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Barriers to Outdoor Recreation for Marginalized Groups at the University of Montana

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Barriers to Outdoor Recreation for Marginalized Groups at the University of Montana

Abstract

Exclusion from outdoor recreation reflects legacies of oppression of marginalized communities and makes access to the outdoors not equally available. In the United States, approximately 38% of Black Americans and 48% of Hispanic Americans participated in outdoor recreation in 2020. This is compared to 55% participation among Caucasian Americans. Many other intersecting identities are actively excluded, including people with disabilities, fat populations, and members of the LGBTQIA2S+ community; furthermore, class-based hierarchies are shown through the restricted outdoor access of low-income populations.

While numerous studies show a lack of diversity in outdoor recreation, little to no research has been conducted on the experience of marginalized groups in higher education settings globally and at the University of Montana (UM). The first part of our project includes an event where we invited outdoor community groups within the Missoula and UM community to connect with students and share their resources. We also conducted an anonymous survey of students at the University of Montana to better understand their experiences with outdoor recreation and the barriers in place. Participants were asked a series of questions about their recreation experiences and participation with various outdoor groups within the Missoula community. They were also asked questions relating to the barriers they may face to outdoor

participation, with responses including quantitative answers and open-space personal reflections. Respondents reported facing seven key barriers to outdoor recreation: financial, social, lack of information, accessibility, time and money, safety, and transportation. The main objective of our research is to better understand the experience of and identify the barriers to outdoor recreation for various marginalized groups at the University of Montana so that we can better promote community awareness.

1. Introduction

Access to the environment is critical for mental and physical well-being and helps connect people to resources and supportive communities. However, access to the outdoors is not equally available, and the resulting exclusion from outdoor recreation reflects the legacies of oppression of marginalized communities. Connecting marginalized groups at the University of Montana with campus and community resources will foster engagement with the natural world. The main objective of our research is to better understand and identify the barriers to outdoor recreation for various marginalized groups at the University of Montana so that we may identify how best to promote community awareness. Although our research centers on UM, outdoor access is a global issue. We provide a model for how other universities can better increase access for marginalized communities to the outdoors.

In Montana, the outdoor recreation economy makes up 10% of all jobs, and more than 80% of Montana's residents participate in outdoor recreation. (*Outdoor Recreation and Montana's Economy* 4). An Outdoor Foundation report found that in the United States, just 38% of Black Americans ages six and over participated in outdoor recreation in 2020, and under 48% of Hispanics. This is compared to 55% participation among Caucasian Americans (*2021 Outdoor Participation Trends Report* 13).

Alongside these statistics, research shows that students perceive that the lack of racial diversity is connected to traditional power relationships, unequal marketing that targets white or BIPOC individuals, and a lack of resources intended specifically to diversify outdoor participation (Lee, KoFan, et al. 162). Together, these studies imply that limited diversity in outdoor settings correlates to distrusting the systems that allow outdoor recreation. Youth members of marginalized communities do not believe that there is a place for them in the outdoors, nor do they believe that will change, and therefore they are denied the benefits that the outdoors can provide.

The lack of diversity in the outdoors means marginalized communities do not receive as many of the benefits that the outdoors can provide. The U.S. Forest Service explains that “whether it is a park in your neighborhood or exploring the vast landscapes of national forests and grasslands, there are benefits to be had when we step outside” (Avitt). They identify the numerous physical and mental benefits of spending time outdoors, including supporting a healthy and active lifestyle, lower risk of depression, and greater social connection (Avitt). Other benefits correlated with time spent in nature are “added mental health benefits, stress relief, and reduced mortality over the course of life” (Taylor, Gonzalez, Razani 24). In addition, time spent in nature can be healing for those who have experienced trauma and can create stronger bonds between family and friends. These benefits positively impact people of all races, gender, sexuality, economic status, background, and body type. While these benefits are apparent, marginalized communities still have unequal opportunities to access the outdoors and thus experience these benefits (Gosalvez).

While numerous studies show a lack of diversity in outdoor recreation, little to no research has been conducted on the experience of marginalized groups at the University of

Montana (UM) specifically, and very few in higher education settings globally. In order to better understand the disconnect between marginalized communities and their access to the outdoors, we propose the following questions:

- What are the barriers to participating in outdoor recreation for marginalized groups and communities at the University of Montana?
- How can we reduce those barriers within the University of Montana community?

These questions allow for exploring barriers to outdoor recreation for marginalized groups. We aim to highlight overarching oppressive systems that impact access to the outdoors and explore how to address these barriers and systems.

We propose an action plan to increase awareness of barriers to outdoor access, provide individuals with resources to approach their barriers to nature and connect them with a community of individuals facing similar barriers. We worked with the Marketing and Communications Office's University Relations team at the University of Montana, participated in UM's Day of Kindness, and hosted our own concurrent event on February 17, 2023. This event aimed to connect individuals facing similar barriers to the outdoors and provide resources to support inclusion.

Second, we presented our research findings at the University of Montana Conference on Undergraduate Research (UMCUR) on April 21, 2023. This research included information from prior studies and our campus survey of self-identified students from marginalized and other populations. This presentation aimed to increase awareness of the problem among members of the University of Montana community who have the power to help reduce barriers. Furthermore, these presentations shed light on the issue and opened up opportunities for individuals of marginalized communities to share their own experiences. This problem is not a unique one to

UM. On almost every continent, outdoor education and access remain rooted in Eurocentric, white, male, able-bodied, and heterosexual perspectives (Aylward & Mitten). We plan to develop this framework in order for it to be more broadly disseminated across the globe.

2. Definitions

According to the National Collaborating Centre for Determinants of Health, *marginalized populations* are groups and communities that experience discrimination and exclusion because of unequal power relationships across economic, political, social, and cultural dimensions. This often includes categories such as race, ethnicity, economic class, gender, sex, sexual orientation, physical ability, and neurodiversity.

“LGBT,” “LGBTQIA+,” and more recently, “LGBTQIA2S+” are acronyms that stand for different identities within the queer community. “L” stands for lesbian, “G” for gay, “B” for bisexual, “T” for transgender, “Q” for queer/questioning, “I” for intersex, “A” for asexual, and “2S” for two-spirit. The term as a whole encapsulates a “broad coalition” of diverse populations with respect to “gender, sexual orientation, race/ethnicity, and socioeconomic status” (U.S. Institute of Medicine). “2S,” or two-spirit, refers to a genderfluid concept specific to Indigenous communities in North America. The term is adopted by some members within groups such as American Indian and Alaska Natives (AIAN), First Nations, and Aboriginal peoples. It encompasses “spiritual, sexual, gender, cultural, and community identities” (Elm, et al.).

Sizeism is discrimination or prejudice on the basis of a person’s size, especially against people considered to be overweight. There are different levels of privilege within the fat community about which bodies are granted more societal acceptance than others.

Neurodiversity refers to variations in brain function across all populations, settings, and cultures. It describes the idea that people experience and engage with the world in many different

ways (Baumer). This includes autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), sensory processing disorder, dyslexia, obsessive-compulsive disorder (OCD), Tourette syndrome, etc. Neurodiversity welcomes and celebrates the diverse cognitive differences that individuals with neurodiversity possess, emphasizing that differences are not deficits (Baumer).

Specialized needs is used in this paper to encapsulate particular requirements resulting from learning disabilities, physical disabilities, and emotional and behavioral difficulties (Special Needs).

BIPOC is the acronym for Black, Indigenous, People of Color (Davidson).

3. Global Context

Although our research focuses on UM and Missoula, inequitable access to greenspace is a global issue. The greenspace standard, or how much area one should have access to within 1000 meters (about a 10-15 minute walk), is 30 square meters, as suggested by the United Nations or nine square meters, as suggested by the World Health Organization (Şenik). However, as urban sprawl grows more and more widespread, people worldwide consistently find that their greenspace access depends on their financial, physical/mental, and social situations. In Wuhan, China, an internationally recognized “park city,” most greenspace is centralized along the Yangtze River, where wealthier populations tend to live (Zhang). In Sydney, Australia, low-income suburbs with high population and housing density suffer from what is known as the “urban heat island effect,” where building materials and confined spaces create a ‘heat bubble’ significantly higher than other spaces directly near those urban areas (“Untouchable Playgrounds”). Greenspace access is universally inequitable, and it is impacting people everywhere.

This data extends beyond financial barriers. If one experiences physical or mental limitations, the UN recognizes that their greenspace access needs to be even closer for the individual to experience equitable benefits from greenspace. Plus, generational disparity means those in areas with high urban density tend to be ethnic minorities or otherwise underrepresented communities. While the data focuses on financial barriers specifically, wealth inequality means greenspace inequality affects all marginalized communities, as a systemic exclusion on a generational level continues to place members of ethnic minorities, queer folk, women and gender-diverse individuals, etc., in lower-paying jobs and therefore urban-dense areas with low greenspace access.

4. Literature Review

Marginalized groups have been consistently underrepresented within the outdoor community. This underrepresentation stems from a series of barriers preventing these communities from accessing the physical and mental health benefits found in the outdoors. While national and local groups that aim to equalize access to the outdoors are available, findings indicate that it continues to be a relevant issue. Underrepresentation has been found in national forest visitation (Winter et al.) and other public parks (Powers et al.). For example, research conducted in 2010 by Winter et al. showed that only 5.5 % of national forest visitors were of Hispanic or Latiné origin, whereas Hispanics were 16.2 % of the nation's population. In addition, "differences in outdoor recreation visitation between African Americans and Whites [grew] over time, owing in part to experiences of discrimination and concerns surrounding safety" (Winter et al. 2). The most likely visitors to national forests are Caucasian, and the least likely visitors are ethnoracial minorities (Winter et al.). According to 2021 U.S. Census data, Missoula, Montana, is a city with low levels of diversity, with an estimated 87.3% of the

population as white alone, not Hispanic or Latiné (“Quick Facts: Missoula, MT”). In areas with such low levels of diversity, people of marginalized groups can feel isolated and “othered,” finding it difficult to connect with others through shared marginalized identities (Taylor et al.).

This section reviews the literature surrounding the underrepresentation of marginalized groups in the outdoors. We start with discussing the mental and physical benefits of the outdoors and then explore the barriers relevant to different marginalized groups, such as financial, social, educational, and accessibility issues. We then identify how the University of Montana community has addressed these issues and how we could expand on this work. Finally, we pay special attention to studies that show how one can best aid and connect these groups.

4.1 Physical and Mental Health Benefits from the Outdoors

It has been well-established that a myriad of health benefits come from being physically active. This includes better cardiovascular function, reduced blood pressure, and the prevention of many major diseases, such as heart attack, cancer, stroke, and type 2 diabetes (Eigenschenk et al. 2). However, when physical activity is combined with time spent outside, the benefits increase, as “exercising outdoors, in and around nature, results in added mental health benefits, stress relief, and reduced mortality throughout life as compared to exercise that happens indoors” (Taylor et al. 24). Outdoor sports specifically are associated with “a better subjective overall health perception and a better physical quality of life,” as well as healthy aging, including better mobility and higher vitamin D absorption (Eigenschenk et al. 2). When people have the opportunity to get outside, they report higher levels of social interaction compared to when they are indoors (2). In addition, activity outside has been correlated with preventing diseases such as multiple sclerosis and myopia (2).

Altogether, there has been a bulk of research done on how activity and nature together can positively address physical health, mental health and well-being, education and lifelong learning, active citizenship, crime reduction, and antisocial behavior (Eigenschenk et al. 5). With increasing urbanization, lower levels of activity, and a deep disconnect between humans and nature overtaking much of the United States, outdoor physical activity could potentially be part of the solution to these issues.

