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Review Article

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An Evidence-Based Approach to Assess Ecotherapy Currently in Practice

Mary J. Thornbush*

Abstract

In this systematic review, an evidence-based approach is adopted to address the use of ecotherapy in psychotherapeutic practice. Two literature databases (APA PsycNET, Web of Science) were searched for environmental psychology (or ecopsychology) and ecotherapy to access practice-relevant studies. The searches derived 15 items that are examined in detail in this paper. Summary tables are provided of information about study type, impetus, activities, data collection, and sample size, plus demographic information concerning sex/ gender, age, ethnicity/ race, and education. Data are scanty for the latter two demographic variables. The available evidence suggests that studies are predominantly White (Western), mainly completed as participants by those with at least an undergraduate degree, and dominated by women participants from a range of ages. Introducing ecotherapy into psychotherapy may serve as a way to contribute towards diversity through Indigenous perspectives of nature.

Keywords: Human-nature relationship; EcoWellness; Ecocentric values; Ecological self

Introduction

By 1970, it was already known that the physical environment has the power to influence affect, arousal, and exploratory activity [1]. Adaptation level theory was used to identify sources of positive and negative affect. For example, stress and discomfort emanating from the environment causes us to adapt. It was also acknowledged then [1] that very little was known concerning the long-term behavioral effects of exposure to visual and auditory stimuli, as for instance associated with urban living (e.g., urban ghettos, city center congestion, rush-hour traffic in urban freeways, life near a jetport or industrial plant, etc.). The influence of environmental problems (e.g., pollution, congestion, depletion of natural resources, etc.) had not been considered by psychologists or therapists in terms of their potential to affect attitude formation and change [1]. Furthermore, the mediation and transformation of environmental effects had not been considered through symbolic activity and interpersonal societal and cultural influences; and individual differences in response to the environment had likewise not been investigated before the disciplinary emergence of environmental psychology [1].

Ecotherapy applies the disciplinary principles of environmental psychology (or ecopsychology) in psychotherapy. As such, its practice draws from the published evidence base of the discipline, which also influences training and future developments [2]. At the core of ecotherapy is the belief in the human-nature relationship, that we are connected to our natural setting [3,4]. Environment has provided the context for human evolution for thousands of years, and is a critical factor affecting our perception [5,6], cognition [7], motivation, attitude formation, and behavior [8-10].

Affiliation:

Family Relations and Applied Nutrition, University of Guelph, 50 Stone Road East, Guelph, ON N1G 2W1, Canada.

***Corresponding author:**

Mary J. Thornbush, Family Relations and Applied Nutrition, University of Guelph, 50 Stone Road East, Guelph, ON N1G 2W1, Canada.

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Since the human-nature relationship can offer us a sense of being connected to ecology and the natural environment [7], it has the potential for healing. Indigenous peoples have known this about the healing qualities of nature before the advent of ecopsychology and ecotherapy. A decolonial psychotherapy that applies "Two-Eyed Seeing" [11] recognizes ancestral spirituality and folk healing methods. Additionally, decolonial psychotherapy acknowledges the Latin American construct of *vincularidad*, which is rooted in Indigenous cosmovision, alluding to our interconnectedness to all organisms [12], the environment [13], and the cosmos [11].

In this way, ecotherapy adopts worldviews of nature and responsibility [14] that promote a togetherness with nature. It provides an alternative or additional resource for Western psychotherapists or counsellors to work in more constructive ways with Indigenous peoples. More culturally aware and informed studies are, therefore, needed to explore the benefits of ecotherapy over traditional therapy – as for Indigenous clients. For example, "relationality" from an Indigenous worldview acknowledges the importance of relationships between all life forms existing in the natural world [15].

The development of our "ecological self" springs from ecocentric values that develop as we recognize our connection to and interdependence with the natural world [16]. Inherent conceptions of "Mother Nature" are linked to notions of anthropomorphism [17] and convey our interdependence. Contemporary environmental issues, such as the "climate change crisis," are distressing and anxiety-provoking in people [18] – especially major (extreme) events [19-21]. Ecotherapy is healing in that it can take clients outside (22,23,4], or otherwise bring nature indoors [24], where clients can be stimulated by the natural world and feel united with it. In other words, there are many different applications of ecotherapy in clinical practice today – although they are all grounded on the human-nature relationship and the healing elicited by this connection.

