

THESIS

CASTING WIDER NETS: ADVANCING WOMEN'S PARTICIPATION IN COLORADO'S
FISHING COMMUNITY

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ABSTRACT

CASTING WIDER NETS: ADVANCING WOMEN'S PARTICIPATION IN COLORADO'S FISHING COMMUNITY

Despite the growing number of women participating in outdoor recreation, there remains a significant gap in research exploring what motivates and constrains women in recreational fishing—and how they navigate these constraints. This study seeks to address this gap through in-depth qualitative interviews with ten women anglers in Colorado. Findings reveal that while some motivations align with broader trends—such as a desire for rest, connection with nature, and personal achievement—women also experience unique constraints that diverge from those documented in traditional leisure studies focused on white male participants. These include gender stereotyping, discrimination, safety concerns, lack of representation, and exclusionary social norms. Women negotiated these constraints through strategies such as embracing sense of empowerment, building women angling communities, cultivating confidence, and adapting safety practices. The results underscore the need to continue to revisit and expand the leisure constraints framework to more fully capture the intersecting identities and lived realities of underrepresented recreationists and take into consideration the unique and complex characteristics from each individual to better understand what motivates and constrains them. This research contributes critical insight to guide inclusive policy and program development aimed at supporting women's equitable participation in recreational fishing in Colorado.

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INTRODUCTION

Recreational fishing is a top leisure activity generating millions of dollars of revenue to the U.S. economy and supporting natural resource management and conservation agencies (U.S. Fish and Wildlife Service, 2016, 2023). Similar to other outdoor recreation activities, fishing provides numerous benefits for health and wellbeing as individuals are motivated to fish to escape from the typical daily routine, gain exposure to the outdoors, and to relax and mentally unwind (Bellew et al., 2020; Burkett & Carter, 2022; Floyd, M. et al., 2006; House, 2025; Toth & Brown, 1997). Fishing can be a low-cost, easily accessible leisure activity enjoyed by everybody. However, an increasing number of studies show that women and other minoritized groups face distinct constraints to fishing, such as gender and racial discrimination, that impact their experience or ability to equally engage in the angling community (Basto et al., 2025; Burkett & Carter, 2022; Burkett & Winkler, 2019; Henderson & Bialeschki, 1993; House, 2025; Lavoie et al., 2025; Schroeder et al., 2006; Shores et al., 2007; Stodolska et al., 2020). Systemic and societal constraints to fishing have been recently captured as outdoor recreation research has shifted focus from the dominant angler group (white men) to women and other minoritized groups to understand the constraints they face (Burkett & Winkler, 2019; Copeland et al., 2017; Fedler & Ditton, 1994; Henderson & Bialeschki, 1993). This is of growing importance as the number of women engaging in outdoor activities, including angling, is increasing in Colorado, the U.S.A. (U.S. Fish and Wildlife Service, 2016, 2023), and globally (House, 2025) creating demand for a more comprehensive understanding of women's experiences.

According to the U.S. Fish and Wildlife Service National Survey of 2022, 39.9 million people participated in recreational fishing in 2022 (U.S. Fish and Wildlife Service, 2023). Of these, 30 million identified as white and 26.9 million as male, reflecting continued overrepresentation of white men in angling. In contrast, participation by historically underrepresented groups such as women, non-binary individuals, and people of color remains disproportionately low. Still, progress is evident. The number of women anglers grew from 9.8 million (27%) in 2016 to 12.5 million (31%) in 2022, indicating a positive trend in women's participation (U.S. Fish and Wildlife Service, 2016, 2023). This growth aligns with projections that women's involvement in recreational fishing will continue to increase (Burkett & Winkler 2019).

WOMEN'S OUTDOOR RECREATION

As the number of women anglers increases, it is important to identify the constraints to participation in the recreational fishing community. Gender was found to be the most consistent and likely predictor of leisure participation in a study conducted in 2006 (Floyd, M. et al., 2006; Wilkes et al., 2024). Women must typically alter their behavior because of unwelcoming societal behaviors when recreating, facing constraints men do not have to deal with. (Coble et al., 2003). Recent studies specific to women anglers show how women have to contend with discrimination, harassment, gender stereotyping, and safety issues within the male dominated sport (Basto et al., 2025; Burkett & Carter, 2022; Burkett & Winkler, 2019; Fennell & Birbeck, 2019; House, 2025; Shores et al., 2007), constraints common to women recreationists (Bialeschki, 2005; Henderson, 1996).

Research on women's leisure has been motivated by the emergence of a leisure gap between men and women and a gap caused by the conflict between leisure, responsibilities, demand, and availability women experience (Codina & Pestana, 2019; Henderson, 1996; Shaw &

Henderson, 2005). Furthermore, men and women experience leisure differently. Men and women have different recreational motivations and strive for different ends (Schroeder et al., 2006). Angler motivations include food, sport, trophies, companionship, nature, and relaxation (Schroeder et al., 2006). Studies show that women place greater importance on the social aspects of fishing, and are more likely to harvest the fish they caught (Floyd et al., 2006; Henderson & Bialeschki, 1991). Others show that women anglers don't prioritize catching fish but seek out quiet and meditational time connecting with nature (Burkett & Carter, 2022). More importantly women's sense of empowerment as an angler is a major motivator as they carve out their rightful place in angling communities (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025). Time spent recreating is also different among men and women, as well. In a study performed in 2019 that surveyed men and women, and the time spent in leisure, men spent more time experiencing leisure (Codina & Pestana, 2019). Only 39.6% of women spent over 150 minutes of leisure time, but 60.4% of men experienced over 150 minutes of leisure time (Codina & Pestana, 2019).

Constraints to leisure for women can be connected to the "gender gap" and the values of a traditional woman versus a man by defining a woman's role through the structure imposed on women from a male-dominated society (Burkett & Winkler, 2019; Gaither et al., 2001). Women tend to view work and family as higher priorities than their leisure, as the demands and expectations of maintaining a balance between work, family, childcare, and a spouse acted as a barrier to opportunities for leisure (Henderson and Bialeschki, 1991, as cited in Floyd et al., 2006). This is particularly a barrier for women of color, such as Latinas (Basto et al., 2025; Floyd et al., 2006). Additionally, women's participation in leisure can be limited to concerns about safety and the threat of violence, and they are more likely than men to avoid leisure because of it (Gaither et

al., 2001). When asked about the fear of violence in outdoor recreation settings, most women stated fear of violence in a recreation setting was a major constraint for them, and this caused them to alter their preferences in order to avoid negative encounters (Basto et al., 2025; Bialeschki, 2005). This is an unfortunate reality despite everyone having the right to recreate in a safe environment (House, 2025).

Basto et al. (2025) found that Latino women experienced unique constraints, such as interpersonal and system constraints of gender stereotyping, harassment, and being dismissed by white, male anglers. They also noted that the male participants in the study (Basto et al., 2025) did not experience the interpersonal constraints the women anglers faced. The findings of Basto et al., (2025) indicate there is a relationship between gender and ethnicity that amplifies constraints for women that men do not experience. Women who identify as a person of color may find it more challenging to participate in angling or other outdoor recreation, or have altered recreation experiences, because of societal stereotyping and behaviors surrounding their multiple minoritized identities (Basto et al., 2025; House, 2025; Schroeder et al., 2006; Stodolska et al., 2020).

INTERSECTIONALITY AND LEISURE CONSTRAINTS

There is little understanding of how people of color are constrained in their leisure and why some individuals attempt and succeed at negotiating those constraints, but others cannot (Stodolska et al., 2020). Crenshaw (1989) observed and stated that Black women encounter combined race and gender discrimination and because the experiences of Black women are defined by the experiences of white men and white women, they are offered very little protection when they are discriminated against because of their compounded identities (Crenshaw, 1989). Studies conducted with people of color show they experience constraints to angling that include racial discrimination, selective enforcement of regulation, and negative behavior of others (Basto et al.,

2025; Schroeder et al., 2006). The role people of color play in the leisure landscape, coupled with their identifying as a woman or non-binary individual builds a case for how intersectionality plays a role in how individuals experience leisure. Burkett and Carter (2022, p. 1024) identified that a limitation in their study on women's experiences in the gendered recreation landscape was a lack of socio-economic information collected by the participating women. The authors of this study stated, "This prevents us from a more intersectional feminist analysis of how gender interacts with multiple group identities and social, cultural, or institutional level differences to shape women's fishing experiences" (p. 1024-1025). The gap in research defends why the role of intersectionality is critical in leisure sciences as it pertains to women. Research conducted on race and leisure constraints is limited and has been primarily conducted separately, despite the intersection of the two (Shinew et al., 2004).

Everyone deserves access to meaningful and enriching outdoor recreation experiences. In Colorado, women are becoming a powerful and growing presence in the outdoor industry, carving out space in traditionally male-dominated activities like recreational fishing. While interest and participation among women are rising, their stories and experiences remain underexplored—despite facing disproportionate constraints. As this demographic continues to grow, understanding and addressing these constraints is essential to fostering a more equitable and welcoming angling culture. Recent work has begun to inform outdoor recreation and management agencies of this gap (Basto et al., 2025; Lavoie et al., 2025) and this research expands upon existing efforts by aiming to answer three key questions: (1) What are the motivations and constraints experienced by women anglers in Colorado? (2) What strategies do they use to negotiate these constraints to enable participation? (3) How does the intersection of ethnicity and gender identity shape their ability to negotiate and resulting participation? The purpose and justification of this research is to understand

the experiences of women anglers in Colorado and the unique barriers they face as a minority within the fishing community, to inform recreation management organizations and ensure equal access to recreation for all individuals. We drew from an adapted leisure constraints model that accounts for intersectional constraints, or constraints commonly faced by minoritized identities called the ecological model of leisure constraints (Stodolska et al., 2020).

ADVANCES OF THE LEISURE CONSTRAINTS FRAMEWORK: TRADITIONAL MODEL

The leisure constraints model provides a framework for uncovering reasons why individuals do not experience recreation the same and how some individuals can overcome constraints to recreating, but others cannot (Crawford, 1991). Leisure constraints research aims to “investigate factors that are assumed by researchers and/or perceived or experienced by individuals to limit the formation of leisure preferences and/or to inhibit or prohibit participation and enjoyment in leisure” (Jackson, 2000). The traditional leisure constraints model essentially examines participation in outdoor recreation by analyzing people’s motivations, constraints, and negotiation strategies and how those play a role in their ability to participate (Crawford, 1991). Jackson (2005) identifies three justifications for leisure constraints research; first, understanding an individual’s choice to participate in leisure and their behavior towards leisure requires a lens that looks into the positive and negative impacts of partaking in leisure; second, constraints research has opened up a sector of leisure research that was previously thought to be sound; and third, constraints research opens up an avenue for communication between practitioners and scholars to make meaningful change (p. 3). The research is responsible for generating new knowledge and insights into aspects of leisure that were previously not well-understood and is useful to enhance management plans within government sectors and to inform leisure studies scholars (Jackson, 2000, p. 3). Additionally, improved knowledge on minoritized and

underrepresented communities is needed to understand their motivations and constraints to recreation.

Motivations are fundamental to understand how and why individuals participate in recreation, as motivations are the needs, reasons, and drivers for involvement in outdoor recreation, and these include enjoying nature, and to escape or relax among other reasons that enable participation through negotiation (Beard & Ragheb, 1983). Constraints on the other hand are factors that inhibit or make it challenging to engage in recreation unless individuals are able to overcome (negotiate) them, or in other words, “anything that inhibits people’s ability to participate in leisure activities, to spend more time doing so, to take advantage of leisure services, or to achieve a desired level of satisfaction” (Gaither et al., 2001).

The traditional model of Crawford and Godbey (1987) identified four types of constraints on leisure: context, structural, intrapersonal, and interpersonal, and these can vary based on gender, age, socio-economic background, and demographics. Context constraints include any barrier that inhibits an individual in the broader context of their personal life and can include home environment, problems with availability or characteristics of recreation programs, neighborhood environment, or safety issues (Stodolska et al., 2020). Structural constraints include cost of participation, time commitments, lack of financial resources, and transportation and distance (Basto et al., 2025; Jackson, 2005; Shaw & Henderson, 2005). Interpersonal is a barrier to leisure that forms from relationships with others and include social interactions and disapproval, social control of women’s activities and lives, and lack of co-participants (Basto et al., 2025; Shaw & Henderson, 2005). Intrapersonal constraints psychologically impact an individual’s ability to participate in leisure and can include lack of skills and abilities, self-attitude, stress, depression, anxiety, religion, and lack of self-esteem (Crawford et al., 1991; Shaw & Henderson, 2005) .

Additionally, the intrapersonal constraint is especially reflective of married women with children or who may be caring for aging relatives because of sense of guilt of having leisure time when they have caretaker responsibilities or conflict between leisure and obligations (Basto et al., 2025; Shaw & Henderson, 2005).

Negotiation strategies refer to an individual being able to overcome constraints that traditionally result in nonparticipation (Jackson et al., 1993). The result of the negotiation strategy is participation in the activity despite facing a constraint. Negotiation strategies, however, are not always successful and largely depend on the individual's motivation and the intensity of the constraints (Stodolska et al., 2020). However, negotiation depends on the individual and context of their life. The traditional model did not fully capture the constraints faced by minoritized groups and assumed they would be able to overcome them through intrapersonal negotiation (Crawford et al., 1991; Stodolska et al., 2020). Because of this shortcoming, Stodolska (2020) and colleagues proposed a new constraints model (ecological model of leisure constraints) that incorporates the experiences and challenges of people of color in a recreation context that incorporates the notion that each individual is not always able to negotiate constraints that are beyond their control. This new model (Figure 1) categorizes constraints into individual (e.g. lack of money, lack of time, language barrier), interpersonal (e.g. lack of family and peer support, interpersonal tensions, inadequate training), context (e.g. access to sites, problems with recreation program availability), and system (e.g. national and local regulations, systemic racism, societal beliefs and attitudes (Stodolska et al., 2020, p. 16). This model better captures how ethnicity and gender identity interact to contribute to the motivations, constraints, and negotiation strategies.

ECOLOGICAL MODEL OF LEISURE CONSTRAINTS

Bridging the traditional and new model offers a more comprehensive understanding of the motivations, constraints, and negotiation strategies that enable participation in recreation. In 1991, Crawford et al. (1991) identified a hierarchy in which leisure constraints operate. They argued that structural constraints are the least relevant in determining how or why individuals participate in recreation, and intrapersonal and interpersonal are more influential in determining recreation participation (Crawford et al., 1991). This original model did not take into account the presence of race, ethnicity, socio-economic status, and gender in conjunction with the ways in which these constraints impact participation in recreation. The inclusion of race, ethnicity, socio-economic status, and gender comprise the gap in research pertaining to underrepresented and minoritized identities. For women in recreation, it's essential to consider aspects of identity beyond gender in order to understand why their participation differs from the traditionally studied recreationists—typically white men.