While many observable physical benefits exist for individuals to utilize greenspaces and nature, the mental benefits may be less noticeable. The mental health benefits include lower stress levels, reduced depression and anxiety, improved cognition, increased self-esteem, and increased self-efficacy (Dorsch 161, Pearsons and Craig 1). Immersion in nature can help individuals get “away” from their daily stresses and reduce stress (1). The focus of the literature discussed by Pearsons and Craig is to bring awareness to the fact that nature is a restorative place for everyone and should be taken advantage of to increase mental well-being.

A study conducted by Sprauge and Ekenga found that spending time in greenspaces has been “shown to be a sustainable method to promote physical, emotional, and mental health” (394). Their study focused on students in the St. Louis area to demonstrate how a nature-based education would assist in enabling individuals to have more access to greenspaces and what this would do for their physical and mental health (395). Based on the student experiences, the researchers found that there were “...mental health promotions, happiness, and well-being promotion, aggression reduction, [and] increased social cohesion...” (Sprauge and Ekenga 398). One of the main takeaways from this study is that if students and other individuals are introduced to the benefits of nature-based education and the outdoors, physical and mental well-being are improved. Marginalized communities have much less access to these spaces and, therefore, less

access to the benefits that these spaces provide (Twohig-Bennett et al.). Through our project, we hope to bring awareness to the barriers marginalized communities experience in the outdoors and facilitate access to resources.

Stress is one of the leading contributors to major illnesses and their severity (Sawyer et al. 1020). Stress is the body's way of preparing for a situation that contains harm or the potential of harm. It is a protection method that prepares the body for survival by "activating the sympathetic nervous system and hypothalamic-pituitary-adrenal axis responses" (1020). However, long-term and chronic stress can lead to "allostatic load," also known as "the wear and tear on the body" produced through "repeated activation of the stress-response systems" (1020). Allostatic load increases the risk of several health problems, such as memory impairment, neural atrophy, and heart disease, and it can contribute to the development of "coronary and carotid atherosclerosis and hypertension" (1020). A common cause of stress is the *state of being oppressed*, which can contribute heavily to the presence of chronic stress in an individual and thus increase the body's vulnerability (1020). A study by Sawyer et al. measured physical and cardiovascular responses in individuals when faced with a situation where discrimination was predicted. These included "threat cognitions, threat emotions, and increased cardiovascular reactivity." In addition, "increased vigilance for prejudice cues is associated with having interracial/ interethnic mistrust, negative emotions, and depleted cognitive resources (1020). The prevalence of diseases is much higher in marginalized communities, even when factors such as hospital access, healthy food access, housing, and employment are controlled for (1021).

Taylor, González, and Nooshin compiled a short list of some of the many discriminatory incidents against marginalized communities, specifically in Black, Indigenous, and people of color (BIPOC) communities, in the outdoors. For example, we have seen "a bird watcher,

Christian Cooper, threatened with police action; we have seen a jogger, Ahmad Aubery, hunted and killed without cause; Tamir Rice, killed while playing in a park, and Trayvon Martin, among others, were killed for nothing other than being out of doors” (23). The amount of violence enacted in the outdoors against marginalized communities dramatically contributes to the continuation of these health disparities.

As previously demonstrated, stress, among many other ailments, can be addressed in no small part by mental and physical engagement in nature. Mental and physical health are deeply intertwined. Nature can be highly beneficial for both, which is crucial to recognize when considering increasing access for marginalized communities. Exposure to the outdoors can combat the physical stress resulting from oppression.

4.2 Financial Barriers

Financial constraints play a significant role in preventing marginalized groups from establishing a connection with the outdoors. When looking at park visitation by people of low income, Scott and Munson found that “income was the single best predictor of perceived constraints to park visitation” (91). Travel time, distance, and costs to visit these parks were common issues. For low-income, marginalized groups, barriers to accessing the outdoors are especially high.

Low-income areas are disproportionately subject to nature deprivation than moderate or high-income areas. Nature deprivation, defined by Rowland-Shea et al. is if an area “has a higher proportion of natural area lost to human activity, including urban sprawl... than the state-level median” (6). Across the country, “[s]eventy percent of low-income communities... live in nature-deprived areas. This figure is 20% higher than the figure for those with moderate or high incomes” (7). This disproportionate access to nature is even more extreme when one further

separates low-income communities of color: over 76% of people in low-income communities of color are impacted by nature destruction and live in nature-deprived areas (6). Because of where nature is situated in or around urban areas, it is costly to visit greenspace areas due to the increased cost of living around safe parks and outdoor play areas, distance necessitating the cost of private or public transportation, or increased time required to travel to and from these areas (Cameron). Living in a nature-deprived area puts a financial barrier in place that prohibits access to nature for urban low-income individuals.

Individuals living in areas with less green space and, therefore, more pollution, are more susceptible to developing asthma and other immunocompromising illnesses, which is especially dangerous in the era of Covid-19 (Rowland-Shea 7). From a mental health perspective, the impacts are just as strong. A June 2022 study by Sprague and Ekenga found that among elementary and middle school students in Saint Louis County Public Schools, a district where 86% of public schools report that at least 95% of students use the federal reduced lunch program, self-reported levels of health-related quality of life (HRQoL) significantly increased when students had even a few extra hours of guided access to nature (nature-based field trips) (395). In contrast, students' self-reported quality of life in the same district *without* that increased access reported *decreasing* levels of HRQoL over time (Sprague and Ekenga 396). The increased risk of developing mental and physical illness can affect the quality of life, which can result in more financial responsibilities surrounding healthcare costs that strain access to the outdoors. It is significantly harder to access the outdoors when one's physical or mental strength is focused elsewhere. Furthermore, when there is concern about financial priorities, people are less likely to be able to focus on outdoor recreation while also having the additional barrier of not being able to afford outdoor recreation financially.

Even excluding access to urban greenspaces, financial barriers still ensure that low-income communities have significantly lower access to the outdoors than their high-income neighbors. The cost of equipment, park passes, and other necessities for supposedly free outdoor recreation limits who can participate in outdoor recreation. 29% of Americans list financial need as one of the biggest barriers to their access to the outdoors (Cameron). Much of that cost comes from the equipment. If one were to mathematically calculate, “[a]t the federal minimum wage of \$7.25 per hour, it would take a worker two full eight-hour days to afford new hiking shoes from most major outdoor brands” (Cameron). The financial barrier of equipment cost is high enough to price low-income individuals out of a comparatively low-cost and easy-access form of outdoor recreation.

While there are ways to access equipment second-hand, this equipment is often not of the same quality as new equipment from a trusted brand, especially safety gear (Cameron). The effects from faulty equipment, even if not actively dangerous, are often enough to dissuade one from further accessing outdoor recreation. Furthermore, name-brand companies that are trusted to produce high-quality equipment are unwilling to lower their prices to reduce the financial barrier that equipment costs put on low-income individuals. In 2018, when Walmart started selling high-quality equipment at low prices, the brands that signed on to Walmart’s sales immediately pulled out (Cameron). While there can be reasons for this high price— Patagonia, for example, says that they stand by the company’s prices to source fair-trade materials with little ecological impact (Cameron) — this unwillingness to reduce costs causes low-income individuals to experience difficult barriers to outdoor recreation.

In summary, lacking access to greenspace and equipment puts significant strain on those with financial barriers to the outdoors. This does not need to be the case, however, as from a

policy perspective, it is more economically sound to increase access to the outdoors than to keep things as are: it is predicted that, for every dollar spent on increasing urban greenspace and access to the outdoors, another three dollars are saved on mental and physical health facilities (Rowland-Shea). The financial barriers in place that prevent people from accessing the outdoors are both impactful and needless.

4.3 Social Barriers

Community is a key factor in engaging in outdoor recreation. Increased communication allows for the provision of resources for equipment, transportation, social support, safety education, inclusion, and acceptance. With fewer marginalized groups participating in outdoor recreation, the challenge of finding a community that can support individuals and their outdoor goals increases. We especially see this challenge in the specialized needs community. Research suggests people with specialized needs have less peer support for participating in outdoor recreation compared to neurotypical or traditionally abled individuals (Taheri et al. 436). People with specialized needs also report having fewer friends who share an interest in outdoor recreation (Armstrong et al. 9). Some individuals with specialized needs face challenges with executive functioning skills. Executive functioning skills are higher-level mental processes that influence and regulate behavior and thoughts, including organizing, planning, decision-making, prioritization, cognitive flexibility, time management, risk analysis, and autonomy (Margari et al. 1191). The stress associated with planning and participating in outdoor recreation alone can be a social barrier for these individuals (Armstrong et al. 9).

Those particularly vulnerable to social isolation are those that fall within the college-age range. The transition from high school to college is challenging for all young adults, but research suggests that marginalized groups, especially people with specialized needs, face increased

social challenges navigating college and adult life. While there is academic support on campuses, college students with specialized needs do not feel like there is adequate social support (Cai and Richdale 38). Organized social groups for outdoor recreation activities, led by individuals with adequate education on specialized needs, can lessen the stress of planning and initiating these activities and help to reduce this social barrier (Armstrong et al. 9)

Community also provides acceptance and representation. Marginalized groups need to be able to engage with members of their community because being around one's community brings empathy and fosters feelings of acceptance. For the specialized needs community, research suggests that engaging in outdoor recreation with able-bodied peers can actually cause distress and lowered self-esteem (Dorsch et al. 160). Able-bodied individuals are not as aware of the considerations necessary to participate with and include marginalized groups in outdoor recreation activities. The lack of diverse representation in groups for outdoor recreation can deter marginalized groups from engaging in recreational activities. Feeling excluded, unable to access, and not being represented in recreational activities can result in this lack of participation. However, increased awareness and representation can contribute in a positive way that assists marginalized groups in engaging in outdoor recreational activities.

Conversely, negative representation and a segregated history of BIPOC communities in the outdoors also act as a deterrent for marginalized groups. Taylor et al. explores recent and historical violence against people of color while outdoors, which is important to understand the gap in activity outdoors for BIPOC communities. The increased focus on outdoor recreation prompted by the COVID-19 pandemic brought to light many racial barriers to access to the outdoors, including several examples of how structural violence and racism in outdoor recreation have health consequences. For example, Black Americans were denied access to swimming

pools during segregation, which resulted in an equity gap today between those who know how to swim and those who do not. Consequently, the fatal drowning rate of Black children (aged 5-14 years) is three times higher than White children their age (Taylor 26).

Social barriers also manifest in the form of culture-based exclusion from some fields altogether, specifically around the environment. Corbett and Maloney explore Native American participation in Western ecological science. They assert that these ecological organizations excluded Native Americans from providing scientific input. This exclusion denies representation for even highly qualified PhD-certified scientists and native cultural representatives (64). Such exclusion is not recent: according to Corbett and Maloney, “this is the classic order of events in settler colonialism, a multi-stepped process moving from expelling Native Americans from the land, to occupying the space, regulating its use, and discounting native epistemologies” (68). Even when members of marginalized communities are actively trying to contribute to outdoor recreation and ecology, the pattern of the mainstream colonial narrative excluding and marginalizing BIPOC groups continues to dominate the space. The research by Corbett and Maloney demonstrates that it is not enough for organizations to consult BIPOC individuals merely or to claim “public participation” in decisions regarding outdoor and nature issues that affect BIPOC communities. These outdoor recreation initiatives need to be led by community members, and they need to be heard by public figures and policymakers.

