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Addressing Climate Trauma among Adolescents: Process-Oriented Group Therapy as a Way Forward

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Climate change and climate trauma are producing chronic anxiety, grief, despair, and depression, particularly among adolescents and children. Unfortunately, a sincere discussion of both the mental health implications of climate change and conceptualizations of working through climate trauma has been absent from the counseling literature. We address this gap by examining the impact of climate change on mental health, how individuals cope with climate trauma, and the strong potential of process-oriented group therapy to facilitate healing. Finally, we propose a group therapy model to address climate trauma with adolescents.

Keywords: climate change, climate trauma, adolescence, group therapy, psychotherapy

Current projections of anthropogenic climate change indicate that by the mid-21st century the world will face rising sea levels, more frequent and severe storms, flooding, and droughts, and a wide range of associated challenges related to environmental degradation, heat stress, food scarcity, loss of employment, illness and injury, displacement, and a host of other traumas and losses (Intergovernmental Panel on Climate Change [IPCC], 2014). The consequences of climate change, defined as a change of climate attributed to human activity that alters the composition of the global atmosphere, are already being felt throughout the world and continue to increase as society is unable or unwilling to sufficiently curb greenhouse gas emissions (IPCC, 2014). The United Nations Framework Convention on Climate Change defines climate change as "'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" (IPCC, 2014). Locally, climate change is already displacing whole communities in southeast Louisiana as evidenced by the Isle de Jean Charles Resettlement Program (Billiot, 2017). As the world edges closer to catastrophic climate change and humanity begins to feel its traumatic effects, the mental health implications of climate change are increasingly apparent (Hasbach, 2015).

An emerging body of literature has highlighted the need for mental health interventions to respond to the anxiety, depression, post-traumatic stress, and other mental health outcomes provoked by climate change (Büchs et al., 2015; Van Lange et al., 2018; Hasbach, 2015). However, a sincere treatment of climate change and its implications are decidedly lacking within the mental health fields (Büchs et al., 2015; Cunsolo & Ellis, 2018). The counseling field is notably deficient in this area, as a review of all publications in American Counseling Association (ACA) journals reveals not a single article focused on the mental health impacts of climate change.

The categorical silence from the counseling field on this topic is noteworthy as counselors have traditionally played an important role in helping clients face reality, work through issues of denial and resistance, and become hopeful (Hasbach, 2015). The interpersonal nature of counseling would also serve to help clients cope with the abstract and complex nature of the climate change threat by making it more embodied and phenomenological. Our Multicultural and Social Justice Counseling Competencies further call for us to "understand individuals within the

context of their environment" (pp. 30) and the way environmental factors influence the "health and well-being of individuals" (pp.33) (Ratts, et al., 2016). As counselors can reasonably expect to see an increasing number of clients with presenting issues that are directly or indirectly linked to climate change (Berry et al., 2010), clinicians need to be prepared to ethically and competently respond. Accordingly, counseling is not only well-positioned to serve a crucial role in coping with, and working through, the lived experience of climate change, but it also may be an ethical imperative for the field to acknowledge the impact of climate change on clients' psychological well-being.

We posit that process-oriented group therapy is an appropriate therapeutic modality to address the mental health issues related to climate change. Climate change is uniquely group-oriented; it is a collective problem requiring collective solutions. Process-oriented group therapy has the potential to foster productive honest dialogues about the full reality of our environmental crisis and improve the outcomes of related mental health issues. This manuscript starts to address an important gap in the counseling literature by reviewing the data on the impact of climate change on mental health, highlighting the role of group therapy in processing and working through climate change, and outlining how group therapy can be applied to adolescents coping with the realities of climate trauma. Throughout the manuscript, we utilize the term 'climate trauma' to refer to the anxiety, fear, grief, guilt, and distress that are provoked by the concept of climate change and the extensive implications of this environmental crisis for humanity.