Numerous models for the relationship between constraints, motivations, and negotiation strategies have been proposed (for a comprehensive review of the history of leisure constraints models, see Stodolska et al., 2020) and utilized in outdoor recreation research. Stodolska, Shinew and Camarillo (2020) proposed the ecological model of leisure constraints they adapted from Mehtälä et al. (2014). Mehtälä (2014) and colleagues proposed the use of a socio-ecological model to examine the multiple-level factors that might be determinants of childhood physical activity, which is the topic of their research. The socio-ecological model gave a better understanding of the whole individual by recognizing their individual, behavioral, social, and physical environmental factors and how those factors play a role in one's ability to be physically active (Mehtälä et al., 2014). The use of this model introduces the concept of how a person's whole being influences their role in recreation.

Stodolska, Shinew, and Camarillo adapted this model in response to Samdahl's (2005) critique of the existing constraints models. The overarching critique was that previous and current leisure research was based primarily on activity participation and less on the social context in which leisure exists (Samdahl, 2005). Samdahl (2005) critiqued previous constraint models for utilizing mainly quantitative models (Samdahl, 2005). The explicit use of quantitative models leads to a disregard for the complexity of people's lives and the multiple facets that influence an overall individual (Samdahl, 2005). Samdahl (2005) identified four critiques: 1) a narrow focus on activity participation in isolation from social factors limits the ability to consider the complexity of people's lives that might influence their leisure choices, 2) the existing research portrayed each constraint in a negative light, disregarding that some constraints exist in a positive context, 3) the assumption that negotiating a constraint is always desired or beneficial to the participant, and 4) the assumption that it is the individual's responsibility to negotiate a constraint, which implies that collective action to generate change is not necessary.

Stodolska, Shinew, and Camarillo (2020) adopted the model after conducting a study with minoritized individuals. They were interviewed about their participation in activity and what might prevent them from participating in recreation. The study resulted in similar responses from individuals in select groups, such as lack of programs and inadequate instruction inhibited participation in Asian immigrants, and documentation status inhibited participation in some Latinx individuals (Stodolska et al., 2020). Socio-economic status heavily influenced the type of barrier to leisure within each minority group, for example, documented middle-class Latinx interviewees were more affected by busy lives and schedules, while undocumented Latinx interviewees struggled with the ability to move freely throughout town (Stodolska et al., 2020).

The findings of the study resulted in the validation and resolution of Samdahl's (2005) critiques as the study showed that constraints experienced by people of color are influenced by the complexity of their lives, including societal and systemic power structures and cultural ideologies (Stodolska et al., 2020). The authors concluded that the ability and desire to negotiate constraints was not as simple as traditional leisure constraints models proposed and that people of color's ability to negotiate constraints is shaped by multiple levels, including family, community, society/country, and the ability to negotiate constraints is external to the individual (Stodolska et al., 2020). Finally, the authors noted that it is arguable "that people's ability to partake in recreation is a result not only of their capacity to negotiate constraints but also of society's (un)willingness to accommodate them" (Stodolska et al., 2020, p. 15). Thus, resulting in the new constraints model: ecological model of leisure constraints.

Within the model, each constraint is interrelated and mutually interdependent (Stodolska et al., 2020). For example, the 'language barrier' constraint can be considered an 'individual' constraint, but also a 'context' constraint if the information at a recreation site is not offered in their language, or a 'system' constraint if the city in which they live is hesitant to accept the inclusion of other languages within their community. The new constraints model "accounts for the broader social conditions and political discourses and addresses some of the criticisms of Samdahl (2005), who argued that the existing quantitative models are heavily focused on the individual and assume his/her ability to negotiate constraints" (Stodolska et al., 2020, p. 17).

The ecological model of leisure constraints is fully applicable to women recreators, as it is critical to consider the broader societal contexts in which women's recreation exists. While women often cite fear of violence, lack of respect, gender, skill, and experience (Bialeschki, 2005; Burkett

& Winkler, 2019; House, 2025) as constraints to fishing, it is crucial to get a better understanding in how other, interrelated minoritized identities play a role in recreation experiences.

METHODOLOGY

STUDY CONTEXT

Colorado is a premier hotspot for outdoor recreation with diverse aquatic environments—from alpine streams to large warm-water reservoirs—that draw both resident and visiting anglers (Colorado Parks and Wildlife, 2025). Yet, despite the state's overall enthusiasm for outdoor recreation, participation in recreational fishing remains disproportionately low among minoritized communities. Most anglers in Colorado continue to be white men, and satisfaction surveys have historically centered on their experiences (Lischka, 2013). According to Colorado Parks and Wildlife's Statewide Comprehensive Outdoor Recreation Plan (Colorado Parks and Wildlife, 2024), underrepresented recreationists face constraints such as feeling unwelcome and a lack of representation. However, these challenges have not been fully explored in relation to anglers specifically. Although many anglers in Colorado identify as women, there is a poor knowledge base of their experiences and the constraints they face preventing them from participating in fishing more often, other than two recent studies (Basto et al., 2025; Lavoie et al., 2025). This research was conducted to help fill that critical knowledge gap.

I approach this research as a white, cisgender woman researcher trained in science and social science. I have an interest in human-environment relationships. While I am not an angler myself, my positionality is shaped by research on gender identities and leisure research. My academic training emphasizes the importance of considering marginalized voices in research. As

an outsider to the women's fishing community, I recognize that my understanding of my participant's experiences is partial and mediated through my interactions with participants, existing literature, and my own interpretation of frameworks. This positionality influences how I ask questions, interpret narratives, and represent women's knowledge and existence within fishing communities. I made an intentional attempt to mitigate power imbalances by prioritizing participants' voices and using their words as they were spoken. By explicitly acknowledging my positionality, I hope to increase transparency and accountability in the research process and to produce findings that accurately reflect women anglers' experiences.

DATA COLLECTION

We applied a qualitative research methodology for this study because it enables in-depth conversations with participants about their fishing experiences, providing detail and context that help address gaps in existing research (Knott et al., 2022). Interviews allow for flexibility in how participants express themselves, while simultaneously allowing the collection of data pertinent to the research questions posed in this study (Knott et al., 2022). We used a semi-structured interview guide with questions derived from themes commonly used in leisure constraints research that focus on motivations, constraints and negotiation strategies (Crawford et al., 1991; Humagain & Singleton, 2021; Stodolska et al., 2010, 2020) (Appendix A). The guide was previously developed for a study of Latino Anglers (Basto et al., 2025) that accounted for the new leisure constraints model and experiences of minoritized people by including a probing question about social discomfort or safety while fishing.

We recruited participants by contacting fishing organizations and clubs in Colorado (e.g. Uncharted Outdoorswomen, She’s Fly, Brown Folks Fishing, etc.) and sharing a recruitment flyer with them for distribution. Once initial contacts were made, we applied snowball and convenience sampling technique (Newing et al., 2010) in which initial participants referred others who might be interested in participating in the study. Interviews were held virtually or over the phone (based on the participant’s preference) and last between 45-minutes and one and a half hours. We concluded recruitment with ten interviews (after six months) and believe saturation was reached—when no new information was being shared (Newing et al., 2010). Colorado State University Institutional Review Board approved our research protocol (#2309).

DATA ANALYSIS

The interview audio recordings were transcribed using Otter.ai software (Otter.ai, n.d.). Interview transcripts were coded and analyzed (using MAXQDA Analytics Pro software Version: MAXQDA 24 (Release 24.5.1) (VERBI Software, 2024) through thematic, abductive content analysis, an interpretive approach used to develop theoretical insights by moving back and forth between empirical data (inductively) and existing theories or frameworks (deductively) (Saldaña, 2013; Timmermans & Tavory, 2012). Specifically, line-by-line coding was performed iteratively to identify consistent themes between the data that showed unique instances of motivations, constraints, and negotiation strategies. This initial phase of coding involved open coding, where data was segmented into codes that captured the core meaning of the text called subthemes. These subthemes of initial data segments were then assigned narrative codes, which were words or phrases summarizing the content as themes (Butina, 2015).

These themes were then assigned to the motivations, constraints, and negotiation strategy categories of the interview guide questions. Specifically, each theme was assigned as either a)

motivation if the participant mentioned reasons for why they fished (example question: What motivates you (or keeps you interested in) fishing?) , b) *constraint* if the participant mentioned a reason for why they do not or struggle to fish (example question: what are some things that prevent you from going fishing? Why are they constraints?), or c) *negotiation* if the participant mentioned a way in which they overcome the constraints that prevent them from fishing (example question: How do you overcome the constraints you have faced?) (Figure 2). Considering Samdahl's (2005) critiques of Crawford and Godbey's (1987) original categories of leisure constraints, we adapted Stodolska and colleagues' (2020) and grouped the themed constraints into categories of individual, interpersonal, structural, context, and system as the new constraints model allows for complexity and inclusion of context and system level constraints.

RESULTS

DEMOGRAPHICS

There were 10 participants in the study. All the participants identified as women and all the participants live in the state of Colorado. Eight of the participants identified as white, one participant identified as Alaska Native, and one participant was of mixed race. The years of fishing experience ranged from less than one year to over 40 years.

MOTIVATIONS

Eight primary motivations emerged from the analysis: to enjoy nature, sense of accomplishment, feeling supported, to rest, to spend time with family and friends, empowerment as a woman, to escape, and for solitude (Table 1)

TO ENJOY NATURE

Reasons for enjoying nature varied, but the most common motivators included connecting with nature or water and the beauty of nature, and for getting outdoors and having fun.

CONNECTION WITH NATURE

Women expressed a deep desire to connect with nature and water, describing these experiences as profoundly spiritual and emotionally restorative. For many, being outdoors cultivates a sense of belonging, peace, and renewal. One participant emphasized this connection, stating, “I want to get outside and I want to have that connection with nature” (P1009). Others spoke about the importance of feeling both physically and spiritually grounded through contact with the land and water. For example:

“The nature and the opportunities that we have, the air, the water, the land—it’s fragile, it’s special. It’s what we need to live on and I think that is so important for people to be connected with if people aren’t.” (P1000)

“Mostly just the time and nature...it’s a really good way, because I love hiking and stuff like that too, and I probably actually hike more than I fish, but sometimes I want to get outside and I want to have that connection with nature.” (P1009)

Others talked about the beauty and magic of the outdoors, and their respect for the trout and beauty of the experience fishing as a whole, as one stated, “[Fishing] is quite mystical and magical, and it’s a little hard to explain...trout are truly one of the most magical beings that I think lives on this planet” (P1009).

TO BE OUTDOORS

Getting outdoors in general was a major motivator for women who expressed how their participation in other outdoor activities, such as hiking, rock climbing, and trail running were a natural segue into fishing as an activity. They stated: “I like to do a lot of other outdoor activities, so this kind of just seems like something that's similar and falls in line” (P1007), and “[Fishing] is something to do and [I am] outdoors already” (P1005). Most simply stated they loved to be outdoors.

Some shared how fishing simply brings out the joy in them, and the ability to have fun is a source of rest and rejuvenation from their stressful daily lives. For example, participants stated, “I’ve always loved to fish...it is nice to get out of the city, get out of my apartment...it's definitely relaxing” (P1002), and “Fishing is just fun” (P1004). Others expressed a drive for adventure and finding new spaces.

SENSE OF ACCOMPLISHMENT

Women desired to gain a sense of accomplishment, as they felt accomplished through the challenge of fishing, through learning, or when they felt that they had utilized or contributed to public lands in Colorado.

FOR THE CHALLENGE

Women enjoy the challenge and sport of catching a fish. One participant found the act of “tricking” a fish into chasing a fly a thrilling experience as she expressed, “I can trick an animal to chase my fly. That alone is thrilling.” (P1000). Another stated, “I like the success of getting a fish off the hook very much.” (P1005). The challenge of fishing continues to bring the women back to the sport because of the ability to master the skill of fishing. Mastering the types of flies to use amidst the changing weather were other reasons that they felt fishing was a skill to master rather than just an activity. For many, fishing was an art form that required mastery:

“When I discovered fly fishing, I was like, ‘Whoa, there's a lot of art and skill and learning to be done with that’. And I think that's part of the piece that keeps me coming back —is always learning something, and that is a much bigger motivator for me now than it was as a kid, where [now] I do want to know what the weather and the temperature is and why this specific fly is good for that [type of fish].” (P1009)

“It’s actually pretty challenging to get your fly exactly where you want it to go. And so it's kind of like a fun little exercise to be like, ‘Oh, I want to get my fly in front of this rock or in front of this tree’.” (P1002)

TO LEARN

Women new to angling expressed a strong desire to learn the skill of fishing, viewing it as both a recreational pursuit and a personal accomplishment. The process of gaining knowledge—whether through learning best practices, understanding techniques to improve success, or simply mastering a new outdoor activity—was a major motivator. For others, the drive to fish stemmed from a desire to enhance their own experiences and to share that knowledge with others, particularly within their communities.

One participant, for example, noted that her professional background in watershed science deepened her interest in fish ecology and sparked a growing curiosity about the relationships between fish, their habitats, and the broader environment. She stated:

“I like river dynamics and watersheds and stuff like that. So it's always really interesting to me to see what the state of the river is if there's a lot of algae or if the current is flowing like a different way than I expected or how high the river is when I was out fishing recently.” (P1002)

This blend of personal growth, education, and ecological awareness illustrates how fishing can offer not just enjoyment, but also empowerment and deeper connection to natural systems.

TO ENJOY OR TO CONTRIBUTE TO PUBLIC LANDS

Two participants highlighted their motivation to fish as strongly tied to the accessibility and value of public lands in Colorado. They emphasized how access to these lands supports well-being, particularly mental health, to the public. One expressed a commitment to conservation and environmental awareness, noting that fishing provided an opportunity to engage more meaningfully with natural resources and advocate for their protection.

FEELING SUPPORTED

Some women expressed that the feeling of being supported and safe in their endeavor to fish, is a reason they have chosen to fish or continue fishing. All of the participants explained how their family, friends or community are supportive of them fishing, which serves as a reason they feel comfortable continuing to fish. One participant noted that she feels supported as a woman-owned business stating, “I just think, I mean as a woman owned business, I do appreciate the support we received from the state and I do feel like Colorado Parks and Wildlife” (P1000). Others explained that there were times in which they felt safe or supported in the presence of men, such as one being led by a male guide on a fishing trip, noting the trip as a positive experience that kept her wanting to fish. One stated, “I haven't really run into any like scary fishermen; they've all been very nice” (P1002). Essentially, several women expressed that they felt supported in one way or another.