The purpose of this paper is the contribution of an evidence-based publication based on contemporary literature on ecopsychology and ecotherapy. As a systematic review article, it is led by the research question: How is ecotherapy delivered in contemporary therapeutic practice? By asking this question, it is possible to address the different forms that ecotherapy currently adopts in clinical practice. This endeavor is an interesting one because of the potential for different applications of ecotherapy by therapists that could be encapsulated in published studies and have the potential to inform traditional clinical practice.

Methods

Searches were executed on October 30, 2025 in APA PsycNet (link: https://psycnet.apa.org/permalink/10e5e2e4-2cbb-47a1-75e7-58805cf302a4) and on November 6, 2025 in the Web of Science or WoS (link: https://www.webofscience.com/wos/woscc/summary/c3345d45-244c-4025-8b1f-fcf7ffa755d4-0187116add/0428e3f0-487b-4853-ad80-a5f132c9d01a-018710e357/relevance/1) through the University of Guelph Library portal. For the PsycNet search (website: https://psycnet.apa.org/search/basic), peer-reviewed, APA full texts were selected resulting from the search string "eco-therapy OR ecotherapy," which resulted in only 2 results. This was subsequently followed by another search for "environmental psychology," that broadened the original search and produced 307 results in PsycArticles. Searches within this result included for "climate change" (10 results) and emotion OR emotions (11 results). The WoS search (https://www.webofscience.com/wos/woscc/smart-search) resulted in 2197 results from their core collection for "environmental psychology" (and the search produced 2313 results when the search string "environmental psychology" OR ecotherapy was used). "Ecopsychology" resulted in 306 results, and this was refined with "therapy" to generate 32 items; and when refined with "clinical" 26 items were returned. However, having a focus on ecopsychology caused the most sources to be derived from the Ecopsychology journal, which could not be accessed from the University of Guelph Library. All content from Psychology Interdisciplinary as a category resulted in 144 items for ecotherapy, and this was refined to 130 by selected article, review article, book chapters, editorial material, proceeding paper, early access, book, and letter; not

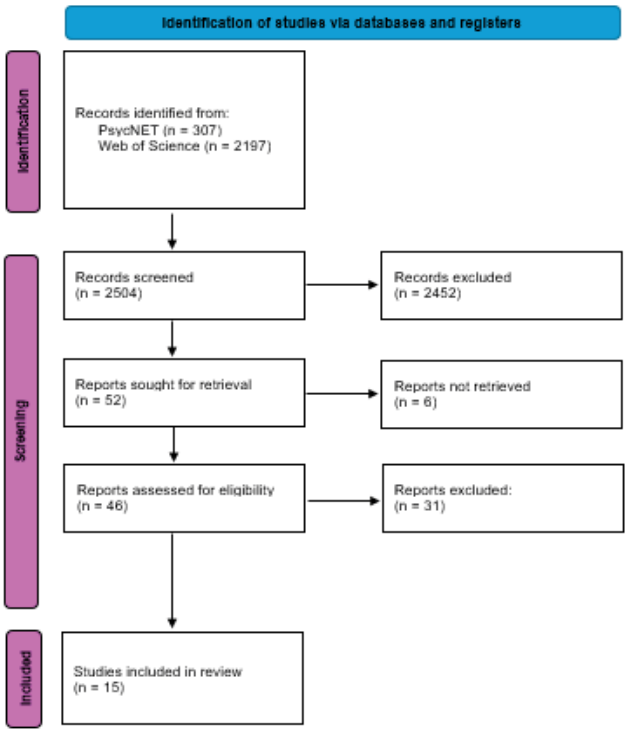

Figure 1. Flow chart of the searches executed in PsycNET and WoS in October-November 2025 modified from [25]. This work is licensed under CC BY 4.0. To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/.

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book review, meeting abstract, news item, poetry, retracted publication, retraction, and software review. This search was further refined to 31 items by selecting WoS Categories, including Psychology Clinical, Psychology Psychoanalysis, Psychology Applied, and Rehabilitation, which were most related to therapy, but excluding general Psychology and Psychiatry. In the end, 25 PDFs were downloaded from this search, and 15 studies were included (Figure 1).