Another social barrier that should be addressed is sizeism. Size-based discrimination, also known as sizeism, is a prevalent issue that inhibits outdoor access due to social limitations. There are social barriers that come with sizeism as it relates to connection with the outdoors, mostly via the availability of gear. In a lot of outdoor recreation, the body is something that becomes an area of focus. The issues are manifold, whether it is through the availability of gear, the exclusivity in

price and sizing, or normative expectations for appearance itself. For example, outdoor rock climbing is an engaging way of connecting with nature. When participating in the sport, there are opportunities to push oneself, establish trust in teams and partners, and experience landscapes differently. However, within sports such as rock climbing, social barriers regarding expectations about size and fixations on weight and image make participation exclusive (Breitweiser et al. 2). These systems of exclusion are based on sizeist, misogynist, and toxic masculine values that make many realms of outdoor recreation challenging for different marginalized identities to break into. Whether it is the way that the routes are set to prioritize bodies that are assigned male at birth (AMAB), “mansplaining,” or judgment from onlookers during activities themselves, there are many subtle and overt manners that social expectations impede fat folks and women from accessing the outdoors (Breitweiser et al. 6).

Finally, perceived beliefs by both queer and heteronormative communities about outdoor culture result in limited access to the outdoors for the LGBTQIA2S+ community. There are general views within the LGBTQIA2S+ community that queer culture can only flourish in cities and that there is no space for it in the outdoor realm. Emotional tolls and physical threats are problems many queer people face in smaller towns and less urbanized settings (Henriquez et al. 2). This has led to a concentration of queer culture in cities, with queer culture being less visible in smaller towns, though this is not to say that it does not exist.

Often, rural areas are closer to nature, which means that physical access to the outdoors is easier than in highly urbanized locations. This proximity results in more time spent outside and higher prioritization of protection of the natural world (Bashan et al. 348). A consequence of queer culture being largely contained in urban areas rather than rural ones is that queer populations may have more unsafe experiences and less access altogether to the outdoors. Nature

is a fundamentally queer space, with the vast majority of species known in nature being in some way gender or sexually non-conforming. The mainstream domination of natural spaces being done through a toxic-masculine lens runs counter to the nature of the environment itself and serves to alienate queer people from a potentially healing space (Roughgarden, 2). Despite this, many of the common narratives around it have been folded into the toxic-masculine realm, in which it becomes something to be “conquered” or “tamed” (Wiley 1). Breitweiser et al. further suggests that “the wilderness, outdoor activities, and adventure sports are often linked with masculinist ideals of environmental domination, rugged individualism, and risk” (3). Creating a safe space for queerness in the outdoors that is inherently connected to the nature of the environment itself is crucial in addressing these social barriers for LGBTQIA2S+ populations.

4.4 Accessibility, Physical, & Educational Barriers

Accessibility barriers include systems that prevent one from physically getting to outdoor areas, utilizing these areas to one’s advantage, and finding a sense of community with those in the outdoors (Burns et al. 405). It can be difficult for people with specialized needs to want to explore the outdoors when they do not see others from like communities and when there is no one to help them navigate outdoor areas. However, when people with accessibility issues can get to outdoor spaces, it can benefit them in a myriad of ways. These benefits include mental well-being, decreased feelings of social inclusion, and increased person-first identity, which means individuals are seen as holistic people and not just their disability (Burns et al. 411-413).

One of the biggest concerns that many programs and outdoor areas, like national parks, face is how to sustain the natural beauty of the outdoors while creating accessible and inclusive spaces for people of all abilities (Hening et al. 807). One way to ensure that marginalized communities can access the outdoors without changing the landscape itself is to bring awareness

to the areas that are currently accessible. This can particularly apply to people with accommodative needs when they are unsure what outdoor areas have any accommodations. Based on a study of outdoor area participants, Hening et al. found that the best way to raise awareness about accessibility to the outdoors is to utilize different ways to advertise and advocate for people of all abilities and other marginalized groups (808). Hening et al. recommends that much of this advertising should take place online. However, while this solution applies to urban areas, extending this advocacy and advertising to rural areas without much internet access may be difficult.

Time in the outdoors is beneficial for physical, mental, and social health, but BIPOC communities have continually experienced violence and been unwelcome in these outdoor spaces. Following the devastation caused by the Covid-19 pandemic, time in the outdoors and the benefits that come with it are more important than ever. Historically, BIPOC have struggled to find a safe place in the outdoors, and their health has negatively been impacted as a result because “[t]he racism and structural violence that prevents outdoor recreation has resulted in decades of health inequities” (Taylor et al. 26). A long history of segregation and racism toward BIPOC has created health inequities and left gaps in education regarding outdoor experiences. Working to provide these safe and positive outdoor spaces for BIPOC is vital, especially when being outdoors can also help heal trauma and benefit interpersonal connections between individuals.

Marginalized groups may also encounter accessibility issues in the lack of representation and education surrounding outdoor spaces. A study analyzing African American student participation in outdoor recreational activities in Mississippi universities found “30% of 18-24 year-old African Americans participate in recreational activities compared to 62% of 18-24-year-

old Caucasians” (Davis, 1). The study identified that African American students felt underrepresented and untargeted by advertising for outdoor and on-campus activities. This demographic of students was unaware that certain outdoor activities were available to them, and if presented with the opportunity, they most likely would participate. If students are not introduced to new experiences early in their college careers, they are less likely to get involved later on. When the interviewed students from Mississippi universities were asked why they did not participate in outdoor activities, the number one reason was “[l]ack of competence, skills, knowledge, and education” (Davis 148). Most interviewees had no previous experience with outdoor activities and therefore did not feel completely comfortable in outdoor spaces or with outdoor activities. Students were later asked if this lack of education may result from the perception that outdoor recreation was a “white person’ activity” (Davis, 154). Many respondents said this perception contributed to their lack of education. Their families did not participate in these activities growing up, so they had little experience.

There are systems in place that try to equalize racial and ethnic access to the outdoors—for example, Powers et al. found that municipal parks “...strive for equitable access among historically disenfranchised groups and increasingly diverse constituencies” (378). However, these programs may not be aware that they are not actually accomplishing their goal. Results showed that characteristics of marginalized communities were significant predictors of lower rates of visitation to municipal parks (Powers et al., 388-390). The main takeaways include the need for increased outreach and marketing toward marginalized communities to ensure they have the proper access and awareness of outdoor areas accessible to them (390-391).

One of the common barriers that marginalized communities face, especially people with accommodative needs, is access to education involving the environment and the outdoors.

Environmental education is vital to understanding the participation of marginalized groups in the environment (Salvatore et al. 4-5). Marginalized communities face disparities when seeking knowledge and skills for engaging in the outdoors, which is why the quality of environmental education is critical (Salvatore et al. 3-4). This education and access to the outdoors also allows these groups to utilize the environment as a tool for themselves to better their mental and physical well-being (Henning et al. 803, Harun et al. 71). When conducting research and bettering environmental education, one must consider how the environment impacts people, specifically marginalized groups. This can help progress environmental education to be equitable and accurate for everyone. It is well known that marginalized communities are “...disproportionately impacted by environmental issues” due to the vast educational barriers they face, which is why there needs to be improved education for these groups (Salvatore et al. 4). Providing the space for marginalized communities to become a part of the conversation around environmental education will help immensely. When these individuals feel that they are welcomed to the topic of environmental education, it can be easier to understand the deficits they experience and how to address them in future education.

4.5 Missoula/UM Specific Work

While evidence of outdoor barriers for marginalized groups nationwide exists, the University of Montana (UM) has not thoroughly analyzed how marginalized groups, specifically in the UM community, may be experiencing these issues. Due to a lack of peer-reviewed sources on Missoula-specific issues, we utilized local news media sources to delve deeper into the barriers and work being done within the Missoula community. As discussions around marginalization and the environment become more prevalent with the Black Lives Matter and climate movements, UM must ensure they actively address outdoor barriers.

Missoula, MT is a community with a strong, accessible base in outdoor recreation, with access to hiking trails up Mount Sentinel and in the Rattlesnake Wilderness within close driving distance. The Missoula community may be unique in its proximity to the outdoors and a general culture of outdoor engagement. However, outdoor recreation still has barriers, even in such a recreationally-centered environment. While the river trail is easily accessible, people may be less inclined to use the river trail if they have poor shoes or inadequate clothing for Montana's extreme temperatures. Barriers can also include the cost of leisure time. Individuals working long hours may have no time to enjoy the outdoors, even if the gear cost was relatively low.

In Missoula, local organizations that work to promote diversity in the outdoors have been created by individuals who found that they were not represented in outdoor experiences (Serbin, Bret Anne). Diverse organizations can provide a space for BIPOC and intersecting communities to gain knowledge about the outdoors, build communities with other diverse individuals, and access outdoor spaces and the gear often needed for these activities.

The disconnect between community resources and the University of Montana is a specific focus of our research. The city and other community groups must also connect and engage with the UM community. UM has many active student groups like the American Fisheries Society student chapter, the Student Recreation Association, and Backcountry Hunters and Anglers that promote outdoor recreation, but no data exists on the diversity within these groups and what is being done to promote more diversity. The Outdoor Program at UM offers low-cost trips, skill classes for rock climbing and other outdoor activities, and equipment rentals for all students ("Outdoor Program"). This program provides excellent resources for students on campus, and more research can be done to determine if these programs are effectively reaching marginalized groups.

More action must be taken to better understand the experiences of marginalized groups at UM in the outdoors and to unite the community's groups to be more effective. This study hopes to gain insight into the barriers to the outdoors for marginalized groups at UM with hopes that it will provide guidance for future changes at a national level. While UM organizations are making great strides toward improving diversity and achieving equity within outdoor spaces, more can be done to understand if universities are reaching marginalized groups effectively and how we can connect and support those doing the work. Through our project, we can help provide solutions for the UM community and create a framework for other universities to utilize.

4.6 Local Experts

Erynn Castellanos, the program coordinator for Missoula's Latino Outdoors (LO) chapter, attended our Reclamation Recreation event and spoke with our group about her experience working to bring more outdoor opportunities to the Latinx community in Missoula, as well as her perspectives from working with Missoula's Parks and Recreation department. Castellanos started the Missoula LO chapter in 2020, providing outdoor recreation opportunities for community members and students from the University of Montana.

Missoula is a great place to get outside, but the city lacks diversity. Castellanos uses her work at LO to allow group members to explore the outdoor world in a safe environment. She pointed out several main barriers, primarily around young people wondering *why they should care*. It can be hard not to take a space for granted until access to it is taken away. She pointed out how "place-based connection" is being lost in younger people growing up in a generation more disconnected from the natural world than previous ones. Why are we losing that connection? From her perspective, representation is always important and can be lacking in Montana. There can be difficulty in recreating in the winter, and getting out of one's comfort

zone is always a challenge, especially as a beginner. In addition, social media has created expectations where we are told that when we get outside, we have to “maximize it,” which can be a deterrent. Nature journaling in a local park is just as valid as backpacking. In reality, getting outside is the most important part. There are also some barriers to integrating UM communities with Missoula outdoor organizations due to the high turnover of leaders due to graduation and busy student schedules.

We also spoke with Molly Kimmel from MonTech. MonTech is grant funded and located on the UM Missoula campus. MonTech provides technology, support, and services to help improve the quality of life for Montanans with disabilities, both physical and cognitive, specifically through the provision of assistive technology (AT) devices.

MonTech has a program to try any technology they have for 30 days for users to test the technology before buying it themselves. After this period, if a user does want to purchase an item and needs financial assistance, MonTech can also do a financial loan program called the Montana Assistive Technology Loan Program (MATL). MonTech primarily meets with students on campus and partners with UM departments, but they are a statewide program and want to advertise and reach out across the state more. A few of the common barriers that MonTech identified in Missoula are interpersonal barriers — fear, mental barriers; and intrapersonal barriers — the social barriers, fear of doing it with other people/strangers, etc. Of course, there are also structural barriers — lack of accessible spaces and equipment, people not knowing about MonTech, etc., which is the most common barrier. When asked what UM can do to reduce barriers to outdoor recreation, Kimmel suggested that the UM Outdoor Program could partner with and boost MonTech. Like the UM Outdoor Program loans out able-bodied outdoor equipment, MonTech loans ability adaptation equipment. Kimmel also encouraged micro-

affirmations, acts that affirm diversity and inclusion and showing that accessibility is important to that event or department or university.

