our own health and the health of our planet. First, client perspectives would help supplement this research and

potentially triangulate the data about what makes NBT's effective, ultimately helping to determine if clients receive these interventions in the way that their therapists conceptualize them. One critical area for further research that was only briefly mentioned in this study is how disabilities (physical and not, visible and invisible) interface with access to NBT's. In addition, the role that gender plays in experience of efficacy of NBT practice also warrants further research (Byrne & Wolch, 2009; Parkinson et al., 2011). More quantitative and rigorous research on the efficacy of NBT's, which can provide the evidence for causality, is needed (Annerstedt & Wahrborg, 2011; Clatworthy et al., 2013; Kuo & Sullivan, 2001; Parkinson et al., 2011).

Social workers can bring a unique perspective to NBT work because of the influence of person-in-environment on their thinking and practice (Heinsch, 2012). Moreover, social work's commitment to social justice means that social workers can help advocate for solutions to macro-level issues of inequity to green spaces, lack of access to healthy foods, and the disproportionately deleterious effects of environmental toxins and climate change on disadvantaged communities. At mezzo and micro levels, social workers can address the lack of information, access, and culturally humble NBT practice for those populations who do not have access to ecotherapy. In addition, social workers can help raise awareness of the need for NBT's to take an anti-oppression framework and consider how sociocultural identity, including such factors as race/ ethnicity, class, physical and/or cognitive ability, gender, and language barriers affect the ability to utilize existing NBT services.

In conclusion, this exploratory, qualitative study involved 12 semi-structured interviews with practitioners of ecotherapy. These interviews allowed for deep exploration of the question, what do ecotherapists think makes NBT's effective and for whom? The main findings of this

study were that participants explained the efficacy of their practice by the biological, psychological, spiritual and therapeutic power of the natural world, the different ways that NBT's are structured, and some additional factors that may remain unknown. In addition, though participants measured whether or not the interventions of their work were effective by similar means (client feedback, client observation and client goal accomplishment), their visions for the ultimate goals of their work varied from improving individual mental health to healing the broader relationship between humans and the rest of the natural world. Participants' perspectives on who most benefitted from this modality reflected a similar difference of opinions; while some believed it would benefit anyone, others stated that certain populations would benefit according to their mental health diagnoses or their age or gender identities. Some participants felt that those with severe mental health issues, medical contraindications, objections to NBT, or lack of access to NBT's could not benefit from them. In addition, half of participants expressed concern about the accessibility of ecotherapy, and others nuanced this statement by pointing out that access is contingent upon how nature and ecotherapy are defined. Thus, the main implications of this study are that there is a lack of universality of practice that makes measuring efficacy difficult. Ecopsychology and NBT's must work to better define what NBT's entail and what nature is in order to gain the research backing to be brought more into the mainstream. In this process, they must also consider the accessibility of their interventions. It is critical that this is a thoughtful process that respectfully acknowledges the power of the natural world and the place that humans fit into the bigger scheme of ecosystems and time. This process should also question the influences of individualism, capitalism, and other forms of bias that are part of the building blocks of our current pathologizing model for mental health care. Though nature itself should never be quantified, these interventions must be more universal and

measurable in order to help spread the vital mission of NBT's. Therefore, for the future of this modality, the health and well-being of humans and rest of the natural world, the field of ecotherapy needs to unite to build a stronger infrastructure to strengthen and thoughtfully, subversively spread these practices.

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Appendix A

Example of Initial “Cold Contact” Communication for Email

Hi [insert name of individual or group here],

My name is Fiona Lundy, and I am a graduate student in clinical social work at Smith College. I am contacting you because you are a mental health clinician who practices nature-based therapy. I am currently recruiting participants for approximately hour-long interviews for qualitative research for my master’s thesis and wanted to see if you might be interested in participating.

Specifically, I am looking to interview those with MSW’s, LCSW’s, LICSW’s, MFT’s, Masters degrees, PsyD’s, and/or a PhD’s in Counseling or Psychology who provide nature-based therapies to individuals and/or groups in the U.S. or Canada. Nature-based therapies can include, but are not limited to, wilderness therapy, animal-assisted therapy, horticultural therapy, and other nature reconnection practices. These interviews will help me answer the following research question: which components of nature-based therapies are most effective and for whom?