Inclusions and Exclusions

The focus was on therapeutic interventions or clinical work. For this reason, a methods section was required by the sources among the inclusions; although, some of the excluded literature was integrated into the introduction and discussion. Exclusions included other review papers [e.g., 26]. Some studies were off-topic [e.g., 8,27-29,3,30-32], and these were also excluded. Editorials [e.g.,33-35] were excluded. There was also a tested intervention [e.g., 10] among the literature that was excluded.

Results

A total of 15 items are summarized in Table 1 on the basis of study type, the purpose or aim(s) of the study (impetus), activities involved, type of data collected (including sampling, where available), and sample size. Among these were four items from the PsycNET search and 11 were from the WoS search. A variety of journals are represented among the search items, including most frequently (alphabetically): Counselling and Psychotherapy Research, the European Journal of Psychotherapy & Counselling, and the Journal of Creativity in Mental Health, and the International Journal for the Advancement of Counselling. In these studies, sample size broadly ranged between 2 and 792 participants. Most studies (two-thirds) employed a qualitative research design, mainly involving interviews. These typically lasted between 20 and 60 minutes, with most of a 40–50-minute duration. Activities were unique to each study, with completing questionnaires or surveys in Qualtrics appearing in several studies.

Demographic information for the participants in these studies appears in Table 2, including information collected about sex/ gender, mean age, ethnicity/ race, and education. The latter was least reported in these studies – and only conveyed in 40% of them. Additionally, one-third of the studies were missing details about ethnicity/ race. Three of the studies were sex/ gender-balanced, with most (73%) dominated by women. White or Caucasian ethnicity/ race similarly dominated the samples, and two studies were based fully (100%) on White participants. In some cases, it was not clear whether participants were White because they were documented according to their ethnicity rather than race (e.g., Australian, British). These studies are predominantly American and British. A couple were based on Master's programs for counsellors in training (CITs), and one sampled undergraduates. Based on the information provided, participants had at least an undergraduate degree. The age range was between 15 and 54 years, including a mixture of clients, therapists, and students.

Table 1. Summary of information acquired from review sources.

Study Type	Impetus	Activities	Data Collection	Sample Size (n)	Source
Quantitative – between-groups experiment (online study was hosted on Qualtrics); average 18 minutes for completion	To inform communication efforts and provides a simple yet targeted strategy to increase proenvironmental support	Reading a (fabricated) newspaper article and then completing the self-report measures of AMP-19, Environmental Guilt, and LAT-19 and LAT-CC	Snowball sampling; included a control group (randomly assigned)	325	Breen and Pensini [17]
Qualitative design – inductive data analysis (CQR); screening exercise delivered through Google Forms with semi-structured questions; interviews lasted on average ~40 minutes, using Zoom software	Ecocentric values of interconnection, reciprocity, and gratitude were emphasized throughout the program	Exercises included sit spots, tree trust practice, nature mandala, and psychoeducation	Data collected through online software, using Google Forms and Zoom	9	Deal et al. [16]
Qualitative – inductive approach	14-week ecotherapy class in as Master's level program in professional counselling	Weekly experiential activities, e.g. green therapy, group-building, horticultural therapy, forest bathing, equine-assisted therapy, archery, and other outdoor activities	Readings, weekly journals, a reciprocity project, and an evidence-based ecotherapy intervention; focus group, follow-up (semi-structured) individual interview, 30-45 minutes over video platform	10 students (12-15 recommended) – counsellors-in-training or CITs	Delaney et al. [36]