4.7 Researched Solutions

When looking through the lens of safety in outdoor recreation, there is a repeated emphasis on solutions of education and awareness. A study by Herrick, et al. focused on recommendations from queer adults for making physical activity safer and more inclusive that can be broadly applied. Two focus points include creating safer spaces, in general, through inclusive changing areas and removing the gender binary-oriented focus as a whole. There were many ways to improve access to outdoor recreation, but the important point to note is that the strategies through which to achieve this improved access lie in staff training, diverse representation, education, and active anti-discrimination policies (454). These recommendations have a common theme: they all suggest improved education. Guides and instructors are key when engaging with more intensive outdoor engagement; utilizing respectful language and conduct through education can help ensure the outdoors are framed safely. Small interactions can be beneficial for creating safe spaces, especially when people are beginners in outdoor education. This can be applied to queer communities and many more marginalized identities.

When instructing participants, Warner and Dillenschneider suggest that “instructors should use instruction and debriefing methods that empower and validate the experience of each participant through the use of multimodal and multisensory strategies.” This may include visual diagrams, step-by-step instructions, or hands-on learning. This is in addition to multilingual materials for non-English participants. Instructors should also plan their activities to accommodate individual speed, comprehension, and mastery differences.

Awareness is another step toward action. Finding a like-minded community is a big part of spurring engagement in any given activity. The same is true with finding a community bonded over a shared experience that is carving out space outdoors. Bringing together resources and the UM community can break down barriers between the natural world and marginalized communities.

University campus recreation programs can offer resources for diverse identities to come together and create a much-desired and needed community. Historically, minorities have not always felt welcome in outdoor experiences, and campus recreation programs have the opportunity to lessen this negative impact. A campus recreation program in a southeastern United States school takes a small group of diverse students each year on an outdoor trip that promotes diversity discussions and integration into outdoor activities. The program provides a platform for the students to learn about their fellow peers and start conversations on diversity. These semi-formal conversations and experiences open the door for students to make connections with one another through the commonality of outdoor activities. A study conducted on the program found that it was impactful for students to facilitate conversations about diversity and have outdoor space provided for them (Williams). When looking for solutions to improve the diversity and inclusivity of outdoor spaces, we can learn from the above study that even smaller seeming actions can make a large impact on students. Campuses can create inclusive spaces by utilizing their existing resources, such as outdoor programs.

Solidarity between marginalized groups can be promoted through shared group disadvantages. Research by Cortland, et al. emphasizes how bringing marginalized groups together to promote solidarity and discussion of shared issues will have a net positive benefit. By making clear how other groups deal with prejudice and discrimination, there is power in shared

experiences to overcome ‘ingroup’ discrimination (Cortland). However, studies show that stigma between groups can increase when one emphasizes their differences. Groups with different identities (race versus sexual orientation) can see another group’s stigmatization as a threat to their social identity, while in comparison, groups with similar identities (Black and Hispanic) perceive higher similarities and relatability between the other’s stigmatization and their own. Collaboration can be better established by making an explicit connection between groups. Historical inequity can be combated by developing a deeper understanding of the need to bond over shared experiences. By creating personal relationships to stigmatization, a connection is formed between self and group (Cortland).

5. Methodology

This study aimed to analyze the perceptions of barriers among marginalized groups regarding access to the outdoors within the University of Montana (UM). Research observing the University of Montana as an in-depth case will act as an example for other institutions of similar size and prominence throughout the nation.

The data collection involved voluntary surveys on Qualtrics, estimated to take between 10-15 minutes. Participation in the survey was voluntary for all UM students, and members of marginalized groups were particularly encouraged to participate. To encourage marginalized group participation, we reached out to groups promoting inclusion in the outdoors and in the local community and asked them to spread awareness for the survey. Survey and study information was also displayed on posters around campus, including a survey link and QR code for access. The researchers sent the survey via email to outdoor groups and clubs around campus to encourage further participation, including a feature in the Davidson Honors College Weekly Need-to-Know. The survey was also advertised at our outdoor campus community event. Three

\$25 Trail Head gift cards were rewarded randomly to participants in order to incentivize participation.

The researchers created the survey using information gained from our literature review. Our aim was to make it clear why the survey was being performed and how data would be used with a statement at the beginning of the survey. Participants were asked a series of survey questions: rating their level of agreement to statements, with answers ranging from strongly agree to strongly disagree; multiple choice; and open-space personal perspectives and reflections based on their responses. This data collection method was chosen to allow participants to openly discuss their views and experiences without being restricted as they would through purely quantitative data. Participants were able to opt out of the survey at any time. In order to ensure confidentiality for the surveys, the surveys were anonymous, and researchers did not include any direct identifying information like the participant's name or contact information. Participants were asked how they identify according to race, specialized needs, etc. Participants were given the option to separately provide their email addresses to opt into the Trail Head gift card reward. Individuals who completed the survey were prompted to submit their email at the end if they would like to be entered to win one of the gift cards. Provided email information was not included with official survey data or identified in the study. There was a disclosure stating that their emails would not be used in any other capacity of the project.

Survey questions were formulated to address the study research questions listed in the introduction. Survey questions include:

1. Do you currently live in Missoula, Montana? (Y/N)
2. Are you a current or recent (within the last five years) University of Montana student (Y/N)?

3. What is your age? (Blank) (Note: You must be 18 years or older to submit this survey)
4. What group(s) do you belong to?
 - a. Asian or Pacific Islander
 - b. Black/African-American
 - c. Latino/Latinx/Hispanic, or Chicano
 - d. Middle Eastern
 - e. Multi-racial
 - f. Native American/American Indian/Alaska Native
 - g. White/European American
 - h. Another racial or ethnic group: (Blank)
5. What was your assigned sex at birth?
 - a. Male
 - b. Female
 - c. Intersex
6. How would you define your gender?
 - a. Cisgender Man
 - b. Cisgender Woman
 - c. Trans* Man
 - d. Trans* Woman
 - e. Non-binary
 - f. Genderqueer
 - g. Agender
 - h. Another gender (Blank)

7. Do you identify as part of the LGBTQ+ community? (Select all that apply)
 - a. Lesbian
 - b. Gay
 - c. Bisexual
 - d. Transgender
 - e. Queer/Questioning
 - f. Intersex
 - g. Asexual
 - h. 2-Spirit
 - i. No
8. Do you have any physical limitations? (Y/N)
 - a. If yes is selected: What is/are your physical limitation(s)?
9. Do you currently utilize any university accommodations (e.g., Office of Disability Equity)
10. Do you identify as neurodiverse? (The idea that differences in brain function exist across the population, including autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), sensory processing disorder, dyslexia, obsessive-compulsive disorder (OCD), Tourette syndrome, etc.) (Y/N)
11. Do you worry about making ends meet financially every month? (Rate on a scale of Never to Always)
12. What forms of outdoor recreation do you participate in?
 - a. Rock climbing
 - b. Hiking

- c. Running
 - d. Camping
 - e. Backpacking
 - f. Skiing
 - g. Biking
 - h. Hunting
 - i. Other (Blank)
 - j. None
13. What makes an outdoor recreation space feel safe/welcoming? (Blank)
14. What are some of the benefits you get from participating in outdoor recreation? (Rate on a scale of strongly disagree to strongly agree)
- a. Heightened physical well-being
 - b. Heightened mental well-being
 - i. Ex: Helps with mitigation of existing conditions such as anxiety or depression.
 - c. Sense of community
 - d. Social interaction
 - e. Feelings of independence and self-sufficiency
 - f. Other (Blank)
 - g. I do not experience any benefits to outdoor recreation
15. What are some barriers (if any) to outdoor recreation for you? (rate on a scale from strongly disagree to strongly agree)
- a. Financial barriers

- b. Social barriers
 - c. Lack of knowledge/awareness that limits access to the outdoors
 - d. Accessibility barriers
 - e. Other (Blank)
 - f. I do not experience any barriers to outdoor recreation
16. Have you ever participated in outdoor recreation through a UM program/club?
- a. (If yes is selected) If so, through what program/club?
17. How has UM made the outdoors more accessible? (Blank)
18. How could UM make the outdoors more accessible so that you would participate?
(Blank)
19. What are some ways UM can improve access to the outdoors? (Blank)

The survey was open on January 17th, 2023, the first day of the spring semester, through March 1st, 2023. After surveys were conducted, survey data was compiled and analyzed to identify themes outlining the overall perceptions of inequity and reasons why those views were formed. If the respondent did not live in Missoula or they were not a UM student, they were directed to the end of the survey and did not answer any more questions. Percentages of the demographic and identity of all student respondents were collected. Qualtrics data analysis tools were used to perform cross-tabulation to determine the relationship between these demographics and other information like financial need and the identification with different outdoor barriers (Question 15). Researchers read through and identified themes for the qualitative questions (Questions 17, 18, 19). These themes were used to determine factors within UM that further contribute to outdoor access barriers and make recommendations moving forward.

Through our website, we hope to educate the University of Montana, students, community members, and the public as a whole about the barriers marginalized groups face. This also contributed to connecting UM students to resources on campus and in the Missoula community for outdoor recreation.

An outreach event took place on February 17, 2023, in connection with the University of Montana Marketing and Communication team's Share Kindness Day to unite outdoor community groups and marginalized people on the University of Montana campus. The invited participants included campus student affinity unions and other groups around Missoula. Some of these organizations included Latinas Outdoors, Girls Who Shred, YWCA, BIPOC Outdoors, Here Montana, Western Montana LGBTQIA+ Center, Mosaic, The Ecology Project, and the Branch Center. The event was located on the University of Montana campus. All students and UM faculty and staff were invited to attend. The event itself was publicized through posters and outreach to outdoor and representative groups around campus in the University Center. This event was used to promote engagement with our research and survey participation. Survey information was posted clearly at the event, and participation was encouraged.

We measured the success of these actions through campus and community group participation and the number of survey responses. Assessing the turnout of both our event and the surveys is key in accurately evaluating the impact of our efforts. We also shared survey results with UM administration and Missoula community organizations.

5.1 Ethical Considerations

Despite the common patterns we aim to bring awareness to, we do not claim to be spokespeople for any marginalized communities at the University of Montana. We acknowledge that the inclusion of traditionally silenced voices is imperative in direct action toward a solution

to any community-centric problem—in this case, how to provide universally available access to nature. Our team includes members who identify with the communities researched, but we recognize that every individual experiences discrimination in outdoor recreation differently. Furthermore, we recognize that we have not researched every community that faces discrimination and that there are additional barriers beyond what we have identified. By focusing on the barriers in place that prevent access to nature, we aim to allow for more open communication about these issues and encourage traditionally silenced individuals to share their personal opinions and outdoor access experiences.

When doing a study on marginalized groups, it is vital that we minimize the burden on them and recognize the labor involved in educating others. Speilhagen, Hernández, and Blevins give recommendations for radical community-engaged participant research, which includes anonymizing findings, approaching people in outdoor recreation and asking them what needs to be done to make the outdoor industry a better working environment, not burdening participants with extra work, including physical labor, emotional labor, etc., and finally, getting information back to the outdoor community through creative ways of disseminating information (5-6). We hope to embrace these findings within our own research.

