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“Medicine for the Soul”: LGBTQ+ Southerners Spending Time in Nature During the COVID-19 Pandemic to Promote Well-Being

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“Medicine for the Soul”: LGBTQ+ Southerners Spending Time in Nature During the COVID-19 Pandemic to Promote Well-Being

The COVID-19 pandemic introduced myriad disruptions and stressors across the globe. Some populations, such as LGBTQ+ people, who already experienced disparities in access to healthcare, social support, and employment saw those disparities worsen, contributing to mental distress. Past research indicates that spending time in nature can be an effective strategy for coping and promoting well-being, yet little is known about how LGBTQ+ people may turn to nature in times of crisis. Using a queer ecology framework, this study engages in qualitative analysis of both text- and visual-based (auto-photography) diary and interview data from 30 LGBTQ+ adults in the Southeastern United States. Findings highlight how LGBTQ+ adults turned to nature as a place to engage in physical movement, to stay connected to people, for coping, and for introspection. We detail considerations for community organizers and planners about how natural spaces are built and made accessible during times of crisis.

Keywords: LGBTQ+; COVID-19; nature; green space; qualitative

The COVID-19 pandemic introduced unique stressors and disruptions that impacted people across the globe, with disparate impacts on populations that already were experiencing disparities in health, job access, and social support. Previous research has suggested that the lesbian, gay, bisexual, transgender, and queer community (LGBTQ+) has faced elevated risks of social isolation, job loss, and virus exposure and decreased access to medical care during this time (Grant, Gorman-Murray, and Walker 2021; Movement Advancement Project [MAP] 2020; Whittington, Hadfield, and Calderón 2020), which may contribute to increased mental distress (Kidd et al. 2021). However, less is known about how this population may have found ways to cope. Emerging scholarship has indicated that general populations of adults sought out nature and green spaces more often in the pandemic, with benefits to their mental health and engagement in physical activity (Labib et al. 2022). This study looks at how LGBTQ+ adults in the Southeastern United States (U.S.) turned to nature to promote their well-being during the COVID-19 pandemic based upon a qualitative analysis of multimedia diaries and video interviews. Before discussing the approach and findings of this study, we will first review the literature about experiences with and effects of the pandemic, barriers impacting the LGBTQ+ community during the pandemic, and the benefits of spending time in nature, including how a queer ecology framework can aid in understanding natural spaces as used by LGBTQ+ people. We conclude the paper with a discussion of what our research findings mean for community planners and organizers and leisure science practitioners.

LITERATURE REVIEW

Experiences & Effects of the COVID-19 Pandemic

With the declaration of the coronavirus disease 2019 (COVID-19) pandemic in 2020, many people across the world experienced significant disruption to their daily lives. Disruptions included: the closing of many businesses, offices, schools, and childcare facilities; quarantining of individuals who were exposed to the virus or displaying symptoms; social distancing protocols; changes to employment, such as new work-from-home requirements or being designated as “front-line” workers facing increased risks of virus exposure; and an increase in social isolation, particularly for older adults and those with disabilities or compromised immune systems. The COVID-19 pandemic led to lost work hours across the U.S. between March 2020-February 2021 due to economic, health, childcare, and other reasons (Asfaw 2021).

There were also impacts on mental health during the COVID-19 pandemic. Scholars note increased rates of stress, depression, and anxiety among adults (Salari et al. 2020; Shevlin et al. 2020). Subgroups likely to have worse mental health included young adults, those who had children at home, those who had existing health conditions prior to the pandemic, and those who saw decreases in income (Nwachukwu et al. 2020; Salari et al. 2020; Shevlin et al. 2020). A review of the literature about the psychological effects of quarantines suggested that imposed isolation may prompt symptoms of post-traumatic stress (Brooks et al. 2020), reflecting how interventions meant to promote physical health may have had downstream negative impacts.

LGBTQ+ Community Barriers During the COVID-19 Pandemic

LGBTQ+ communities have been uniquely impacted by the COVID-19 pandemic. Societal inequities already faced by this community expanded, impacting access to affirming

medical care (Kidd et al. 2021; MAP 2020), employment stability (Kidd et al. 2021; Whittington et al. 2020), and community support (Grant et al. 2021; Kidd et al. 2021). LGBTQ+ communities of color experienced these disparities at even greater rates (Human Rights Campaign Foundation 2020). LGBTQ+ individuals are more likely to work in service-related industries – such as food service, retail, and education – than their non-LGBTQ peers, increasing the likelihood of virus exposure as well as vulnerability to loss of jobs and health insurance coverage (Whittington et al. 2020). Within the first year of the pandemic, between 27% (Martino et al. 2022) and 64% (MAP 2020) of LGBTQ+ individuals and their families noted a loss of employment, reduced hours, and/or mandatory unpaid leave or furloughs. These disruptions manifested even greater financial hardships than were present prior to the pandemic (MAP 2020).