Interviews will be conducted via webcam, phone, or, for participants who live in the San Francisco Bay Area, in person. They will be conducted in the winter and spring of 2015. All data collected will remain confidential and protected according to Smith College School for Social Work’s Human Subjects Review Committee guidelines. Information from the data collected will contribute to the research base of this developing field.

If you are interested in participating, or if you would like further information, please respond to this email. Please do not hesitate to contact me with any questions or concerns.

Thanks so much for your time!
Sincerely,

Fiona Lundy
Smith College School for Social Work
Class of 2015

Example of Email to Use for Snowball Recruiting based on Previous Participants’ Contacts

Hi [insert name here],

My name is Fiona Lundy, and I am a graduate student at the Smith College School for Social Work. I got your contact information from [insert name of previous interviewee/contact], who informed me that you are a mental health clinician who practices nature-based therapy. I am currently recruiting participants for approximately hour-long interviews for qualitative research for my master’s thesis and wanted to see if you might be interested in participating.

Specifically, I am looking to interview those with MSW's, LCSW's, LICSW's, MFT's, Masters degrees, PsyD's, and/or a PhD's in Counseling or Psychology who provide nature-based therapies to individuals and/or groups in the U.S. or Canada. Nature-based therapies can include, but are not limited to, wilderness therapy, animal-assisted therapy, horticultural therapy, and other nature reconnection practices. These interviews will help me answer the following research question: which components of nature-based therapies are most effective and for whom?

Interviews will be conducted via webcam, phone, or, for participants who live in the San Francisco Bay Area, in person. They will be conducted in the winter and spring of 2015. All data collected will remain confidential and protected according to Smith College School for Social Work's Human Subjects Review Committee guidelines. Information from the data collected will contribute to the research base of this developing field.

If you are interested in participating, or if you would like further information, please respond to this email. Please do not hesitate to contact me with any questions or concerns.

Thanks so much for your time!

Sincerely,

Fiona Lundy
Smith College School for Social Work
Class of 2015

Example of Email Following Up After One Contact to Check in about Interest in Returning Forms/ Considering Participation:

Hi [insert name],

I am writing to follow up with you to determine your interest in participating in my research study for nature-based therapists. It would require talking about your practice of nature-based therapy in an interview that will last approximately one hour. Participation is completely voluntary. If you are interested, or you are considering participating, please contact me to ask clarifying questions, discuss concerns, or request demographic and informed consent paperwork.

Thank you!

Sincerely,

Fiona Lundy
Smith College School for Social Work
Class of 2015

Example of Initial "Cold Contact" Communication for Social Networking Websites

Are you a mental health practitioner who facilitates animal-assisted therapy, horticultural therapy, wilderness therapy, or other nature reconnection practices at work?

Would you like to support research about nature-based therapies by participating in an hour-long interview with a graduate student?

Who: Practicing MSW's, LCSW's, LICSW's, MFT's, those with a Masters in Counseling or Psychology, a PsyD, &/or a PhD who provide nature-based therapies to individuals &/or groups in the U.S. or Canada (wilderness therapy, animal-assisted therapy, horticultural therapy, other nature reconnection practices)

What: Graduate research in the field of clinical social work

Where: In person, phone, & webcam interviews

When: Winter & spring of 2015

Why: To help determine which components of nature-based therapies are most effective & for whom

How: Hour-long interviews describing your perspective

If so, please email or call Fiona, MSW candidate at Smith College School for Social Work -to see if you qualify to participate in this important research.

[Attach flyer from Appendix B]

Are you a *mental health clinician* who practices *nature-based therapy*?



Photo from <http://tmacfitness.com/natures-hidden-gems/>

Would you like to talk about your work & support research in this field?