TO REST

Fishing was also a form of rest as women expressed the need to meditate and experience the physical and mental health benefits from fishing.

TO MEDITATE

The meditative and spiritual experience drew women to fishing. They enjoyed the relaxing, calm nature of fishing and were drawn to it for the purpose of meditation and reflection. Some shared how the healing and mindfulness of fishing motivated them. For example, one stated, “It became breath work, mindfulness, finding healing in nature” (P1010). Another expressed how fishing became a time of healing and connecting with her late husband: “When I started fishing, it was soon after my husband died. I was using his gear when I first went out to fish. So, it was a way of connecting with my lost loved one” (P1010). Another noted, “[Fishing] is the best medicine I found” (P1000).

PHYSICAL AND MENTAL HEALTH BENEFITS

Women were also drawn to the physical and mental health benefits they feel from fishing. Some talked about instances where they specifically choose to fish because it positively impacts their physical and mental wellbeing, which brings about a restful feeling to their whole body and mind. One participant noted: “I’m also a big proponent of the mental health aspects of outdoor adventure. I think there are tremendous healing properties for people, whether it’s overcoming trauma, whether it’s illness or disease, or all kinds of life challenges” (P1000). There was a common assumption among participants that fishing and being in nature can improve mental health as participants stated: “[Fishing] improves mental health” (P1008), and “Nature is scientifically proven to help your mental health” (P1004). Another shared how fishing helped with the stress of school and life: “Life’s got kind of stressful as soon as I hit 18, I guess. And

fishing is definitely one of those stress relievers for me, and it can be, you know, something that gets me outside when I've been stuck inside for a week doing homework” (P1006).

TO SPEND TIME WITH FAMILY AND FRIENDS

Other women were motivated to fish as a means to spend time with family and friends. One participant shared that connecting with a loved one's skill was a motivator as they stated, “I think some of it's also like a connection to a skill that somebody really important taught me, that my dad taught me. It's—it's quite mystical and magical, and it's a little hard to explain” (P1009). Another mentioned their main motivator for fishing was to accompany her father who was a recovering alcoholic to help him ease back into possible uncomfortable situations:

“My father was a recovering alcoholic. And when he went through recovery, which was when I was around 25. He asked me if I would join him on his trip to Montana. Because he went for two weeks every year with like a [couple] guys. But he said, ‘You know, they're not alcoholics, but I am’. And he said if it's uncomfortable for me to be around them drinking, having you there with me will give me a graceful exit. So, if he got uncomfortable, he could just say, ‘Oh, well we're going to go to this other river and have some father daughter time,’ so they wouldn't feel bad. And he wouldn't feel awkward. But he could remove himself from the situation. So, I said of course I'll go with you. And then I just kept going and he didn't have any problems [with me going with him more] and I thought this is great.” (P1003)

Two participants mentioned that a motivator for them was to connect others with the sport and to see others experiencing the joy of fishing for the first time.

EMPOWERMENT AS A WOMAN

The empowerment of being a woman was a major motivator for some participants. While not a traditional motivator found in leisure research, it was an undeniable motivating concept. Empowerment of being a woman was expressed when the participants explicitly stated that being a woman was a motivator or that being a woman empowers them to keep going in life, in general and in fishing. For example, participants stated:

“I love being a girl so much. It's the best thing ever. And I think that, like, to some extent, almost gives me more of a like, ‘Oh, I'm a cool girl’. Like, yeah, you're a guy and you go fishing, but, like, all you guys go fishing. So, like, who cares? But, I'm a girl and I go fishing, and that's awesome.” (P1009)

“I know that, you know, fishing can be more of like a boys club, but I don't see that as a barrier for me at all because, you know, that's how climbing is. That's how every other sport outdoors is. And that hasn't stopped me in the past.” (P1007)

One participant expressed that her work with women through her fishing organization in addition to angling is rewarding, connecting the empowerment of the two stating:

“It is rewarding in that the work that we do with women, that part's rewarding and when we do go on retreats, we get a free day. And we usually do our retreats in places where there's stellar waters that we want to fish. So, we'll go out and hit that water when we're, we get some free time.” (P1010)

Another participant noted just how empowering fishing is stating, “There's a lot of power and feelings of independence and being able to, like, use a skill by yourself and be in nature by yourself” (P1009). Another shared that she named her business after her two female dogs as a nod to the power of women and feminism.

TO ESCAPE

Women described fishing as a powerful means of escape. For some, it offered a break from the city or the confines of home, while others saw it as a necessary respite from the stress and responsibilities of daily life. One stated, “I currently enjoy fishing because it's a getaway. You get to get away from it all and enjoy the outdoors. We're fortunate to have a lot of public land in Colorado to do that” (P1004). Another simply stated, “It is an escape from reality” (P1006). The relief of stepping away from the reality of life or urban environments allowed them to regain a sense of balance.

FOR SOLITUDE

The solitude and the quietness of fishing drew some women to fishing. They felt that fishing is inherently a solitary activity or thought fishing would be a way to get away from other people. For example, one stated, “Now that I've gone alone a couple of times, it is nice to get the alone time” (P1002). Another expressed, “Now, it's definitely to get away from homework and away from a lot of other people, and just be able to be outside and sit next to a river and just kind of chill out for a little bit” (P1006).

CONSTRAINTS

Seventeen primary constraints emerged from the analysis and these were grouped into the categories of system, structural, context, interpersonal, and individual (Table 2).

SYSTEM

Four major subthemes were identified within the system category: poor representation in fishing, lack of support from local, state, and federal governments, the feeling that they are living in a ‘man’s world’, and gender stereotyping.

POOR REPRESENTATION IN FISHING

Women felt that there was a lack of women's participation and representation in fishing in addition to poor representation of LGBTQ+ and BIPOC anglers. They expressed frustration in not seeing a diverse population within the fishing community and believed that having a diverse population would encourage others to participate in fishing. One participant stated:

“I think that more social media posts with women and people that are diverse [would increase participation]. I saw one [post] today and there was a woman of color hunting that they posted. I was like, ‘Oh my gosh!’ I even commented on it. I said ‘Oh my gosh, a girl,’ so hopefully they saw that as a positive thing because I'm sure somebody was like, ‘Hey, you should probably post this woman of color hunting to show other women of color that they can also get out there and hunt.’” (P1004)

Participants stated they did not usually see women out fishing when they went themselves, and that they did not feel like the social media posts of traditional fishing organizations were diverse or representative of the women or other minoritized identities who fish. One participant discussed their involvement in efforts to improve diversity and stated: “We've done some workshops with them in the past for with black youth, and we work with black guides, because we're like, you see yourself doing something, you're more likely to gravitate towards it, right” (P1010). Some women expressed that they would fish more often if they knew more women who fished. They found that it is easier to connect with women anglers rather than men anglers. They also expressed a need for more women fishing guides, with one participant explicitly stating there is a national need for more women guides. Another noted that it often feels like fishing is a white man's activity and the marketing techniques of traditional fishing organizations reflects that: “But I think the marketing section and the promotions show all of these like white men. Generally, fishing is seen as like a white man [activity]” (P1005).

LACK OF SUPPORT FROM LOCAL, STATE, AND FEDERAL GOVERNMENTS

Women felt that there is a lack of support from local, state, or federal government agencies. Most participants felt that the lack of support from government agencies perpetuates their inability to obtain permits and difficulty to make fishing outings happen. Participants who owned their own women's fishing organization expressed frustration in the struggle to obtain permits or grants and they felt there was a generational continuation of permits being granted to the same organizations and that permits and grants are not welcoming of the newer, more diverse organizations or groups.

In discussing the biggest issue with Colorado recreational fishing, one participant noted the difficulty of obtaining permits and had the conviction that the same groups and organizations continue to receive the permits. One stated, "I don't know how we ever get those permits, ever, unless we collaborate with those fly shops and do something where we don't get to be Outfitters" (P1010). The participant noted that they would have to forgo their own organization and join another in order to utilize permits. Another participant experienced difficulty in obtaining grants for her women's fishing organization: "I have people reach out that can't afford our classes, which is why we applied for Colorado Parks and Wildlife grants for diversity in the outdoors, as well as some other grants around the nation. But we keep getting denied" (P1004).

Participants also perceived a lack of communication from government agencies when engaging with underrepresented groups and expressed concern that these agencies do not have a clear or effective communication strategy. For example, one stated, "I feel like especially, with a Wildlife Council [(state-sanctioned organization)], they're pretty out of touch with who their audience is and who their target audience would listen to" (P1005). They feel that the government's messages are not being conveyed the way they want them to be and are not being

intercepted by audiences correctly. Another participant discussed the lack of support for diversity, equity, and inclusion and the support from government when discrimination or blatantly racist events or violence occur. This participant mentioned stories she had heard regarding violence in the outdoors and how there is a gap between government and these diverse groups on how to handle these situations. In expressing how safety constrains her participation in fishing, she stated:

“[The government] can get away with arguing over whose jurisdiction it is to exploit pain. What if something happens to us? What if I was harmed on a [river] bank? What if I was harmed while in the river? Is someone going to argue over whose jurisdiction it is to take care of the fact that I was hurt while fishing? Is anyone gonna care?... I just know these things from a little bit of a higher level and the background arguments that go on and that just gives me cause for concern because I'm like, oh, I don't know who's actually going to take responsibility if something does happen, and that's scary.” (P1005)

Participants felt that there needs to be more money going into supporting diverse fishing organizations and groups. They believe that increasing funding for improving diversity would solve problems related to feeling constrained when wanting to participate in fishing.

FEELING LIKE IT IS A 'MAN'S WORLD'

Women felt like they live in a ‘man’s world’ when it comes to fishing as fishing is geared towards men, informed for and by men, and physically built for men’s body shape. Beyond the male-centered construct of recreational fishing, the women consistently mentioned how there is a systemic problem with being forced to operate within this ‘man’s world’ construct. They often felt that there needs to be a systemic change, either an elimination of misogyny, or an aggressive

attempt at including women and other diverse populations. One participant discussed a mental block that constrains her from fishing: “Maybe it is the systemic aspect of this being mostly like a sport done by men” (P1001).

One participant felt that other recreation activities are easier for women to get involved in, but fishing remains more exclusive stating, “I think yeah, there's definitely a lack of information for fly fishing. I think that other outdoor recreation sports are way more accessible for women. Primarily because of the education and information out there, I think it's really lacking” (P1007). Another felt strongly that there must be systemic change to how men see women in the outdoors, specifically in fishing. She stated that one of the only things that would prevent her from fishing is toxic masculinity that she may encounter on the rivers. Based on the conversations with the women who have joined her women’s only fishing organization, she knows that, “Men are insecure about their public land access and that the patriarchy believes women should stay at home” (P1008). She recounted conversations with other women who shared this sentiment and how their husbands were reluctant to support their fishing participation, often citing concerns about dinner not being ready or household tasks being left undone.

GENDER STEREOTYPING

Some women believed that gender bias was also a barrier to their fishing participation and emphasized that their gender often constrained their ability to engage in fishing, both recreationally and professionally. One woman shared that when she launched her woman-owned fishing company, she faced skepticism and resistance rooted in gender bias. She explained:

“When we first started the company, there were a lot of people that really felt like we were going to fail, that this was just a phase, and that women and fishing were not going

to last. People pulled us at trade shows and said, ‘You won't be here next year,’ and really doubted that there was 1) a need in the market and 2) a company that could endure those challenges, so even at the beginning of our company, you know, there were a lot of people that really didn't believe in it.” (P1000)

She went on to say that being a woman was not the only challenge as women of color faced additional discrimination and are treated differently:

“I hear a lot of stories of women who are fishing and they feel like people want to move them out of their space, that they're not safe in the parking lot, that, you know, they're being kind of pushed around because of their identity or their gender or their color of skin or all kinds of things.” (P1000)

Another participant shared an example where one of her female colleagues was denied a permit from a permit sales office due to her gender, “He said, ‘I'll be damned if I ever let a woman have a permit on this river.’ And he laughed her off” (P1010).

CONTEXT

Two major subthemes were identified within the context category: safety concerns or inappropriate behaviors, and access.

SAFETY CONCERNS OR INAPPROPRIATE BEHAVIORS

Safety or inappropriate behaviors was a common constraint for women as they described a range of uncomfortable situations that they or others faced. These include fears related to wildlife encounters, uncomfortable or inappropriate interactions with male anglers, and unsolicited or aggressive comments directed at them. Such experiences contributed to an overall sense of vulnerability and unease in outdoor fishing spaces. Two participants noted that the

presence of mountain lions makes them uneasy and prevents them from wanting to go fishing alone.

Women consistently described feeling unsafe and unwelcome while fishing, reporting intimidation and exclusion from male anglers, ranging from subtle tensions (such as hostile behavior when they were successful at catching fish) to overt actions meant to push them off fishing spots. Inappropriate comments and sexualized remarks were also common—inappropriate comments sometimes even directed at their children, contributing to a sense of vulnerability in outdoor settings. Many of the women shared instances of intimidation, feelings of not belonging, and feeling as if they have been victims of men’s egos while fishing. Some expressed concern about the added discrimination against ethnicity. For example:

“I’ve noticed women not feeling safe in certain outdoor settings. I’ve noticed lots and lots of comments. Some to me, some to my kids. I mean, there were comments at the [fishing] invite [I attended], such as, ‘I saw you last night’. Um, inappropriate things. I hear a lot of stories of women who are fishing and they feel like people want to move them out of their space, that they’re not safe in the parking lot, that, they’re being kind of pushed around because of their identity or their gender or their color of their skin or all kinds of things.” (P1000)

“I know a lot of the women that I fished with are Asian and they’re very aware of Asian hate and have been victims of Asian hate. So, even when we go turkey hunting they are scared, even with a gun. When they’re approached by people, that’s the first thing that they think of—this is not safe for me because I’m not white.” (P1004)

Many women highlighted the lack of fishing partners and the heightened risk they felt when fishing alone, particularly in areas without cell coverage. This lack of support often left

them questioning how to respond to uncomfortable or threatening encounters with men. Some recounted incidents of being followed or approached by male anglers in ways that felt intimidating or unsafe. Even routine interactions with groups of men created unease, reinforcing perceptions that these spaces were male-dominated and that women's presence was contested. One participant recounted an uncomfortable situation while fishing, while another expressed their fear of being alone at a fishing site without cell phone service:

“I'm heading down to the river, and I see a man fishing, and I'm just like, oh, you know, I'm not gonna bug him. I'm not gonna be anywhere near him, because I got this dog and this isn't a real serious fishing trip. This is like teaching this dog to hang out while I fish. And so I went down around the bend, to where I couldn't see him at all anymore, and I think it had to be at least 50 yards, maybe longer away from him, and I'm getting all set up, and then I turn around, and he is right next to me. He came up there to intimidate me to leave that area. He did not want me on that water because he was fishing it. And at that moment, I realized there was not a single soul on the planet that knew where I was at that moment. I was like, nope, nobody knows where I am. I'm going to go back to my campsite. I'm going to make sure he can't see where I'm going so he doesn't know where I'm camped.” (P1010)

“I would say one of the number one constraints to women fishing is they have no one to go with, and they feel unsafe if they are approached by men when they're in the wilderness and they don't have cell coverage. And that is the one that we get asked about the most when we're teaching lessons is: ‘What do I do in a situation where I'm by myself and a man approaches me and I'm uncomfortable with it?’” (P1010)

ACCESS

While fishing site access was not a major constraint to women, the types of accessibility constraints varied and include, weather & climate, privatization of land, and overcrowding at fishing sites. Two women noted that the changing climate and its implications (e.g. poor air quality, changes in water temperature/depth) were impactful on their decision to go fishing, while another stated that cold weather prevents her from wanting to go fishing.

