## THESIS

# EXPLORING LATINO AND LATINA ANGLERS' MOTIVATIONS, CONSTRAINTS, AND NEGOTIATION STRATEGIES FOR RECREATIONAL FISHING IN COLORADO TO IMPROVE PARTICIPATION AND EXPERIENCE

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In partial fulfillment of the requirements

For the Degree of Master of Science

Colorado State University

Fort Collins, Colorado

Summer 2023

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## ABSTRACT

## EXPLORING LATINO AND LATINA ANGLERS' MOTIVATIONS, CONSTRAINTS, AND NEGOTIATION STRATEGIES FOR RECREATIONAL FISHING IN COLORADO TO IMPROVE PARTICIPATION AND EXPERIENCE

This study aimed to inform efforts to improve diversity of and access to recreational fishing with a focus on Latino communities in Colorado. To fill the gap in the literature, this study to explore the motivations, constraints, and negotiation strategies of Latino(a) anglers, and how the interaction of these factors, and ethnicity and gender identity shaped their fishing participation and experience. The analysis was informed by the Outdoor Recreation Framework, and from which we adapted two leisure constraint models. Sixteen men and twelve women were interviewed using a semi-structured questionnaire. Major motivations to fish were being outdoors, for relaxation, socialization, and to be role models for Latinos and women. Spending time with others was reported by participants as a motivation, constraint, and negotiation strategy, and family is prioritized when negotiating fishing versus their needs. The main constraints reported were time management and financial resources, of which participants had strategies in place to successfully negotiate them or modify plans enabling them to go fishing. However, participants experienced harassment and dismissal and felt unwelcome at fishing sites which they attributed to their Latino ethnicity. They also reported constraints impacting the broader Latino community, including immigration status, licensing barriers, and racism. While these constraints did not prevent Latinos completely from fishing, they may permanently inhibit or diminish their participation and experience. There was very little difference in factors effecting participation among genders, but constraints expressed by women, such as being dismissed, being harassed at fishing sites, or not having women role-models or teachers, were attributed to the intersection of their ethnicity and gender. Our findings unique to Latinos can inform natural resource management agency recruitment, and education

and outreach efforts, and future studies focused on minoritized groups to help identify and potentially remove barriers to angling and other outdoor activities.

#### ACKNOWLEDGEMENTS

This project was funded by the Colorado State University Provost Council for Engagement, Community Engaged Scholars Seed Grant Program of 2022, and Department of Human Dimensions of Natural Resources Graduate Teaching Assistant funding. I would like to thank the study participants for their time and what I learned from them. I also, would like to give them a shout-out for their continuous efforts to foster Latino access to the outdoors. I would like to thank M. Hall and E. Oyague who accompanied me to recruit and interview study participants. I would like to thank my family, my Fort Collins family, E. Cubley, J. Krabbe, J. Branstrator, and R. Stout, D. Iglesias, A. Pando, F. Malaga, E. Jurado, D. Mejia, , D. Stone L. Gimenez, and J. Hassler for their support throughout this degree and to help me to be a better version of myself. I would like to thank Drs. S. Cardenas, A. Forsyth, and A. Whitworth for their continuous mentorship and support to be a better researcher. I would like to thank Drs. A. Bright and J. Dahl, and MSc. J. Wurz for their continuous cheering and advice. Finally, I would like to thank Dr. D. Cooper for introducing me to the Department, for his support that helped me join this program, and his continuous advice.

I would also like to thank my committee members Drs. Sara Bombaci, Tara Teal, and Mike Quartuch whose feedback was essential to improve the project and for their advice beyond this project. Additional thanks to Mike whose pushback in drafts made me reassess in ways that I did not think of. Finally, I would like to thank my advisor Dr. Anna Lavoie for securing the funding for this project and cheering me on, for showing me the disparity in the outdoors that often reminded of my privilege compared to other Latinos and women, for introducing me to qualitative research and how to apply it, for the many hours reviewing drafts of this thesis, and most importantly for introducing me to a new lens through which to assess people's interaction with the natural environment.

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#### INTRODUCTION

Recreational fishing is among the five most popular outdoor activities among Americans (Outdoor Foundation, 2022). It has been a widespread activity for decades generating billions of dollars for U.S. Fish and Wildlife Service (U.S. Department of the Interior, 2020; Voyles & Chase, 2017). Participation in recreational fishing has steadily increased over the past decade and continued to increase despite new barriers from the COVID-19 pandemic (Midway et al., 2021; U.S. Fish & Wildlife Service, 2023). Similar to other outdoor activities, recreational fishing can provide health-related benefits that foster well-being and is also said to be self-empowering for many (Bellew et al., 2020; Floyd et al., 1994; Parker & Green, 2016). Yet, it has been reported that these benefits tend to reach a limited proportion of the public, with minoritized groups experiencing them the least. Even though outdoor organizations formed by historically minoritized groups are increasing (Flores & Kuhn, 2018), concerns remain about the inequality in access and lack of inclusion in outdoor spaces that impact these groups (Finney, 2014; Humphrey, 2020; Schelhas, 2002; Schultz et al., 2019).

The demographic of recreational fishing has been, and continues to be, mainly comprised of white men (Ditton & Hunt, 1996; D. Kuehn, Durante, et al., 2013; O'neill, 2001; Platis & Schisler, 2021; RBFF & Outdoor Foundation, 2020). Additionally, angler assessments often overlook or fail to capture the experiences and preferences shared by other angler identities (Hunt & Ditton, 2001; Lischka, 2013). This continues to be observed in more recent assessments, which is further intensified by low response rates from minoritized groups compared to their white counterpart (Hunt et al., 2012). Having access to information about fishing preferences and experiences of marginalized identities would allow federal and state natural resources agencies (NR agencies) to adjust outreach, education, and recruitment efforts to meet these identities' specific recreation needs and increase diversity of participants (Winter et al., 2020). However, according to several studies even if these experiences and preferences have been assessed, they have not been adequately integrated by NR agencies (Finney, 2014; Humphrey, 2020; K. J. Lee et al., 2020; K. J. Lee, Mowatt, et al., 2016; Schelhas, 2002; Winter et al., 2020).

A great deal of leisure and recreation scholarship has focused on anglers' motivations and constraints, which has advanced theoretical and applied understanding of their role in angling participation and experience; however, most of these studies also examined these factors primarily from white, non-Latino, men anglers (Copeland et al., 2017; Fedler & Ditton, 1994; Hunt & Ditton, 1996; D. Kuehn et al., 2017; Schroeder et al., 2006; Toth & Brown, 1997). Minoritized groups have increased their participation in recreational fishing in the past years, which is expected to continue, and yet little is known about their specific motivations, constraints, and negotiation strategies that shape their participation (Anderson & Loomis, 2005; Burkett & Winkler, 2019; Ditton & Hunt, 1996; Schroeder et al., 2006). More specifically, Latino population is forecasted to significantly increase in the upcoming decades, which could lead to an increase in Latino participation, which in turn to an increase in license revenue for NR agencies (Outdoor Foundation, 2022; RBFF & Outdoor Foundation, 2020). However, the knowledge base of Latino participation is very limited and there is a need to advance scholarship focused on their participation that will inform NR agencies' efforts to increase their participation in outdoor activities and meet their specific recreation needs (Burkett & Winkler, 2019; Floyd et al., 2006; Henderson & Gibson, 2013; Shinew et al., 2004; Winter et al., 2020). This study aimed to inform efforts to improve diversity of and access to recreational fishing with a focus on Latino communities in Colorado. To fill the gap in the literature, this study investigated motivations, and constraints of Latino and Latina anglers, how they negotiate constraints, and how the interaction of these factors, and ethnicity and gender shape their recreational fishing participation and experience. The analysis was informed by the Outdoor Recreation Framework, and from which we adapted two leisure constraint models. We specifically sought to answer:

- 1. What are Latino(a) anglers' motivations and constraints for participating in recreational fishing?
- 2. What are strategies Latino(a) anglers use to negotiate constraints and enable them to fish?
- 3. How do ethnicity and gender identity shape Latino(a) anglers' participation and experience in recreational fishing?

This paper continues as follows, we first summarize the outdoor recreation framework applied in this study and situate it within the context of previous research on Latino and women outdoor recreationists. Next, we describe our study methodology and corresponding results. Finally, we discuss the applicability of our framework in the context of leisure constraint research on Latino and Latina anglers, and management implications for natural resource management agencies.

#### **Outdoor recreation framework**

A common and extensively applied method to examine recreation in the outdoors is through the study of leisure motivations, constraints, and negotiation strategies (D. W. Crawford et al., 1991; D. W. Crawford & Godbey, 1987; Godbey et al., 2010; Jackson et al., 1993). While scholars disagree in what the specific negotiation process is, they agree that the interaction of these factors impact participation; with motivations and negotiation strategies positively impacting participation and constraints negatively impacting it (Hubbard & Mannell, 2001; Kyle et al., 2006; Schneider & Wynveen, 2015; Son et al., 2008; White, 2008).