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Qualitative approach – phenomenological structure; accounts of exposure to computer-generated sounds and visuals of nature proceeding five practicum classes	Master's-level counseling program at a CACREP Accredited Counseling Program in the United States	Nature-based activity – indoor live-stream for 3 minutes; one 50-minute, semi-structured individual interview and one 60-minute, semi-structured focus group via Zoom	50-minute, semi-structured individual interview via Zoom; in-person, open-ended focus group, lasting 60-minutes; and participant's five free-write reflection journals	11 CITs	Duffy et al. [37]
Quantitative – experimental online experiment (between-person design) conducted through Qualtrics	To explore the effect of death anxiety versus reflection among those with more environmentalist contingent self-worth	After completing condition-specific tasks, participants in all conditions completed two fillers tasks: a mood assessment and a word search about nondeath related words (e.g., words such as cable, actor, commercial); they then responded to outcome measures, including the Environmental Attitudes Inventory and environmentalist contingent self-worth (CSW)	Participants were randomly assigned to one of three conditions: (a) death anxiety, (b) death reflection, or (c) control	280	Guerriero and Swim [18]
Quantitative – experience sampling based on online questionnaires; using a time-based sampling strategy for on telephone app	Study 1 indicated that employees' contact with nature is associated with enhanced recovery due to esthetic appraisal; building on these findings, in Study 2, they developed a nature-savoring intervention to evoke the esthetic appraisal of nature through more nature experiences and active savoring	Study 1: answered questions on a telephone app and took photo to represent their environment Study 2: completed questionnaires	Data acquired through questionnaires; in Study 2, compared a waiting-list control group (WCG) with a nature intervention group (NIG) that participated in the nature-savoring intervention over the course of 5 days	Study 1: 50 Study 2: 66	Hilbert et al. [41]
Quantitative – correlations based on a questionnaire (Qualtrics)	To inform the clinical application of EcoWellness	Study questionnaire	The EcoWellness Inventory (EI); Animal Naturalness Scale (ANS); The Five-Factor Mindfulness Questionnaire (FFMQ); HEXACO-60	474	Holden et al. [13]
Qualitative – an NHS study that explored whether working outside might appeal to more men and to more people from Black, Asian, and other minority ethnic backgrounds	The 12-week group was planned and facilitated by two qualified Art Psychotherapists	Creating images and objects which would remain in the natural setting; photography; group reflections	Based on session themes applied both individually and in groups, with group reflections to provide feedback	19	Jerwood et al. [22]
Qualitative – narrative inquiry (relational research)	The practice of shifting therapy outdoors	Semi-structured Interviews with practitioners who practiced outdoors	Narrative data collected	~7	Jordan [23]
Qualitative research design using an open-ended questionnaire followed with semi-structured telephone interviews; analyzed using Interpretive Phenomenological Analysis (IPA)	To explore innovative data	Online questionnaire followed up by some with phone interviews	Completion of online questionnaire via SurveyMonkey and semi-structured interviews held for 40-60 minutes, audio-recorded and transcribed	30 → 11	Kamitsis and Simmonds [38]

Qualitative research method – thematic analysis using one-to-one semi-structured interviews	Outdoor sessions were offered to clients who were especially missing in-person therapeutic contact during the COVID-19 pandemic	Interviews – held either on the phone, face-to-face, or online	Purposive sampling of counsellors and psychotherapists; interviews were audio-recorded and transcribed	6	Moore and Mahmood [4]
Quantitative (Qualtrics survey)	To investigate multivariate relationships between two instruments (EcoWellness Inventory or EI and Five Factor Wellness Inventory or FFWEL positively related)	Complete an online (Qualtrics) survey	Participants were randomly selected from a participant (ResearchMatch) database	792	Reese and Lewis [42]
Qualitative – interpretative phenomenological approach	To address this gap in the current UK homelessness literature and explore the experiences of individuals experiencing homelessness (IEH), who were living in supported hostel accommodation and had voluntarily engaged in an outdoor Adventure Therapy (AT) intervention program	Adventure therapy (AT) intervention	Individual, semi-structured interviews (50 minutes) held two weeks after the end of the AT intervention, using a repertory grid as an aid to increase verbal expression and minimize researcher bias; used purposive, homogenous sampling	7	Shehade and Kyriakopoulos [39]
Qualitative – pragmatic case study	Being of use to practitioners who may wish to explore ecotherapy work, but who wish to remain in a traditional therapy room setting	Six sessions and post-therapy reflection session – held a few weeks after the end of therapy	Data included therapist's written session records, client written work, a diary of therapist's reflections of the work, Helpful Aspects of Therapy (HAT) forms completed after each session, and materials created in sessions	2	Smith [24]
Qualitative research method – reflexive thematic analysis; semi-structured in-person interviews for ~20 minutes immediately after the program and again six weeks after the program's end	To equip adolescents with knowledge and skills effective for managing emotions and improve their overall well-being through engagement with an ecotherapeutic intervention	Weekly sessions (2 hours) for six weeks; with a celebration event held at the end of the sessions	Weekly focus on five ways to well-being, self-esteem, confidence and resilience, mood, anxiety, and again five ways to well-being	8	Wang et al. [40]

Table 2. Demographic information about the participants in these studies.