Climate Change Impacts on Mental Health

The direct impacts of climate change on mental health predominantly result from exposure to climate-related disasters, including flooding, hurricanes, fires, extreme heat, and droughts (Berry, Bowen, & Kjellstrom, 2010). The experiences of these disasters and their associated losses can result in post-traumatic stress disorder, generalized anxiety, depression, and chronic psychological distress (Berry et al., 2010). In addition to post-disaster mental health concerns, temperature fluctuations and high temperatures adversely affect mental health issues, such as depression (Berry et al., 2010). Individuals may also increasingly experience solastalgia, which describes feelings of desolation or homesickness that result from meaningful landscapes, ecosystems, and species disappearing or changing beyond recognition (Hasbach, 2015). Support for mental health services will become increasingly important as people not only cope with extreme climate-related events, but are also forced to adapt to a new normal that is marked by continuous disruption of environmental and social conditions (Cunsolo & Ellis, 2018).

Indirect impacts on mental health are also noteworthy as social systems, interpersonal interactions, and the socioeconomic determinants of health shift amidst climate change (Berry et al., 2010). Higher temperatures, disasters, and resource competition are expected to increase social exclusion, displacement, and violence (Pearson & Schuldt, 2018). Climate change will also elevate levels of economic insecurity and unemployment, both of which are linked to poor mental health outcomes (Berry et al., 2010). Some individuals may also need to work different or longer hours, which may result in less time spent with loved ones and reduced

social connectedness (Berry et al., 2010). Additionally, climate change is expected to impact physical health due to heat stress, injury, disease, and disruption to food and water supplies, all of which have been shown to influence mental health (IPCC, 2014; Berry et al., 2010). Climate change projections also predict the emergence of new infectious disease as a result of changing climatic conditions (IPCC, 2014). While there is no evidence of a direct connection between climate change and the Coronavirus disease (COVID-19), climate change does indirectly impact COVID-19 response by adding additional stress to health systems and impacting the environmental determinants of health (World Health Organization, 2020). Taken in their totality, the anticipated direct and indirect impacts of climate change loom as a significant threat to mental health.

Climate Trauma

While numerous studies have examined the direct and indirect impacts of climate change on mental health, the cumulative impact of existing within the climate crisis is rarely recognized (Cunsolo & Ellis, 2018). Woodbury (2019) coined the term "climate trauma" to describe an "entirely new, unprecedented, and higher-order category of trauma" (pp. 1) that results from living with the all-encompassing nature of the climate change threat and its implications for social existence. Woodbury (2019) argues that since climate change involves fundamental changes to the planet, "the climate crisis calls into question our basic relationship to nature, and what it means to be human in the Anthropocene" (Woodbury, 2019, pp. 5). The concept of climate trauma acknowledges the lived experience of people in distress throughout the world as they wrestle with the knowledge that we are in the midst of profound and irreversible changes (Woodbury, 2019). According to Woodbury

(2019), climate trauma affects everyone, although individual responses to climate trauma differ. While some clients may be aware they are experiencing climate trauma (Büchs et al., 2015), others may not be cognizant of the links between their distress and climate change (Gifford, 2011; Hasbach, 2015). Meaningfully existing within this traumatic global disruption requires authentically addressing how interrelated and interdependent we all are (Pearson & Schuldt, 2018).

Coping with the Climate Change Threat

Climate change is an overwhelming threat to comprehend, accept, process, and address. Several studies have highlighted how the climate crisis overwhelms our emotional capacity, triggers past personal, cultural, and intergenerational traumas, and provokes existential anxiety by challenging the idea of a shared future and our collective sense of order (Büchs et al., 2015; Gifford, 2011; Myers, 2014; Ojala, 2016; Woodbury, 2019). As Kidner (2007) aptly summarized:

> Staring reality, and not least ecological reality, in the face can indeed be unbearable, and it is therefore unsurprising that many of us engage in mental gymnastics in order to avert the full psychological impact of the destruction of the natural world. (pp. 140)

Mental gymnastics take many forms and influence one's response to climate change.