#### **Motivations**

Motivations are the needs, reasons, and drivers for involvement in recreation activities, and antecedents for continued recreation, which are fundamental to understanding participation in recreation (Beard & Ragheb, 1983; Crandall, 1980). Studies on motivations date back to the 1970s, and the suite of motivations reported by early and more recent studies is extensive and diverse often including sense of achievement, restfulness, enjoyment of nature, and socialization, among others (Beard & Ragheb, 1983; Crandall, 1980; Fedler & Ditton, 1994; Humagain & Singleton, 2021; D. Kuehn, Durante, et al., 2013; Kyle et al., 2006; London et al., 1977; Manfredo et al., 1996; Tinsley et al., 1977; Tinsley & Kass, 1978; Whiting et al., 2017). Early on, scholars agreed that motivations for participation are complex as a single participant can have different motivations to participate in different activities and different participants can have different motivations to participate in the same activity (The second conference on "Reasons for Leisure", University of Illinois, 1978; Crandall, 1980).

Motivations are also dynamic since they are shaped by the individuals' social context which could vary over time (Crandall, 1980; Williams et al., 1990). For example, adult participation in outdoor activities is often influenced by the recreation history during childhood, with adults who were exposed to it as children being more likely to continue participating than adults not exposed (D. Kuehn, Durante, et al., 2013; Lovelock et al., 2016). Moreover, while motivations to participate in outdoor activities often overlap across demographics, how they are experienced by different individuals can vary significantly (Fedler & Ditton, 1994; Gentin, 2011; Grima et al., 2017; Lischka, 2013; Toth & Brown, 1997; Walker et al., 2001). Virden and Walker (1999) observed that most of the affective and environmental motivations reported did not significantly differ across ethnicities, races, and genders, but that the intersection of these identities had an additive effect on how motivations were perceived.

#### **Constraints**

Constraints are the factors that prevent an individual from getting involved in recreational activities and shape how they participate in them (D. W. Crawford & Godbey, 1987). Crawford and Godbey (1987) grouped constraints into three categories of constraints the factors that prevent an individual from getting involved in a recreation activity and shape how they participate in it, which have been, and continue to be, extensively referred to in constraint studies (Ditton & Hunt, 1996; Metcalf et al., 2015; Nyaupane & Andereck, 2008; Quartuch et al., 2017; Shores et al., 2007; Son et al., 2008; Walker & Virden, 2005; White, 2008). *Intrapersonal constraints* relate to the psychological states and attributes that influence an individual's perception of themselves and recreation participation such as age, mental and physical health, sense of community, and education. *Interpersonal constraints* result from the conflicting recreation preferences of an individual and others or from their interaction while recreating that are shaped by individuals' social identities such as ethnicity, gender, and social relationships. Lastly, *Structural constraints* refer to factors related to an individual's social context and resources, and physical environment that stand between the desire and actual participation, and shape recreation preferences as time, finances, accessibility to recreation spaces and resources. Similar to motivations, constraints to individuals' participation often overlap among demographics, with time and finances being the most often

reported (Ditton & Hunt, 1996; Nyaupane & Andereck, 2008; Quartuch et al., 2017; Shores et al., 2007; Walker & Virden, 2005; Metcalf et al., 2015; Son et al., 2008; Walker & Virden, 2005; White, 2008). In addition, some studies have shown that ethnic minorities and immigrants are further constrained by a combination of distinctive factors such as social inequalities, language barrier, fear of discrimination, and fear of criminalization due to legal status (Shores et al., 2007; Stodolska et al., 2020; Stodolska & Shinew, 2010).

The Multiple-hierarchy Stratification (MHS) theoretical model emerged as a response to the failure of existing constraint models, including Crawford and Godbey's (1987), to address the dynamic process of experiencing constraints, including how constraints from different categories interweave (D. W. Crawford et al., 1991). The MHS model assumes that constraints from different categories interact and are experienced hierarchically from intrapersonal constraints, the most proximate, to structural constraints, the most distant (Chen & Tsai, 2020; J. Lee et al., 2001; Nyaupane & Andereck, 2008); suggesting that intrapersonal and interpersonal constraints are more likely to influence participation than structural constraints. The model also suggests that every person has a position in society where a "social stratification continuum" (SSC), which combines social identities (i.e., age, gender, race, and ethnicity) and economic status, illustrates how a person of disadvantaged status are more likely to experience more constraints to recreation than a person in a more advantaged status (D. W. Crawford et al., 1991; Floyd et al., 2006; Hudson et al., 2013; Shores et al., 2007). Thus, upper and middle class, younger, white men comprise the top of the hierarchy, whereas lower class, women of color, and older individuals are at the bottom. Additionally, previous studies have found that the effect of constraints on a person of multiple disadvantaged statuses is multiplicative and more intensive compared to a person of a single disadvantaged statuses (Chen & Tsai, 2020; Floyd et al., 2006; Shinew et al., 1995; Shores et al., 2007). Negotiation efforts

Contrary to what is expected, the presence of constraints does not always result in nonparticipation (Little, 2002; Shaw et al., 1991). The Negotiation Thesis, for example, posits that despite constraints, people engage in and enjoy recreation activities, even if is not in the way they initially

expected (Jackson et al., 1993). Later studies reported that the experience of constraints leads individuals to initiate efforts to negotiate them supporting the thesis propositions (Hubbard & Mannell, 2001; Son et al., 2008). Negotiation efforts refer to the attitudes and strategies used by individuals that enable their participation in their preferred activity despite their constraints (Kay & Jackson, 1991), such as planning ahead, budgeting and saving for activity costs, and carpooling (Covelli, 2006; Humagain & Singleton, 2021; Metcalf et al., 2013, 2015). Crawford and Godbey (1987) suggested that if the strength of motivations to recreate is greater than the perceived constraints, an individual may still participate despite the latter. Supporting this, Kay and Jackson (1993) proposed that the perception of constraints and the outcome of negotiating them is not limited to participation versus nonparticipation, as participation in recreation activities still can exist but in an altered manner or different activity than preferred by an individual. Building on these findings, the Negotiation Thesis also proposes that the decision to negotiate constraints and its outcome is dependent upon the strength of the relationship and interaction between an individual's motivations and constraints to recreate (Jackson et al., 1993). However, contrary to this proposition, Hubbard and Mannell (2001) observed that the motivation to recreate and its strength did not lessen individuals' perception of constraints; while Son and colleagues (2008) reported that motivations' influence in participation was by bolstering individuals' negotiation efforts. Moreover, additional studies suggest that because individuals from multiple disadvantaged social identities often experience more constraints compared to their counterparts, the perception of them is likely to be greater than what researchers have described to date (J. Lee et al., 2001; K. J. Lee, Scott, et al., 2016; Shores et al., 2007). These findings and others give light to the complexity of the interaction among motivations and constraints and why the alleviation of an individual's constraints often does not translate into higher participation (Hudson et al., 2013; K. J. Lee, Mowatt, et al., 2016; Stodolska & Shinew, 2010).

The broadening of the field of outdoor recreation constraints has allowed researchers to understand how these fit into the context of people's lives; and how these in turn are shaped by their broader social, political, economic, and environmental context (Jackson, 2005). Yet, the field has not addressed how societal and systematic contexts influence the individuals' ability to negotiate constraints.

The existing MHS models assume that an individual is completely free to negotiate their constraints, thus placing the burden of the negotiation entirely on oneself (Samdahl, 2005; Samdahl & Jekubovich, 1997). In contrast, Crawford and Stodolska (2008) illustrated how some constraints – specifically those that are ingrained in society - are completely out of an individual's control (e.g., cultural beliefs, attitudes). To accurately assess constraints from the individual level to the societal level, Stodolska and colleagues (2020) proposed a new model which groups constraints into four categories (2 new categories and 2 modified from previous research). Individual constraints are somewhat within an individual's power to negotiate such as cost, lack of skills, lack of time, and language barriers. *Interpersonal constraints* result from an individual's social relationships and interactions during participation such as lack of support from family or friends, of recreation companionship or an instructor, and interracial tensions. Context constraints result from the social and physical characteristics of the immediate recreation environment such as availability of recreation programs and facilities, and safety. System constraints are ingrained in the broader sphere in which the individual and its context are immersed such as policy, systemic racism, and societal attitudes and beliefs. Moreover, expanding on the Negotiation Thesis propositions, scholars have shown that the desire and the ability to negotiate constraints are also dependent on the type of the constraint (i.e., Individual, Intrapersonal, Interpersonal, Structural, Context, System), the individuals' perceived power to negotiate them (dependent on their position in the SSC), and the broader context of their lives (Jackson et al., 1993; Little, 2002; Stodolska et al., 2020; White, 2008). Stodolska and colleagues (2020) also argued that the ability to recreate is a combination of one's ability to negotiate constraints and society's "(un)willingness" to accommodate them (e.g., immigration status).

#### Latino outdoor recreation

Latino participation in outdoor activities is increasing with 51% recreation rate in 2021, compared to less 35% rate in 2013 (Outdoor Foundation, 2022). Latinos are expanding their recreation on federal and state public lands, by beyond day-use to engage in activities like overnight backpacking and camping (Flores & Sánchez, 2020; Thomas et al., 2022). They were also more willing to travel for outdoor

recreation activities and had the highest average annual outings per participants (62.7 per individual) of all other ethnic groups (Outdoor Foundation, 2019).