Source	Sex/ Gender	Mean Age	Ethnicity/ Race	Education
Breen and Pensini [17]	201 female, 99 male	54	62% Australian	61% had an undergraduate degree or higher education
Deal et al. [16]	8 female, 1 male	50	100% Caucasian	-
Delaney et al. [36]	Gisgender (8 females, 2 males)	25	60% White	8 full-time, 2 part-time CIT students
Duffy et al. [37]	7 females, 4 males	25	-	CIT students
Guerriero and Swim [18]	274 females, 3 males, 3 other	19	77% White/ Caucasian	Undergraduate (psychology) students
Hilbert et al. [41]	Study 1: 35 women, 15 men Study 2: 48 women, 18 men	Study 1: 44 Study 2: 43	-	-
Holden et al. [13]	235 female, 238 male	48	76% White	39% earned an undergraduate degree
Jerwood et al. [22]	10 females, 8 males, 1 nonbinary	45	74% White (British)	-
Jordan [23]	4 females, 3 males	47	-	-
Kamitsis and Simmonds [38]	-	52	-	-
Moore and Mahmood [4]	4 females, 2 males	-	100% White (British)	-
Reese and Lewis [42]	610 females, 115 males (67 undisclosed)	42	82% Caucasian	36% had an advanced degree
Shehade and Kyriakopoulos [39]	2 females, 5 males	44	71% White (British)	-
Smith [24]	1 female, 1 male	-	(British)	-
Wang et al. [40]	6 females, 2 males	15	75% White (British)	-

Discussion

Among the studies examined, anthropomorphisms of nature was addressed [17] associated with proenvironmental attitudes and behaviors. These participants felt that leisure air travel should be restricted in order to mitigate the spread of the virus as well as promote climate change action during the COVID-19 pandemic. The authors believe that environmental guilt was key to such proenvironmentalism. Another study [18], testing for mortality reminders and how they might affect proenvironmental outcomes, did not find a meaningful effect. In particular, death anxiety affecting biospheric concern or mortality reminders on prosocial outcomes were not connected to proenvironmental outcomes. Therefore, these authors suggested exploring relations among mortality reminders and biospheric concern.

Several studies support the benefits for mental health and wellness of ecotherapy. For instance, participants had an increased awareness of how nature can help them shift their perspective, ground them in the present moment, and enable them to access a deeper sense of connection and belonging in something greater than themselves [16]. These benefits manifested in the regulation (stress reduction, presence) and reduction of stress and anxiety as a result of a brief ecotherapy program. Moreover, the program gave participants a sense of meaning (transcendence, awe). The research aligns ecotherapy with humanistic counselling principles and emphasizes including ecocentric values (e.g., interconnection, gratitude, reciprocal spiritual belonging) in therapy.

Among CITs, ecotherapy evoked deep thought and affected emerging identities as well as self-care [36]. For clients and counsellors alike, nature is a place of healing and the class helped CITs recognize their own connection to nature and rekindled that connection through physical experiences. These led the authors to suggest moving class outside to give students a break from technology and allowing them to interaction with others in groups and to reflect about their outdoor activities and experiences. For CITs, being outdoors lowered their anxiety and improved their level of engagement as well as sense of classroom community and wellness [37]. These authors made an important observation, that students can still be exposed to the natural world using technology within a classroom environment. Stimulating the senses can be executed indoors, for example using scented candles for smell and natural objects (e.g., twigs, leaves, sand, water) for touch. Ultimately, these authors advocate that counselor educators integrate elements of nature into their practice, either real or technology-driven.

Ecotherapy provides options to address client themes, permitting therapists the freedom to choose client-suited exercises, stage of work, and setting [24]. The author suggests ecotherapy interventions when they were executable from the security of the room and clients did not have to move far beyond their comfort zone. Ecotherapy can be used as a way for participants to develop tolerance for traditional (indoor) settings. For instance, tolerance for working indoors was built up by several participants, who continued in individual art therapy [22]. Nature, natural materials, and the space shared

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reflecting created opportunities for exploration of loss, change, and resilience.