- Who: Practicing MSW's, LCSW's, LICSW's, MFT's, those with a Masters in Counseling or Psychology, a PsyD, &/or a PhD who provide nature-based therapies to individuals &/or groups in the U.S. or Canada (wilderness therapy, animal-assisted therapy, horticultural therapy, other nature reconnection practices)
- What: Graduate research in the field of clinical social work
- Where: In person, phone, & webcam interviews
- When: Winter & spring of 2015
- Why: To help determine which components of nature-based therapies are most effective & for whom
- How: Hour-long interviews describing your perspective

If so, please email or call Fiona,
MSW candidate at Smith College School for Social Work
for more information

ARE YOU A MENTAL HEALTH CLINICIAN WHO PRACTICES NATURE-BASED THERAPY?



WANT TO TALK ABOUT YOUR WORK & SUPPORT RESEARCH IN THIS FIELD?

- ❖ **Who:** Practicing MSW's, LCSW's, LICSW's, MFT's, those with a Masters in Counseling or Psychology, a PsyD, &/or a PhD who provide nature-based therapies to individuals &/or groups in the U.S. or Canada (wilderness therapy, animal-assisted therapy, horticultural therapy, other nature reconnection practices)
 - ❖ **What:** Graduate research in the field of clinical social work
 - ❖ **Where:** In person, phone, & webcam interviews
 - ❖ **When:** Winter & spring of 2015
 - ❖ **Why:** To help determine which components of nature-based therapies are most effective & for whom
 - ❖ **How:** Hour-long interviews about your perspective as a clinician
-

Email or call Fiona, MSW candidate at Smith College School
for Social Work--for more information

Nature-based therapy research for clinicians	Nature-based therapy research for clinicians	Nature-based therapy research for clinicians	Nature-based therapy research for clinicians	Nature-based therapy research for clinicians
Email Fiona, MSW Candidate @ Smith	Email Fiona, MSW Candidate @ Smith	Email Fiona, MSW Candidate @ Smith	Email Fiona, MSW Candidate @ Smith	Email Fiona, MSW Candidate @ Smith

Are you a mental health practitioner who facilitates
animal-assisted therapy,
horticultural therapy,
wilderness therapy,
or other
nature reconnection
practices
at work?



(From left to right: photo from <http://www.motheearthnews.com/organic-gardening/fall-garden-zm0z11zmat.aspx#axzz3LeVvjHeL>; photo from <https://www.petfinder.com/dogs/dog-training/training-therapy-dog/>; photo from <http://www.openskywilderness.com/why-open-sky/what-is-wilderness-therapy>)

Would you like to support research about
nature-based therapies by participating in an
hour-long interview with a graduate student?

If so, please email or call Fiona, MSW candidate at
Smith College School for Social Work-,
-for more information

Appendix C

Thank you so much for your interest in this nature-based therapy research! Please read the following consent and demographic forms and, if you agree to participate and are eligible, complete both. Please return them to me within two weeks in the attached stamped and self-addressed envelope.

Thank you,
Fiona Lundy

Scope of Professional Practice:

- 1) Are you a mental health clinician with at least one of the following degrees/ qualifications to practice psychotherapy/ counseling/ therapy for individuals/ and or groups: MSW, LCSW, LICSW, MFT, a Masters degree, PsyD, and/or a PhD in Counseling or Psychology? (*Circle one answer below*)

Yes No

Name of degree/s: _____

Year/s of graduation: _____

License(s) with which you practice: _____

- 2) Do you practice in the United States or Canada? (*Circle one answer below*)

Yes No

- 3) How many years have you been practicing psychotherapy/ counseling/ therapy with a master's level degree or higher?

_____ years

- 4) How many years have you been practicing nature-based therapies, like animal-assisted therapy, wilderness therapy, horticultural therapy, or nature-reconnection practices?

_____ years

- 5) What kind of nature-based therapy do you currently practice? (*Circle as many answers as apply. If you select other, please describe*)

Animal-assisted therapy

horticultural therapy

wilderness therapy

nature reconnection practices

other: _____

- 6) How many hours a week, on average, would you say that you spend practicing nature based therapies?

_____ out of a total of _____ hours per week that do mental health work.

7) In what setting(s) do you currently practice nature-based therapies? (*Circle as many as are applicable below*)

private practice community mental health inpatient setting school-based setting
forensic setting other: _____

8) In what setting do you practice? (*Circle one below*)

urban semi-urban rural semi-rural suburban
semi-suburban

9) With which populations do you currently practice nature-based therapies?

children adolescents adults seniors families
individuals couples groups

Demographic Information

10) What is your gender identity?