Special attention is given to providing informed consent and anonymity to each participant within the study. At the beginning of each survey, participants were required to read and agree to a statement regarding the study's scope, intent, and assurance of confidentiality. The contact information of the study author will be included to answer any study questions. In interacting with these participants, this informed consent form communicates the study's risks, benefits, and potential consequences. In addition, it ensures that participants are fully informed

and educated and know that they can withdraw at any time. Participants' names were not collected to ensure anonymity.

Beyond ensuring that participants have full knowledge of the research and its implications, it is also vital to ensure that their voices are properly represented, as author Pickering explains that “ethically engaged representation is located at the start or at least the mid-point of ongoing, multi-faceted research relationships, rather than after extractive encounters” (Pickering, Lucy, and Helen Kara 299). In reaching out to groups within the UM and Missoula community to bring them together for an event, we work to engage with these stakeholders and establish positive relationships early in the study. Rather than approach them with solutions, we want to involve them in the collaboration process from the beginning to better understand what is needed to reduce barriers in the outdoor recreation world.

In order to reduce the burden on marginalized groups within our research, qualitative data collection was limited to fifteen-minute surveys rather than a lengthier and more taxing data collection method like interviews. Further, the goal of our event was to provide marginalized groups with a space to collaborate with others. We do not want them to have to be “educators”, rather, we want them to gain the benefits of shared solidarity. In order to promote solidarity and reduce outgroup stigmatization, we focused on “meaning-making,” or the mental and physical benefits of the outdoors to everyone, allowing people to find a deeper reason behind the need to connect over shared experiences (Craig, M. A., & Richeson, J. A.).

We distributed survey results through a report on our findings. We created a website to educate the public on these barriers and connect UM and Missoula outdoor groups with our community.

6. Event

On Friday, February 17th, in conjunction with UM's Share Kindness Day, our capstone team hosted an event called *Recreation Reclamation*. Details about the event were posted around campus on posters and through UM social media pages like the DHC Weekly Need-to-Know. An ad was placed to advertise the event in the local university paper, *The Kaimin*. Our goal was to increase access to resources to the outdoors for marginalized populations by connecting them with the outdoors. To do so, we hosted sixteen local and campus organizations with the goal of connecting with the UM student body. In choosing the organizations represented at our event, we connected with groups dedicated to elevating marginalized groups and enabling access to the natural world. These included affinity and disability equity groups at UM and organizations from around Missoula, such as Here Montana, Garden City Harvest, and Run Wild Missoula. In addition to the informational aspect, we wanted to create a fun and uplifting atmosphere that celebrates the excitement that comes with connecting with like-minded communities and getting outside. We had snacks catered through UM Dining as well as live music from the UM Roots group. We distributed succulents, supplied a painting station, and handed out s'mores kits. In addition to this, we distributed handouts regarding resources on how to access the outdoors for those just getting started—from gear and brand recommendations to our favorite places around Missoula to get outside. When all was said and done, over 250 people attended our event.

In addition to connecting marginalized communities with resources that enable them to engage with the outdoors, we wanted to conduct deeper levels of research in order to better understand the nature of the relations of marginalized communities to the outdoors. We circulated a survey focused on doing just that and received 164 responses.

7. Website

We created a website to provide information about our project, event and survey for outdoor organizations, UM students and others interested in our work. We utilized a free Wordpress template for our website. It was officially published in February 2023 and was updated with relevant information throughout the semester.

The website includes a home page with a brief summary of our work and results. The next page on the site is an “About Us” page that features each of the project researchers. The next page highlights our event. Before the event, this page was used to provide more information for organizations and students interested in getting involved, with a frequently asked questions section. After the event was completed, we transitioned the event page to a post-event information page, with thank yous and pictures for organizations to use in their own work. Another page highlights the organizations involved with our event in the UM and Missoula community, with logo pictures and bios for each. Next, a page on our research highlights our abstract, survey information, and the ability to download our final paper through a file or by accessing a link to UM Scholarworks. Our Resources and “Get Involved in Missoula” pages showcase ways to get outside and how one can work in improving outdoor access in Missoula. We have included a “model for action” page on the site for universities across the globe to consider replicating our event and survey. Finally, we have a “Contact Us” page for those interested to get in touch with the researchers and event organizers.

As of April 30th, 2023, the website had 252 views, with 122 visitors and 39 downloads of our Fall 2022 project proposal. The project proposal was replaced with our final project paper on April 30th, 2023. The link for the website can be found here:

<https://umtoutdoors.wordpress.com/>.

8. Results

The survey was open from January 17 – March 1, 2023. Of the 162 respondents, 142 live in Missoula. Those who do not live in Missoula were directed to the end of the survey and excluded from survey results. Of those 142 respondents, 131 are University of Montana students. Those who were not students were directed to the end of the survey and excluded from survey results. Therefore, 131 respondents were analyzed in total.

8.1 Demographics

129 respondents gave answers to the question regarding race. Some respondents identified with more than one race. 17% (25) of respondents were BIPOC. This includes Asian/Pacific Islander (3), Black/African American (3), Latino/Latinx/Hispanic (11), multi-racial (2), Native American/Alaska Native (5), and other (1). No respondents identified as Middle Eastern (0). 82.99% (122) were white/European American.

129 respondents gave answers to the question about gender identification. 18.60% of respondents identified as cis men (24 respondents), 74.42% cis women (96), 4.65% non-binary (6), 3.10% gender queer (4), 2.33% agender (3), and 1.55% identified with another gender (2).

130 respondents gave answers to the question about identifying as part of the LGBTQIA2S+ community. Respondents may identify with more than one group. 67.69% (88) of respondents did not identify as part of the community. 32.04% (42) of respondents identify as part of the LGBTQIA2S+ community. This includes lesbian (5), gay (2), bisexual (29), genderqueer/questioning (10), asexual (10), and 2-spirit (2). No respondents identified as transgender or intersex.

Out of 130 responses to the physical limitations question, 11.5% (15) of respondents experience physical limitations, including asthma, muscular dystrophy, chronic pain, etc.

Out of 129 respondents, 23.26% (30) respondents utilize university accommodations like the UM Office of Disability Equity. 43.41% (56) identify as neurodiverse.

38% of respondents had participated or do participate with UM outdoor recreation providers such as Montech, the UM Outdoor Program, UM courses, and other campus-organized events.

8.2 Barriers to the Outdoors

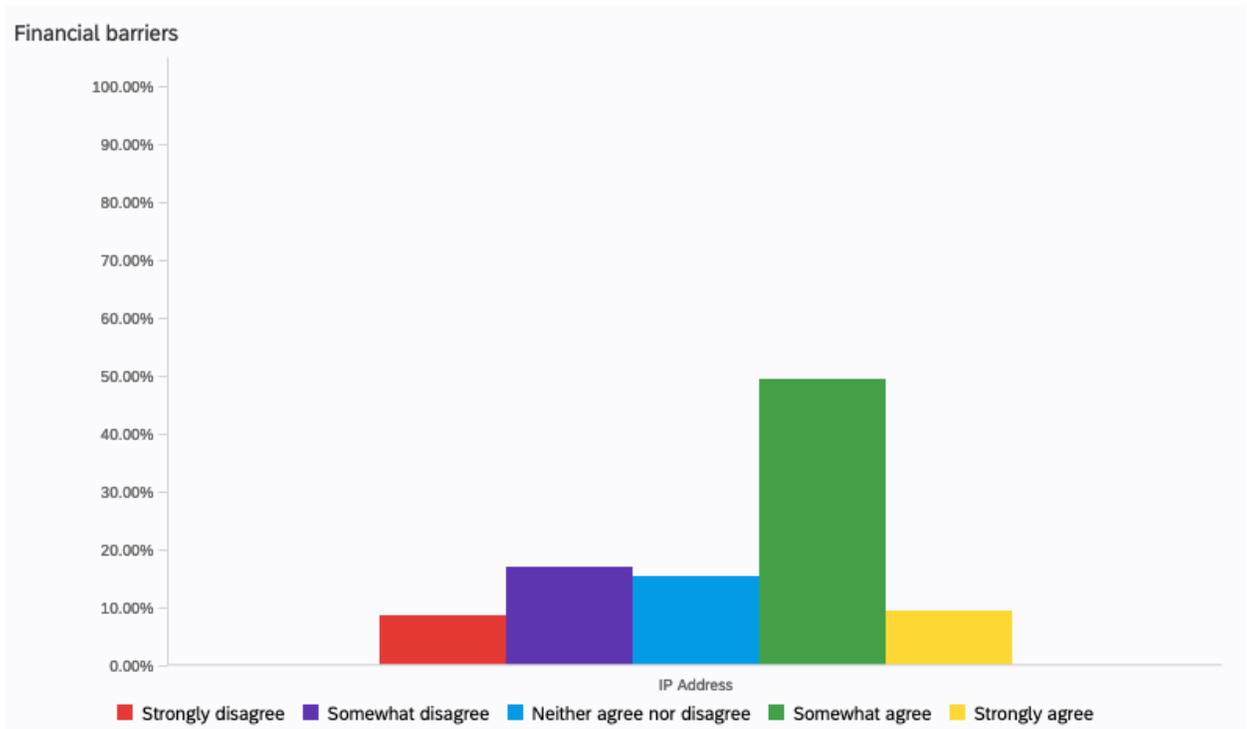
Of 128 responses on the type of outdoor activity question, students participate in all forms of outdoor recreation from rock climbing (45), hiking (107), running (51), camping (74), backpacking (63), skiing (64), biking (66), hunting (17), and other (28). Three respondents do not participate in any form of outdoor recreation.

Respondents reported facing seven key barriers to outdoor recreation: financial, social, lack of information, accessibility, time and money, safety, and transportation.

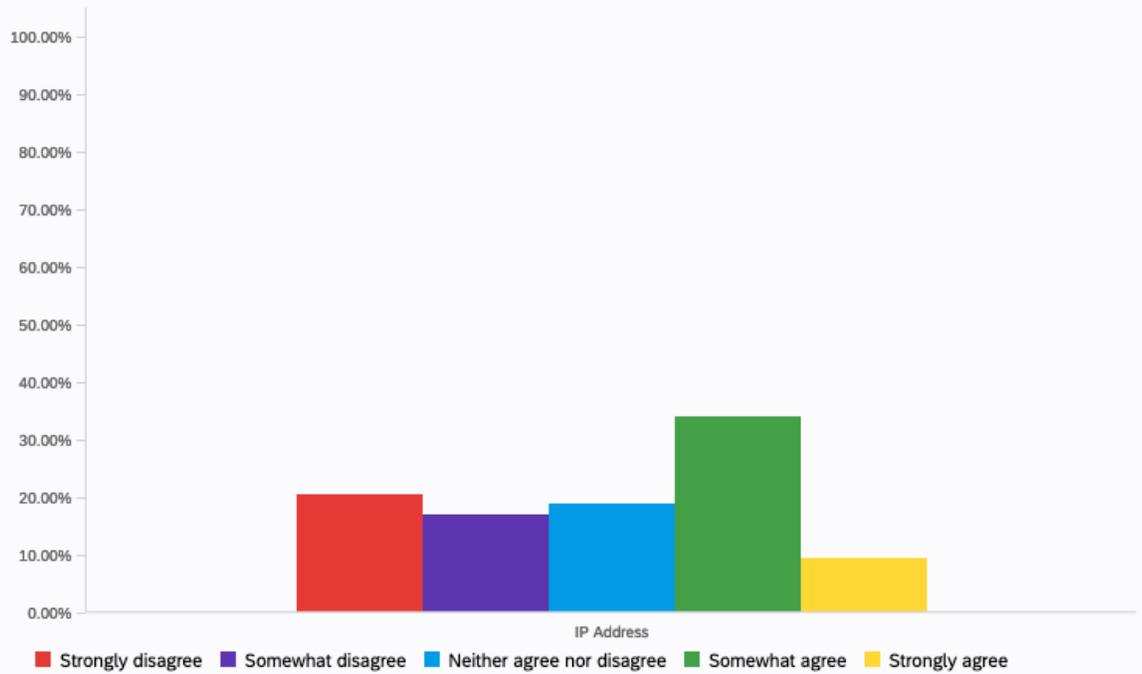
We assessed and evaluated the survey results for the overlapping themes regarding the barriers marginalized populations face on campus. Through evaluating these statistics, we focused on the broader marginalized populations (e.g., BIPOC, LGBTQIA2S+) rather than specification within marginalized groups (e.g., Latiné/Chicana women, genderqueer, etc.). The results stated in the study may include statistical overlapping.