Numerous articles have highlighted the myriad of factors that prevent individuals from thinking and/or acting on climate change (Gifford, 2011; Van Lange, Joireman, & Milinski, 2018). First, common emotional responses to the overwhelming implications of climate change challenge include feelings of distress, anxiety, grief, and/or guilt. For some, these underlying emotions may be so

difficult and powerful that a protective mechanism takes over and the person instead expresses fear, anger, dissociation, denial, and/or paralysis (Gifford, 2011; Myers, 2014).

Second, humans have an innate tendency to focus on immediate and personal threats (Gifford, 2011). As a result, the brain encourages individuals to underestimate or undervalue a threat that is spatially or temporally distant. In the case of climate change, the impacts of climate change are often felt most in the geographic regions that contributed the least to greenhouse gas emissions, and changes in climate inherently occur on long time scales (IPCC, 2014). These traits making it even more difficult for an individual to consider climate change as a serious threat. Individuals may instead seek out excuses or arguments that allow them to avoid viewing climate change as a significant danger, such as claiming to not know that a problem exists or not knowing what actions one can take after becoming aware of the problem (Gifford, 2011). These excuses and arguments may manifest as ignorance or uncertainty about climate change (Gifford, 2011).

Third, there are ideological barriers to addressing climate change, such as religious beliefs in a superhuman power and worldviews valuing free market capitalism and individualism (Gifford, 2011; Ojala, 2016). Full recognition of the climate change threat challenges these strongly held beliefs and values. For example, someone might believe that a religious deity will do what it wants despite any climate-related action (Gifford, 2011). Individuals that strongly support free-market ideology are likely to hold strong beliefs in efficiency, economic growth, and techno-optimism, which have been found to result in environmental apathy or overconfidence in the potential for current technologies to fully address climate change issues (Gifford, 2011; Heath & Gifford, 2006). Feelings of powerlessness can also fuel system justification and tendencies to defend one's identity, status, and the status quo (Büchs et al., 2015; Gifford, 2011; Pearson & Schuldt, 2018). Many individuals are financially and socially invested in the current system, and environmental issues are not given priority over other needs (Gifford, 2011). For example, Steentjes et al. (2017) examined social norms around climate change and racial equality, concluding that the social cost of confronting climate change disregard is higher than the social cost of confronting racial prejudice. Their study highlighted that individuals view confrontation on climate change as morally ambiguous and that even polite confrontation on climate change topics can incur social sanctions (Steentjes et al., 2017). People have also made financial investments in carbon-intensive products (Steentjes et al., 2017; Gifford, 2011). For example, people are also less likely to use bicycles or public transportation if they already own a vehicle since they would see not driving the car as wasting the money that has already been invested and failing to take advantage of the benefits of the car (Gifford, 2011). As a result of emotional distress, cognitive dissonance, and ideological challenges, climate change is minimized, denied, or avoided altogether (Büchs et al., 2015; Myers, 2014; Woodbury, 2019).

These emotional, cognitive, and ideological protective mechanisms are often reinforced socially. Social norms, perceived inequity, and comparison to others' actions have been shown to stifle climate change action (Gifford, 2011; Pearson & Schuldt, 2018). For example, when homeowners were told the average amount of energy that their neighbors used, homeowners increased or decreased their consumption to fit the norm (Gifford, 2011). Although

several pro-environmental actions have been encouraged in Western societies (e.g., recycling, driving hybrid vehicles), these actions themselves are insufficient and can result in individuals feeling justified in engaging in other environmentally-damaging behaviors (Gifford, 2011). As a collective issue, climate change action is also stifled by the fact that people are less inclined to take action when they believe their actions will have minimal impact and that they cannot control the ultimate outcome (Büchs et al., 2015; Gifford, 2011; Stevenson & Peterson, 2016).

It is increasingly important to recognize, process, and work through feelings of grief, despair, denial, ignorance, apathy, and other emotions in relation to climate trauma. Failure to facilitate humans' capacity to do so, both on an individual and collective level, will likely ensure that we are unable to meaningfully cope with climate trauma. This is particularly true for children and adolescents (Nairn, 2019; Ojala, 2016).