Studies have shown that many of the motivations and constraints to outdoor activities of Latinos overlap with those reported by other identities (e.g., relax, exercise, socialize; time, transportation, safety); however, how these shape Latinos' participation can vary significantly from other identities. Moreover, to fully understand how Latinos recreate, we must consider not only their demographic and economic status, but also the slightly different lens through which Latinos see the world and the subcultural differences between countries of origin (Adams et al., 2006; Gordon, 2010). Family and community serve as primary roles for Latinos by providing emotional, material, and behavioral support, which often transcends into a high level of interest in recreating in large groups, which in turn can create or intensify their motivations and constraints (Adams et al., 2006; Nichols & Morse, 2020; Stodolska & Shinew, 2010). Additionally, studies have reported constraints more specific to Latinos such as discrimination and racism, attributed to their ethnicity, limitations because of the language barrier (e.g., lack of information and resources in Spanish), and limitations because immigration status (e.g., lack of identification to obtain licenses required to fish and hunt, fear of deportation; [Adams et al., 2006; Schroeder, Nemeth, et al., 2008; Sharaievska et al., 2010; Stodolska et al., 2020]). In the context of this study, recreational fishing is the fifth most popular outdoor activity Latinos enjoy (Outdoor Foundation, 2022). The RBFF and Outdoor Foundation (2020) reported that 12% of Latinos fished in 2019 with an average of 2.8 more fishing outings than the general angler population. These organizations additionally reported 11% of Latino(a) non-angler participants were considering learning to fish, indicating a potential increase in participation and diversification of the activity.

## **Gendered outdoor recreation**

Studies have shown that specific motivations (e.g., relax, socialize, be outdoors) and constraints (e.g., time, financial resources, transportation) to recreate reported by women often overlap with those reported by men (D. M. Kuehn et al., 2006; McAnirlin & Maddox, 2020; Metcalf et al., 2015). Yet, gender identity is often the most influential and consistent demographic predictor for outdoor

participation, with women having fewer years of experience (Culp, 1998; Fedler & Ditton, 2001; Henderson & Gibson, 2013), which is attributed to gendered constraints experienced only by women.

Society's stereotypical gender roles have traditionally excluded women and girls from the outdoors (Wesely & Gaarder, 2004). For example, women hikers believed women feel they need permission to participate in the outdoors, whereas men believe they have the right to do so (McAnirlin & Maddox, 2020). Moreover, even when women do not feel discriminated against or in disadvantaged in the outdoors because of their gender identity, they often modify their participation due to perceived gendered constraints (e.g., the activity is for men, fear of assault by men, [Henderson, 1996]). Women's gendered fear which includes the fear of violence, harassment, and sexualization, profoundly influences where they choose to recreate as more often than not, leading them to areas where they feel more (Coble et al., 2003; Wilson & Little, 2005). Additional gendered constraints include differences in opportunities and resources for men and women, motherhood, and family obligations (Culp, 1998; Henderson, 1990; Metcalf et al., 2015; Wilson & Little, 2005).

Despite gendered constraints, women have negotiated them and continue to do so (Little, 2002; Wesely & Gaarder, 2004); in fact, participation among women is increasing, with women comprising nearly half (47%) of all outdoor recreationists in 2021 (Outdoor Foundation, 2022). However, even when women successfully negotiate these constraints to participate in the outdoors, the stereotypical gender roles remain ingrained in many women. For example, McAnirlin and Maddox (2020) observed that women from a community hiking group, assigned food and decoration roles to women, and route planning and campfire roles to men.

Similar to other outdoor activities, gender identity was reported as the most influential and consistent demographic predictor for Americans' fishing participation (Fedler & Ditton, 2001; K. J. Lee, Scott, et al., 2016). Nineteen percent of women were involved in fishing in 2021, a slightly increase from two years ago, yet they only represented less than 40% of anglers (Outdoor Foundation, 2022). Moreover, there is a lack of diversity within this group with nearly 79% of women anglers identifying as white (RBFF & Outdoor Foundation, 2020). Given the disparity of the knowledge base of Latino and Latina

participation in recreational fishing in the existing literature and angler surveys, this study targets these identities in Colorado to inform of the barriers and enabling factors that drive or inhibit their participation in fishing. In doing so and in answering our research questions above, we adapted two leisure constraints models to develop a new model that accounts for systemic and societal constraints to recreation that are specific to marginalized identities such as Latinos or this study.

#### METHODOLOGY

### **Study context**

The largest ethnic group in the state of Colorado is white non-Latino (66.5%), and the second largest is Latino of any race (22.5%, [(U.S. Census Bureau, 2022)]. By 2050, the demographic composition of white non-Latino population is expected to decrease to 54%, while Latino population to increase to 35%, comprising the largest racial and ethnic minority in the state (Forces, 2018). Recreational fishing is among the most practiced activities in the state, which has seen a steep increase in registered anglers. Between 2013 and 2023 there was a 54% increase in license holders, among which Latinos are included. The state of Colorado has a variety of water bodies suitable for fishing (e.g., rivers, lakes, reservoirs, streams and small ponds at different elevations), including over 9,000 miles of rivers and streams, and 2,000 natural lakes, which makes the state a desirable place to practice recreational fishing (Neal, 2016).

Colorado Parks and Wildlife (CPW) is the division of the Colorado Department of Natural Resources responsible for the protection and management of fisheries resources, which include the assessment of angler experience's satisfaction (Colorado Parks & Wildlife, 2015). The CPW's 2012 angler satisfaction survey showed that 71% of respondents (n=1300) were 'very satisfied' or 'somewhat satisfied' with their angling experience (Lischka, 2013). The 2019 survey results were similarly encouraging as 72% of respondents (n=1435) were 'somewhat' or 'very satisfied' (Platis & Schisler, 2021). While the survey's results are positive, the demographic of recreational fishing has been, and continues to be, mainly comprised of white, non-Latino, men. In fact, 90% of respondents from the 2012 survey identified as white non-Latino, and 80% of respondents from the 2019 survey identified as men. The past satisfaction assessments failed to capture the experiences of minoritized anglers, which in light of the current and projected increase of minoritized population in the state, there is a need to increase the understanding of these groups' unique fishing preferences and experiences.

## **Data collection**

We applied a qualitative approach to data collection as it allows for more in-depth understanding of participation and experience (Howitt, 2013). Participants of this study were purposively recruited using snowball and convenience sampling (Newing, 2010) by reaching out to CPW, and organizations and groups led by Black, Indigenous, and people of color (BIPOC; e.g., Colorado Treks, Latino Outdoors) and women (e.g., United Women on the Fly, Women who fly fish Colorado), by visiting fishing sites (e.g., Dixon Reservoir, Sloan's Lake, Lake Lehow), by attending fishing clinics, and 2022 Latino Conservation week events (https://latinoconservationweek.com/events/past-events/2022). We targeted men and women anglers who identified as Latino(a), Hispanic, Chicano(a) or Indigenous Mexican, and Mexican descendant or Mexican American. Semi-structured interviews were conducted by phone, virtual, or in-person (Appendix A). The interviews covered eight broad themes (Table 1), they lasted 1.5 hours on average, and were audio recorded using the Otter.ai app with participants' consent. Our procedures were approved by the Colorado State University (CSU) Institutional Review Board Protocol #2309.

## **Data analysis**

The interviews were transcribed verbatim, and a single coder analyzed the transcripts via thematic content analysis (Braun & Clarke, 2006; Saldaña, 2013) using QSR International NVivo software Version 1.7.1. The analysis began with inductive coding which involved multiple iterations of line-by-line coding to identify unique and shared motivations, constraints, and negotiation strategies emerging from the data. A code was assigned as a motivation if the data described why participants fished or what kept them interested in the activity; as a constraint if it described what has prevented or negatively influenced their participation; and as a negotiation strategy if it described how constraints were overcome.

The inductive coding was followed by deductive coding to group similar codes into subthemes, themes, and categories previously reported in the leisure constraint literature (D. W. Crawford & Godbey, 1987; Manfredo et al., 1996; Nichols & Morse, 2020; Shinew et al., 2004; Stodolska et al., 2020). Specifically, we hypothesized the leisure constraint models proposed by Crawford and Godbey (1987) and Stodolska and colleagues (2020) independently do not portray how participants of this study

perceived constraints to recreation fishing. Thus, we grouped constraints emerged from this study into five categories adapted from the two existing constraint models: System, Context, Structural, Interpersonal, and Intrapersonal (Table 2). We incorporated into our model Samdahl's (2005) critique that Crawford and Godbey's categories assume that an individual has full freedom and social power to negotiate System constraints, when in reality these are out of an individual's social power. Moreover, Stodolska and colleagues (2020) showed that while Context constraints are out of an individual's power to overcome individually, with a coordinated effort they can potentially be overcome. In addition to grouping negotiation strategies into themes and categories previously reported, we grouped them in such a way that they mitigate a particular constraint. This study's codebook describes each code, how they were grouped, and examples of quotes (Appendix B). Finally, motivations, constraints, and negotiation strategies that emerged from this study are presented in tables with the total number of their coding references. The total number do not equal the total number of participants as each of them made multiple statements leading to the same code, or different codes.

#### RESULTS

## **Demographics**

Overall, we interviewed sixteen men and twelve women who identified as Latino(a) (n=10), Hispanic (n=7), Chicano(a) or Indigenous Mexican (n=7), and Mexican descendant or Mexican American (n=4) (Table 2). All participants, hereafter, are referred to as Latinos(as). Participants resided in 17 different cities, with 60% of them living in the Denver metro area. The age ranged between ages 18 to 74, with 40% of participants being between ages 25-34. Almost 60% of the participants had a bachelor's or graduate degree and 71% were employed full time. Thirty-six percent of participants reported an annual income less than \$50,000, 36% between \$50,000 and \$74,999, and the remaining 28% over \$75,000. Over 60% of participants learned to fish at ages 10 and under.