To better gauge participants' obstacles to the outdoors, we included four frequently faced barriers to see what our participants experienced. These barriers include financial, accessibility, lack of knowledge, and social barriers. We also included the ability to fill in the space in an “other” category for another barrier not explicitly listed in the survey. Respondents indicated additional barriers they face, such as safety, transportation, and time/money. The figures below

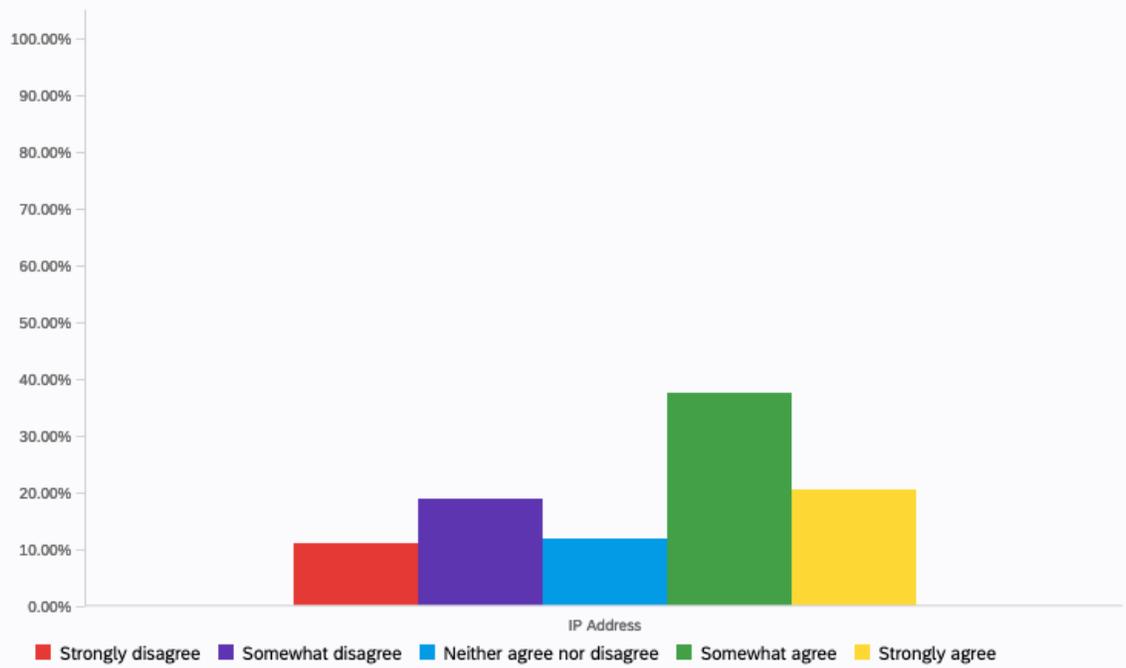
show the percentage of responses in each category, from strongly disagree to strongly agree. In the following sections we will dive deeper into these results.



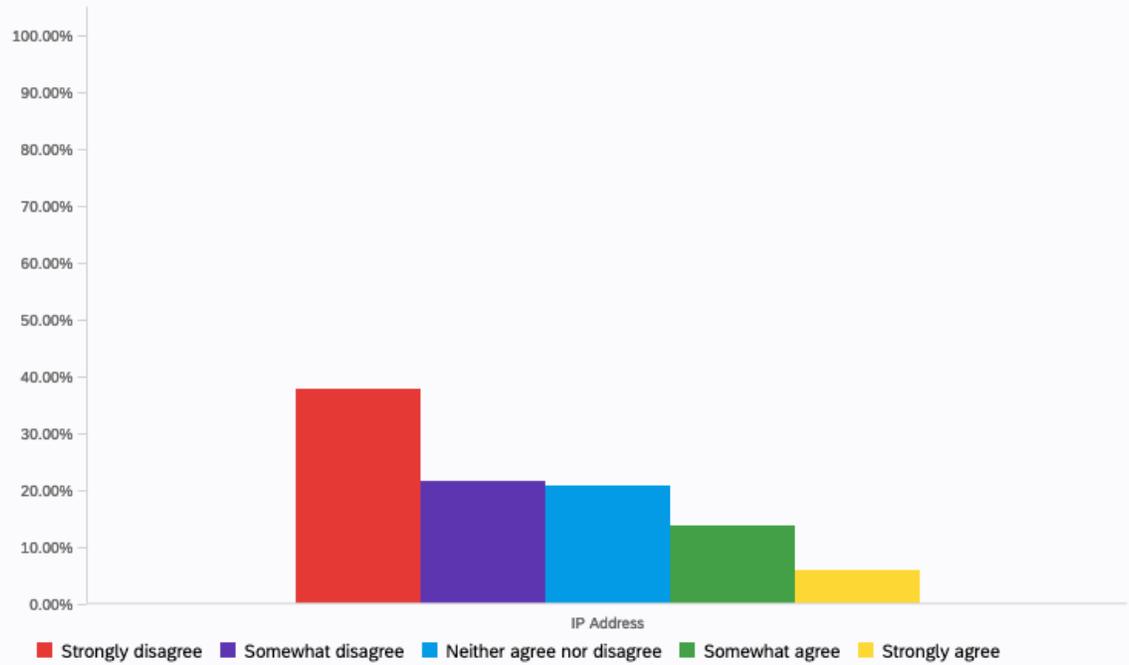
Social barriers



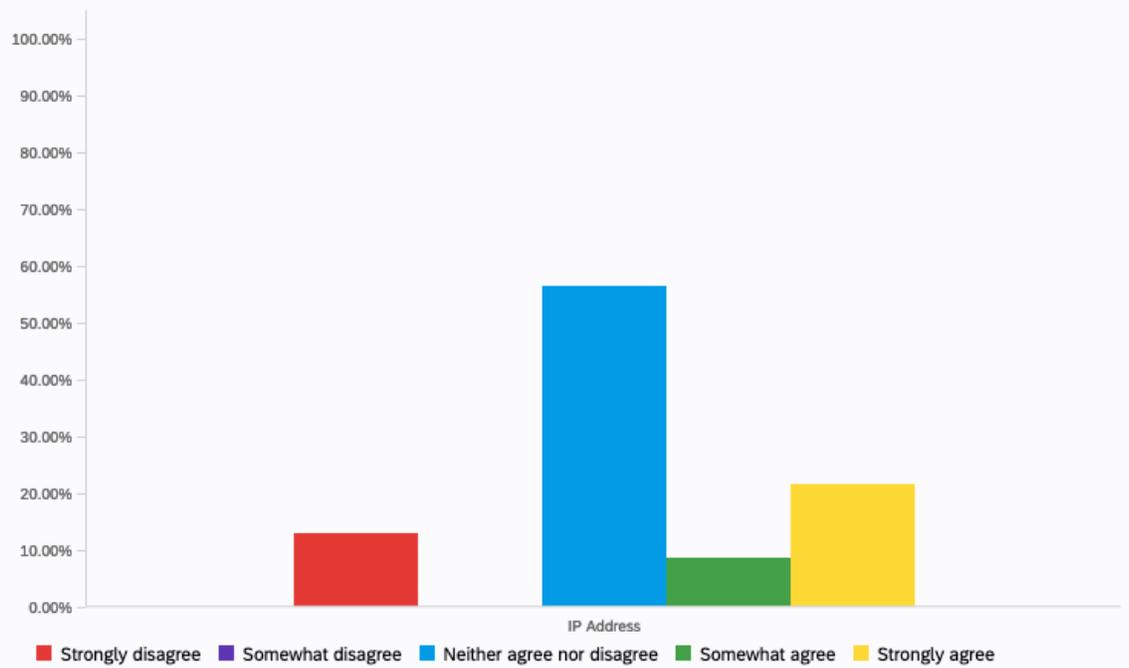
Lack of knowledge/awareness that limits access to the outdoors

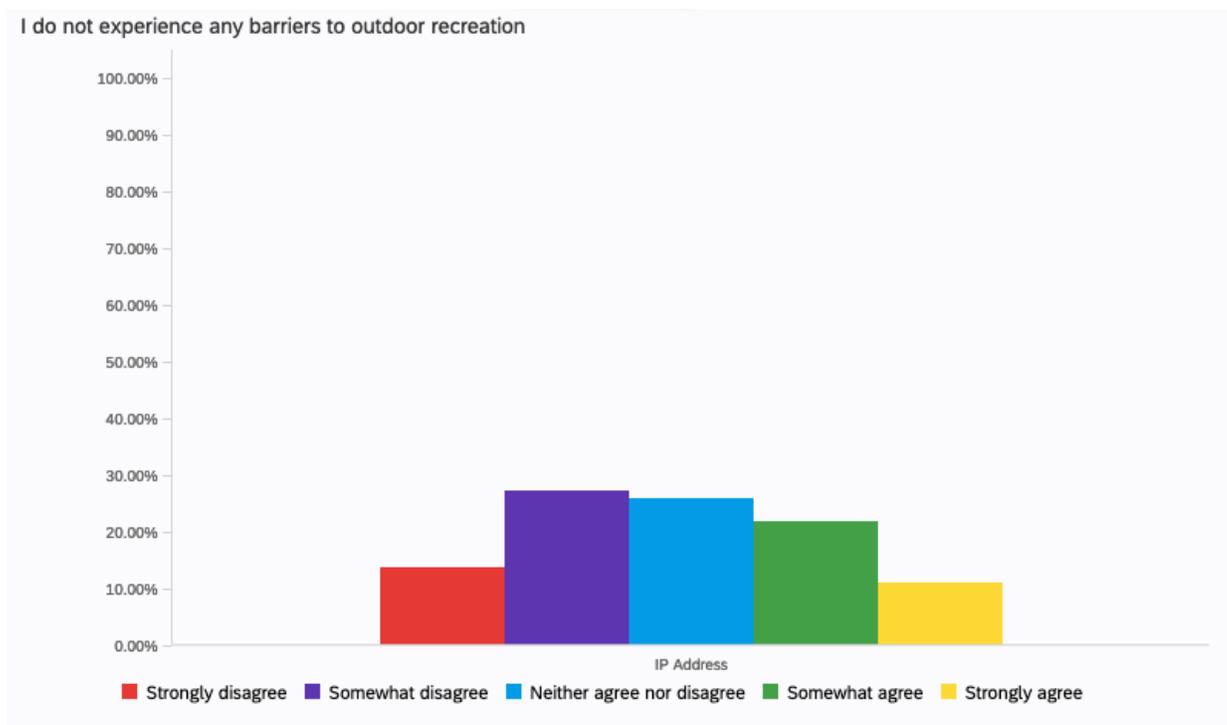


Accessibility barriers



Other





8.2.1 Financial

We found that 60% of respondents reported facing financial barriers to the outdoors.

When we controlled for race/ethnicity, we found that 20% of the overall respondents who reported facing financial barriers were part of a racial or ethnic group other than white/European American.

Of the 22 respondents who identified as male, all were cisgender, and 50% of those men said that they also faced financial barriers. Of the 86 cis women, 60% of those women reported that they faced financial barriers. Of the 14 gender non-conforming respondents, 42% also reported facing financial barriers.