Regarding land access, participants shared instances where they had hoped to fish in specific area due to its beauty or ideal location, only to discover those lands were privately owned and inaccessible without permission or payment. While both acknowledged that some private lands offer paid access, they noted that the associated costs can be prohibitive, especially for those with limited financial resources. One participant expressed concern that newcomers to fishing might misinterpret “private property” signs as signals that they are not welcome anywhere nearby, including adjacent public lands. This, she suggested, could discourage continued participation and reinforce feelings of exclusion among novice or underrepresented anglers. Overcrowding of fishing sites was also a barrier as women felt it diminished their fishing experience and they preferred to seek areas with less over-use.

STRUCTURAL

Five major subthemes were identified within the structural category: lack of or difficulty with gear, time, and cost.

LACK OF OR DIFFICULTY WITH GEAR

The lack of or difficulty with gear was described as instances when participants had a hard time participating in fishing due to the difficulty in acquiring gear or finding gear that fit their body, and discouraging encounters in gear shops. Women expressed how difficult it is to find the required gear that properly fits women. One participant said: “All the other waders are

made by men, who kind of did some small test groups and said, 'We'll just, you know, add some inches here and take away some inches here, and then there you go'" (P1010). Another participant noted on gear sizing: "Sizing has been a challenge for a lot of women, myself included. Over the years of finding gear that fits, that is safe, that is functional, and that isn't necessarily made for men. So that's one barrier" (P1000). On the topic of fly rod sizing, one participant expressed frustration about when she began fishing on how difficult it was to find a rod that fit her hand: "So you know, we have recognized the need for options and choices and different sizes from the fly rod perspective. That was something that frustrated me a lot when I was getting started. Like, why aren't there fly rods that come in different [size] options" (P1000). Four participants also stated that they have felt dismissed or ignored inside of fly shops that are primarily run by men. One participant stated: 'The guy, like, explicitly said to me, he was like, 'Oh, are you shopping for like, your dad or your boyfriend?' And I was like, 'No, shopping for me'" (P1009). Another participant stated:

"So, I went into a fly shop in town, and they saw a small woman who didn't know much about fly fishing. So, they tried to get me to buy many things that I now know I don't need. I've heard stories from other women who have also gone into shops and have had similar experiences where it's kind of like when you're a woman and you're going to get your oil changed by yourself, and they tell you, 'Oh, you need to, like, fix your radiator', or something ridiculous that you know isn't broken. Um, so I would say that's been one of the harder things for me, for sure, is not kind of being seen as equal on the fishing ground." (P1006)

TIME

Lack of time was a barrier to fishing among women. Lack of time from work or school and the inability to plan ahead were the main responsibilities that prevented participants from fishing more often. Women stated that work constrained their participation in fishing, as it was hard to find time around work or feeling like work burns them out to the point that they are too busy on the weekends to go fishing. Having to make reservations at some sites and having to pre-plan trips was also a constraint as one participant said: “I think the biggest thing is that it's not something that you can do spontaneously, not for me anyway...you have to have a reservation everywhere” (P1003).

COST

Cost was a barrier to fishing but mainly due to accessibility of good fishing sites. For example, one participant shared that when she went on a trip that required a campsite, the campsite cost over 100 dollars a night. Another stated that she has a friend who would like to start fishing, but cannot due to the cost. Lack of transportation complicates the cost of going fishing as a younger participant as a student also did not own a car.

INTERPERSONAL

Four major subthemes were identified within the interpersonal category: lack of teacher, understanding, or experience, insults on skill or experience, discrimination, and no fishing partners.

LACK OF TEACHER, UNDERSTANDING, OR EXPERIENCE

The lack of a teacher, understanding, or experience was an all-encompassing feeling of not being able to fish due to not having the skills or training to do so. One participant tried reading books on angling but found it difficult because of the jargon and she felt like the books

are geared towards men. Other participants stated that not having a teacher themselves to help them learn the skills of fishing has prohibited them, and others they know, from learning to fish or improving skill. One stated: “Obviously there's so many more people that are in our society that might dream of [fishing] but don't know how to get started, or don't know where to begin or who to ask” (P1000). Another participant has a friend who said: “She doesn't know how and doesn't have anyone to teach her. Because she doesn't have a dad to teach her” (P1005). When asked what has prevented her from going fishing in the past, one participant said:

“Probably experience. I just recently learned how to tie all my own flies and how to get my line set up now that I got a fishing pole. And so learning how to do that because before I would either have my dad help me or like someone else who knew how to do that. But now that I know that I can do that I can go fishing, which is nice.” (P1002)

INSULTS ON SKILL OR EXPERIENCE

Other’s insults on skill or experience negatively impacted women’s ability to fish. Women were often questioned about whether or not they know what they are doing, and they experienced subtle insults when fishing in public areas. They explained the inability to get men to take them fishing because men do not believe women can keep up with the fishing. When reflecting on an instance that she felt a man did not believe she could ‘handle’ fishing, one participant said:

“I've had other comments directed to me and my kids of, you know, it's good we didn't catch a big fish since this was a saltwater trip because [my daughter] probably couldn't have handled it. So sometimes reflecting on size or strength or things like that, just simply because of the gender.” (P1000)

The same participant went on to say, “I have had comments from male guides and it might be as simple as, ‘I can't believe she wanted to fish all day’” (P1000). One participant reflected on an instance where she was fishing and a car filled with men drove by and yelled out the window to her and a friend. Reflecting on that experience, she stated: “We're people out there. We're enjoying the same sport [as men]. But, if people are saying, ‘What are those women doing [fishing]?’ They [think] we don't belong” (P1001). Another participant who owns her own fishing organization that is aimed at working exclusively with women anglers reflected on an experience she had while trying to obtain proper permits for her business:

“They say, ‘Oh, well why don't you just hire a fly-fishing guide?’ And I'm like, No. We are the fly-fishing guides. Like they don't even get it. They don't understand what we're trying to do because they see it's a woman's name and see pictures of women and they're like: Oh, well they should just hire a guide, or do they need a permit?’” (P1004)

The same participant also stated that she found out that some organizations will not take women hunting: “After finding out, like especially in duck hunting, that a lot of the waterfowl guys won't take women duck hunting. Won't call you back or whatever, but they'll call my husband back” (P1004). She stated that this incident is what prompted her to want to start an all-women's outfitter, so that women had a place to go where they would be able to learn, recreate, and find a safe space with other women. Another participant expressed similar gender bias while fishing as she stated:

“When I'm fishing alone, men love to approach me—and I've heard this from many other women—where men will just come up and assume you need help and that's their gateway to talking to you. I'm like, I just caught four fish while you sat there doing nothing and so the thing that's really off putting in those situations is—especially when you have been

doing something really well—[a man] comes up and ask you if you need help, and it's like clearly you weren't actually watching me.” (P1005)

In fly shops, being dismissed or judged, or being oversold, based on gender were common experiences for women as male anglers and fly shop employees assumed they did not know much about fishing.

DISCRIMINATION

Instances of discrimination included problems for minority groups or concerns regarding the overall acceptance of minority groups and acceptance of people who are considered ‘other’ in particular groups. One participant stated that because of discrimination, minority-based groups exist to combat the problem of not being fully included:

“But yet, we [people of color] do exist and even more so we're so passionate about [being in nature], that we've created our own group, like Hunters of Color exists like it is a group that exists [because of discrimination]. It is a nonprofit organization. My group is [also] an organization that exists because we don't feel welcomed... We don't even feel welcomed by our own state regulators. That's not okay. It wouldn't exist. Neither one of those groups would exist if we didn't feel discriminated against and obviously a lot of white men don't see it.” (P1004)

One participant reflected on her organization’s efforts to support equity in outdoor recreation, noting that while their core mission is centered on women, they are increasingly aware of broader needs. She explained that while they are most effective in addressing gender-based constraints, they also recognize the importance of supporting racially and socially marginalized groups:

“I’m most concerned about minorities, you know, marginalized people, being out there and feeling welcome. And I think we’ve got a lot of work to do in both of those spaces. So, you know, we’re trying to figure that out. Like, you know, we know women. We know how to help there.” (P1010)

However, one participant shared her decision to leave a women’s fishing organization after observing generational tensions and a lack of inclusivity toward younger members. She perceived the group’s leadership, composed largely of older women, as resistant to involving newer, younger participants.

NO FISHING PARTNERS

The lack of having fishing partners was another barrier and had different meanings among women. For some, it meant they lost motivation to go fishing, or they did not feel comfortable going alone. One participant stated that she feels her family does not go fishing because they do not have anybody to go with. Others noted that they like to have a fishing partner so that they know where to start, to help build confidence, or to have safety in numbers. When asked about fishing with people, one participant noted that in her line of work (owner of a women’s fishing organization), she has heard women say they would like fishing partners for safety.

INDIVIDUAL

Two major subthemes were identified within the system category: physical or mental health, and self-perception.

PHYSICAL OR MENTAL HEALTH

Some participants expressed that they sometimes need rest from their busy lives and they did not have the energy to go fishing. Others had physical health issues that prevented them from

going fishing more often, and one stated that post-partum depression served as a major constraint in being able to get back to fishing: “I would say it's more just like physical and mental health getting in the way right now of doing literally anything, not just not fishing. Postpartum depression was a big one. It was a big one” (P1005). The same participant noted that her divorced marital status had impacted participation in fishing due to her ex-husband not being around and encouraging her to go fishing.

SELF-PERCEPTION

Women also expressed self-perception as a constraint. Some stated they had ‘imposter syndrome’ or felt they did not know what they were talking about. For one participant, when asked if she experienced any constraints or if she could remember a time where she found the breaking point of attempting to overcome the constraints, one participant replied, “When I've really felt like I don't belong, like I don't know what I'm doing. So, it's kind of like a mental block” (P1001). Another participant stated that she does not feel confident in her ability to self-rescue, despite being physically prepared for any sort of dangerous situation:

“I'm not super crazy confident in my ability to self-rescue and stuff like that. So, I just prefer not to go crazy off the beaten path into the wilderness, and I carry a first aid kit with me and a personal rescue beacon and all that stuff. But, I always just like to generally be in a place that I'm relatively confident I could access help quickly if I'm by myself.” (P1009)

NEGOTIATION STRATEGIES

Eleven primary negotiation strategies emerged from the analysis and these were grouped into the categories of individual, interpersonal, structural, system and context (Table 3).

CONTEXT

Two subthemes emerged for context negotiation strategies. Participants attempted to improve safety, or to overcome access constraints they were willing to pay to fish on private land.

IMPROVE SAFETY

Enhancing personal safety emerged as one of the most common and deliberate negotiation strategies among participants. Women described a range of tactics they use to feel secure while fishing, including carrying protective devices, fishing only where comfortable, utilizing hyper-awareness, and communicating whereabouts effectively with others.

Safety tools used included pepper spray, knives, firearms, and emergency beacons, reflecting both the perceived risks of being alone in outdoor spaces and the proactive steps women take to navigate them. Participants stated, “I have friends of color who don't go fishing without a firearm on them” (P1005) and “To see women talking about carrying firearms on the river....and not just for the bears is something” (P1003). One participant that carried an emergency beacon and first aid kit was particularly worried about her safety in the outdoors and the ability to self-rescue. Another participant stated:

“I also have started carrying a safety alarm device on my waders and, of course, my dog now that he's older, he comes with me. He hates men. I don't know why. I mean, I didn't teach him that. He really, he just hasn't been around any men much since he was a puppy, and so his whole demeanor freaks [other anglers] out.” (P1010)

Women also mainly fish only where they feel comfortable. One participant noted she fishes in locations she is well accustomed to and feels safe and comfortable so that she can get

help if needed. She also prefers to fish in more crowded areas and stated she would fish in more remote areas if she felt that safety was not a concern.

The lack of feeling safe or comfortable also relates to women's utilizing of hyper-awareness to overcome feelings of discomfort while fishing. Some women have been able to successfully divert or avoid uncomfortable situations by being what they refer to as hyper-aware. Some are extra careful about looking around and being observant, and some mention not waiting for something to happen if something feels 'off' but rather immediately taking action to either leave or feel safer. One participant expressed that fishing has more of a possibility for feeling discomfort due to being a, "sitting duck and stationary, out in the open" (P1007). Another participant stated, "I take exponential amounts of precautions over a white man for example, who would just go fishing and not think about it" (P1005). Others take preparedness steps to reinforce their hyper-awareness as one stated:

"Maybe there's a reason, whether there's an animal or a person, you need to be paying attention. I think being smart [helps me overcome constraints]. So even though I didn't get to do Boy Scouts, I did learn a lot about being prepared. So having your outdoor checklist and making sure you have the supplies you need, making sure you're prepared in case of emergencies. So that, hopefully they don't happen, but if they do, you're ready." (P1000)

The same participant explained how she listens to her gut and inner voice if she feels like her situation is unsafe. Another strategy was to make it appear as if they were not alone as one women stated, "Now, I put out two chairs. I put out two pairs of fly-fishing boots, two pairs of waders, to make it look like I'm not alone. This is a deterrent" (P1010).