11) How do you identify racially and/or ethnically?

12) What is your age?

_____ years old

13) How would you describe your socioeconomic class identity? (*Circle one*)

working class middle class upper middle class well off

14) What state or province do you live in?

15) How would you describe the area in which you reside? (*Circle one*)

urban semi-urban rural semi-rural suburban
semi-suburban



**Consent to Participate in a Research Study
Smith College School for Social Work • Northampton, MA**

.....
Title of Study: Nature-Based Therapists' Perceptions about the Efficacy of their Work

Investigator(s): Fiona Lundy, Smith College School for Social Work
.....

Introduction

- You are being asked to be in a research study of practitioners of nature-based therapies.
- You were selected as a possible participant because you are a mental health practitioner who uses nature-based therapies with your clients in your professional work in the United States and/or Canada.
- I ask that you read this form and ask any questions that you may have before agreeing to be in the study.

Purpose of Study

- The purpose of the study is to learn about nature-based therapists' perceptions about what makes their work effective and for whom.
- This study is being conducted as a research requirement for my master's in social work degree.
- Ultimately, this research may be published or presented at professional conferences.

Description of the Study Procedures

- If you agree to be in this study, you will be asked to do the following things: complete a demographic form and be interviewed individually by the researcher for approximately one hour. The interview will take place via webcam, phone, or face to face at a time convenient for you. If you agree, the interview will also be audio recorded.

Risks/Discomforts of Being in this Study

- There are no reasonable foreseeable risks.

Benefits of Being in the Study

- The benefits of participation include having an opportunity to share your thoughts about your nature-based therapy work and helping to build a research base for this important work. Describing your nature-based therapy work may provide you with an opportunity to reflect on components of your current practice and the state of this developing field.
- The benefits to social work and society include: helping develop best practices for nature-based therapy work, identifying which populations this field effectively serves and which populations, if any, are not benefitting from these interventions. An additional benefit is determining areas for further research.

Confidentiality

- Your participation and any data collected will be kept confidential. I will be the only individual who will have access to the data collected. Should any volunteer or professional interview transcribers be hired, they will have signed an agreement binding them to maintain the highest standards of confidentiality. Face to face interviews will take place in coffee shops, in private clinical offices, or in another public setting of your choosing. Webcam and phone interviews will take place while I am in the privacy of my home or office. In addition, the records of this study will be kept strictly confidential. You will be assigned a number that will be on the recording and transcription; your name will not be included in the recording or the transcription. Transcriptions will be destroyed after the mandated three years. Audio recordings will be permanently deleted from the recording device once they have been transcribed. Your signed informed consent form will be kept separately from the transcription and will be locked in a filing cabinet for the mandated three years.
- All research materials including recordings, transcriptions, analyses and consent/assent documents will be stored in a secure location for three years according to federal regulations. In the event that materials are needed beyond this period, they will be kept secured until no longer needed, and then destroyed. All electronically stored data will be password protected during the storage period. I will not include any information in any report I may publish that would make it possible to identify you.

Payments/gift

- You will not receive any financial payment for your participation.

Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study *at any time* (up to the date noted below) without affecting your relationship with the researcher of this study or Smith College. Your decision to refuse will not result in any loss of benefits (including access to services) to which you are otherwise entitled. You have the right not to answer any single question, as well as to withdraw completely up to the point noted below. If you choose to withdraw, I will not use any of your information collected for this study. You must notify me of your decision to withdraw by email or phone by April 1, 2015. After that date, your information will be part of the thesis.

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, Fiona Lundy, at . If you would like a summary

of the study results, you can inform me of this and one will be sent to you via email once the study is completed. If you have any other concerns about your rights as a research participant, or if you have any problems as a result of your participation, you may contact the Chair of the Smith College School for Social Work Human Subjects Committee at (413) 585-7974.

Consent

- Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep.

.....

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

.....