Social support and community connection have been positively associated with psychological well-being for LGBTQ+ people (Snapp et al. 2015). During the pandemic, LGBTQ+ communities lost access to community support (Fish et al. 2020; Grant et al. 2021; Kidd et al. 2021). Shelter-in-place and social distancing mandates prevented gatherings from occurring, with LGBTQ+ persons expressing a loss in community connection (Grant et al. 2021) and feelings of social isolation (Fish et al. 2020; MAP 2020). Kidd et al. (2021) found that over half of the transgender and nonbinary individuals experienced a loss of access to LGBTQ+ specific supports, which was associated with increased psychological distress.

LGBTQ+ Community Resilience during the Pandemic

Resilience, or the process of adapting and recovering in the face of trauma and stress (Meyer 2015), has been shown to be an important factor in managing stressors of the COVID-19 pandemic (Goldbach, Knutson, and Milton 2020; Hostetter and Philliber 2021). The community connections lost through social distancing efforts may have impacted resiliency among members

of the LGBTQ+ community (Goldbach et al. 2020). In a study looking at social connection and resiliency among nonbinary communities, feelings of connectedness and resiliency both declined in comparison to pre-pandemic ratings (Hostetter and Philliber 2021). Goldbach et al. (2020) discovered in their study of LGBTQ+ adults that higher levels of resiliency were associated with lower levels of pandemic-related distress. While resiliency remains important for the LGBTQ+ community, this may have decreased for some members of the community.

Benefits of Spending Time in Nature

A significant body of research suggests that spending time in nature, having proximity to public green space, and engaging in exercise in green spaces predict improved mental and physical health and well-being (e.g., Barton and Pretty 2010; Bratman et al. 2019; van den Bosch and Ode Sang 2017). Scholars have posited that aspects of the natural world, including sensory inputs, may positively affect humans' physical and mental health and sense of spirituality (Akers et al. 2012; Benfield et al. 2014). The total number and overall area of parks and public green spaces in one's neighborhood has been found to relate to greater well-being (Wood et al. 2017), while other studies found that more green space in the neighborhood was associated with lower risks of mental health problems, stress, and cardiovascular disease (Beyer et al. 2014; Richardson et al. 2013). In a sample of adults from the UK, the accessibility and sufficiency of green spaces and the possibility of using them for recreation or relaxation were associated with lower psychological distress (Pope et al. 2018). Access to green spaces alone can promote physical activity (Kaczynski and Henderson 2007), and meta-analyses suggest that exercise conducted in green spaces may help reduce negative affect and improve blood pressure compared to exercise indoors or in urban built environments (Li et al. 2021; Li et al. 2022). Parks can serve as a space

for social interaction and connection, especially when the park is perceived as high quality, attractive, and has multiple features, including areas for children (Każmierczak 2013).

Queer ecology framework & LGBTQ+ people spending time in nature. The disciplines of queer and trans ecologies focus on how LGBTQ+ people interact with and experience the natural world, given that conceptualizations of nature are often overlaid with constructions of normative gender and sexuality (e.g., Mortimer-Sandilands and Erickson 2010; Vakoch 2021). Yet, there is a substantial history of natural spaces being “queered” in various ways (Mortimer-Sandilands and Erickson 2010). Examples include queer Black individuals leading environmental conservation efforts (Moore et al. 2024) and spaces like garden-cemeteries become differentially separated (“queered”) from surrounding environments through their multiple, spontaneous, and creative uses, including as spaces for gay public cruising (Gandy 2012). Scholars thus call for critiquing assumptions that green spaces or nature are inherently hostile or counter to the lives of LGBTQ+ communities (Mortimer-Sandilands and Erickson 2010). We use this conceptualization to inform our research framework by looking at how LGBTQ+ adults in the Southeast speak to the positive and restorative aspects of natural spaces as they navigated the crises raised during the COVID-19 pandemic.