There were also some differences between gender identities' demographics. Men participants' age ranged between 29 and 73 years old, and women's age between the ages of 19 to 43 except for one participant who was 72 years old. The percentage of participants that had a bachelor's or graduate degree was the same (29%), but more women had a bachelor's degree compared to more men having a graduate degree. Seventy-five percent of men were employed full time compared to only 66% of women, which is reflected in their annual income with 37.5& of men earning \$75,000 or more compared to only 17% of women. This is related to a few women being recent high school graduates who only worked part-time. Finally, men learned to fished at ages 10 or under twice as much as women mostly related to some women not having family members or friends that fished so they were not introduced to the activity until there were older.

#### Motivations

Thirteen different motivations (*italics*) emerged from the thematic content analysis. These motivations were grouped into the themes: To Rest, To Enjoy Nature, To Socialize, Sense of Achievement, For Enjoyment, and For Sustenance. Table 4 summarizes the disaggregated (men and

women separately) and aggregated (men and women as a group) total coding references for each motivation.

The theme most referenced by participants was To Rest, which contrasts one participant's belief that Latinos(as) have a hard time slowing down. This theme included the motivations *to relax and recharge* and *for mental health*. Fishing allowed several participants to escape their daily routines and decompress, which for some meant fishing in the company of others, and for others, by themselves. For few participants fishing was also another form of stress relief during COVID-19 pandemic. Moreover, for some of the participants fishing was akin to medicine that made them feel renewed. More specifically, they referred to its positive effects on their mental health. Fishing helped them work through daily problems and the stress of their jobs, and in some cases ameliorate the mental toll of their disability or health issues.

'If I'm outside, I'm calm, I'm happy, It's where I belong. And you put me in the water on top of that, it changes everything about my home feeling emotionally and mentally.' (F002)

'As a kid I don't think fishing really helped me with my mental health but as I got older fishing really helped with dealing with adult stuff like work.' (M003)

'Is a medicine of our mind, body, and spirit, it is a reconnection to ourselves when we are near the water. [...] I'm always drawn to water ever since I was a weaving kid.' (M009)

'Some people go for a bike ride or for a run and I like to do all of that but to me, if I'm very stressed and I need to unplug and forget about the world, fishing [does that] to me.' (M015)

The second theme most referenced by participants was To Enjoy Nature, which included the motivations *to be outdoors, experiencing the scenery*, and *to explore new sites*. Fishing gave several

participants the opportunity to enjoy the outdoors and connect with nature, while experiencing the scenery of fishing sites. Some participants described Colorado as a beautiful state with many landscapes to enjoy and also the different wildlife sightings experienced while fishing, which further enhanced their experience. More specifically, only women reported being motivated by the adventure of exploring new places and fishing gave them the opportunity to go to places that otherwise they would not go. One of these women shared that it was hard to have a favorite fishing site and when asked another women shared that she rarely goes to the same fishing site as there are many places to explore.

'It's really cool to explore different bodies of water [...], hiking out to alpine lakes and stuff is really fun [...]. So, I think just exploring nature in different places.' (F004)

'Just sit there quietly with yourself, it's just you and your thoughts. And I really like that, having a little time in the outdoors because I really do love nature, being around the trees, around the water.' (F012)

'It's the connection with a fish, with a water, with wilderness. I feel as I've grown up, that's something that I've lost, so going out into natural spaces it's always something that revives me, reconnects me, and I think fishing is a part of that.' (M012)

The theme To Socialize included the motivations *spending time with family and friends, to teach others to fish*, and *to be role models to Latinos and women*. For many participants fishing was a family activity growing up, with some of them adding that fishing has been and continues to be an important part of their life. Additionally, several participants were motivated by teaching others how to fish, which served as a means to pass down their culture to the next generation beyond their family and friends. Moreover, only women reported that the lack of angler diversity motivated them to be role models for Latinos and women and show them that fishing is also for them and not only a white men's activity.

'It made me really want to get out there and connect with other ladies and let them know they can get out there and fish. That's been the biggest thing for me and that's why I've really enjoyed the female fly-fishing community here in Denver.' (F006)

'Growing up I wasn't outdoorsy until I was, and a huge motivating factor for why I talk about things like hunting and fishing is because I want little kids who look like me and who have similar experiences to me to see that [fishing] is something that I enjoy and it's something that they can enjoy.' (F008)

'The memory that sticks out to me the most is [fishing] wasn't an isolated event or sport. It was a communal [activity]. So that is what has kept me going through junior high through high school.' (M006)

The theme Sense of Achievement included the motivations *the challenge of fishing* and *to catch fish.* Several participants enjoyed the challenge fishing represents such as the continuous learning of what works and what does not work, the fight that some fish species play out, and the feeling of outsmarting the fish.

'[It is] outsmarting the fish, it's a challenge and then when something is not working being innovative. If this isn't working, let's go to somewhere else above, maybe over there. It's also a mental game, it's a mental challenge.' (M001)

Additionally, while several participants were motivated by catching fish, not catching one did not negatively impact their overall fishing experience. A third of participants attributed this to the activity being called "fishing" and not "catching". One participant shared that: '[was motivated by] the pure enjoyment of [fishing], the sport is more sitting around rather than catching. That's why they call it fishing and not catching anyway.' (M011).

The theme For Enjoyment included the single motivation *for fun*. Several participants simply enjoyed the activity as a whole. Particularly, some participants that grew up fishing shared that fishing brings up good memories that made them feel at home.

'I like getting away from the city and just being up there [in the mountains] and when I'm up there [I] can hear the streams flowing because we usually camp by a stream.' (F007)

'[My mom passed away] and we went fishing because that was what she liked to do. So, after she passed away, we decided to have a big fishing trip in her honor.' (M004)

Finally, the theme For Consumption included the motivations *sourcing my own food* and *the taste of fish*. The present motivation of some participants to source their own food was not out economic necessity, it was attributed to them knowing where their fish came from and that it was sustainably sourced. One of these participants shared: 'I can feed myself with an animal that I know that lived a full life and wasn't farm raised and wasn't just wrapped in plastic and dropped on my dinner table' (F008). Still, it is worth noting that few of these participants shared that growing up their family fished because it was a cheap source of protein. Moreover, some of the women expressed that they normally do not target specific fish species; however, they still prioritized fishing sites and tried to catch fish that they like to eat. All participants that kept their catch shared that they eat all of it and in some cases, they shared it with family and friends.

## Constraints

Seventeen constraints (*in italics*) emerged from the thematic content analysis. These were grouped into the categories Context, Structural, Interpersonal, and Intrapersonal adapted from Crawford and Godbey's (1993) and Stodolska and colleagues' (2020) leisure constraint models. Table 5 summarizes the disaggregated (men and women separately) and aggregated (men and women as a group) total coding references for each constraint.

## Context

The Context category included the constraints *habitat degradation*, *overcrowding*, *privatization of sites*, and *safety*. Direct human-induced threats to fishing sites reported by many participants included encroachment into wilderness, overfishing, extensive agricultural practices, and diversion of water; while indirect-threats included the increasing number and severity of droughts and floods, and rising water temperatures. For many participants the lack of awareness of fishing regulations and their importance to fisheries conservation have led to overfishing. These participants have observed that many anglers do not follow rules such as minimum size or bag limits; however, in some cases was because of sustenance need. Additionally, many participants shared that overcrowding in fishing sites, which steeply increased during COVID-19 pandemic, made fishing almost impossible. One participant added: 'I know how overcrowded our state parks and public areas were. And so, we love our natural resources [ ... but the pressure] was much stronger on our natural resources during COVID than before.' (M015). Moreover, many participants said that many fishing sites are becoming privatized, which denies anglers access to desirable locations and, in some cases, to locations where participants and their families have fished for generations.

'[Areas] have been made more inaccessible by private ownership who are fencing off access to the rivers and streams that I used to fish in.' (F007)

In contrast, one participant described the emotions experienced when a fishing site where his family had fished for generations was reopened to the public.

'It is our ancestral land because my grandmother was born in the next town nearby [...], so it was coming home and so we felt, I felt that we were always meant to be there and that the ancestors waited for us to be there so that way we can have this abundance of fish.' (M009)

Finally, few participants reported being concerned about the increase in crime and racial tensions in some areas, which made them feel unsafe. Moreover, even if these participants have not experienced them themselves, their friends have shared anecdotes where they have been attacked and harassed.

'I have one friend who used to go fishing at the same time every day in a certain spot and one day this one guy came down and tried to grab her.' (F006)

'I'll be fishing, and I'll see somebody coming and in the back of their truck they have the Confederate flag and they all come out and they all have weapons.' (M002)

'A friend of mine had heard about me fishing by myself. He told me that his brother had been jumped on the lake and hurt pretty bad, but I've never had that experience.' (M003)

## Structural

The constraints under the Structural category were grouped further into the themes Time Management, Financial Resources, and Accessibility. The most referenced theme by participants was Time Management which included the constraints *work, competing activities* (e.g., hiking, church events), and *family activities*. For almost all participants work consumed most of their time, even if they had flexible jobs. On the contrary, even when family activities often prevented half of the participants from fishing, most of the men and one women did not see them as constraints per se as they considered that nothing was more important than prioritizing family. One of these participants shared: 'there's a lot of games and practices which you know, I want to be there, and I want to support [my kids]' (F006); while another stated: 'If my children were doing a lot of homework, and they needed to stay there at the house and work then, and they said "Dad, I need your help". Then we have a nice day [at the house]. Yeah, they [family] always come first. Everything I do comes back to family' (M002).