Women also communicated with others, such as family or friends or local officials in advance of their plans and whereabouts in case something were to happen. One stated, “I tell people where I’m going. I text people where I’m going, [and tell them] if you don’t hear from me by this point...and this is where the car is...I’ve got the dogs, or I don’t have the dogs” (P1010). Some locations often do not have cell phone coverage so women also communicate with local officials. For example, one participant stated, “I know a lot of the wildlife officers. If I go to a place I’ll let them know where I’m going and then I will check in with them on the way back” (P1005).

ACCESS

To navigate access constraints caused by land privatization two women shared their interest in fishing on private lands. One participant who owns her own women’s fishing organization explained that they already pay private landowners for fishing access as a way to bypass the difficulties of securing permits through state agencies. Another expressed a strong desire to do the same, noting that the ability to pay private landowners for access would open up opportunities otherwise unavailable to her. These examples highlight how anglers actively seek alternative pathways to maintain their fishing participation despite regulatory and contextual constraints.

INTERPERSONAL

Three subthemes emerged for interpersonal negotiation strategies. Participants overcome constraints surrounding relationships or society by women supporting other women, and standing up for themselves.

WOMEN SUPPORTING WOMEN

Women supporting women was a key strategy to overcome constraints. Participants highlighted the value of women-only fishing courses and retreats, which created safe, welcoming

spaces and provided practical skills for navigating outdoor challenges. These initiatives not only helped women feel more comfortable but also taught essential safety practices, fostering confidence and empowerment in fishing. In fact, one woman mentioned when she began fishing, she learned quickly that the local fly shops were not welcoming of women anglers, reinforcing the need of support for women:

“We're sharing stories like this more, and we're getting the word out that, hey, you know we want to fish too. So, I'm hearing now from some clients like, oh, this fly shop treated me really well, or this one didn't, you know. So, we're swapping stories about which ones to go to.” (P1010)

Women also actively sought to build community with other anglers beyond organized events. Those who were new to fishing or not involved in formal groups still worked to create support networks. These informal connections helped them find fishing partners, which enhanced their sense of safety through strength in numbers. Participants also shared gear and transportation and carpooled, further reinforcing mutual support and accessibility.

STANDS UP FOR SELF

Women explained how they stand up for themselves in various ways to overcome negative interactions while fishing and to maintain their self-confidence. This theme is co-occurring with mental strength under individual negotiation below. Participants stood up for themselves if men tried to impede on their fishing spaces, and faced uncomfortable situations with grace and strength by trying to take it as an opportunity for teaching them that they know what they are doing. One shared how having confidence in herself at fishing sites helped men have confidence in her stating:

“All right, you guys can say whatever you want to me, but I know what I'm doing. And most of them quickly figured that out. They were like, ‘Oh, she knows what's up’. And it's a much more chill experience I guess once you've become more confident in yourself” (P1009).

STRUCTURAL

Two subthemes for structural constraint negotiation emerged related to finances and time. To overcome financial constraints, participants budgeted or saved specifically for gear and trips, while others relied on borrowed or gifted equipment to offset costs. To address time constraints, participants prioritized fishing over other activities, noting that not having family obligations afforded them more flexibility and opportunities to fish.

BUDGETING/SAVING FOR TRIPS OR GEAR

Women budgeted or saved money to make fishing trips happen and to be able to afford necessary gear, while some received gear as gifts or hand-me-downs from family members or their networks. Saving money for new excursions, or (on the contrary) avoiding expensive fishing areas were other strategies to make fishing possible. Participants used a variety of strategies to manage gear-related financial constraints. One woman emphasized maintaining her gear meticulously to extend its lifespan, while another described a gear-sharing and donation system within her women-owned organization. A third participant increased her work hours to afford new gear.

PRIORITIZING FISHING OVER OTHER ACTIVITIES

The motivation to fish led women to prioritize fishing and enabled them to overcome time constraints. Some prioritize fishing over other activities while others work it around their busy schedule. One participant mentioned that she tries really hard to prioritize fishing over other

activities, and even when they feel too busy or tired they find a way to make fishing possible as one woman stated:

“Pretty much just working around my schedule and saying no to other things when they come up. Because I'm like, 'Okay, I'm gonna go fishing this weekend. Like, that's priority.' And just kind of trying to, like prioritize.” (P1009)

One participant, on the other hand, did not feel overly constrained by time and they explained that not having a family that needed care allowed her to more easily overcome time as a barrier.

INDIVIDUAL

Three subthemes emerged related to individual negotiation strategies. Some women used mental strength and bolstered self-perception to overcome individual constraints, while others felt they were unsuccessful or still working on overcoming constraints

MENTAL STRENGTH

Mental strength was the primary way that women were able to overcome the multitude of constraints they faced. To the participants, mental strength meant anything that utilized mindset, courage, and confidence. According to one participant, women are taught from birth to protect themselves:

“Women are taught this from birth. We have to be aware of our surroundings every second of our life, we have to be aware of how we look, how we're being perceived, where we go, what company we keep, because we are targets. So yes, we have to be aware of that, even when we go fishing out in the middle of nowhere and we think nobody's going to be there.” (P1010)

This participant mentioned being mentally prepared and life-long knowledge of how to keep herself protected as ways in which she overcomes constraints to fishing. Other women also expressed confidence in handling tricky situations at fishing sites by reinforcing theirs and other women's presence in fishing. One woman of color stated she would not allow her skin color to prevent her from leaving her house, so it would not prevent her from going fishing: “My skin color isn’t stopping me from walking out the door” (P1005).

Another participant described how she remained confident while fishing near a group of male anglers who seemed to question her abilities. Rather than withdrawing, she responded with self-assurance, demonstrating how mental resilience can serve as a powerful negotiation strategy. Her confidence not only helped her overcome internal doubts (individual) but also neutralized the social pressure and skepticism from others (interpersonal). This example illustrates how cultivating a strong sense of self can empower individuals to resist exclusionary dynamics and persist in recreational spaces where they may not be fully welcomed.

SELF-PERCEPTION

Women emphasized that enhancing the self-perception of women anglers could not only improve their overall fishing experience and visibility in the sport, but also empower them through education on personal safety and preparedness in outdoor environments. With increasing education, one participant noted that she and her organization already do this by offering shotgun clinics to women and teaching women about how to be cautious and safe in the wilderness. One participant also educated men on how to properly encounter women anglers:

“We're just like: "Be careful about when you approach a woman", because I think the statistic is [one] out of three of them has had some kind of abuse in their life, and it could be a trigger. So, you shouldn't just approach people and tell them or ask them, you know,

what are they biting on? Or, you know, ‘Hey, honey, you should really use this fly.’ Like, just be aware when you're approaching a woman that she might have some trauma she's dealing with and she's not comfortable with you.” (P1010)

UNSUCCESSFUL OR STILL WORKING ON OVERCOMING CONSTRAINTS

Two participants described significant, ongoing constraints to fishing that they have been unable to overcome. One woman shared that due to persistent mental health challenges, she has struggled to make fishing happen, and does not foresee being able to overcome this limitation in the near future. Another expressed frustration that she could not find any accessible, women-focused classes or opportunities and emphasized that the lack of inclusive instruction continues to be a major obstacle. In addition to limited access, she cited safety concerns and broader societal issues, including ageism, sexual assault, and toxic masculinity. She stated plainly that she still experiences these constraints and does not believe she will ever be able to fully overcome them.

SYSTEM

SOCIETAL SHIFT TOWARDS ACCEPTING WOMEN ANGLERS

Some women felt that an overall societal shift towards accepting women anglers has helped overcome constraints to fishing and that gender roles in fishing are slowly changing in a positive way. For example, one participant noted that she feels that people are much more progressive now and that she has encountered people who think it is cool that she is a female angler. However, others do not see how a shift could be possible if the underlying issue of patriarchal traditional values in fishing persists. One participant who perceives a positive shift but is apprehensive of change stated:

“There are a lot [of people] that are willing to change if they hear the feedback, or if they are called out on what they're not doing well, but some won't and that's unfortunate” and “When female anglers truly are equally represented in the water, when that [male] statistic isn't 84% when it fits closer to 50/50, I think then we can say we have more equal representation” (P1000).

DISCUSSION

WOMEN ANGLERS' MOTIVATIONS, CONSTRAINTS AND NEGOTIATION STRATEGIES

Our findings are consistent with other studies of women anglers and recreationists showing unique motivations and constraints that are a product of sociocultural and systemic inequalities that shape negotiation and their experiences in the recreational fishing community. Women's motivation to connect with nature and challenge gender norms associated with inferiorization enabled them to feel empowered and make space for themselves in the angling community as similar studies have found (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025). Women of this study were motivated to go fishing for rest, solitude, and a sense of accomplishment, which are common motivations among anglers, whereas feeling empowered is unique to woman anglers and recreationists. They also faced other typical constraints such as lack of access and time. However, safety concerns, discrimination, feeling as if they live in a man's world, or feeling a lack of support from local, state, and federal government are also constraints unique to women. Negotiating these constraints involved improving their safety, utilizing mental strength and confidence, and cultivating empowerment and solidarity with other women in the fishing community and women's organizations.

It is important to note that the participants in this study may not represent the average woman angler in Colorado. This is primarily due to the fact that a few participants were owners of their own women's fishing organizations, so their constraints and priorities to negotiation are likely different from the average recreational angler. The women who owned businesses and organizations bring a unique and strong perspective to the fundamental issues faced by women-owned angler businesses and organizations in Colorado.

WOMEN'S MOTIVATIONS FOR ANGLING

Women anglers are motivated to fish for various reasons including to enjoy nature, sense of accomplishment, for rest, to spend time with friends and family, and to escape, which reflect the broader benefits of recreational fishing found in existing literature (Bellew et al., 2020; Burkett & Carter, 2022; Toth & Brown, 1997). A key motivation unique to women, however, and found in other recreation and angler studies, is the sense of feeling empowered as a woman (Burkett & Carter, 2022; Fennell & Birbeck, 2019; Henderson & Bialeschki, 1991). Angling promotes individual and collective empowerment by challenging traditional gender norms, deepening self-connection, and fostering strong social bonds and friendships (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025). While women feeling empowered is not conceptually new, it is a unique motivation in the male dominated activity of recreational fishing and motivates women to seek out and build a sense of community among women anglers (House, 2025). The women expressed that being a woman angler was particularly exciting and made them feel as if they had a right to step into this activity, and embrace womanhood while resisting expected gender norms as Fennell and Birbeck found (2019) and perhaps even pave the way for other women to join the activity.

Women anglers seek connection, enjoyment, and rest outside of their daily lives which contributes to their wellbeing. When women of this study described their motivation to spend time outdoors, many emphasized a deep sense of “connection” with nature or water—an experience closely aligned with what other studies describe as sense of place and often tied to emotional and spiritual well-being (House, 2025). This embodied connection to nature appears to be particularly salient for women, as it does not commonly emerge in traditional leisure-constraints research focused on men who typically express domination of it (Birkett and Carter, 2022; Fennell and Birbeck, 2017). For women, feeling rooted in natural spaces and connected to nature can be more rewarding than catching fish (Burkett and Carter, 2022).

CONSTRAINTS FACED BY WOMEN ANGLERS

The main constraints found in this study that are consistent with similar studies of women anglers (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025), include discrimination, gender stereotyping and inferiorization, having skills or experience insulted, and safety issues. Some women expressed negative self-perception and declined physical or mental health, or work exhaustion as reasons for not fishing as often. They also noted instances of imposter syndrome, or a lack of confidence in their skill which is due to the underlying bias against women and internalizing gender stereotypes in a male dominated activity, and not having fishing partners, a teacher or experience, which are common constraints among women anglers (Basto et al., 2025; Carini & Weber, 2017; Fennell & Birbeck, 2019).

Women of color found discrimination as a deterrent to fishing for them or others they knew. Experiences of discrimination, whether based on race or gender, not only alters the experiences of women anglers but can actually reduce their level of participation (Basto et al., 2025; Lavoie et al., 2025; Schroeder et al., 2006; Schroeder et al., 2008). Women who experience men insulting

their skill is tied to traditional gender norms for both men and women—men finding there is no place for women in recreational fishing, and women feeling as if they do not belong because their skill is questioned. This double-edged gender bias is common in angling where women have traditionally been excluded or not recognized as viable customers to outdoor recreation agencies (Carini & Weber, 2017; Floyd, et al., 2006; Smith, 2003). Women of this study felt like they were living in a ‘man’s world’ because fishing was built by men, and for men. They must exert extra energy to fit into the male dominated space of recreational fishing by building and creating new spaces for women to fit into. Poor representation in outdoor recreation (including angling) is a significant barrier as research shows that when people see other people “who look like them” participating in an activity, it increases their desire to participate in that activity due to feeling a sense of belonging or acceptance (Basto et al., 2025; Carini & Weber, 2017; Fennell & Birbeck, 2019).

Women of this study also struggled to shop for gear at fly shops as Basto et al. (2025) found among Latina anglers, and mansplaining being a common experience among women anglers (Burkett & Carter, 2022). Male fly shop staff assume women were shopping for husbands or that they did not know what they were looking for, and would even oversell gear they did not need. Poor representation of women anglers in gear shops and state-level marketing is a barrier emphasized by Carini and Weber (2017), as well as lack of support from local, state, and federal government in promoting women anglers in Colorado. The women felt that Colorado agencies tend to lean heavily on the traditional fishing identity (white men) rather than improving diversity in fishing. Two participants of this study formed women’s organizations aiming to broaden the fishing community due to gender-biased constraints but found insignificant support from state agencies suggesting this is a reason why more women do not participate in angling in Colorado.

With the history of exclusionary practices, researchers and managers of outdoor recreation should take into account biases, discrimination, and other forms of oppression that limit leisure opportunities such as these (Henderson & Gibson, 2013).

Access to fishing sites, personal safety concerns, and inappropriate behavior are additional constraints for women. While the privatization of land limits physical access to high-quality fishing areas, participants emphasized that access alone is not enough—feeling safe in fishing spaces is more critical. Concerns about personal safety stemmed from experiences of inappropriate behavior or intimidation by men (as House 2025 found), which heightened their sense of vulnerability when fishing alone or in unfamiliar areas. Thus, even when access is technically available, the absence of safety effectively renders those spaces unusable for many women. Safety concerns rooted in the fear of assault, harassment, or violence from men is a common barrier to women recreationists—constraints that white men do not have to deal with in androcentric recreation spaces (Green et al., 1987).