Various scholars have studied LGBTQ+ communities’ experiences in nature and the outdoors. For example, several researchers have studied the impact of outdoor and wilderness therapies for LGBTQ+ communities (e.g., Kara 2023; Tucker et al. 2020). Stanley (2020) discusses how portrayals of people engaging in leisure activities in the outdoors often show thin, white, able-bodied, heterosexual men, ignoring the experiences of other communities. Experiences of racism, ableism, fat-shaming, and heteronormativity are often part of interactions in the hiking community (Stanley 2020). Meyer (2010) examined how LGBTQ+ adults describe

being in the wilderness, intersections of the body and gender in the wild, and experiences of ecological and social well-being. Meyer's (2010) study found that being in the wild promoted a sense of connection with self and others, with the past, and with something bigger than oneself. Participants also discussed having a sense of awe, seeking refuge, escaping technology and consumerism, and reflecting and practicing mindfulness. Being in the wild also promoted kinesthetic awareness – attentiveness to the needs, strengths, agilities, and vulnerabilities of one's body (Meyer 2010). This research shows that nature provides specific benefits to LGBTQ+ people—such as a sense of connection, refuge, and kinesthetic awareness – though there are still risks for exclusion in these spaces.

Unique context of the COVID-19 pandemic & seeking reprieve in nature. The arrival of the COVID-19 pandemic presented a unique disruption to everyday life. A review of studies found that nature exposure during the pandemic was frequently related to lower rates of depression, stress, and anxiety, and greater happiness, life satisfaction, sleep, and physical activity (Labib et al. 2022). A study in Tokyo, Japan documented that frequency of using green spaces and having green views from a home window during the pandemic were positively associated with subjective happiness, self-esteem, and life satisfaction and negatively associated with anxiety, depression, and loneliness (Soga et al. 2021). Across studies, data suggest individuals were increasing their time in greenspaces, private gardens, and/or the outdoors during the pandemic compared to before (Labib et al. 2022).

GAPS IN THE KNOWLEDGE BASE & RESEARCH QUESTIONS

The COVID-19 pandemic has had notable impacts across the globe, including negative impacts on people's physical and mental health, increases in stress, and exacerbations of

disparities in access to healthcare, isolation, and rates of job loss. The LGBTQ+ community was particularly impacted through the loss of community spaces and connection. Past research has documented that access to green spaces and spending leisure time in nature can provide a boost to physical and mental health and social connectedness, including for LGBTQ+ adults. An emerging body of scholarship has looked at the benefits of nature exposure in the COVID-19 pandemic, yet there is little to no research to date on how the LGBTQ+ community may be turning to nature during this time of crisis.

Our research questions were: How are LGBTQ+ individuals in the Southeastern U.S. spending time in nature during the COVID-19 pandemic? How is nature a resource for LGBTQ+ individuals during the pandemic? For our analysis, we defined *nature* as aspects of our world that occur in the outdoors and are not created by humans, such as trees, rivers, and mountains. We included human-planned green spaces (gardens, yards, parks) in our definition because of our interest in how LGBTQ+ people interacted with such spaces as part of their connection to nature, as these are often the only green spaces available in urban settings.

METHODS

This research is part of a larger project launched in 2020 with support from the Public Interest Technology University Network Fellowship to carry out a multimedia, mixed methods study of resilience among LGBTQ+ adults in the Southeastern U.S. during the COVID-19 pandemic. We decided to use a multimedia approach to provide people with powerful, multidimensional ways of telling their stories through techniques such as auto-photography and auto-videography (Glaw et al. 2017). We organized a community advisory board of six LGBTQ+ individuals to provide input on the project's design and data collection and to help us

anticipate the intersectional dynamics of LGBTQ+ populations in the Southeast. The co-PIs met virtually with the community advisory board several times over one year; these conversations greatly assisted with the formulation of diary questions and methods of sharing participant stories (with permission) with the general public. The IRBs of both partnering universities of the co-PIs (Georgia Institute of Technology and Georgia State University) approved this study as exempt (Protocol Numbers H20321 and H21017 respectively) because of the determination that the study either demonstrated minimal risk or fell within at least one of the eight exempt categories of research while still meeting organizational ethical standards.