Moreover, four men stated that time was no longer a constraint, which was attributed by two of them to being retired, by one to his children moving out, and by one to no longer working two jobs.

The theme Financial Resources included the constraints *non-fishing expenses* and *increasing cost of fishing*. Few participants shared that they were limited by their disposable income and often had to prioritize above and beyond expenses not related to the activity. Additionally, participation for half of the participants was constrained by increasing costs of fishing trips (e.g., entrance fees, license fees, cost of

gas) and the cost of gear, with the latter being the costliest. One man said: 'money is always a factor because fishing gear is kind of expensive' (M016); while one woman shared why she did not try fishing a second time: 'I don't have any [equipment] and just having to go buying it and spending money just not on me but like in someone else o siblings, so we could do it together' (F003). In contrast, participants in higher income brackets acknowledged their privileged position in their ability to participate in outdoor activities, including fishing.

The theme Accessibility included the constraints *distance and transportation* to fishing sites, and *lack of access to resources*. Sites with good fishing conditions or with desirable habitat tended to be far from where many participants live, which prevented them from fishing more often. All but one participant owned a car, but not all owned a well-equipped vehicle necessary to access more remote sites. One participant shared: 'with my vehicle for instance I can't go to a lake because it's in the mountains and I don't know if [my vehicle] would make it all the way there' (M016). Additionally, some participants shared that not knowing where to fish or from where to borrow gear were initial constraints to their participation. A few of them added that they fished less often when they moved to the state because they were not aware of fishing sites nearby or where to find information.

## Interpersonal

The Interpersonal category included the constraints *lack of fishing partners*, *lack of a teacher or role model*, *harassment*, and *being dismissed*. Many participants shared that they did not have many fishing partners as their families were not as interested in fishing as they were which in many cases led to participants choosing activities enjoyed by the whole family instead of fishing. Similarly, in some cases, participants' friends were not comfortable in the outdoors; or even if they were, fishing was not their preferred activity.

'Is just not one of their primary hobbies that they like to do in Colorado. [My friends] would rather go hiking or go rafting or kayaking. It's that we don't all have the same interest.' (F008)

Moreover, many participants believed that unless family or friends teach others to fish, it is rarely attempted by Latinos, and particularly by women. Only women reported initially being constrained by not having someone to teach them how to fish or role models to help them navigate the activity. These women attributed this to not being exposed to the activity growing up rather than to the stereotypical gender role that fishing is only for men.

> 'I never did it because our parents just weren't focused on that, and they didn't know how to. We just didn't know what fishing was really or if we would do it. It wasn't something we did at all as kids.' (F003)

Half of the participants reported being harassed by other anglers, which they attributed to their ethnicity and gender identity. Some participants shared that white men anglers have tried to intimidate them into leaving different fishing sites. Additionally, half of the participants have felt uncomfortable due to strangers' stares and comments including racial and gender slurs directed toward them, which resulted in a feeling of not belonging. Moreover, some participants shared that many fishing sites were in communities that are predominantly white, and while they are not private, there is a sense of being guarded from "outsiders". Few participants also shared that they did not feel welcomed in this sites because of their experience interacting with white men anglers and also related to their perceived racism within CPW and its' park rangers.

'A couple of times there were some people from out of state in these areas and along the Los Pinos River who made us feel uncomfortable, like we were not wanted there, it was me and a couple of my friends who were also women, They were actually kind of aggressive towards us.' (F007)

'I would go by myself often for day trips, and then recently I stopped going by myself because of just like the racism within CPW. [...] I know the way that CPW navigates outdoor spaces, especially of fishing, it is very white and racist, and those with power carry guns.' (M009)

It is also worth noting that one-third of participants have not experienced harassment and did not recall any negative experience that changed their mind about fishing or a fishing site. One of them believed that in general anglers are friendly and that respect was important to have a good interaction with others. Finally, only women reported often being dismissed by men anglers and fly-fishing stores' staff who do not believe that Latinos nor women know how to fish, especially fly fishing.

'I know a couple of times I have gone into different stores to buy different supplies and people will think that I don't know what I'm looking for or they'll say little dumb comments to me because I'm a woman.' (F008)

'Sometimes when we're trying to explain things other people think they know more than us because we're people of color. So that's definitely a discomfort knowing that they think that they're better than us. And when in reality they're not.' (F012)

## Intrapersonal

The Intrapersonal category included the constraints *thinking fishing is not for them* and *physical limitations*. For several participants fishing is still seen as an "old white men" activity despite indigenous people having practiced it for millennia. Some participants shared that their perceived lack of Latino and women anglers led them to think that fishing was not for them, which was an entry constraint to recreational fishing that some of the women participants faced. Finally, almost half of participants stated that while physical limitations because of their health, disability, or old age sometimes slowed them down, they did not necessarily prevent them from fishing. One participant shared that fishing was an activity that he still engages in despite of his health issues.

'I was in a plane crash in 2011 so that kind of messed up my back, and [...] I still can't do a lot, like riding bikes.' (M005)

#### **Non-angler Latino constraints**

We asked participants what constraints they knew or believed prevent non-angler Latinos(as) from getting involved in recreational fishing. Nine constraints (*in italics*) emerged from the thematic content analysis, which were grouped in the categories System, Context, and Structural adapted from Crawford and Godbey's (1993) and Stodolska and colleagues' (2020) leisure constraint models. Table 6 summarizes the aggregated (men and women as a group) total coding references for each constraint. *System* 

The System category included the constraints exclusion from outdoor spaces, racism, immigration status, and stereotypical gender roles. Several participants believed that Latino communities have been and continue to be excluded from outdoor spaces despite the long history of Latinos fishing in the region. Many participants also considered that state and federal agencies have done a poor job of getting Latinos involved in fishing; however, another one believed that while this is changing, the change is slow. Participants added that there is also a lack of advocacy from outdoor organizations, many of which they believed are catered to serve white men, and outreach efforts have resulted in non-angler Latinos(as) thinking that fishing is not for them. Yet, if they become interested, there are limited resources or networks for them to reach out to. One participant added that while more outdoor organizations, and state and federal agencies are focusing their efforts on minoritized groups, they are focused in urban areas leaving rural residents still underserved. Moreover, several participants described how *racism* in the fishing community and within CPW were constraints often experienced by Latinos(as) and other minoritized groups. These participants believed racial tensions in the fishing community have caused non-angler Latinos(as) to not get involved in fishing and Latino anglers to seek spaces where they feel a sense of community resulting in segregated fishing sites. Additionally, some participants described bias in the form of who park rangers choose to approach and check for fishing licenses.

'Latino people have fished in this region for hundreds of years, and why aren't [our stories] being talked about? Why isn't that in our stories? [...] Our storytelling is a huge break, I don't know how to explain it, but it's a missing culture there.' (M012)

'Often, I think the rangers have that bias and say 'Oh, you don't look like the guy in a Toyota four runner with all the equipment and gear. What are you doing here? Let me go and stop you and ask you why you're here' versus somebody in a Toyota Tacoma with all the gear from Orvis or somewhere else. They're not stopped and asked [for licenses].' (M006)

More than half of participants also described how immigration status influences the ability to fish in two ways. First, undocumented immigrants are unable to provide documentation required to apply for a fishing permit, which results in them not fishing to avoid fines. Moreover, even when the Individual Taxpayer Identification Number (ITIN), which many undocumented immigrants possess, is currently a valid documentation only two of the participants were aware of this. Both of them, who work with Latino communities, stated that there was insufficient awareness among license vendors and the community about this, which could result in vendors incorrectly denying licenses to undocumented immigrants. Second, undocumented immigrants avoid fishing as they believe park rangers will call Immigration and Customs Enforcement (ICE) resulting in their deportation. Some participants stated that this belief is reinforced by CPW park ranger's uniform that resembles a "police" uniform, and the firearms or Tasers incite fear. To these participants, this uniform is not welcoming to a community that already feels unwelcomed and afraid of law enforcement.

Several men and women reported that the stereotypical gender roles in Latino culture did not impact their fishing participation; but despite this, almost all participants, regardless of their gender identity, believed that fishing is still a male-dominated activity and is not encouraged among girls and women. These participants also shared that even if girls and women are included, they are only assisting rather than actively participating. Further, some participants have observed that in many cases Latinas are still expected to take care of home chores, which extends to outdoor settings where women often do all of the cooking and cleaning. Additionally, one participant was aware of many Latinas who believe that outdoor activities such as fishing should be taught by men, which often results in children with single

mothers not being exposed to the outdoors. Although nowadays there are more Latinas interested in fishing, many participants believed that similar to the experience of some women in this study before getting involved in the activity, non-angler Latinas do not have role models to show them that fishing is also for them. One of these participants shared: 'I just think that there's just a lack of outreach from those that inspires female or non-binary to feel included in that space' (M013).