Adolescents and Climate Trauma

In this section, we briefly outline three key reasons why it is imperative to address climate trauma among adolescents. First, climate trauma is already manifesting among young persons (Ojala, 2012). Over the past ten years, youth have been inundated with messages about dire climate change projections and the failure of older generations to resolve this manmade problem (Stevenson & Peterson, 2016). It is unsurprising that children and adolescents are increasingly worried, anxious, pessimistic, and distressed by climate change (Nairn, 2019; Ojala, 2016).

Second, children and adolescents today will transition into adulthood and positions of leadership at a time when the brunt of climate change hits society and ecosystems (Ojala, 2012; Stevenson & Peterson, 2016). Whereas climate change is a temporally distant threat to today's adults, young persons will have no choice but to confront the issue of climate change (Ojala, 2012; Stevenson & Peterson, 2016). It is thus increasingly important to engage young persons in climate change dialogues (Ojala, 2016).

Third, addressing climate trauma among adolescents has the potential to alter the trajectory of how humanity processes and responds to the climate change threat. Duncan, Hall, and Knowles (2015) have argued that psychological work with adolescents can make meaningful impacts on their psychosocial trajectory. Developmentally, adolescence is marked by the formation of identity, including the development of a moral value system and preparation for the future (Malekoff, 2015). Furthermore, adolescents continue to develop emotional regulation, impulse control, consequential thinking, and decision-making functions into their mid-20s (Duncan, Hall, & Knowles, 2015; Malekoff, 2015). Successful development of these skills are critical in the capacity to engage in a complex and abstract phenomena like climate change.

There is thus a need to not ignore or pathologize the anxiety felt by adolescents in response to climate change. Rather, anxiety is a natural response to an existential threat and can be leveraged as the catalyst for productive and meaningful development. Several therapeutic modalities can trace their origins to the existential crisis that emerged amidst the terrifying destructive capacity of the nuclear bomb and are designed precisely to help humans navigate existential threats like climate change (May, 1994; Tillich, 1957). There is thus an opportunity and need for mental health professionals to work with adolescents on climate trauma issues.

Addressing Climate Trauma: Process-Oriented Group Therapy with Adolescents

Process-oriented group therapy has been an effective therapeutic approach to help individuals cope with loss and facilitate honest emotional expression without feeling overwhelmed (Paine et al., 2017). While there is a current lack of evidence for group therapy to address the mental health issues associated with ongoing climate change, therapeutic techniques for disaster events could provide helpful insights to addressing climate trauma given the interrelated nature of climate change and specific disaster events (Berry et al., 2010). There is evidence across diverse settings that group therapy can improve mental health outcomes for adolescents and children after a specific disaster event or trauma (Pityaratstian et al., 2015; Salloum, Garside, Irwin, Anderson, & Francois, 2009). Additionally, since climate change brings more frequent and severe climate-related events, clients will increasingly experience the direct and indirect impacts of specific disaster events, in addition to mental health issues related to the ongoing, abstract nature of climate change (Berry et al., 2010). Group therapy is particularly appropriate for adolescents due to the value of peer relationships in this developmental stage (Malekoff, 2015). Group therapy helps adolescents build the ability to consider multiple viewpoints and engage in meaningful debates, learn how to seek support and be useful to others, and believe in a hopeful future (Malekoff, 2015). These skills are indispensable if we are to address climate change in a healthy and productive manner (Nairn, 2019; Ojala, 2016).