Sample Recruitment

Potential participants were recruited via community-based LGBTQ+ organizations and leaders, as well as through online groups, email lists, and social media, including paid advertisements. To be eligible to participate, individuals needed to be: (a) aged 18 or older; (b) living in one of nine states in the Southeastern U.S. that were the focus of the project; and (c) LGBTQ+ identified. Interested individuals were directed to an online screening instrument. A member of the research team reviewed responses for eligibility, subsequently inviting those who were eligible to participate and providing them with a unique participant code.

Thirty LGBTQ+ adults were included in the final sample, with ages ranging from 18-73, with an average age of 36. The largest proportion of the sample (40%, $n=12$) were cisgender men, 30% ($n=9$) were transgender/nonbinary, 26.7% ($n=8$) were cisgender women, and 3.3% ($n=1$) were unsure of their gender (questioning). More than half (60%, $n=18$) of the sample was white, 23.3% ($n=7$) identified as African American/Black, 13.3% ($n=4$) were another race or ethnicity, and 3.3% ($n=1$) preferred not to answer.

Data Collection

Eligible individuals were invited to complete an online consent form and pre-survey about mental health, COVID-19 exposure, demographics, and other topics. Those who finished the pre-survey were subsequently invited to respond to monthly diary topics related to resilience over the course of a year. We chose to use monthly diary prompts for several reasons, including to allow participants greater ease in responding about various topics in a short format to reduce their response burden during a highly stressful time period, to allow for better multimedia data integration, to collect data at multiple timepoints over one year, and to allow the research team to adjust diary topics and prompts over time as the pandemic and related impacts shifted. Online diary prompts were used to allow participants to easily share their experiences in an accessible manner due to the risks of COVID-19 exposure. The research team used diary prompts rather than online focus groups to allow for more personal disclosures than might occur in group discussions. To access the monthly diary submission site, participants were provided a link to a secure, password-protected website where they were prompted to enter their unique participant code. Only the principal investigators and key technical support staff had access to these data. Example diary topics queried about included adaptability, mental health, hobbies, and the natural world. One diary prompt related to nature was: *What has your time in nature looked like during the pandemic (since early March 2020)? Do you have a favorite place to visit that provides you with a sense of peace, satisfaction, happiness, etc.? Please consider sharing a photo, video, or audio clip representing this place in nature.*

With each diary entry, participants were prompted about the degree to which they were open to having their diary entry shared. The options they could choose were: (a) available for public sharing, including possible donation to a library archive, with the name (real or pseudonym) and age they listed; (b) available for public sharing, but kept anonymous; or (c) kept

confidential – used for research purposes only, without a name attached. Participants had the option to submit typed text, audio, photograph, and/or video files. Most diary submissions were typed text, ranging in length from a few short phrases to several paragraphs. Audio files were usually a few minutes long, and photo submissions typically included between 1-4 photos in one entry. There were two audio-only diary submissions, one photograph-only diary submission, and one video-only diary submission. All diary data were stored securely on the project website.

To promote a deeper use of multimedia data in this project, a subgroup of 8 individuals were also invited to three video interviews conducted by trained interviewers over the course of the year to ask follow-up questions related to the diary topics. These participants were selected to represent a diverse subgroup in terms of gender, race, ethnicity, and age/generation. Interviews were between 10 to 45 minutes in length and conducted on Zoom. If the participant had not responded to recent diary prompts, they were asked those questions verbally in the interview.

At the conclusion of the 12 months of this project, participants were invited to complete a post-survey with similar questions as contained on the pre-survey. Participants were offered \$10 payment for each diary entry and \$20 for each video interview. At least two researchers took detailed notes on video interviews and audio diary entries, and these notes were used for analysis. All diary submissions that included photographs or videos were also analyzed for the present study as visual data. Prior to manuscript submission, the research team obtained consent to publish from three participants who could possibly be identified by the public based upon their data shared in this paper (e.g., the name they chose to share; a photograph that might reveal their identity). An additional participant who originally gave consent for public sharing of their diary and was identifiable could not be reached for consent to publish, and therefore their data was revised in this paper to be anonymous.

Analytic Approach

The research team used content analysis (Bengtsson 2016) to review our data based upon our research questions of interest. We focused on the types of data that would be most relevant to our exploration of nature as a resource for LGBTQ+ individuals. We analyzed participants' monthly diaries (text, audio, video, and photographs) and detailed notes from participant interviews and audio entries. Although there were questions in one diary prompt that related to participants' relationships with pets, we determined this to be a topic distinct from our focus on experiences outside in nature and excluded these data from the current analysis.