1. I agree to be audio taped for this interview:

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

2. I agree to be interviewed, but I do not want the interview to be taped:

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

Form updated 9/25/13

Appendix D

Logistics/ Introductions:

- State participant #
- Overview the research question and the reasons for the study:
 - “What techniques of ecotherapy do you think are most effective, and for whom?”
 - Completion of my master’s degree in clinical social work
- Review informed consent, right to stop interview at any time, not answer certain questions, etc.
- Collect demographic form if not previously submitted and review it
- Provide definition of nature:
 - Nature: “the spectrum of habitats from wilderness areas to farms and gardens. Nature also refers to any single component of the natural environment (such as plants, animals, soil, water, or air) and includes domestic and companion animals as well as potted plants” (Heinsch, 2012).

1. Origin of Clinician’s Motivation for Involvement in NBT’s: What sparked your interest in practicing NBT’s?

Prompts:

* What, if any, were the major personal experiences that led you to utilize these approaches in your work?

*What, if any, were the major professional experiences that lead you to NBT?

*What, if any, were the major educational experiences that lead you to NBT?

2. Specific Interventions: What are some examples of the types of ecotherapeutic interventions that you use?

Prompts:

*What kinds of activities/ comments/ differential use of self/ use of nature would you incorporate in your practice of [insert type of NBT]?

3. Demographics of NBT Clientele: Can you please describe the clients you typically work with in your NBT practice?

Prompts:

*How diverse are they in terms of age, gender, race/ ethnicity, native languages, and socioeconomic status (SES)?

*What are the presenting problems that cause them to come to mental health treatment? What is your “typical client”?

4. Clinician’s Perspectives on Efficacy of NBT’s: How do you know when your approaches are working or not working with your clients?

Prompts:

*What is it about **your** practice of [insert specific branch of NBT that clinician practices] that makes it effective **for your clients**?

*What do your approaches “working” mean to you? (Define efficacy)

5. Clinician’s Perspectives on Efficacy and Demographics of Clientele: Whom do you feel the ecotherapy is most effective for and why?

Prompts:

*Is there anyone you feel ecotherapy is not effective for or who may be left out of this practice? (Consider such factors as: cost, accessibility, presenting issue, etc.)

*And if so, why do you think this is?

Appendix E

Volunteer or Professional Transcriber's Assurance of Research Confidentiality

This thesis project is firmly committed to the principle that research confidentiality must be protected and to all of the ethics, values, and practical requirements for participant protection laid down by federal guidelines and by the Smith College School for Social Work Human Subjects Review Committee. In the service of this commitment:

All volunteer and professional transcribers for this project shall sign this assurance of confidentiality.

A volunteer or professional transcriber should be aware that the identity of participants in research studies is confidential information, as are identifying information about participants and individual responses to questions. The organizations participating in the study, the geographical location of the study, the method of participant recruitment, the subject matter of the study, and the hypotheses being tested are also be confidential information. Specific research findings and conclusions are also usually confidential until they have been published or presented in public.

The researcher for this project, Fiona Lundy, shall be responsible for ensuring that all volunteer or professional transcribers handling data are instructed on procedures for keeping the data secure and maintaining all of the information in and about the study in confidence, and that that they have signed this pledge. At the end of the project, all materials shall be returned to the investigator for secure storage in accordance with federal guidelines.

PLEDGE

I hereby certify that I will maintain the confidentiality of all of the information from all studies with which I have involvement. I will not discuss, disclose, disseminate, or provide access to such information, except directly to the researcher, Fiona Lundy, for this project. I understand that violation of this pledge is sufficient grounds for disciplinary action, including termination of professional or volunteer services with the project, and may make me subject to criminal or civil penalties. I give my personal pledge that I shall abide by this assurance of confidentiality.

Signature

Date

Fiona Lundy

Date

Appendix F



School for Social Work
Smith College
Northampton, Massachusetts 01063
T (413) 585-7950 F (413) 585-7994

February 1, 2015

Fiona Lundy

Dear Fiona,

You did a very nice job on your revisions. Your project is now approved by the Human Subjects Review Committee.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Congratulations and our best wishes on your interesting study.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elaine Kersten'.

Elaine Kersten, Ed.D.
Co-Chair, Human Subjects Review Committee

CC: Kelly Mandarino, Research Advisor