Group therapy is uniquely positioned to address climate trauma given the inherently collective nature of climate change causes and potential solutions (Pearson & Schuldt, 2018). Social norms, intergroup contact, and social embeddedness are among the many factors influencing how individuals perceive and respond to climate change (Büchs et al., 2015; Steentjes et al., 2017). It is thus unsurprising that processing climate trauma strongly aligns with Irving Yalom's (1995) therapeutic factors of group therapy. Yalom (1995) identified eleven therapeutic factors in group therapy, including instillation of hope, universality, imparting information, altruism, interpersonal learning, development of socialization techniques, corrective recapitulation of the primary family group, imitative behavior, existential factors, catharsis, and group cohesiveness. These therapeutic factors come together in group therapy to foster a space in which the group can perform optimally and maximize its therapeutic benefit for members (Yalom, 1995). In Table 1, we summarize the various ways in which each therapeutic factor is relevant in the context of group therapy for adolescents working on climate trauma issues.

Table 1. Therapeutic Factors for Group Therapy with Adolescents for Climate Trauma

Group Therapy Therapeutic Factor Source: Yalom, 1995	Significance of Factor for Climate Trauma Group Therapy with Adolescents	Potential Utilization of Factor in Climate Trauma Group Therapy with Adolescents
Instillation of hope, including the belief that group therapy will be effective and that the current situation can and will improve.	There is widespread evidence highlighting the pervasiveness of hopelessness and powerlessness in relation to the climate change threat, particularly among younger populations (Ojala, 2016).	Interpersonal connection, support, and feedback on the impact of individual and collective actions can foster feelings of empowerment and self-efficacy to think about and find ways to act on climate change (Hasbach, 2015).
Existential factors, including issues of life, death, freedom, responsibility, and meaning	Climate change itself is an existential threat, forcing clients to re-frame human-nature relationships, lifestyles, and social existence (Myers, 2014; Woodbury, 2019).	Group therapy is an opportunity to discuss the existential aspects of climate change and to find personal and collective meaning (Büchs et al., 2015; Myers, 2014).
Universality, including highlighting the similarities among group members and the relief that comes from not feeling alone in struggle	Climate change will have impacts on every individual and every community (Pearson et al., 2016). Strong emotional responses to climate change are increasingly common but not often identified and recognized (Berry et al., 2010).	Group therapy is an opportunity to highlight the universality of climate change; we all share the identity as a perpetrator and victim of climate change (Woodbury, 2019). Clients may find relief from meeting others with similar concerns about climate change (Büchs et al., 2015).
Corrective recapitulation of the primary family group, including increasing awareness and making changes to distortions, roles, and attitudes that stem from early familial conflicts and dynamics	Climate change provokes strong emotions that will be managed according to clients' learned ways of coping with distress (Gifford, 2011). Meaning-focused coping strategies for climate change are most strongly linked with hope and action, yet these strategies require trust in societal actors (Stevenson & Peterson, 2016).	Group therapy is an opportunity to recognize how the primary family group has influenced one's responses, distortions, and assumptions related to societal actors and peers. By working through these issues, clients can potentially overcome mental blockages (Gifford, 2011; Stevenson & Peterson, 2016) .
Imitative behavior, including vicarious spectator therapy and imitation of counselor or member behavior	Social norms play a strong role in promoting or discouraging climate change dialogues and action, and individuals are more likely to engage in pro-environmental behavior when they perceive that others are doing it (Pearson & Schuldt, 2018).	Group therapy is an opportunity to establish group norms that normalize honest dialogues about climate change (Steentjes et al., 2017).