The first two authors (Kristie and Riley) conducted data analysis. We both started with the text data from diaries and interviews, reading through these data and independently identifying meaning units that we deemed as relevant to the research topic (*decontextualization*; Bengtsson 2016). We used Microsoft Excel, applying open coding to these meaning units. For the visual data, we took inspiration from the work of Shankar (2019) who describes a process of "listening" to photos – not just merely taking in the visual data, but also registering an affective tone and how the visuals move, touch, and connect us to the event we're seeing. From Shankar's perspective, this listening is a political act that calls us to reflect on and suspend our assumptions and forefront questions of power, value, and affect. We also wanted to capture the aesthetics of how visual data were constructed (Vellanki 2022). Therefore, we created our own description of each image or video, including how our assumptions may be challenged and reflections on the aesthetics (framing, lighting, focus, etc.). We then attached codes to our descriptions, like the coding of text-based data. These codes were included in our thematic analysis to assist us in grouping visual data into themes but were not used as exemplar quotes in our findings.

We met virtually to discuss the coding process, questions that arose, strategies for merging our codes, and how to resolve disagreements. We then used Google's Jamboard app to visually cluster similar codes as digital "sticky notes," which helped move us towards identifying broad topics and categories underneath the themes (*categorization*; Bengtsson 2016). From there, we constructed the "story" of our themes (*compilation*; Bengtsson 2016). As we identified potential exemplar quotes, we also looked through the original meaning units to promote *recontextualization* when sharing quotations and reviewed visual data to determine where they best fit within our themes (Bengtsson 2016).

FINDINGS

We identified four main themes about how LGBTQ+ adults in the Southeastern U.S. spent time in nature and used it as a resource during the COVID-19 pandemic: (a) for physical movement; (b) to stay connected to people; (c) for coping; and (d) for introspection.

A Place for Physical Movement

Participants reported spending time in nature to facilitate physical movement. Having a space to move one's body and maintain health was valuable. Some participants noted engaging in outdoor exercise, walking, and hiking. Others spoke about tending to their yards and gardens.

One participant, Shannon (they/she), shared the importance of having space outside in nature:

I love just being able to go outside, go on hikes, go on walks, and, like, release that pent-up energy, you know... I think, I definitely try to spend time around people who like being outside and adventuring and just exploring things because that's what I like to do.

Participants also used movement outside to overcome feelings of discouragement. This also included using nature to take breaks throughout the day, as shared by Sunny (she/her): “I try to balance my lack of motivation with outdoor exercise in my neighborhood as well as frequent breaks throughout the day.”

Another participant (Katherine, she/her) shared:

When I have felt down, I have tried to institute twice daily walks to give me fresh air and sunshine. I also have one friend near me who is part of my ‘COVID-19 bubble,’ and we get together for walks, hikes, and other activities on about a weekly basis.

Participants also submitted images linked to the theme of physical movement. Figure 1 shows a wooden boardwalk with multiple paths through a sunny, tree-filled space. The photo reflects a space for exploration within a peaceful environment, with the pathways providing a way for humans to accessibly navigate this green environment through physical movement. With its winding paths and planks, it also provides space for people to share in the space together.

| Insert Figure 1 approximately here |

A Space to Stay Connected to People

Participants spoke about the importance of nature as an outdoor space to remain connected to other people during the COVID-19 pandemic. Given the virus transmission risks associated with sharing space indoors (which became more evident as the pandemic progressed), spending time outside was seen as a valuable resource for social connection. Outdoor environments could facilitate connections and relationships. Participants shared anecdotes of sharing space with their “COVID bubble” in their yards, driveways, porches, as well as out on walks and hikes together. One participant, Mark (he/him), shared:

We have had social distance visits with friends in our backyard, on porches 10 feet distance, or in driveways. We and our friends wear masks and do not hug or touch... Our circle of friends and us feel the need for social interactions to maintain emotional good health.

The importance of adaptation to ensure community well-being was further noted by leyousef (he/him):

My friends and community on the other hand found ways to adapt. My friends who do drag have been continuing to perform whether through digital platforms or drive-ins. My weekly queer family dinner gathering every Wednesday (going on 5 years now) went virtual and once a month we will gather in a friend's yard. I think being aware of other peoples' needs and adapting to those is more important than adapting your own needs to fit the restrictions of the pandemic.