WOMEN OVERCOMING CONSTRAINTS TO ANGLING

Self-empowerment, mental strength, and exerting confidence enabled women to continue fishing and helped reinforce their right to be in the outdoors as other angler studies have found (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025). Some emphasized how they “stood up for themselves” in instances of disrespect or dismissal by men, as House (2025) observed of women anglers who encountered men’s derogatory behavior. These disrespectful experiences, that can dissuade women from fishing, leads them to support other women anglers in finding their place in recreational fishing and develop sense of community (House, 2025). Two women of this study formed women’s organizations for forging connection and building sense of community among women, and shared gear and organized trips to help others overcome cost and time

constraints. This high level strategy can boost women's participation and increase acceptance in the angling community (Carini & Weber, 2017).

Despite the barrier of feeling like they were in a man's world or lack of agency support, they also noticed there was a positive, overall shift towards a new acceptance of women anglers within the recreational fishing community. Women anglers of this study, however, do not feel the need to be accepted by men to continue fishing as Fennell and Birbeck (2019) show, and instead embrace their womanhood as a means to carve out their rightful space in the angling community. This shift in acceptance and their increased presence can lead to changes in perception of women anglers, inspire those who feel unable to overcome constraints (such as two women in this study), and improve participation in future generations as the number of women anglers continue to increase not only in Colorado (U.S. Fish and Wildlife Service, 2016), but elsewhere (House, 2025).

Lastly, women's desire to connect with nature and water outweighed the constraints they faced overall. This sense of feeling connected with nature, on or near the water, contributes to their wellbeing as other angler studies found women seek out spaces for spiritual connection and meditation (Burkett & Carter, 2022; House, 2025). To improve their safety in isolated areas they carried protective devices, went to sites where they felt comfortable, informed others of their whereabouts, or utilized their hyper-awareness, which are common strategies among women and minoritized anglers (Basto et al., 2025) and recreationists in general (Coble et al., 2003). However, these strategies to improve safety are primarily aimed at protecting themselves from potential assault from men in secluded areas, which is an unfortunate social and systemic reality when attempting to recreate and seek out escape from daily life, and this problem continues to persist (Coble et al., 2003; Green et al., 1987). It is important to note, also, that overcoming constraints can be interrelated for the women, as seen in Figure 3. Interrelated negotiation strategies is

primarily seen when women need to employ multi-level negotiation strategies to overcome a constraint. Oftentimes, individual, interpersonal, and systemic constraints are interrelated and the women must negotiate each level in order to achieve participation.

THEORETICAL IMPLICATIONS FOR LEISURE CONSTRAINTS MODELS

The findings of this study show how leisure constraints operate across multiple levels, illustrating the dynamic relationship between individual, interpersonal, structural, contextual and systemic constraints, supporting the ecological model of Stodolska et al. (2020) by demonstrating that constraints are not experienced independently but are interconnected and influenced by one another (Basto et al., 2025). Traditional models of leisure constraints, such as the hierarchical model proposed by Crawford and Godbey (1987), show a linear progression of experiencing intrapersonal, interpersonal, and structural constraints that does not fully capture the dynamic nature of how constraints exist for the individual. It is also over simplified as it assumes constraints and related negotiation strategies belong to one of three categories: intrapersonal, or interpersonal, or structural, ignoring the compounding nature of constraints and their negotiations (Stodolska et al., 2020). It suggests that individuals also progress through negotiating constraints in a linear, step-by-step fashion (Crawford et al., 1991). Based on this research and new to the study of leisure constraints proposed by Stodolska et al. (2020) is the notion that not every motivation, constraint, and negotiation strategy fits neatly within one category—often, they fall into multiple categories. Stodolska and colleagues (2020) state that each constraint type (individual, interpersonal, structural, system, and context) is interrelated and mutually interdependent influencing negotiation (Stodolska et al., 2020, p. 17).

This recent, expanded ecological model is necessary to account for the complex multi-level interactions which was found in this study and Basto et al.'s (2025) who show that “system level

constraints permeate through the societal and personal level causing challenges to outdoor recreation” for women and other minoritized identities. For example, gender (and/or racial) discrimination and stereotyping may be a direct interpersonal constraint experienced by women anglers, but this behavior and its underlying ideology is systemic (Figure 3). To overcome this constraint women need not only mental strength and confidence (individual), but they need to stand up for themselves (interpersonal) and attempt to change the status quo (system). Another example is the constraint of availability and access to permits. Access constraints typically fall under the context constraint category because the inability to acquire permits directly impacts access to fishing sites; however, this constraint also belongs under the systemic constraint category because the inability to acquire permits is an aspect of fishing that directly involves state government and its distribution of permits.

Women of this study, and recreationists in general may also describe exhaustion, lack of time, or mental stress as a constraint to leisure due to work or home responsibilities (Crawford & Godbey, 1987). These constraints are typically considered intrapersonal (or individual) constraints; however the origin of these constraints are structural (full schedules, difficult work hours, and financial strains). These examples demonstrate how constraints (and their respective coded themes in data analysis) can be co-occurring and do not necessarily fit into one category, and how constraints are inter-related and the complexity of each individual’s circumstance and related constraints categories must be captured. Essentially, constraints are not necessarily discrete to one category (i.e. individual, interpersonal, structural, system, and context) but influence and are influenced by other types of constraints, particularly system level constraints.

Diane Samdahl’s (2005) critiques of the traditional leisure constraints model formed a basis for why Stodolska and colleagues (2020) proposed the ecological model of leisure constraints, and

this study echoes those critiques. Our findings corroborate two of Diane Samdahl's critiques and further supports the notion that the traditional framework of leisure constraints is narrowly focused and that negotiation cannot be solely up to the individual. The first critique is that the traditional model has a narrow focus on mainly activity participation in isolation from social factors that limits the ability to consider the complexity of people's lives that might influence their leisure choices. The results of this study show that being a woman brings forward many constraints that are not easily identified in traditional constraints model. In traditional models, white men were studied who experienced typical constraints such as lack of time or money. In this research, constraints such as discrimination, inappropriate behavior, insults on skill and experience, and fears for personal safety are constraints unique to women. Additionally, participants noted and were aware that women of color tend to be more likely to experience an unwelcoming fishing experience (Basto et al., 2025; Schroeder et al., 2008). Simply being a woman, or being a woman of color, creates a complexity to leisure research that is not captured in the traditional model.

Intersectionality is the concept of how multiple identities (i.e. race, gender, and class) combine and compound to create vulnerabilities within an individual (Crenshaw, 1989). This concept motivated this study and there is a need for more intersectional research on women anglers (Basto et al., 2025; Burkett & Carter, 2022; House, 2025). Unfortunately, in this study only two participants were women of color. However, they shared discourse that support the notion of intersectionality in recreational fishing, similar to the Latino(a) study of Basto et al. (2025). One woman found it frustrating to acquire gear in fly shops because she was judged based on her intersectional identities. The other felt that her identity as a woman of color played a major role in her negative experiences fishing, and felt there needed to be systemic change at the governmental level to ensure the safety of people of color who wish to recreate in public spaces. Using the

example of a racial slur that was graffitied on a bridge in a public space that had not been cleaned up due to jurisdiction disputes, she felt that government was not looking out for people of color. She stated that if she is not with a white person, then she will either go to an entirely secluded area away from people and threats, or to a very populated area that is bound to have other people of color present. Experiencing both gender and racial discrimination confounds interpersonal and systemic constraints. In other words, gender and race together create a complex identity that incurs more constraints to leisure than those who only have one underrepresented identity such as a white man (Basto et al., 2025; Floyd et al., 2006; Shinew et al., 2004; Shores et al., 2007).

The second critique is of the assumption that it is the individual's responsibility to negotiate a constraint, which implies that system level change or collective action to generate change is not necessary. Women of this study were advocates for collective action of women and men in general, and local, state, and federal governments for systemic change. They felt that if the many systemic problems are not resolved, then women will never reach the same level of acceptance or participation in fishing as men—they will always face systemic constraints that infringe on their engagement and experiences. This aligns with studies of anglers and recreationists of color showing society must play a role for minoritized identities to fully overcome systemic constraints (Basto et al., 2025; Lavoie et al., 2025; Stodolska et al., 2020)

POLICY AND ACTION RECOMMENDATIONS

Participants of this study were asked if they had suggestions to improve fishing participation among underrepresented communities and women. While recommendations can be formulated

and provided by the researchers of this project, we found it important to provide a voice to the women who participated in this study. While some of the recommendations may seem unrealistic or unachievable, the recommendations are real suggestions from women anglers in Colorado. In addition to these recommendations, Basto et al. (2025) has numerous recommendations that are relevant to women and should be considered as viable action and policy recommendations.

- To obtain a fishing license, individuals should be required to take a mini course on how to recreate responsibly within the state, including how to find information and resources, processes to obtaining a license, Leave No Trace principles, and basic ecological information.
- Individuals who are obtaining a fishing license for the first time should be required to take a mini course on sustainable fishing practices (i.e. how to properly catch and release, wet hands before handling fish, not to fish when it is too hot outside to reduce fish kill).
- There should be a required mini-course on fishing etiquette to obtain a fishing license. It could share statistics of diverse groups who fish in Colorado, implore folks to report bad behavior at fishing sites, remind folks to keep inappropriate thoughts or gestures to themselves, and not disturb others who are fishing.
- There should be an increase in funding for small business run by women, people of color, and the LGBTQ+ community. The increase of funding for these marginalized organizations/businesses would help improve inclusivity of those fishing within the state. CPW should create and regularly run women's only fishing courses and guided trips that can be funded by licensing money.

- Similar to the wildfire danger signs, there should be a sign for ‘how to fish safely’ (to take into consideration variables that impact fish health) that takes into consideration climatic variables (i.e., air temperature, water temperature, recent rain, snowmelt, or runoff, dissolved oxygen levels, and wildfire impacts). The construct could model wildfire danger signs and be adjusted on a sliding scale, and be placed at popular fishing sites.

LIMITATIONS AND FUTURE RESEARCH

A caveat of this study is the number of participants which is less than planned despite active recruitment over 6 months. This may be due to the current political climate and/or the inability to offer incentives to participants for their time. Additionally, only two women were of color and as Burkett and Carter (2022) identified in their study, expanding upon and speaking more to the concept of intersectionality would have strengthened this research and support others showing the complexity of constraints on fishing participation for people with multiple minoritized identities. Lastly, our findings may not represent the experiences of the average women angler (or potential ones) of Colorado more broadly as some of our participants had their own organizations and were leaders in their communities reflecting the prominence of women’s leadership in the outdoor industry of Colorado. Despite these limitations, the findings of this study do corroborate other studies of women anglers. Future research should include addressing these caveats and replicating the study regionally and in other states to gain an understanding of how women’s participation may differ from state-to-state.

CONCLUSION

This study examined fishing participation and experiences of women anglers in Colorado adapting the traditional leisure constraints framework and recent more inclusive framework, the ecological model of leisure constraints. This ecological model provides a means for capturing a more diverse range of constraints, including the effects of systemic and societal constraints on women's participation in leisure. This framework provides a new basis for which leisure research of minoritized identities should be examined by taking into account constraints that range from the individual to system levels, and how they are interrelated and interdependent and often beyond an individual's control.

Our findings align with existing research on women anglers and outdoor recreationists, highlighting that their motivations and constraints are shaped by broader sociocultural and systemic inequities. These inequalities influence not only the constraints women face but also how they navigate and negotiate their participation in recreational fishing. A strong desire to connect with nature and challenge gender-based assumptions fuel women's sense of empowerment and help them carve out space in a male-dominated angling culture—echoing the findings of other recent studies of women anglers (Burkett & Carter, 2022; Fennell & Birbeck, 2019; House, 2025).

We show that women must contend with societal and systemic constraints, such as gender stereotyping and interpersonal safety, in order to participate in angling which is not an issue for the common male angler. Women's negotiation strategies are entirely unique, such as fostering mental strength, standing up for themselves, dismissing harmful attitudes toward them, and seeking support from other women anglers. These negotiation strategies have not been fully

captured in the traditional leisure constraints framework and are unique to women (a minimally studied demographic), and demonstrates the nuance in the types of constraints and negotiation strategies women face. This insight to how women negotiate and overcome constraints in recreational fishing settings in Colorado indicates the need for more work focused on women in Colorado and other regions.

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FIGURES AND TABLES

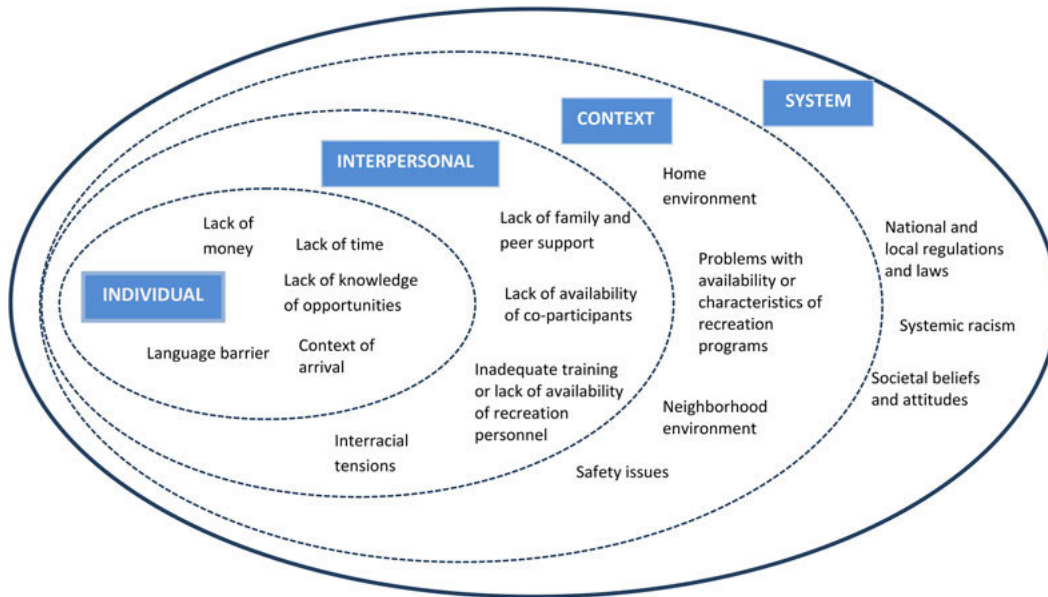


Figure 1. Ecological model of leisure constraints by Stodolska et al. Concept adapted from Mehtala, Saakslahti, Inkinene, & Poskiparta (2014).