Group Therapy Therapeutic Factor Source: Yalom, 1995	Significance of Factor for Climate Trauma Group Therapy with Adolescents	Potential Utilization of Factor in Climate Trauma Group Therapy with Adolescents
Imparting information, including didactic instruction, direct advice, suggestions, and guidance	Lack of knowledge about climate change and its consequences remains a barrier to processing the issue and taking action (Gifford, 2011). There is limited knowledge and among the public on the cognitive, emotional, and social ways people respond to the concept of climate change (Ojala, 2016).	Didactic instruction related to climate change and psychoeducation on mental health responses to climate change can enable clients to more effectively engage with others in dialogues on climate change (Van Lange et al., 2018; Ojala, 2016;).
Catharsis, including emotional discharge and transformative moments of gaining new and/or deeper insight	Studies suggest that transformation at individual and societal levels are needed to address climate change; without a disruption to the status quo, all other solutions will be too little and too late (Myers, 2014).	Group therapy can create a safe space in which individuals can work through the overwhelming reality of climate change and reach a new state characterized by acceptance, concern, and hope (Myers, 2014).
Altruism, including the value of giving to others and the importance of feeling needed and useful	The myth of self-interest has increased reluctance to take individual action (Van Lange et al., 2018). The enormity of the climate change problem is also overwhelming and can make clients feel insignificant (Gifford, 2011).	Group therapy is an opportunity to dispel the myth of self-interest and establish new social norms that empower individual action (Van Lange et al., 2018). For clients feeling insignificant and powerless, altruism in group therapy can provide solace by feeling needed and important in the group (Büchs et al., 2015).
Development of socializing techniques, including development of social skills and increased understanding of impression leave on others	Social skills are needed to effectively communicate with others about climate change, both to be able to process one's own thoughts and feelings and to confront social norms that perpetuate climate change denial and inaction (Gifford, 2011; Myers, 2014; Steentjes et al., 2017).	Learning new skills through group therapy can enable clients to effectively engage with others on climate change topics without incurring significant social costs (Steentjes et al., 2017).
Group cohesiveness, including emotional connectedness, acceptance of self and others, solidarity and attachment to the group, and group effectiveness	Feeling connected to and belonging in a group has helped individuals process difficult emotions related to climate change and fostered pro-environmental action (Büchs et al., 2015; Elf et al., 2018).	Developing a social identity through group membership has the potential to deepen and facilitate one's engagement in challenging topics like climate change (Pearson et al., 2016).

Group Therapy Therapeutic Factor Source: Yalom, 1995	Significance of Factor for Climate Trauma Group Therapy with Adolescents	Potential Utilization of Factor in Climate Trauma Group Therapy with Adolescents
Interpersonal learning, including interactions that result in a corrective emotional experience and highlight societal dynamics and meanings as a social microcosm	Intergroup interactions have the power to reduce intergroup conflict and foster collective action (Pearson & Schuldt, 2018). Minorities will be disproportionately impacted by the adverse effects of climate change and there are ethic/racial, gender, and socioeconomic disparities in how people perceive and respond to the climate change threat (Pearson et al., 2016; Stevenson & Peterson, 2016).	Overcoming emotional and social roadblocks to thinking about climate change will require a corrective emotional experience in talking about climate change issues and its implications for self and society (Büchs et al., 2015). Group therapy has the potential to highlight equity issues related to climate change and to help members explore new ways of addressing both equity and climate change issues (Pearson et al., 2016).

Given the inherent alignment between group therapy and climate trauma issues, process-oriented group therapy appears an ideal therapeutic modality to address climate trauma. Rather than reinvent the wheel to address the complex issue of climate trauma, we assert that leveraging the current practice of process-oriented group therapy can help adolescents navigate the symptoms associated with climate trauma and develop the capacity to meaningfully engage with the abstract and future-oriented nature of the climate change threat.

Navigating the Symptoms Associated with Climate Trauma in a Group Context

Process-oriented group therapy has the potential to create insight into how individuals cope with the threat of climate change and to support a profound examination of climate change, its meaning, and its implications. Meaningful engagement with climate change calls for individuals to acknowledge despair while also activating positive emotions in order to avoid overwhelming paralysis (Ojala, 2016). However, adolescents are increasingly overwhelmed and exasperated by the climate change threat (Nairn, 2019; Ojala,

2012), which is a normal and universal response to such a complex issue. Process-oriented psychotherapy group can benefit adolescents through its emphasis on the "here-and-now" (Yalom, 1995, p. 129). Intentionally focusing on immediate experience can prevent conversations on climate change from becoming abstract and overwhelming. Illuminating the process of the group's interactions can also be useful to work through the protective mechanisms employed to cope with the overwhelming nature of climate change (Paine et al., 2017). Group therapy also provides a space to work through family of origin issues, leading to insights into individuals' coping strategies and the ways they process the climate change threat itself (Yalom, 1995).