Other participants also shared experiences of engaging with others in nature from afar by texting and talking with peers on the phone while on a walk despite being in different physical places.

Evidence of using nature as a space for social connection was also represented in participants' visual data. Figure 2 was shared by Anonymous as an example of a socially distanced gathering with friends in the outdoors.

| Insert Figure 2 approximately here |

A Space for Coping

Participants shared how nature was a coping tool for them during the COVID-19 pandemic. In particular, being in nature: (a) helped them deal with changes in routine and increased uncertainty by creating new daily practices, facing grief, and establishing a new sense of control through outdoor engagement; (b) allowed them to take a break from screens, the news,

and social media, which were often a source of stress, misinformation, and despair; and (c) promoted their mental health by providing a way to take care of themselves and their community and reviving their energy and hopefulness through rejuvenating experiences.

Helping to deal with changes and uncertainty. The COVID-19 pandemic introduced many disruptions to everyday life. Participants said that being in nature helped them deal with these disruptions by establishing new practices, dealing with related grief, and creating a sense of control. Several spoke about establishing daily habits. As shared by Sunny (she/her):

I now have daily practices, too, that connect me to my body and spirit, the earth, the sky, the energy of the universe. I feel more aware and more awake... Dedicating my mornings to writing, movement, and nature walking excites me.

Another participant (Anonymous) also discussed new habits and ways of thinking, including walking outside and visiting parks:

Since the Pandemic began, walking outside and continuing (remote/online) appointments with my therapist have been integral to my wellbeing. Walking is a pattern, a habit: Intense and intentional walking outside, practicing mindfulness and meditation at the sights and sounds of nature--trying to notice something new each day-- has helped fight mental deterioration that the Pandemic so easily brings. Now, being vaccinated, outdoor events and visits to parks and farmer's markets with friends have been added to this routine, which benefits our collective mental health.

A way to take a break from screens, the news, and social media and consequent stress.

Participants turned to nature to cope with increased screen time and/or exposure to distressing news. Tracee (she/her) shared:

Since the Pandemic began, I've gone into what I call my once in a lifetime opportunity to become 'Selfish Mode'. CoVid 19 has contributed to me being more focused only on my mental and physical wellbeing and those that I love... I've also found it very necessary to sensor certain news and other television programming that triggers my disappointments around racial injustice, politics and just plain inhuman treatment of other human-beings. My medicine for the soul includes Mother Nature, meditation, prayer, regular workout schedules, hiking and positive affirmations.

Some participants reported that they had to spend more time in front of screens than usual because their job became remote. Shannon (they/she) was in this situation, sharing:

[All] I do all day is sit at my computer... having my video on all day. Like, good, nine to five kind of thing...I mean, don't get me wrong, I love my job... but it gets to be a lot.

After a while, it's pretty intense, so I love just being able to go outside, go on hikes, go on walks, and, like, release that pent-up energy.

Promoting mental health by taking care of themselves and their community and reviving energy and hopefulness. Being in nature was also discussed as nurturing mental health through caring for self and community and restoring energy and a sense of hope. Anonymous discussed this form of coping, where spending time in nature was part health intervention:

Being in nature has had a huge impact on my wellbeing during the pandemic, now and especially during the pre-vaccine height of the pandemic. I am lucky that my apartment complex is quite pretty, and I live close to a park—a swamp, but really an escarpment—all have provided a consistent experience as I work on trying to manage my weight gain due to the pandemic, and intentionally reduce stress through mindfulness, breathing exercises, and simply leaving my apartment and going outside. I've become proficient at

identifying birds around this area, and often take photos of other wildlife as well, including local raccoons! I work in a windowless basement now, since we must work from campus, however, campus too has a sense of sculptured [beauty] when I have and make the time to go outside and walk around, seeing the live oak trees, flowers, squirrels, and crape myrtles. After working from home for a year, in some ways, it was experiencing sensations anew.

Although less dominant of a theme, some participants spoke of engaging in community care within natural settings, such as Sunny's (she/her) mention of helping others with yardwork:

I love expressing my gratitude and appreciation for my friends and family - letting them know they have a positive impact on other people and in this world...I also like contributing what I can to make a task less difficult or burdensome for the people in my life: getting the mail for a neighbor or running errands, helping in the yard.