When we controlled for sexual orientation, there were 53 individuals total who identified with the LGBTQIA2S+ community. Of those, 62% reported struggling with financial barriers.

When we controlled for physical limitations, neurodiversity, and those who utilize accommodations with the Office of Disability Equity, we found that 42% of participants reported that they experience financial barriers. Of those individuals, 58% of them identify as neurodiverse, 25% of them utilize ODE accommodations, and 16% experience physical limitations.

69 out of 117 respondents (58%) reported “agreeing” or “strongly agreeing” with the statement, “I have financial barriers to access to the outdoors.” Of 164 participants, only 23% reported never worrying about making ends meet each month. Another 24.3% reported they struggled to make ends meet half the time or more, and 31% reported only sometimes struggling to make ends meet. Six of 84 respondents (7%) reported that having affordable (i.e., free, cheap, or otherwise financially accessible) gear and ways to get outside made the outdoors feel welcoming to them.

13 of 51 (25%) respondents said that if UM had more cost-friendly opportunities, they would participate in outdoor recreation through UM’s offered programs. Nine out of 32 respondents (28%) reported that UM made the outdoors accessible to them by providing equipment rentals and outdoor events at low prices. However, four of those nine (44%) reported that UM still needs to do more to remove that financial barrier entirely. Including those four, 18 of 85 respondents (21%) said UM could make the outdoors more accessible by providing more affordable gear, classes, trips, etc.

It is worth noting that this analysis does not include responses where the respondent simply put “improved accessibility” as a response or ones in which the respondent listed time barriers. In terms of “improved accessibility,” there was no way to control whether the respondent meant “financial accessibility” or “physical and mental accessibility.” It was assumed

that respondents meant “physical and mental accessibility,” and it was analyzed below. While time cost is often incredibly impactful on low-income students who have to work, there was no way to specify whether the respondent’s time cost was from financial barriers or merely from being a busy student. Therefore time cost was not taken into consideration in the financial barriers analysis.

8.2.2 Social

We found that 46% of the 132 respondents reported facing social barriers that limited their outdoor recreation participation.

When we controlled for race/ethnicity, we found that 24% of the overall respondents who reported social barriers were part of a racial or ethnic group other than white/European American.

Of the 22 respondents who identified as male, all were cisgender, and 27% of those men stated they also faced social barriers. Of the 86 cis women, 47% of those women reported that they faced social barriers. Of the 14 gender non-conforming respondents, 42% also reported facing social barriers. When we viewed the results of participants who identified with the LGBTQIA2S+ community, 53 respondents identified with the community. Of those, 45% reported struggling with social barriers.

When we controlled for visible and invisible disabilities (physical limitations, neurodiversity, and those who utilize accommodations with the Office of Disability Equity), we found that 37% of participants reported facing social barriers to outdoor recreation. Of those individuals, 59% identify as neurodiverse, 33% of participants utilize accommodations with ODE, and 8% of participants experience a physical limitation.

8.2.3 Lack of Knowledge

We found that 58% of our respondents reported a lack of knowledge of the outdoors as a barrier.

When we controlled for race/ethnicity, we found that 20% of the overall respondents who reported a lack of knowledge barriers were part of a racial or ethnic group other than white/European American.

22 respondents identified as cisgender men, and 31% of reported that they also faced a lack of knowledge barrier. Of the 86 cis women, 66% said that they faced a lack of knowledge barrier. Of the 14 gender non-conforming respondents, 42% also reported facing a lack of knowledge barrier. When we controlled for sexual orientation, there were 53 individuals total who identified with the LGBTQIA2S+ community. Of those, 66% reported struggling with a lack of knowledge barrier. These results demonstrate higher levels of non-cis men facing the barrier of a lack of knowledge.

When we controlled for visible and invisible disabilities (physical limitations, neurodiversity, and those who utilize accommodations with the Office of Disability Equity), we found that 42% of participants reported a lack of knowledge barrier to outdoor recreation. Of the participants reporting educational barriers, 57% of participants identify as neurodiverse, 16% of participants experience a physical limitation, and 27% of participants utilize accommodations with the Office of Disability Equity.

8.2.4 Accessibility

We found that 17% of respondents reported facing accessibility as a barrier to the outdoors.

When we controlled for race/ethnicity, we found that 21% of the overall respondents who reported facing accessibility barriers were part of a racial or ethnic group other than white/European American.

Of the 22 respondents who identified as male, all were cisgender, and 13% of those men reported that they also faced accessibility barriers. Of the 86 cis women, 22% of those women reported that they faced accessibility barriers. Of the 14 non-conforming gender respondents, 14% also reported facing accessibility barriers.

When we controlled for sexual orientation, there were 53 individuals total who identified with the LGBTQIA2S+ community. Of those, 22% reported struggling with accessibility barriers.

When we controlled for physical limitations, neurodiversity, and those who utilize accommodations with the Office of Disability Equity, we found that 19% of individuals reported facing accessibility barriers to outdoor recreation and participation. Of those individuals, 40% of participants identify as neurodiverse, 32% utilize accommodations with the Office of Disability Equity, and 28% of individuals experience physical limitations.

8.2.5 Physical Limitations

Common physical limitations included asthma, tremors, back and knee problems, functional movement disorder, chronic back pain, and chronic pain, Duchenne Muscular Dystrophy, hypermobility, heart conditions, plantar fasciitis, a single short leg, vasovagal disorder (a disorder that causes one to pass out).

2 out of 3 respondents, 66.67%, in the Asian/Pacific Islander category reported facing physical limitations. 1 out of 3 Black/African American respondents said they had physical

limitations, or 33.34%. 1 out of 11 Latino respondents reported physical limitations, 9% in this category. 13 out of 121 White/European Americans had physical limitations, or 10.74%.

0 out of 5 Native American/American Indian/Alaska Native reported physical limitations, and 0 out of 2 multi-racial respondents had physical limitations (0%). Out of the 1 respondent that answered “another racial/ethnic,” the respondent said they had physical limitations, which is 100% in this category. There were 0 Middle Eastern respondents.

2 out of 24 cisgender males faced physical limitations, 8.33% of the total. 11 out of 95 cisgender women had physical limitations, 11.58%. There were 0 trans men and women that responded to our survey. 3 out of 6 nonbinary respondents faced physical limitations, 50% of the total. 1 out of 4 genderqueer respondents, 25%. 2 out of 3 agender respondents, 66.67%. 2 respondents identified as another gender, responded to our survey, and 0 faced physical limitations. 33.08% of respondents identified as part of the LGBTQIA2S+ community had physical limitations. 5 respondents identified as lesbian, and 1 person had physical limitations, or 20% in this category. In a response of 2 respondents that identified as gay, 0 people had physical limitations. 29 respondents identified as bisexual, with 4 reporting physical limitations, 13.79% in this category. There were 0 transgender and intersex respondents. 3 out of 10 respondents identified as queer/questioning, or 30%, reported facing physical limitations. 3 out of 10 respondents, 30%, reported physical limitations. There were 2 two-spirit respondents, and 1 reported facing physical limitations to outdoor recreation, or 50% in this category. Of 27 male at-birth respondents, 3 experienced physical limitations, or 11.11%. Of 101 female at-birth respondents, 12 experienced physical limitations, 11.89%. There was 1 response in the intersex category for assigned sex at birth (but not intersex in the gender category), who reported facing physical limitations, or 100% in this category.

11 out of 56 respondents, or 46.43%, that identify as neurodiverse have physical limitations. 26 out of 56 respondents identifying as neurodiverse utilize university accommodations, or 46.43% of respondents in this category.

Out of all of these categories, 20.55% of all respondents utilized university accommodation resources.

8.2.6 Other

Within the “other” category that allowed participants to fill in the blank regarding what barriers they face, there were three main themes: time/money, safety concerns, and transportation. Two participants wrote that transportation was a barrier, which is most easily understood as a lack of access to a car or system of transportation that permits access to the outdoors. Safety concerns became an overarching category related to weather, specifically ice and snow, that may make outdoor activities dangerous. Lastly, a large category noted by the participants was a lack of time and/or money in their lives left to enjoy the outdoors.

*Note: out of the 132 respondents who took our survey, only 22 belonged to a racial or ethnic group other than white/European American. It is important to note that white people made up the majority of the survey respondents as a whole. The number of people who wrote their own answers in the “other” category were almost all white, except one Asian/Pacific Islander student.

8.2.7 I don't face barriers

Of the 24 participants who reported that they did not face barriers to the outdoors, all identified as white European American except for one Black African American participant.

Of the 26 participants who reported that they did not face barriers to the outdoors, 88% identified as cisgender, and 11% as gender non-conforming. Of the 53 respondents who identified as a part

of the LGBTQIA2S+ community, 20% of individuals reported not facing barriers to the outdoors.

8.3 UM Participation

38% of respondents *had* participated or do participate with UM outdoor recreation providers such as Montech, the UM Outdoor Program, UM courses, and other campus-organized events. There were 117 respondents in regard to outdoor recreation at the University of Montana. Of the 117 students who answered the question, “Have you ever participated in outdoor recreation through a UM program/club?” 62% had not.

Participation in outdoor recreation at UM was defined broadly and included any outdoor activities through UM. UM students participated in numerous outdoor activities on campus, from Outdoor Program trips, intramural sports, campus recreation classes, and classes with outdoor field trips, to clubs (bird watching club, UM Woodsman team, etc.) and the freshman wilderness experience (FWE). Additionally, the weekly Davidson Honors College hikes were cited as helping students get outdoors, along with other non-outdoor focused groups like the Advocates, a student group that provides campus tours and other recruitment activities.

63% of cisgender women who completed the survey had not participated in outdoor recreation through UM.

Of the non white/European American, only 20% had ever participated in outdoor recreation through UM. 86% percent of those who identified as LGBTQ+ had never participated in outdoor recreation through UM. Only 3% of students who responded that they had physical limitations had participated in outdoor recreation through UM, while 14% of those who identified as neurodiverse had not participated. This shows that the majority of students who

identify with any type of marginalized group are less likely to participate in outdoor recreation programs at the University of Montana.

8.4 Welcoming Environment

Regarding what makes outdoor spaces welcoming, six themes were showcased among UM students: Cleanliness/clarity, education, culture, accessibility, solitude, and safety. Those who found outdoor spaces well-lit, clean, and with clear expectations, including signage on trails and maps, were more comfortable. Additional accommodations like restrooms at the trailhead and wide trails also play vital roles. Some students indicated that educators willing to teach them where to go and how to recreate within Missoula helped create safe and welcoming spaces. Areas with an inclusive culture and kind, friendly people with low judgment were cited as increasing comfort in outdoor spaces. Numerous students cited the climbing wall at the University of MT for providing them with this space. A female student noted, “UM provides many opportunities for all people to participate outdoors. I love their girls, gays, and theys rock climbing!” Accessible gear and free access to outdoor spaces were beneficial, as well as solitude and lack of crowds were also included as helpful. Additionally, some students felt being surrounded by nature made them feel safer and more welcome. Finally, areas where students felt safe without concern of violence, one student included “no guns,” were considered better.

8.5 Overall Themes

Themes for ways in which UM could improve outdoor access include increasing accessibility, outdoor offerings, and reducing student time constraints. Among the accessibility themes, students discussed the need for improved bicycle infrastructure and safer winter cycling on campus. While the UM Outdoor Program provides rentals and trips at discounted prices for students, free gear, trips, and classes are perceived to be more helpful in reducing outdoor access

barriers for those with low affordability. More financial assistance for gear rentals was recommended, if free resources cannot be provided. Additional access resources recommended by students include maps that show accessibility for disabled people to hike or other forms of recreation around campus and in Missoula, as well as pamphlets or posters with local trails, gear rentals, affinity/outing groups, and student discounts, info about safe camping locations, etc. Shuttles to good hiking locations around Missoula from the UM campus are also thought to increase access to outdoor spaces provided to students. Finally, numerous students commented on the need for UM to shovel and clear walkways in the winter. One student noted, “I have to imagine that even getting around campus would be tough in a wheelchair, with our sometimes poorly maintained sidewalks and roads...”.