## Context

The Context category included the constraints, *lack of learning and fishing opportunities, lack of access to gear and transportation*, and *lack of resources in Spanish*. Many participants highlighted the importance of children having mentors to teach them to fish and to take them fishing. Similarly, many believed that fishing is rarely attempted by Latinos(as) unless family or friends teach them to fish, which could be further impacted by women's stereotypical gender roles in Latino culture. One participant shared that many of the Latino children he works with are not fortunate to have someone to teach them to fish like he was.

'We didn't necessarily have programs like Colorado treks, or a Latino outdoors teach us how to eliminate the barriers for fishing. We didn't have elders who could take us out to teach us what it was like to practice food sovereignty because that's what it is right?' (F009)

'There's a lot of kids that I know that I work with that have not been able to get out and go fishing, even though we're surrounded by lakes.' (M003)

'Colorado being at the epicenter of gentrification, you have a lot of BIPOC communities no longer being concentrated in a specific area, instead [communities] are spread out through all across various parts of Denver. So, you're faced with many small pockets of communities that identify as BIPOC [which makes] very hard for Latinos to be targeted, in terms of educational and also just promotional activities, similar to the ones that Latino outdoor does, to engage them to come outdoors.' (M013)

Additionally, some participants believed outdoor organizations and CPW have done a poor job of creating learning and fishing opportunities for minoritized groups. These participants explained that they perceived that sites with predominantly minoritized communities are neglected and that learning opportunities are not offered or are rarely offered, compared to sites with a larger white community. Moreover, several participants were aware that the lack of a personal vehicle, public transportation to fishing sites, and access to borrowed and rented equipment are entry constraints for non-angler Latinos. One participant shared that having access to gear through work was the only reason why she started fishing.

> It would be nice to be able to have fishing clubs that offer transportation and equipment [to go fishing]. I'm financially able to go fishing on my own, but when we're talking families that aren't financial able that becomes an elite, an exclusionary sport.' (M011)

Two thirds of participants also believed that the language barrier of non-English speaker Latinos are often intensified by the lack of or limited resources available in Spanish, including written material, signage and website. This can be a barrier for non-angler Latinos to get involved in the activity or result in decreased awareness about fishing regulations or important information among anglers. Additionally, some participants shared that the written resources are not easily accessible as they are often in CPW's offices instead of fishing sites, and that signage in fishing sites is often misspelled. Conversely, while one participant added that the lack of Spanish-speaker park rangers and CPW officers further intensified this barrier, he also acknowledged the CPW's efforts in recruiting Spanish-speakers from the Latino community for their outreach efforts and the importance of this.

> 'Colorado Parks and Wildlife have identified a few individuals that speak Spanish and are fluent, more importantly, individuals that are part of the community because they do have individuals that speak Spanish but you know, there are cultural nuances that we oftentimes don't feel comfortable with white individuals being raised white and having

that privilege, even just passing along that knowledge just because they can be a little bit insensitive sometimes.' (M013)

## Structural

Most participants were aware that non-angler Latinos(as) are generally constrained by the Structural constraints of *time management* and *financial resources*, mainly because of work. Several participants pointed that as lower-income Latinos(as) often have physical-demanding and multiple jobs that further decreased their engagement in leisure activities. One participant added that in his experience even when if these Latinos(as) get involved in recreational fishing, it is not as much as white-collar anglers as they still have limited leisure time. Moreover, several participants believed that financial constraints are more pressing for most Latinos than time management. Some of these participants added that fishing used to be an activity that low-income families could do, but now is more difficult to get involved in due to the increasing costs. For other participants fishing has become an "elitist activity" in which mostly affluent, white men participate. Specifically, one participant shared that she became involved in fishing because of her affluent white friends, which made her wonder how proximity to whiteness impacts fishing participation among people of color.

## **Negotiation strategies**

Seventeen negotiation strategies (*italics*) emerged from the inductive coding. These strategies were grouped in such a way that they mitigate a particular constraint (see Table 5) including Safety (Context constraint), Time management and Financial resources (Structural constraints), Lack of a fishing partner, Lack of a teacher or role model and Harassment or dismissal (Interpersonal constraints), and Physical limitations and Thinking fishing is not for them (Intrapersonal constraint). Table 7 summarizes the disaggregated (men and women) and aggregated (men and women as a group) total coding references for each constraint.

## Context

We identified three negotiation strategies used to negotiate the Context constraint of Safety. These participants *fished with others* and *carried protective gear* (i.e., pepper spray, gun) and did so despite feeling unsafe in certain sites. Few participants also took *other protective actions* including sharing their location and expected return time, fishing in well-known and highly trafficked sites, and women in particular, left sites at the minimum feeling of discomfort.

'If I do go by myself, I have three people who have my location on their phone, so they know where I'm at, and then how long I expect to be there. [...] and if I don't feel comfortable, I leave even if I just got there, I turned myself around and then I go back to the car that I leave.' (F002)

## Structural

Six strategies were used to negotiate Structural constraints; three helped negotiate Time management constraints and three negotiate different Financial resources constraints. The strategies related to time included *fishing around or paired with other activities* (e.g., leave early or take time off from work, paired with camping or hiking), and *planning fishing trips ahead of time*. Some participants also shared being more encouraged to find time *if someone else fished with them*.

'We planned for a year [for a road trip], and [my fried] and I are big nerds and we're indepth planners. We had a calendar and a spreadsheet with estimated costs, we researched everything.' (F002)

'This past Father's Day when deciding what to do, my teen daughters said we can go swimming, fishing, and take a picnic basket and so I think that was supportive, them knowing that I enjoy that activity.' (M006)

'A friend really encouraged me to go [fishing] more often. He showed me some places where I found out that I could catch bigger fish than I thought I could.' (M007)

Moreover, to broadly negotiate their financial resources constraints, some participants *budgeted and saved for fishing expenses* (e.g., gas, gear, fishing trips). Specifically, to negotiate the high cost of gear, especially fly-fishing gear, participants *use and made low-cost gear* (e.g., secondhand and non-brand gear, hooks, self-tied flies), and *borrowed gear* from others (i.e., family, friends, work). One of these participants shared about using low-cost gear: 'my uncle also taught me how to fish with a bottle and a line and just normal bait cheap as a hotdog [... and] catching fish with that bottle' (M012); while one other participant shared that having access to borrowed equipment was central to her involvement in fishing: 'If I didn't have a fly rod that I could use from work I probably wouldn't fish. I don't want to buy my own for a minute' (F008). Additionally, participants' families showed support of their interest in fishing by gifting them gear, even if they themselves did not fish. Whereas several participants also expressed that while they now have all or most of the equipment they need, they acquired it over a long period of time as they could not afford to buy them at once.

### Interpersonal

Six strategies were used to negotiate Interpersonal constraints; three helped negotiate the Lack of a fishing partner and Lack of a teacher or role model, and three to negotiate the Harassment and dismissal from other anglers. To overcome not having fishing partners some participants *fished by themselves*. Two women from these participants shared that fishing by themselves also helped them overcome the discouragement from others who were not into fishing and because fishing was perceived as a men activity.

> 'I just keep fishing even if it caused conflict [with my ex], I still went fishing or did what I wanted to do. So, it might not have been the best way to do it, but that's how I have overcome some of these things.' (F006)

Moreover, to negotiate the lack of a teacher or role models, some participants learned to fish or improved their skills by *self-teaching* using YouTube and other resources, or by *asking other anglers and attending fishing clinics*. Additionally, one participant shared that she developed a sense of community to rely on through the clinics.

'If I'm not catching something and somebody is, I walked by and I'm going further upstream I asked him what color [of fly] they're using.' (M002)

Participants who experienced harassment and dismissal chose a variety of tactics to overcome them. Some continued fishing choosing to *disregard attitudes and comments* from other anglers. Few participants *fished where they felt comfortable*, which in some cases were in sites with large brown communities, even if it meant driving several hours or outside the state; and for others, it meant avoiding encounters with white men anglers to prevent uncomfortable situations. Moreover, some participants reported being well-versed in techniques, and rules and regulations to show white men anglers that they *know what they are doing*. This allowed participants to confront anglers that wanted to intimidate them into leaving fishing sites and disprove the perception that Latinos and women do not know how to fly-fish.

'Just push through [harassment], really. Definitely that uncomforting feeling isn't gonna go away but that's not gonna scare us away either.' (F012)

'I try to not have those [contentious] encounters, I just do a lot of avoidance around strangers in the outdoors.' (F001)

'My conditioning is based out of fear 'they're gonna come in, they're gonna seek us out, they're going to try to harass us'. So, I always make sure to have an official license, always make sure I am following the rules.' (M009)

#### Intrapersonal

Two negotiation strategies were used to negotiate Intrapersonal constraints, one helped negotiate the Lack of Latino and women anglers and the other their Physical limitations. To foster fishing among other Latinos and women, a third of the participants took their teaching interest even further by *volunteering or working with minoritized groups* independently or through organizations to create access to the outdoors. Specifically, one participant took an additional step and started his own organization that promotes outdoor activities among minoritized communities, especially Latino communities.

'I run an organization where I get to provide that same medicine for my community and so I take youth, families and communities [...] to beautiful spaces that are untouched in the wilderness. A lot of participants in my organization are first time camping, for some fishing, and I get to reclaim that medicine again of that first time experience.' (M009)

Moreover, most participants with physical limitations negotiated these by *modifying where and how they fished*; this included fishing at sites that required shorter hikes and were easily accessible from the road, and by oftentimes modifying the position they fished in (e.g., sitting while fishing, fishing shorter periods of time). Contrary to this, only one of the participants constrained by physical limitations shared that despite her negotiation efforts, she stopped fishing completely.