Ecotherapy seeks to enhance human health through sensory contact with the natural world [38]. Accordingly, being exposed to nature, as through homework exercises, has assisted clients who have experienced depression, anxiety, stress, and interpersonal difficulties. Therapists can bring nature indoors to their offices by enriching these spaces with nature, such as having natural views or by incorporating images of nature, to create a calming atmosphere. In this way, clients are reminded of nature and their connectedness to nature, which involves the recognition that they as individuals are not separate from the natural world [38]. These authors saw some of their study participants combine ecotherapy and art therapy by offering clients the opportunity to create art with the use of natural items or by integrating mindfulness and/ or meditation exercises. For example, homework exercises that involve clients taking notes of specific natural elements experienced through their senses when they visited a nature location. These participants experienced the value of relieving symptoms of stress and anxiety, since mental distress can (at least in part) be triggered by a disconnect between the individual and the (natural) environment.

Ecotherapy acknowledges the vital role of nature in the therapeutic process and sees the human-nature relationship as central to it [23]. Therefore, the "ecological self" begins with the individual and their emotional and psychological world. Adventure therapy (AT) among the homeless, for example, provides a safe emotional environment and fosters positive relationships with practitioners and peers that offer respite and facilitate the development of a sense of belonging [39]. Participants felt empowered by experiencing achievement and mastery, including overcoming physical and psychological challenges. Such positive experiences challenged negative beliefs about themselves and led them to a greater perceived self-efficacy and sense of personal agency [39]. Upon reflection, their views of others also became more positive. Therefore, they were able to improve their intrapersonal relating based on self-acceptance, self-value, and an increased desire to socially reintegrate.

Ecotherapy can be deployed when working with adolescents and their parents. Such participants experienced improvements in mood, self-esteem, confidence, and social skills in ecotherapy programs [40]. Accordingly, such improvements (in personal confidence and self-esteem) are critical for adolescents to overcome challenges associated with social ability. By exploring nature, it is possible to bring individuals with shared experiences together to engage in practical activities. Moreover, the undivided attention of support workers played crucial roles in enhancing the psychosocial well-being of adolescents in their program [40].

The studies by [41] convey that nature exposure can lead to recovery experiences (relaxation, detachment) and positive affective states (positive activation, serenity). However, being in a natural setting is not sufficient to foster recovery, since one must first be aware of the natural surroundings and subsequently evaluate these as aesthetic. Nevertheless, these authors saw the benefit of using the savoring approach to stimulate awareness and aesthetic appraisal of the natural environment and thereby reap the rewards of contact with nature for recovery.

Personality is an important aspect, however, as clients who are open to experience and cooperative and interpersonally outgoing may be more likely to seek out or be open to EcoWellness interventions [13]. Accordingly, individuals who are observant and able to describe their mental states may also be more likely to engage in nature-based interventions. Additionally, people who view nature on a continuum can benefit from a variety of types of nature experiences. EcoWellness-based work needs to be grounded on approaches that emphasize mindfulness and self/ other empathy (e.g., mindfulness-based cognitive therapy, dialectical behavioral therapy, acceptance and commitment therapy). EcoWellness is firmly embedded in holistic wellness. Humanistic counsellors can ask their clients about aspects of EcoWellness (present or desired) in their lives by recognizing client issues related to environmental justice and exploring the ways they might integrate the human-nature connection as part of their treatment plans [42].

In the therapeutic alliance, the natural environment can be seen as a third partner, which brings unpredictability and spontaneity to the relationship, fostering mutual vulnerability and shared humanity [4]. As a creative space, the outdoors provides potential and depth for a growing and developing client-therapist relationship with nature. It offers a space for inquiry, reflection, and experimentation, while the environment also promotes relational equality.

Conclusion

Evidently, there is much leeway for the application of ecotherapy in psychotherapy. Its execution does not need be outdoors, since sensory stimuli can function in an indoor setting to remind individuals of the human-nature relationship and connection. This is a healing relationship, which can escape people – especially those living in urban settings. Since distress can result from this disconnect, therapy functions to remind individuals of their place in the natural world and replenish their sense of connectedness and belonging, that can be extended to others (in social settings) and environmental issues affecting worldviews (anthropomorphism), such as anthropomorphic climate change. It can introduce Indigenous approaches to Western psychotherapy and diversify current practice, which remains predominantly White and European – and thereby colonial (e.g., Man's conquest of nature). Small steps can be taken to introduce ecotherapy to traditional

practice, as by introducing natural objects and stimulating the clients' senses. Therapists should tailor the experience for their clients based on their mutual comfort zone.

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