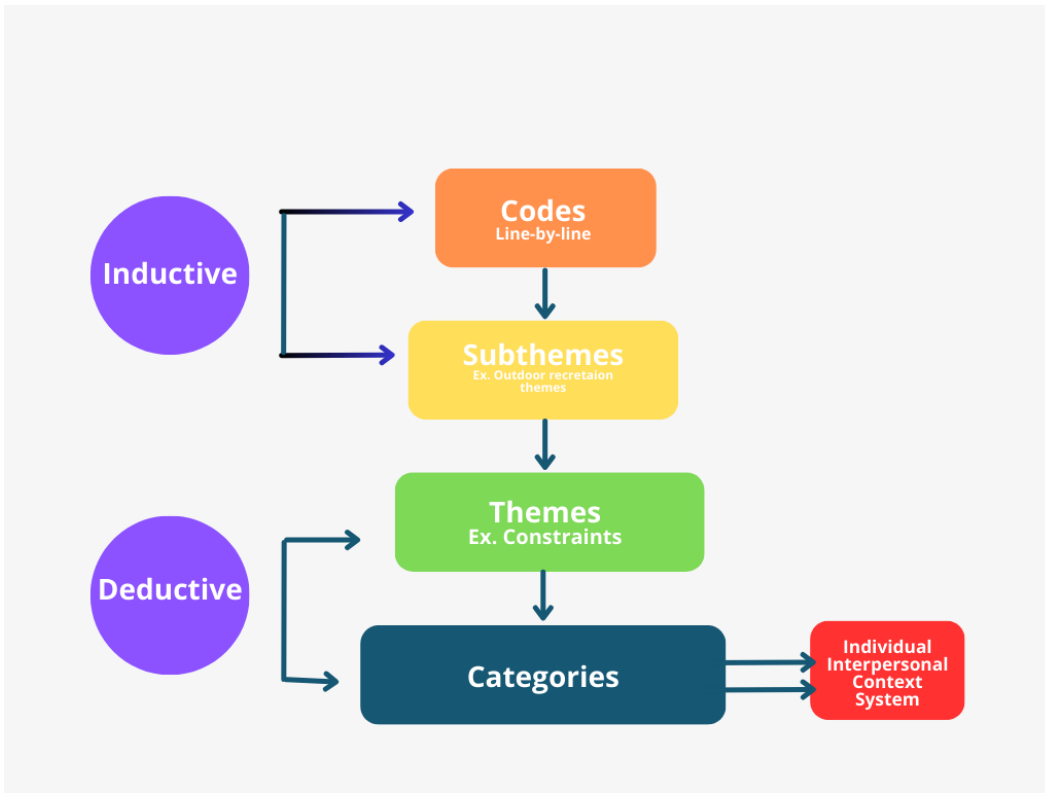


Figure 2. Flow chart showing data coding steps (Canva Software, 2025).



Figure 3: Diagram showing connections between constraint categories and negotiation

Table 1. Code frequencies of motivations.

Motivation	Subtheme	Code frequency
To enjoy nature		42
	Connection with nature	21
	To be outdoors	21
Sense of accomplishment		27
	For the challenge	12
	To learn	10
	To enjoy or improve public lands	5
Feeling supported		23
To rest		19
	To meditate	13
	Physical and mental health benefits	6
To spend time with family and friends		13
Empowerment as a woman		9
To escape		8
For solitude		5

Table 2. Code frequencies of constraints.

Constraint	Subtheme	Code frequency
System		68
	Poor representation in fishing	27
	Lack of support from government	25
	Feeling like it's a man's world	10
	Gender stereotyping	6
Context		53
	Safety concerns or inappropriate behavior	44
	Access	9
Structural		47
	Lack of or difficulty with gear	28
	Time	10
	Cost	9
Interpersonal		40
	Lack of teacher/understanding/experience	12
	Insults on skill /experience	12
	Discrimination	10
	No fishing partners	6
Individual		14
	Physical or mental health	9
	Self-perception	5

Table 3. Code frequencies of negotiation strategies.

Negotiation	Subtheme	Code frequency
Context		31
	Improve safety	29
	Access	2
Interpersonal		22
	Women support women	18
	Stands up for self	4
Structural		17
	Budgeting/saving trips or gear (financial)	13
	Prioritize fishing over other activities (time)	4
Individual		15
	Mental strength	9
	Self-perception	4
	Unsuccessful or still working	2
System		6
	Societal shift towards accepting women anglers	6

APPENDIX A: PROJECT INTERVIEW GUIDE

PROJECT INTERVIEW GUIDE: *CULTIVATING ACCESS AND DIVERSITY OF RECREATIONAL FISHING IN COLORADO*

Interview type: Phone | Email | Virtual | Face-to face

Name:

Ethnicity:

Gender Identity:

Date:

Time (start/finish):

Town of residence:

Occupation:

Fishing organization affiliation (if any):

First I am going to ask you about your history fishing. [Note: try not to spend too long on this question]

I. Fishing experience

1. How many years have you been fishing (years of experience)?
2. Can you explain your experience learning how to fish?
 - ii. *[If they didn't already discuss (assessing socialization)]*: Can you tell us about who taught you how to fish or who you used to go fishing with when first starting out?
 - iii. What about these early experiences “hooked” you (or kept you coming back)?
3. What is your favorite memory or experience fishing?

Next, I'm going to ask you a few questions about the reasons why you fish and how those motivations keep you interested (or not) in fishing.

II. Motivations

1. Why do you enjoy fishing?
2. What motivates you to go (or keeps you interested in going) fishing?
 - i. *For example*, do you go fishing to get outside; for fun; for exercise; to escape; to be with friends or family; for food; etc.?
3. Who do you typically go fishing with (e.g., with friends/family, colleagues, etc.) or do you go by yourself?
 - i. Why do you go with others or by yourself?

4. How have the reasons why you fish changed over time (i.e., from when you started to now)?
5. Out of the reasons you just described, which one would you say is the primary reason why you currently enjoy fishing?

III. Constraints [This may need more and probing for intrapersonal, interpersonal, structural, context, and system]

1. What are some things that prevent you from going fishing? Why are they constraints?
 - i. *[For example, lack of time; family or work responsibilities; cost; not enough information; safety/fear of crime; poor health; etc.]*
 - ii. *[If they say “lack of time” make sure to clarify why this is a constraint]*
 - iii. *For example, is this due to work, family commitments, interests in other activities, etc.*

IV. Negotiation Strategies

You have shared what motivates and constrains you, now I'd like to discuss what enables your participation and how you overcome the constraints/constraints you have faced.

1. How do you overcome the constraints you have faced? [Get examples for each type they mention]
2. Which constraints do you still face?
3. Of the constraints you weren't successful at overcoming, what was the breaking point at which you stop trying?
4. What types of things would help you overcome any of these constraints?
5. How supportive is your family/friends/community of your interest in fishing? How do they encourage (or constrain) your participation?
6. How successful do you think you have been in overcoming constraints to recreational fishing? Why?
 - i. Not successful, slightly successful, successful, very successful
7. Do you have family or friends that want to start fishing but cannot? If yes, do you know why?
8. Are there any other things that get in their way from starting?

V. Fishing Experiences

Now I'd like to ask you about your experiences fishing.

1. In the survey you stated XYZ. Can you tell more about this? [This is where you prepare in advance by seeing their responses in the survey].
2. Have you, or others that you know, experienced social discomfort or felt unsafe while fishing? Please explain these experiences. [This may be answered by the above question. If not fully, then probe more]
 - i. Fear of physical or assault [including sexual], discrimination, or crime?
 - ii. How did you feel and how did you navigate these experiences so that you continue fishing?
3. If yes above, do you think your identity plays a role in the this? How so? [*If they are women of color, ask them if they think being both a woman and a person of color intensifies/worsens this constraint*].
 - i. [*Make connections with their responses here and constraints from earlier*]
3. What do you think are some of the biggest issues or challenges that Colorado's fishery is facing?
 - i. In your opinion what could be done to overcome these issues?
 - ii. Do you think the information available about fishing sites, species, and other related issues need to be addressed? Or there is enough information out there? What about information in Spanish [*if relevant*]?

VI. Location & Habitat

1. What types of water did you fish in the past year (Jan-Dec)? *Select all that apply*
 - i. Lakes or reservoirs at low elevations
 - ii. Lakes or reservoirs in the mountains
 - iii. Boatable and wadable, large rivers (e.g., Arkansas River, South Platte River, Colorado River, etc.)
 - iv. Smaller rivers or streams (non-navigable) at low elevations
 - v. Smaller rivers or streams in the mountains
 - vi. Urban small ponds (e.g., City Park Lake, Dixon Reservoir)
2. Is there one that you most prefer? (If so, which one?) _____

3. Can you share some of the locations you usually go to fish? [*Bodies of water and towns*]
 - i. How far are they from home?
 - ii. How do you get to them? Drive?
 - iii. What do you like about the locations?
 - iv. Which one are your favorite?
 - v. Have you noticed any major ecological changes to the fishing locations you typically go to? [*Habitat decline, fish abundance and health, crowding, etc.*]
4. Do you usually keep what you catch, or catch and release, or both?
 - i. [*If they keep what they catch or do both*], what do you usually do with the fish you do not release (e.g., eat it, give it away, etc.)?

Other: Please add anything else you would like to share about your fishing experience in Colorado.

APPENDIX B: CODE BOOK

MOTIVATIONS

Code	Description	Example
TO ENJOY NATURE		
Connection with nature	Participants describe directly how their connection with nature is a motivation for fishing.	<p>‘The nature and the opportunities that we have, the air, the water, the land—it’s fragile, it’s special. It’s what we need to live on and I think that is so important for people to be connected with if people aren’t.’ (P1000)</p> <p>‘Mostly just the time and nature...it’s a really good way, because I love hiking and stuff like that too, and I probably actually hike more than I fish, but sometimes I want to get outside and I want to have that connection with nature.’ (P1009)</p>
To be outdoors	Participants describe directly or indirectly being outdoors in nature is a motivation for fishing.	<p>‘I like to do a lot of other outdoor activities, so this kind of just seems like something that’s similar and falls in line.’ (P1007)</p> <p>‘I’ve always loved to fish...it is nice to get out of the city, get out of my apartment...it’s definitely relaxing.’ (P1002)</p>
SENSE OF ACCOMPLISHMENT		
For the challenge	Participants express feeling motivated to fish due to the challenge of the sport.	<p>‘I can trick an animal to chase my fly. That alone is thrilling.’ (P1000)</p> <p>‘It’s actually pretty challenging to get your fly exactly where you want it to go. And so it’s kind of like a fun little exercise to be like, ‘Oh, I want to get my fly in front of this rock or in front of this tree’.’ (P1002)</p>
To learn	Participants express their enjoyment of learning to fish or learning a new skill as a motivation to fish.	‘I like river dynamics and watersheds and stuff like that. So it’s always really interesting to me to see what the state of the river is if there’s a lot of algae or if the current is flowing like a different way than I expected or how high the river is when I was out fishing recently.’ (P1002)

To enjoy or to contribute to public lands	Participants express their desire to fish is tied to the value of public lands.	‘One participant expressed a commitment to conservation and environmental awareness, noting that fishing provided an opportunity to engage more meaningfully with natural resources and advocate for their protection.’
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FEELING SUPPORTED

Feeling supported	Participants refer to the feeling of being supported and safe in their fishing experiences as a motivation to continue to return.	‘I just think, I mean as a woman owned business, I do appreciate the support we received from the state and I do feel like Colorado Parks and Wildlife.’ (P1000). ‘I haven't really run into any like scary fishermen; they've all been very nice.’ (P1002)
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TO REST

To meditate	Participants describe the meditative and spiritual experience of fishing as a motivation.	‘It became breath work, mindfulness, finding healing in nature.’ (P1010) ‘When I started fishing, it was soon after my husband died. I was using his gear when I first went out to fish. So, it was a way of connecting with my lost loved one.’ (P1010)
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Physical and mental health benefits	Participants describe how fishing positively impacts their mental and physical health.	‘I'm also a big proponent of the mental health aspects of outdoor adventure. I think there are tremendous healing properties for people, whether it's overcoming trauma, whether it's illness or disease, or all kinds of life challenges.’ (P1000) ‘[Fishing] improves mental health’ (P1008)
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TO SPEND TIME WITH FAMILY AND FRIENDS

To spend time with family and friends	Participants express that spending time with family and friends is a motivator to fish.	‘I think some of it's also like a connection to a skill that somebody really important taught me, that my dad taught me. It's—it's quite mystical and magical, and it's a little hard to explain’ (P1009) ‘My father was a recovering alcoholic. And when he went through recovery, which was when I was around 25. He
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asked me if I would join him on his trip to Montana. Because he went for two weeks every year with like a [couple] guys. But he said, 'You know, they're not alcoholics, but I am'. And he said if it's uncomfortable for me to be around them drinking, having you there with me will give me a graceful exit. So, if he got uncomfortable, he could just say, 'Oh, well we're going to go to this other river and have some father daughter time,' so they wouldn't feel bad. And he wouldn't feel awkward. But he could remove himself from the situation. So, I said of course I'll go with you. And then I just kept going and he didn't have any problems [with me going with him more] and I thought this is great.'
(P1003)

EMPOWERMENT AS A WOMAN

Empowerment as a woman

Participants describe how being a woman gives them a sense of power and motivates them to fish.

'I love being a girl so much. It's the best thing ever. And I think that, like, to some extent, almost gives me more of a like, 'Oh, I'm a cool girl'. Like, yeah, you're a guy and you go fishing, but, like, all you guys go fishing. So, like, who cares? But, I'm a girl and I go fishing, and that's awesome.'
(P1009)

'I know that, you know, fishing can be more of like a boys club, but I don't see that as a barrier for me at all because, you know, that's how climbing is. That's how every other sport outdoors is. And that hasn't stopped me in the past.'
(P1007)

TO ESCAPE

To escape

Participants describe fishing as a powerful means to escape.