'I injured my foot severely when I was younger, and arthritis set in when I hit 50 years old, and it started limiting the areas I could hike to go fishing in what I considered less traveled areas. So, I had to switch over to bait fishing at lakes and reservoirs.' (F007)

#### Negotiation success

We asked participants how successful they thought they had been at negotiating constraints. Twenty-one participants believed being "successful" or "very successful", and added that if they wanted to fish today, they could. Many of these participants believed they had been successful because of the opportunities and motivation they have to go fishing they have. Some participants also attributed their success to having an angler and non-angler community (e.g., family, friends, work) supportive of their interest in fishing. One women considered herself successful because she is the first in her family to participate in outdoor activities, while another because she self-taught to fish. Some women also attributed their success to their upbringing with no stereotypical gender roles as they are get-goers who do not believe there are "only men activities".

'My immediate family raised me to be the way that I am, we don't really buy into [these roles]. My grandfather and his brothers don't really care about gender roles as much as I think other Latino families do.' (F008)

Six participants believed being only "slightly" or "somewhat" successful because they considered that they had not fully negotiated the impact of their constraints to their participation (e.g., time, harassment), and to not fully attaining their fishing expectation (e.g., not catching fish as desired, not having a community). Additionally, these participants added that despite their constraints, they continued fishing, even if it was not in the way they would prefer.

'One learns to not worry about what other people think. Now that I am older and being an

educator, it opens up your mind a lot of how other people look at you.' (F012) A single participant considered being "not successful" because after her first fishing experience she made no effort to continue her participation. This participant shared that even though she enjoyed fishing, she was constrained from the get-go by not having the gear and its cost with the latter being a greater constraint as she would also have to buy gear for her siblings to go fishing with her. Finally, all but the one participant regardless of their perception of success did not have a breaking point at which they would stop trying to participate in recreational fishing because if they wanted to fish, they would find a way.

#### DISCUSSION

This study identified fourteen motivations, seventeen constraints, and seventeen negotiation strategies that shape Latino anglers' participation; and ten constraints that may prevent non-angler Latinos from getting involved in recreational. We discuss our findings in the context of the outdoor recreation framework and an adapted leisure constraint model. As expected, several factors that impact participation are consistent with previous research, but we also show how these factors are experienced by Latino anglers and compare this to how other demographics experience them. More relevant to this study, we identified unique factors related to the Latino ethnicity and how the interaction of Latinas' ethnicity and their gender identity intensified their perception of constraints compared to men. Finally, we discussed the practical implications of our findings to recreational fishing in relation to Latino participation.

### Motivations

The motivations reported in this study were diverse, with the majority commonly reported across angler demographics (D. Kuehn, Durante, et al., 2013; D. Kuehn et al., 2017; D. Kuehn, Luzadis, et al., 2013; Schroeder et al., 2006; Schuett et al., 2010; Toth & Brown, 1997) and consistent with others demonstrating the important benefits of fishing perceived by minoritized anglers, including enjoyment of nature, restfulness, and socialization (Hunt & Ditton, 2001; Nichols & Morse, 2020; Schroeder, Nemeth, et al., 2008). The enjoyment of nature is an important component of Latino fishing participation, a motivation common among the angling community (Hunt, 2000; D. Kuehn et al., 2017; O'neill, 2001). Yet, this study and others show that enjoying nature is mistakenly not perceived by others as part of Latino culture (Toth & Brown, 1997), indicating a need for increased cultural awareness in outdoor recreation communities, and NR agencies' outreach and education efforts.

Latino anglers are motivated by the restfulness of fishing and socializing with family and friends (Nichols & Morse, 2020; Schuett et al., 2010; Walker et al., 2001) and there is a notable difference in the meaning of relaxation between Latino and white anglers. Ditton & Hunt (2001) observed that Latino men anglers placed less importance on escaping from daily stressors compared to white men anglers who saw

restfulness as being alone. Our study shows restfulness as an important component of Latino fishing experience, and its positive effect on their mental health (Schroeder, Fulton, et al., 2008). This positive effect on mental health could be emphasized among Latinos and other minoritized groups that are continuously on edge because of their treatment from society; and more specifically, among undocumented immigrants who are in a permanent fight or flight mode because of their immigration status. There is also notable difference in the meaning of relaxation between Latino and white anglers as for Latinos relaxing could mean either fishing alone, or most preferred, in company of family and friends (Hunt & Ditton, 2002; Nichols & Morse, 2020). Additionally, for Latinos it is also important to get others involved in recreational fishing, especially those who are younger because, as others' findings have showed, when learned young one is more likely to continue fishing (D. M. Kuehn et al., 2006; Lovelock et al., 2016). This desired socialization has been broadly reported in outdoor recreation, yet when reported by Latino recreationists it is generally associated with the importance of family in Latino culture. Our findings also support previous findings in the context of Latino recreationists which showed the preference for group activities and recreation in large groups (Adams et al., 2006; Walker et al., 2001) indicating the need for NR agencies to incorporate family- and community-oriented activities in outreach and recruitment efforts focus on Latino communities.

Latino anglers also expressed a strong motivation to catch fish and challenge themselves as a sense of achievement. Catch-related outcomes tend to be a strong predictor of satisfaction among anglers (Birdsong et al., 2021; Gundelund et al., 2022); yet ours and others' findings demonstrate that for anglers of different ethnicities, fishing trips can be satisfying even if a fish is not caught (Ditton & Hunt, 1996; Nichols & Morse, 2020; O'neill, 2001). This finding illustrates a unique opportunity to improve communication between NR agencies and Latino(a) anglers to increase their understanding of Latino preferences and provide a more satisfying experience based on their specific needs. Moreover, our findings contrast with what Schroeder and colleagues (2008) identified from their work with Latino anglers who viewed fishing as a form of subsistence activity rather than recreational. In this study, we reported the motivation of sourcing their own fish was not out of necessity but related to the perceived

sustainability (Cooke et al., 2018). This suggests this interest in sustainability may be a creative strategy to get non-angler Latinos interested in recreational fishing. While we identified a new motivation behind sourcing their own fish our findings still identified Latino anglers sometimes shared their catch as has been shown in other studies, indicating a strong sense of community from fishing (Nichols & Morse, 2020; Toth & Brown, 1997).

#### Constraints

The most reported constraints in this study have been found across angler demographics, including constraints related to time management and financial resources (D. Kuehn, Durante, et al., 2013; D. Kuehn et al., 2017; J. Lee et al., 2001; Schroeder, Fulton, et al., 2008; Sutton, 2007). These common constraints however may be experienced differently by Latinos. For Latinos, family commitments may present as a time constraint preventing participants from fishing more often, yet they are not described as constraints per se, as family is a priority (Adams et al., 2006; Walker et al., 2001). This is exemplified by our findings of anglers choosing recreation activities enjoyed by the whole family instead of fishing, which is key as it suggests the need of family-oriented recreational fishing events that combine activities the entire family can enjoy. Latino angler participation is also constrained by their financial resources (Chung et al., 2017; Nichols & Morse, 2020; Wightman et al., 2008); however, our findings also support Kay & Jackson's (1991) observation that time constraints have been found to influence leisure participation more than financial ones.

Minoritized groups also often experience constraints related to accessibility to resources and services available (Bustam et al., 2011; Stodolska & Shinew, 2010). We show that barriers related to accessibility preventing non-angler Latinos from getting involved in recreational fishing include the absence of or limited learning opportunities, access to gear and transportation, and opportunities to engage with anglers who look like them. Our findings also corroborated others showing accessibility barriers exclusive to Latino immigrants including language barriers, the inability to obtain a license, and fear of deportation (Nichols & Morse, 2020; Schroeder, Fulton, et al., 2008; Stodolska et al., 2020). Additionally, similar to Flores and Sánchez's (2020) findings, ours' suggest accessibility constraints may

also emerge from ineffective communication and awareness across Latino communities and not only from the absence of resources available. It is paramount that efforts directed to Latino communities include a strong component of written resources and learning opportunities in Spanish to reach non-English speaker individuals.

Constraints distinctive to the Latino ethnicity include racism, harassment, and being dismissed by white men anglers (Floyd, 1998; Floyd et al., 1994; Sharaievska et al., 2010). Racism continues to be ubiquitous in the outdoors and may be a significant barrier preventing non-angler Latino participation (Nichols & Morse, 2020; Philipp, 1997; Stodolska et al., 2020) The perception of fishing as a "white men" activity paired with racism in outdoor spaces and the accessibility constraints discussed above reinforce non-angler Latinos' self-perception that fishing is not for them. This is consistent with Hines and colleagues' (2019) findings that feeling unwelcomed prevented minoritized groups from participating in an outdoor activities program, and they were more likely to participate if their friends or others "like them" were to participate. Thus, efforts aimed to remove accessibility barriers could increase participation in two ways. First, by removing these barriers so non-angler Latinos can get involved in recreational fishing, and second, as a result of increased Latino participation, by nurturing among non-angler Latinos that the activity is also practiced by Latinos, and they could too.