A Space for Introspection

Participants spoke of turning to nature as a space for introspection. Being in nature was a way to find solace and serenity by immersing oneself in the outdoors. Nature provided participants with space to think and reflect, be attuned with their senses, be inspired and thankful, be amazed, and find spiritual meaning. Being in nature was a space for freely being, breaking out of boundaries, and exploring. Anonymous shared:

I had this moment of standing at the [lake] which was just really big and seeing it under the sky, and I was like "wow, ya know, this is wild, like we are living on this planet and it's so immense." I really felt...this smallness of being [a part] of something so wonderful and immense and like huge, and very powerful.

Charles (he/him) spoke about the value of going on long drives to commune with nature:

But what I was always most drawn to was the beautiful landscape. I never got out of my car so I'm not sure if that is cheating. My [communing] in nature was from an automobile but the tranquility even from 35 miles per hour still made an impression on me. It was hard not being moved by the natural beauty and scenic roads...Once I went down some road and I got freaked out because I did not really know where I was...But those drives will forever in my mind be associated with this chapter.

Besides these textual examples of data, we also identified several examples of photo and video data that exemplified this theme of introspection in nature. When we engaged in listening with Figure 3, we found that it represented solitude, open space, and quiet. It had no people or human-created objects anywhere in the shot, so represented a space for solace and reflection.

| Insert Figure 3 approximately here |

The photograph in Figure 4 spoke to how using nature as a space for introspection can prompt us to pay close attention to our surroundings and capture a sense of amazement and surprise. This photograph showed a representation of the juxtaposition of nature and the built environment, demonstrating how nature (in the form of a plant root or branch) can adapt to its environment and mesh with the built world. We also thought this photograph represented how introspection can help us envision ways of breaking out of usual boundaries by seeing the ways this is similarly represented in nature.

| Insert Figure 4 approximately here |

DISCUSSION

This research explored the ways in which LGBTQ+ adults in the Southeastern U.S. turned to nature and used it as a resource during the COVID-19 pandemic. Access to nature has

previously been found to improve overall well-being inclusive of mental and physical health (Barton and Pretty 2010; Benfield et al. 2014; Bratman et al. 2019; Wood et al. 2017). Further, immersion in nature has been noted to support connections to oneself as well as others (Meyer 2010). Consistent with previous literature, findings from this study noted themes pertaining to spending time in nature for (a) physical movement, (b) staying connected to people, (c) coping, and (d) introspection.

While the importance of natural spaces has been previously explored, the contextual circumstances of the COVID-19 pandemic posed new points of significance. In a time when routines were greatly disrupted, including the closing of gyms and recreational centers, having space and motivation for leisure and physical movement was important. Results from this study indicate that LGBTQ+ adults in the Southeast turned to nature as a space for physical movement. Previous research has indicated that there are specific benefits to being able to exercise within a green, natural environment (Li et al. 2021; Li et al. 2022). Our study supports the findings of others who have documented the need for safe places for exercise and movement among LGBTQ+ people (Herrick, Baum, and Duncan 2022). Having natural spaces that promote physical movement—such as accessible outdoor walking paths—could be such a safe space.

Community connection is immensely important to the LGBTQ+ community (Fish et al. 2020; Snapp et al. 2015), and nature was seen as a space for not only enjoying the outside world, but also a way to remain connected to community. Nature served as space for communities to socially distance while maintaining connections, as well as an instigator for retaining communication through calls and texts. Given that many LGBTQ+ community organizations closed at least temporarily during the pandemic, having alternative methods for community building was important. Our data suggest that natural and green spaces served as de facto spaces

for social connections for LGBTQ+ adults in the Southeast U.S., supporting the value of designing these spaces to promote community-building and social interaction and continuing a history of subversions of cisheteronormativity within natural spaces (Mortimer-Sandilands and Erickson 2010).

Participants also noted the importance of spending time in nature to cope with unfolding nuances and stressors. The COVID-19 pandemic introduced disruptions and heightened uncertainty, elevating risks of traumatic stress for LGBTQ+ people, some of whom had already tackled similar risks in the past. The natural world provided a space where people could stay grounded and take a break from news and technology. Other research has supported the ways that being immersed in nature can promote mental health (Bratman et al. 2019) and allow for a healthy break from technology (Meyer 2010). The current research further adds to knowledge about how time in nature was particularly beneficial in the pandemic context.