'I currently enjoy fishing because it's a getaway. You get to get away from it all and enjoy the outdoors. We're fortunate to have a lot of public land in Colorado to do that'
(P1004)

'It is an escape from reality'
(P1006)

Code	Description	Example
Physical and mental health benefits	Participants describe how fishing positively impacts their mental and physical health.	<p>‘I’m also a big proponent of the mental health aspects of outdoor adventure. I think there are tremendous healing properties for people, whether it's overcoming trauma, whether it's illness or disease, or all kinds of life challenges.’ (P1000)</p> <p>‘[Fishing] improves mental health’ (P1008)</p>

TO SPEND TIME WITH FAMILY AND FRIENDS

To spend time with family and friends	Participants express that spending time with family and friends is a motivator to fish.	<p>‘I think some of it's also like a connection to a skill that somebody really important taught me, that my dad taught me. It's—it’s quite mystical and magical, and it's a little hard to explain’ (P1009)</p> <p>‘My father was a recovering alcoholic. And when he went through recovery, which was when I was around 25. He asked me if I would join him on his trip to Montana. Because he went for two weeks every year with like a [couple] guys. But he said, ‘You know, they're not alcoholics, but I am’. And he said if it's uncomfortable for me to be around them drinking, having you there with me will give me a graceful exit. So, if he got uncomfortable, he could just say, ‘Oh, well we're going to go to this other river and have some father daughter time,’ so they wouldn't feel bad. And he wouldn't feel awkward. But he could remove himself from the situation. So, I said of course I'll go with you. And then I just kept going and he didn't have any problems [with me going with him more] and I thought this is great.’ (P1003)</p>
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EMPOWERMENT AS A WOMAN

Empowerment as a woman	Participants describe how being a woman gives them a sense of power and motivates them to fish.	<p>‘I love being a girl so much. It's the best thing ever. And I think that, like, to some extent, almost gives me more of a like, ‘Oh, I'm a cool girl’. Like, yeah, you're a guy and you go fishing, but, like, all you guys go fishing. So, like, who cares? But, I'm a girl and I go fishing, and that's awesome.’ (P1009)</p> <p>‘I know that, you know, fishing can be more of like a boys club, but I don't see that as a barrier for me at all because, you know, that's how climbing is. That's how every other sport outdoors is. And that hasn't stopped me in the past.’ (P1007)</p>
TO ESCAPE		
To escape	Participants describe fishing as a powerful means to escape.	<p>‘ I currently enjoy fishing because it's a getaway. You get to get away from it all and enjoy the outdoors. We’re fortunate to have a lot of public land in Colorado to do that’ (P1004)</p> <p>‘It is an escape from reality’ (P1006)</p>

CONSTRAINTS

Code	Description	Example
SYSTEM		
Poor representation in fishing	Participants describe directly and indirectly that there is a lack of women's participation and representation in fishing.	<p>'I think that more social media posts with women and people that are diverse [would increase participation]. I saw one [post] today and there was a woman of color hunting that they posted. I was like, 'Oh my gosh!' I even commented on it. I said 'Oh my gosh, a girl,' so hopefully they saw that as a positive thing because I'm sure somebody was like, 'Hey, you should probably post this woman of color hunting to show other women of color that they can also get out there and hunt.' (P1004)</p> <p>'We've done some workshops with them in the past for with black youth, and we work with black guides, because we're like, you see yourself doing something, you're more likely to gravitate towards it, right.' (P1010)</p>
Lack of support from local, state, and federal governments	Participants express there is a lack of support from local, state, and/or federal governments and that lack of support perpetuates their inability to participate.	<p>'I don't know how we ever get those permits, ever, unless we collaborate with those fly shops and do something where we don't get to be Outfitters.' (P1010)</p> <p>'[The government] can get away with arguing over whose jurisdiction it is to exploit pain. What if something happens to us? What if I was harmed on a [river] bank? What if I was harmed while in the river? Is someone going to argue over whose jurisdiction it is to take care of the fact that I was hurt while fishing? Is anyone gonna care?... I just know these things from a little bit of a higher level and the background arguments that go on and that just gives me cause for concern because I'm like, oh, I don't know who's actually going to take responsibility if something does happen, and that's scary.' (P1005)</p>
Feeling like it's a 'Man's World'	Participants express that fishing feels geared towards men, informed for and by	<p>'Maybe it is the systemic aspect of this being mostly like a sport done by men.' (P1001)</p>

	men, and physically built for men's body shape.	'Men are insecure about their public land access and that the patriarchy believes women should stay at home.' (P1008)
Gender Stereotyping	Participants describe how gender bias was a barrier to their fishing participation.	<p>'When we first started the company, there were a lot of people that really felt like we were going to fail, that this was just a phase, and that women and fishing were not going to last. People pulled us at trade shows and said, 'You won't be here next year,' and really doubted that there was 1) a need in the market and 2) a company that could endure those challenges, so even at the beginning of our company, you know, there were a lot of people that really didn't believe in it.' (P1000)</p> <p>'I hear a lot of stories of women who are fishing and they feel like people want to move them out of their space, that they're not safe in the parking lot, that, you know, they're being kind of pushed around because of their identity or their gender or their color of skin or all kinds of things.' (P1000)</p>

CONTEXT

Safety concerns or inappropriate behaviors	Participants express a range of uncomfortable they or others faced.	<p>'I would say one of the number one constraints to women fishing is they have no one to go with, and they feel unsafe if they are approached by men when they're in the wilderness and they don't have cell coverage. And that is the one that we get asked about the most when we're teaching lessons is: 'What do I do in a situation where I'm by myself and a man approaches me and I'm uncomfortable with it?' (P1010)</p> <p>'I've noticed women not feeling safe in certain outdoor settings. I've noticed lots and lots of comments. Some to me, some to my kids. I mean, there were comments at the [fishing] invite [I attended], such as, 'I saw you last night'. Um, inappropriate things. I hear a lot of stories of women who are fishing and they feel like people want to move them out of their space, that they're not safe in the parking lot, that, they're</p>
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		being kind of pushed around because of their identity or their gender or their color of their skin or all kinds of things.’ (P1000)
Access	Participants expressed constraints to access, such as weather and climate, privatization of land, and overcrowding at fishing sites.	<p>‘One participant expressed concern that newcomers to fishing might misinterpret “private property” signs as signals that they are not welcome anywhere nearby, including adjacent public lands.’</p> <p>‘Two women noted that the changing climate and its implications (e.g. poor air quality, changes in water temperature/depth) were impactful on their decision to go fishing, while another stated that cold weather prevents her from wanting to go fishing.’</p>

STRUCTURAL

Time	Participants describe a lack of time as a barrier.	‘I think the biggest thing is that it's not something that you can do spontaneously, not for me anyway...you have to have a reservation everywhere.’ (P1003).
Cost	Participants express the cost of sites and transportation to fishing sites was a barrier.	‘One participant shared that when she went on a trip that required a campsite, the campsite cost over 100 dollars a night.’
Lack of or difficulty with gear	Participants describe a lack of or difficulty with gear due to ill-fitting gear and discouraging experiences at encounters at fly shops.	<p>‘Sizing has been a challenge for a lot of women, myself included. Over the years of finding gear that fits, that is safe, that is functional, and that isn't necessarily made for men. So that's one barrier.’ (P1000).</p> <p>‘So, I went into a fly shop in town, and they saw a small woman who didn't know much about fly fishing. So, they tried to get me to buy many things that I now know I don't need. I've heard stories from other women who have also gone into shops and have had similar experiences where it's kind of like when you're a woman and you're going to get your oil changed by yourself, and they tell you, 'Oh, you need to, like, fix your radiator', or something ridiculous that you know isn't broken. Um, so I would say that's been one of the harder things for me, for sure, is not kind of being seen as equal on the fishing ground.’ (P1006)</p>

INTERPERSONAL

Discrimination	Participants describe instances of discrimination that included problems for minority groups or concerns in the overall acceptance of those who are considered ‘other.’	‘But yet, we [people of color] do exist and even more so we're so passionate about [being in nature], that we've created our own group, like Hunters of Color exists like it is a group that exists [because of discrimination]. It is a nonprofit organization. My group is [also] an organization that exists because we don't feel welcomed...We don't even feel welcomed by our own state regulators. That's not okay. It wouldn't exist. Neither one of those groups would
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		<p>exist if we didn't feel discriminated against and obviously a lot of white men don't see it.' (P1004)</p> <p>'I'm most concerned about minorities, you know, marginalized people, being out there and feeling welcome. And I think we've got a lot of work to do in both of those spaces. So, you know, we're trying to figure that out. Like, you know, we know women. We know how to help there.' (P1010)</p>
Lack of fishing partners	Participants express how not having a fishing partner led them to lose motivation or did not feel comfortable going alone.	<p>'One participant stated that she feels her family does not go fishing because they do not have anybody to go with.'</p> <p>'One participant noted that in her line of work (owner of a women's fishing organization), she has heard women say they would like fishing partners for safety.'</p>
Lack of teacher, understanding, or experience	Participants express how having no teacher, understanding, or experience led them to feel unable to fish.	<p>'Obviously there's so many more people that are in our society that might dream of [fishing] but don't know how to get started, or don't know where to begin or who to ask.' (P1000)</p> <p>'Probably experience. I just recently learned how to tie all my own flies and how to get my line set up now that I got a fishing pole. And so learning how to do that because before I would either have my dad help me or like someone else who knew how to do that. But now that I know that I can do that I can go fishing, which is nice.' (P1002)</p>
Insults on skill or experience	Participants express having their skill or experience insulted leads them to feel insulted.	<p>'I've had other comments directed to me and my kids of, you know, it's good we didn't catch a big fish since this was a saltwater trip because [my daughter] probably couldn't have handled it. So sometimes reflecting on size or strength or things like that, just simply because of the gender.' (P1000)</p>

‘They say, ‘Oh, well why don't you just hire a fly-fishing guide?’ And I'm like, No. We are the fly-fishing guides. Like they don't even get it. They don't understand what we're trying to do because they see it's a woman's name and see pictures of women and they're like: Oh, well they should just hire a guide, or do they need a permit?’ (P1004)

INDIVIDUAL

Physical or mental health

Participants express that the need for mental rest or health issues prevented them from fishing.

‘I would say it's more just like physical and mental health getting in the way right now of doing literally anything, not just not fishing. Postpartum depression was a big one. It was a big one.’ (P1005)

‘They say, ‘Oh, well why don't you just hire a fly-fishing guide?’ And I'm like, No. We are the fly-fishing guides. Like they don't even get it. They don't understand what we're trying to do because they see it's a woman's name and see pictures of women and they're like: Oh, well they should just hire a guide, or do they need a permit?’ (P1004)

Self-perception

Participants express having self-perception issues, such as imposter syndrome, or feeling like they did not know what they were talking about, led to constraints to fishing.

‘When I've really felt like I don't belong, like I don't know what I'm doing. So, it's kind of like a mental block.’ (P1001)

‘I'm not super crazy confident in my ability to self-rescue and stuff like that. So, I just prefer not to go crazy off the beaten path into the wilderness, and I carry a first aid kit with me and a personal rescue beacon and all that stuff. But, I always just like to generally be in a place that I'm relatively confident I could access help quickly if I'm by myself.’ (P1009)

NEGOTIATION STRATEGIES

Code	Description	Example
CONTEXT		
Improve safety	Participants describe how enhancing personal safety is a common way to overcome the feelings of not feeling safe while fishing. These tactics include carrying protective devices, fishing only where comfortable, utilizing hyper-awareness, and communicating whereabouts effectively with others.	<p>‘I have friends of color who don't go fishing without a firearm on them.’ (P1005)</p> <p>‘I also have started carrying a safety alarm device on my waders and, of course, my dog now that he's older, he comes with me. He hates men. I don't know why. I mean, I didn't teach him that. He really, he just hasn't been around any men much since he was a puppy, and so his whole demeanor freaks [other anglers] out.’ (P1010)</p> <p>‘Now, I put out two chairs. I put out two pairs of fly-fishing boots, two pairs of waders, to make it look like I'm not alone. This is a deterrent.’ (P1010).</p>
Access	Participants describe ways in which they navigate access constraints.	‘One participant who owns her own women’s fishing organization explained that they already pay private landowners for fishing access as a way to bypass the difficulties of securing permits through state agencies.’
INTERPERSONAL		
Women supporting women	Participants express that having or being a woman that supports other women is key to overcoming constraints.	‘We're sharing stories like this more, and we're getting the word out that, hey, you know we want to fish too. So, I'm hearing now from some clients like, oh, this fly shop treated me really well, or this one didn't, you know. So, we're swapping stories about which ones to go to.’ (P1010)
Stands up for self	Participants describe how they stand up for themselves in various ways to overcome negative interactions while fishing and to maintain their self-confidence.	‘All right, you guys can say whatever you want to me, but I know what I'm doing. And most of them quickly figured that out. They were like, ‘Oh, she knows what's up’. And it's a much more chill experience I guess once you've become more confident in yourself.’ (P1009).

Code	Description	Example
STRUCTURAL		
Budgeting/saving for trips or gear	Participants describe how they budgeted or saved money to make fishing trips happen and to afford necessary gear.	‘One woman emphasized maintaining her gear meticulously to extend its lifespan, while another described a gear-sharing and donation system within her women-owned organization.’
Prioritizing fishing over other activities	Participants describe how motivation to fish led them to prioritize fishing and enabled them to overcome constraints.	‘Pretty much just working around my schedule and saying no to other things when they come up. Because I'm like, 'Okay, I'm gonna go fishing this weekend. Like, that's priority.' And just kind of trying to, like prioritize.’ (P1009)
INDIVIDUAL		
Mental strength	Participants describe how mental strength was the primary way in which they overcame constraints to fishing.	‘Women are taught this from birth. We have to be aware of our surroundings every second of our life, we have to be aware of how we look, how we're being perceived, where we go, what company we keep, because we are targets. So yes, we have to be aware of that, even when we go fishing out in the middle of nowhere and we think nobody's going to be there.’ (P1010)
Self-perception	Participants express how enhancing the self-perception of women anglers could improve their fishing experience.	‘My skin color isn’t stopping me from walking out the door” (P1005) ‘We're just like: "Be careful about when you approach a woman", because I think the statistic is [one] out of three of them has had some kind of abuse in their life, and it could be a trigger. So, you shouldn't just approach people and tell them or ask them, you know, what are they biting on? Or, you know, ‘Hey, honey, you should really use this fly.’ Like, just be aware when you're approaching a woman that she might have some trauma she's dealing with and she's not comfortable with you.’ (P1010)

Unsuccessful or still working on overcoming constraints	Participants express they do not think they will ever overcome constraints or they are still trying to overcome constraints.	‘One woman shared that due to persistent mental health challenges, she has struggled to make fishing happen, and does not foresee being able to overcome this limitation in the near future.’ ‘One participant stated plainly that she still experiences these constraints and does not believe she will ever be able to fully overcome them.’
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SYSTEM		
Societal shift towards accepting women anglers	Participants feel that there is an overall societal shift towards the acceptance of women anglers and that changing gender roles are positively influencing women’s acceptance in fishing communities.	‘There are a lot [of people] that are willing to change if they hear the feedback, or if they are called out on what they're not doing well, but some won’t and that’s unfortunate” and “When female anglers truly are equally represented in the water, when that [male] statistic isn't 84% when it fits closer to 50/50, I think then we can say we have more equal representation.’ (P1000).