As for offerings on campus that students would like to see, many students perceived that more advertisements of current offerings would be useful through more posters around campus, events in the UC, and social media. One student expressed that they weren't aware that there were club sports on campus, while others noted that they wish they were more aware of the trips offered by the Outdoor Program.

Outdoor Program improvement recommendations include offering alpine ski rentals, adaptive mountain bikes, and accessible kayaking options for physically limited people. Another adaptation includes multiple times available for trips so students can work around their schedules. Further student discounts for ski tickets could help reduce some financial barriers for alpine ski participants. Campus recreation offerings could include more beginner classes, and some students expressed that they felt nervous about trying new activities with other more advanced participants. One recommendation for beginner course offerings included a gun safety course.

More outdoor meetups with a focus on BIPOC students and graduate students were requested. One student expressed that they would like to know how to get involved with the Outdoor Living Learning Community in the dorms.

Some students mentioned that they felt the resources at UM were adequate, but due to their schedules, they lack the time to take advantage of them. This could indicate deeper systemic problems like financial barriers that require students to work long hours, limiting their free time, and large classroom demands on students. It is also possible that outdoor recreation is merely not prioritized among some students. Finally, a number of students noted that there are many factors that UM cannot control, and many felt that the work UM is doing to provide outdoor access is sufficient.

8.6 Limitations

Limitations of this study include respondents not answering every question and self-reported results. We, as researchers, had time constraints, especially around results analysis, causing our group to have a limited analysis of the extensive data. Another limitation is the lack of previous research on outdoor access at UM for marginalized groups, which does not provide data and results to compare to.

According to the University of Montana's census enrollment numbers, our survey demographic was closely representative of the UM population. For the Spring 2023 semester, 25% of UM's population were BIPOC. In our survey that was open specifically in the Spring 2023 semester, 15% of our survey respondents were BIPOC. UM's census only offered two options for gender: male and female; 60% of UM students are female, and 62% of those who completed our survey were assigned female at birth. While UM's census offered data on gender and race/ethnicity, they did not have data available regarding the number of LGBTQ+ students.

9. Discussion and Recommendations to UM

We concluded this analysis with recommendations to UM for future growth. Among other recommendations, one of the most important is greater advertising of resources to students. One way to do this would be the utilization of the UM Advocates. For example, the UM Advocates could discuss outdoor recreation opportunities for marginalized communities during their tours and hand out pamphlets about available resources in this area, while the Admissions office could include information about recreation opportunities along with the UM information and swag that they receive. This could also be included during Go Griz Days. Similar recommendations include more advertising of Outdoor Program events and more offerings specific to beginners. There is a need to increase awareness about ways to get involved with club sports and intramurals. Another way to increase advertising is with pamphlets that list accessible trails around campus.

ASUM Transportation offers free shuttles for floating the river in the summer, a great recreation opportunity. This is an excellent place to expand and could be used for other recreation, such as winter sports. This program could also be expanded with shuttles directly from campus to trailheads to reduce accessibility and transportation barriers.

Since financial constraints are a main barrier to outdoor recreation, we recommend free resources. The Outdoor Program (ODP) provides equipment but is still limiting for low-income people who must decide between cross-country ski rentals or groceries. While we understand that obtaining funding is difficult and it is not easy to make resources free, we still think it is important to include. We recommend a Griz card checkout system, or something similar, in which students will be charged only if they do not return the gear within the needed time frame or other resources to provide funding for those with money constraints.

In addition, a number of survey respondents requested better winter shoveling/de-icing of sidewalks (MonTECH has also cited this as an issue) to increase physical accessibility. The university could also invest in more equipment, such as alpine skiing, adaptive bikes, and more.

There is a disconnect between UM and community resources. Due to this disconnect, many community organizations found it difficult to connect with and get UM student volunteers. We believe hosting an annual event like ours that connects students with these outdoor resources is a great way to do this.

Mental health is important to the well-being of all people, but people often can't access traditional counseling or therapy. While it is not a cure for mental disorders, outdoor time is especially important for maintaining mental health and relieving stressors. While harder to implement than other recommendations, it would be a big step for UM to create specific times for outdoor recreation opportunities for students during the day.

Some students mentioned that they felt the resources at UM were adequate, but due to their schedules, they lack the time to take advantage of them. This could indicate deeper systemic problems like financial barriers that require students to work long hours or large classroom demands, limiting their free time. It is also possible that outdoor recreation is merely not prioritized among some students.

Finally, a number of students commented on how lucky they felt for UM and Missoula's outdoor resources, from the weekly honors college hikes to Outdoor Program trips. Undoubtedly, UM is already doing work that is benefitting our community in many ways that can be replicated across the nation.

10. Future Steps

Now that the event and survey have concluded, our first step is to share our research with the University of Montana administration. We created a write-up of recommendations to UM in our email.

After finishing analyzing our survey results, we shared them with the local community and campus organizations that attended our event. We included a link to our website, where organizations can find results and a link to our final paper.

Our survey results show that our event was useful for reducing outdoor barriers for students. As a result, we provided a template on our website for putting on this event. We hope that other UM groups will take on this event in the future.

Finally, to encourage global action, we included an action page on our website for other universities in the US and across the world to access. By including this action plan on the website, we hope that other universities will be able to create their own events and evaluate their own outdoor recreation barriers to assist their students in their specific outdoor environment.

11. Conclusion

The underrepresentation of marginalized communities in the natural world is part of ongoing systems of oppression with tangible detriments to mental and physical health. There are many marginalized communities whose access to the outdoors is limited due to a large array of barriers, many of which fall under financial, social, and physical themes. The study provided perspective on how to bridge the gap between the University of Montana's marginalized populations and the outdoors. It allowed for the distribution of resources and the facilitation of community among the participants. This is just the beginning of undoing the harm caused by historical legacies of exclusion. Our research provides other campuses with a template for how to

identify the barriers their marginalized students face and how they can provide resources to improve access to outdoor recreation participation.

Awareness of implicit bias is the first step to formulating solutions to a problem. We used our event to spread awareness of marginalized groups' barriers and bring diverse people together. However, it is also crucial that there are safe spaces available for marginalized groups to enable easier outdoor access. This can look like diversity-centered recreation groups, increased accessibility for people with physical disabilities, or access to recreation gear for lower-income students.

Based on this research and the event facilitated on Kindness Day by our team, we hope that the University of Montana will better understand the scope of this issue on its campus and be more prepared to address it. Students attending the university deserve access to equal participation in the outdoors. A wide variety of individuals and groups on the UM campus are seeking a great education and a community to connect with that facilitates outdoor engagement. The natural world has deep connections for Montana communities; UM's community is no exception. It is vital that all groups, especially marginalized groups, are permitted access to the outdoors in order to begin to counteract negative legacies left by a history of oppression. One way that UM can begin this task is to make the February event, in conjunction with Share Kindness Day, an annual affair. The yearly occurrence of this event will include resources enabling student participation in the outdoors, education about the outdoors, and like-minded communities oriented around connection with the outdoors. In doing so, this will contribute to making nature more accessible for marginalized student communities for generations of students to come. Through this project, we hope that UM will work toward ways of encouraging and enabling its students to connect with the outdoors for their benefit.

Future research could dive deeper into understanding student groups' role in increasing access to the outdoors and what more can be done to increase their accessibility. UM has many active student groups like the American Fisheries Society student chapter, the Student Recreation Association, and Backcountry Hunters and Anglers that promote outdoor recreation, but no data exists on the diversity within these groups and what is being done to promote more diversity. Further, a study surveying marginalized students on the national level would help us understand the common barriers to the outdoors for marginalized groups across all university campuses, allowing for the development of a national comprehensive plan for action.

It's important to see diverse groups outdoors because nature is so diverse. As Wyn Wiley, also known as the drag queen Pattie Gonia, said, "...the outdoors can be a place where we celebrate diversity, something that Mother Nature knows is absolutely key" (Wiley, 1). For Pattie, participation in the outdoors can look like backpacking in six-inch heels, and it can also look like communities coming together to encourage connection with the natural world for generations to come.

12. Reflection

Each member of our group comes from a different background, studies a different perspective, and has had different experiences resulting in us bringing different strengths to the table. Majors included political science, environmental science, sociology, psychology, communicative sciences and disorders, and English and creative writing. From there, our project aimed to focus on marginalized populations. As we came together at the beginning of the semester, we discussed other shared values that would allow us to come together. Outdoor values showed through as a shared value and an important UM value that could be improved. Our project represents a multidisciplinary effort because members of our group come from

marginalized groups. Coordinating and working with such a large group can always be hard, especially when we're all leaders. Yet different people were better suited to certain tasks over others: some excelled in writing, some thrive in research, and some are accomplished in the event's design and other aspects of the project. While we faced challenges throughout our project, we were able to come together as a collaborative force.

Motivation was a struggle throughout the year, especially after the conclusion of the event. In order to address this, we facilitated team meetings and check-ins. When needed, we clearly re-outlined expectations. We were intentional about supporting one another and ensuring that we were coming from places of understanding. Kicking people while they are down is an ineffective method of motivating them. Understanding the application of restorative justice principles is key to creating positive group dynamics in which everyone can get the most out of the experience as possible. We are all busy people living in late-stage capitalism, where the earth is on fire, doing the best we can!

After the proposal stage, the project came alive. We got to see what the execution of our abstract goals looked like in real-time. The event was a huge success, and seeing people connect with one another and different campus/community resources was exciting. We received a lot of positive feedback from the attending organizations and people who came to the event. In addition, seeing the number of people who responded to our survey grow was exciting, as well as being able to dig into the results. The results provided perspective on the realities of outdoor access at UM specifically and reflected theories we had when crafting our proposal and research. Sifting through the results to report them enabled a more detailed understanding of the issue we based our project around. Finally, translating everything into the presentation stage gave us a comprehensive view of everything we had achieved throughout the year. This was valuable

because it's easy to get lost in the weeds of a current piece that we are all focusing on. Being able to zoom out helped us see the positive impacts of our efforts and why we chose this topic in the first place.

If we were to do anything differently, we would narrow the scope of the survey so the data is easier to evaluate and apply to our project. After receiving the survey results, we realized that many of our questions were overlapping or repetitive or there were too many options, making it difficult for us to analyze our results in a way that was the most beneficial for the students of UM. Also, we picked a huge topic with a huge scope. We were able to put together a highly effective project, but it ended up being *so much work*. This made it a little easier to burn out and required more vigilance in order to prevent that. We would have also loved to do our event at a time when we would have been able to be outdoors!

Systems of power and oppression are globally ubiquitous and manifest in many different ways. Relevant to our project, this shows up in inequitable land access. Exposure to the natural world is a human right and, too often, is one that is infringed upon, specifically for disenfranchised populations. This is true in the United States, and it is true in urbanized settings across the globe. It was challenging for us to fold in the global context because it is such a large scope. Also, there is a lack of research on the topic. It's hard enough to inspire change in a local setting, so trying to do that in an international sphere can be quite difficult.

If we were to redo the process, we would want to look at specific sister universities abroad and other policies they had implemented that could more directly inspire UM rather than looking just into UM as a case study. We researched cities around the world that struggled with barriers to the outdoors, but because we were primarily focusing on UM, we would want to look more closely at other universities around the world for a better comparison.

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