Nature also provided a space for introspection. This finding links to the work of Meyer (2010), who suggested that LGBTQ adults were turning to wild spaces to engage in mindfulness, to have a sense of awe, and to seek refuge. Since many LGBTQ+ people experience a lack of welcome in faith communities (Pew Research Center 2013), nature could work as an alternative space for spiritual reflection, meditation, and feelings of connectedness to the larger world.

Implications

This research has several implications for community organizers and planners and practitioners in the leisure sciences. Our findings support the body of evidence about the importance of green spaces and public parks in urban environments for public health. This research highlights the value of such spaces for LGBTQ+ individuals in the often-hostile climate of the U.S. Southeast during a public health crisis. Relatedly, this research indicates that green

spaces can play an important role in crisis situations in promoting resilience, health, community, and spiritual strength. Some scholars have argued that cities need to prioritize urban access to nature for their resident populations, particularly in anticipation of such crises (Soga et al. 2021). We believe it should be a priority for community planners, neighborhood organizers, and policy makers to look for creative ways to increase green spaces and repurpose unused urban environments (e.g., abandoned homes) as new green spaces.

Our research also supports the idea of designing green spaces as a place for social connection. Public green spaces can be purposefully designed for community gathering and connection, such as building outdoor auditoriums, classrooms, and gardens, and integrating shaded/covered seating areas in green spaces. Green spaces can be tailored to match the ways LGBTQ+ people are already using them for health promotion – for example, creating more paths for walking/biking, offering fitness areas within public parks, and creating recreational “libraries” where community members can borrow outdoor equipment such as hiking boots, binoculars, or paddleboats. Communities could also offer programming that further encourages engagement in the outdoors, such as a community-wide “screen-free” day. Outdoor spaces could be designed to promote introspection by integrating water features, art installations, posting signs that offer reflection prompts, creating outdoor “sacred spaces” for group spiritual services, and offering public yoga or meditation. For LGBTQ+ people specifically, community practitioners could offer tailored programs, such as outdoor experiential therapy, LGBTQ+ walks/hikes, and guided kayaking. Communities can create more public health messaging about the value of spending time outside. In hindsight, more work could have been done earlier in the COVID-19 pandemic to communicate clearly to the public that being outside with others was less risky for virus transmission than gathering indoors.

Limitations

While this study held many strengths and allowed for innovative means of engagement, some limitations should be noted. Throughout the year of the study, only a subset of the 30 participants regularly responded to diary prompts; thus, some voices were not as regularly heard, and those individuals may have faced unique barriers in the pandemic that were not reflected in our findings. With this smaller subset of participants, there was not enough variability within the group to analyze identity subgroups across the sample or how experiences with accessing nature may have been similar or different based upon other demographic information. Additionally, young adults – many of whom were white – were overrepresented within the sample, which does not reflect the full diversity of LGBTQ+ adults in the Southeastern U.S. Future research should continue to document the experiences of older LGBTQ+ adults and adults of color during the COVID-19 pandemic and in other crises. While participants were asked and able to submit visual and video diary entries, many submitted only text entries, limiting the depth of visual data for analysis.

CONCLUSION

This study used visual, audio, and text-based diary entries and video interviews to understand how LGBTQ+ adults turned to nature during the COVID-19 pandemic. The findings showed the importance of spending time in nature to stay active, for introspection, and to maintain community connection. Community connection has long stood out as an important aspect for LGBTQ+ people. Community organizers and planners and leisure scientists should continue to focus efforts on community programming in natural spaces. This could include activities such as park-based social events, hiking meetups, or outdoor meditation groups. These

efforts would benefit both community engagement and health promotion efforts. Further, this would provide a framework for communities to proactively stay connected to each other.

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DISCLOSURE

The authors report there are no competing interests to declare.

DATA AVAILABILITY STATEMENT

Researchers who wish to access the data from this study for further research can contact the first author (Seelman). Some of the data are not available for sharing due to restrictions requested by study participants.

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Figure 1. Photograph of a wooden walkway in a green space, submitted by Anonymous in a diary entry, with permission provided for public sharing.



Figure 2. Photograph of two people socializing outside while socially distanced, submitted by Anonymous in a diary entry, with permission provided for public sharing.



Figure 3. Photograph of a mountainside, submitted by Tracee (she/her) in a diary entry, with permission provided for public sharing.



Figure 4. Photograph of intertwined plant and railing, submitted by Taylor (he/him) in a diary entry, with permission provided for public sharing.