The high level of distress that is likely to occur in this process necessitates the creation of a safe environment that will allow individuals to move through their mental roadblocks in relation to climate change (Yalom, 1995). Notably, clients will inevitably have different abilities and interest levels in expressing certain emotions and thoughts related to climate change (Büchs et al., 2015). Process-oriented group therapy is well-suited to work with these differences by creating an

environment in which one's coping strategies can play out in a safe and authentic interpersonal space (Paine et al., 2017). Without an intentional and safe environment, it is unlikely that many adolescents would be able to commit to such difficult work and successfully develop a more livable and honest narrative about the world and their reality.

Furthermore, building a community and a sense of universality in the face of the climate change reality is critical to healing and growth (Nairn, 2019). Given the limited dialogue in public and social spheres on climate trauma and its existential implications (Cunsolo & Ellis, 2018), group therapy for climate trauma may be the first time an individual articulates their deep fears around climate change. Adolescents are likely to feel less alone by sharing their concerns with the group and listening to others express similar concerns.

The Role of Group Therapy in Climate Change Action

Productive engagement with climate change, particularly in a group format, has the potential to inspire collective action and pro-environmental behavior (Büchs et al., 2015). However, while some members may channel their energies into identifying and implementing actions to ameliorate the causes and/or impacts of climate change, others may not take part in pro-environmental efforts. Additionally, the solutions for climate change are wide-ranging and it is important that the group not become a vehicle for indoctrination about the 'correct' way to respond or act. Becoming too focused on outcomes and solutions can hinder the growth process for members. For this reason, climate change action should not be an explicit objective of the group. Instead, when addressing external complex problems, it is important that the group's emphasis remain on bolstering the client's capacity to actively

engage with their phenomenological experience and not retreat to avoidant coping or naïve problem solving. The group is better served if the emphasis remains on strengthening a client's ability to face the reality of climate change and its implications for the world and human survival.

Emerging Evidence on Group Therapy for Climate Trauma: A Call for Further Research

There is limited research on the potential of group therapy to address climate trauma. There are, however, a few examples of group therapy for climate trauma in practice (Büchs et al., 2015; Preston, 2017). Carbon Conversations is one prominent example that fosters engagement with climate change issues by applying group therapy techniques (Büchs et al., 2015). Participants in Carbon Conversations reported feeling more confident in influencing others about climate change and in taking action to reduce their carbon footprint (Büchs et al., 2015). In an online survey with 113 group participants, 78 per cent agreed or strongly agreed that taking part in Carbon Conversations helped them "take action to reduce their overall carbon footprint" and 66 per cent agreed or strongly agreed that their participation in the group helped them to "be confident in influencing others about climate change" (Büchs et al., 2015). Half of survey participants agreed that the group helped them to face their worries about climate change (Büchs et al., 2015). In semi-structured interviews with 26 participants, individuals reported experiencing higher levels of distress when they learned more about climate change (Büchs et al., 2015). Interviewees also stated that the group helped them to express and share difficult emotions and that listening to others facilitated personal reflection on the topic (Büchs et al., 2015).

Importantly, this group was not explicitly process-oriented and exclusively targeted adults. While further research is needed on the efficacy of climate trauma groups and their application with adolescent populations, group therapy is well-positioned to facilitate healthy development around climate change issues and support adolescents' capacity to transcend the debilitating effects of climate trauma.

Conclusion

In conclusion, climate trauma is an increasingly urgent issue that needs to be recognized and addressed within the counseling field. Given the group-oriented nature of climate change and the strong alignment between climate trauma and the therapeutic factors for group therapy, we assert that group therapy is the appropriate modality to explore and work through issues related to climate trauma. Process-oriented group therapy for adolescents with climate trauma provides an opportunity to process emotions, thoughts, and beliefs related to climate change in order to deepen clients' abilities for honest engagement with climate change and its implications. Process-oriented group therapy for adolescents with climate trauma is a promising starting point for healing in the face of the climate change reality

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