### **Negotiation strategies**

The literature on anglers' negotiation strategies is limited, particularly those focused on Latino and women anglers. Thus, the strategies reported in this study were mainly discussed in relation to studies of outdoor recreation in general. We found that Latino and women anglers negotiate constraints consistent with those reported in existing literature (Coble et al., 2003; Covelli, 2006; Humagain & Singleton, 2021; TenHarmsel et al., 2021). Similar to Jackson and colleagues' (1993) proposition that negotiation may result in recreation participation but not necessarily as desired, Latinos may have negotiated their constraints and participated in fishing but not always in their preferred way, or as often as desired, due to the presence and strength of constraints which may be beyond their control. For example, despite harassment experienced in the outdoors, Latinos(as) continue to participate in recreational fishing and the

most commonly used strategies include continuing to fish despite them, avoiding uncomfortable interactions, and fishing in sites where they feel welcome (Coble et al., 2003). Our findings show that Latino anglers may also be fostering negotiation efforts among non-angler Latinos to get involved in recreational fishing by volunteering or working for organizations that promote outdoor activities among minoritized groups, including Latinos. Similarly, Flores and Sánchez (2020) provided evidence to suggest that youth Latino recreationists were motivated to fish to create awareness among their community about ways to get involved in the outdoors, thus these constraints may become easier to negotiate. Latino anglers of this study negotiate the lack of access to learning opportunities by self-teaching, reaching out to other anglers, and joining fishing clinics to improve their skills (Adams et al., 2006). Safety at fishing sites will continue to present barriers even if negotiated. Coble and colleagues (2003) found solo hikers negotiated similar constraints by using aids or protective devices and modified their participation including the routes they used and how they hiked (e.g., with a dog), and we found similar evidence with anglers who negotiated safety concerns by fishing with others, often carry protective devices, and let others know their whereabouts.

Latino anglers of this study negotiated time and financial constraints in multiple ways but in many cases did not fish as frequently as they desired (Kay & Jackson, 1991). We observed that family and friends also shaped Latino anglers' negotiation efforts for time management constraints, as participants described being more willing to find time to fish if someone else invited them. Nichols and Morse (2020) reported that Latino anglers expressed they would fish more often if they were not constrained by time. This is not necessarily true, as many participants stated they would fish only if it could be paired with other activities enjoyed by their families. Latino anglers negotiated financial constraints similar to other angler outdoor recreationists by budgeting and saving, using low-cost or borrowed gear (Humagain & Singleton, 2021; Lyu & Oh, 2014; TenHarmsel et al., 2021), and by using or making inexpensive substitutes (e.g., hooks, self-tying flies, human food as bait). Participants from low-and moderate-level income brackets also successfully negotiated financial constraints as they did not fish significantly less than participants from higher brackets. Our findings highlight how Latino anglers find

creative ways to negotiate financial barriers, while negotiating time constraints amidst other priorities (i.e., work, family) is more challenging.

## **Gender identity**

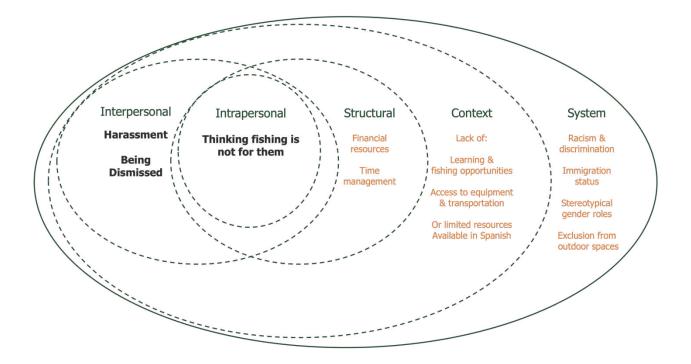
As explained earlier, recreating with others is an important motivation for Latino anglers (ref). Kuehn and colleagues (2006) observed among white anglers that women were more interested in fishing with others, while most men preferred fishing by themselves. Contrary to this finding, we observed that both, men and women, were motivated to spend time with others; but men referred mainly to family, and women to friends, which is most likely related to most men of this study being married with young children compared to only one woman, and most women being younger, thus more friend oriented. We also identified two motivations unique to women compared to none to men. Only Latina anglers were motivated by exploring new sites (Burkett, 2019) and travelled longer distances than men. These differences may be attributed to non-parenting women having more flexibility to schedule trips compared to men with children, again reinforcing the need for agencies to accommodate family fishing at more desired mountain sites. Latinos of both genders were also involved in teaching others fishing skills, but only Latinas were motivated by being role models for Latinos and women to show that fishing is not only for white men (D. M. Kuehn et al., 2006). Similar to Evans and Anderson's (2016) findings, ours emphasizes the importance of women role models and mentors in teaching other women as they better understand women's unique needs. These findings also support earlier propositions that motivations are dynamic and shaped by the individual's social context (Crandall, 1978; Williams et al., 1990) indicating that assessments of gendered participation should include how life stages differently shape participation within the same identity.

Contrary to expected, women in this study did not experience significantly more constraints than men (Bustam et al., 2011; Shores et al., 2007). We identified two constraints unique to women (i.e., being dismissed and lacking role models) compared to none unique men. In this study women anglers are often dismissed by men anglers who think women do not know what they are doing (Burkett, 2019; Evans & Anderson, 2016). Similarly, early and more recent studies continue to show women's participation, including Latinas', is often influenced by stereotypical gender roles and limited learning opportunities available for them (Floyd et al., 2006; Henderson et al., 1996; Wesely & Gaarder, 2004). However, Latina anglers did not attribute their initial constraint of lack of a teacher or role model to stereotypical women's role, rather primarily to their family and friends not being involved in fishing. Our findings suggest that creating learning opportunities exclusive for girls and women would show them that they can be anglers too and give them a fishing community to rely on, which in turn may increase Latinas' participation.

### Adapted constraint model

We adopted a combination of leisure constraint models (D. W. Crawford & Godbey, 1987; Stodolska et al., 2020) and demonstrate how constraints attributed to and intensified by the Latino ethnicity and women identity may influence Latino participation in recreational fishing (figure 1). First, we contend that System constraints (e.g., racism and immigration policy) and Context constraints (e.g., limited resources and opportunities available for Latinos) may potentially prevent non-angler Latinos from getting involved in the activity. This is most likely related to the inability of an individual to overcome them independently as these are largely dependent on institutions, policies, and societal attitudes and beliefs and societies' willingness to remove these barriers (Stodolska et al., 2020). Our findings suggest that despite the inability to overcome systemic and contextual constraints individually, the support and encouragement from Latinos' family and community may allow them to negotiate these constraints and get involved in recreational fishing (Adams et al., 2006). Second, even if Latinos have successfully negotiated System and Context constraints these will continuously shape their participation because constant negotiation must occur to continue fishing, which occurs as Interpersonal constraints (Hudson et al., 2013; Sharaievska et al., 2010). This proposition is exemplified by our findings that longterm Latino anglers continue to adapt how and where they fish to better negotiate harassment from other anglers. Third, while constraints of financial resources or time management are commonly experienced across angler demographics (D. Kuehn et al., 2017; D. Kuehn, Luzadis, et al., 2013; Schroeder, Fulton, et al., 2008), the perception of these constraints may be intensified for Latinos with large families, and physically demanding or low-paying jobs (Adams et al., 2006; Gordon, 2010); potentially becoming a

barrier that cannot be overcome. This is mostly likely related to the preference among Latinos of recreating with others, which required purchasing gear for multiple individuals that may not be possible because of the high cost of the gear, the little time thy could designate to recreation compared to other demographics, and their little interest to participate in more active activities after working long hours. Finally, the self-perception of Latinos in recreational fishing is and may be influenced by constraints from every category. A predominantly white men demographic and limited resources available specific for Latinos may represent a significant entry barrier for non-angler Latinos. This is informed by our findings that some Latino anglers perceived recreational fishing as a "white men" sport and not an activity they could get involved in, which was only overcome when friends or an organization got them involved.



### Figure 1.

Categories adapted from the leisure constraint models proposed by Crawford and Godbey (1987) and Stodolska and colleagues (2020) used to analyze Latino anglers' constraints emerged from this study. The adapted constraint model shows constraints attributed to the Latino ethnicity and gender identity. Summary of the disaggregated and aggregated total coding references for each fishing negotiation strategy reported by study participants. In black are constraints experienced by study participants, and in orange constraints that participants believed or were aware that prevent non-angler Latinos from getting involved in fishing.

#### **Multiple-Hierarchy Stratification Model**

Following the MHS model, we would expect that more disadvantaged participants experienced the effect of a constraint more intensely than their counterpart (D. W. Crawford et al., 1991; Hudson et al., 2013; J. Lee et al., 2001). Later studies have found income to be a predictor of participation, with lowincome anglers being the most constrained supporting the MHS proposition (Floyd et al., 2006; Hunt & Ditton, 2002). This raises the question of how financially accessible the activity is, and how its socialand health-related benefits can be attained by low-income people and families. Similarly, an assessment of Latino outdoor recreation found that income was a decisive factor to participation only among lowincome Latinos (Adams et al., 2006). Contrary to the study's finding, we observed that while participants with lower to moderate financial resources perceived cost and accessibility constraints more intensely than those with more resources, it did not constrain their participation significantly more so, which may be most likely related to having successful negotiation strategies in place (Kay & Jackson, 1991). Our findings also support the MHS model's proposition that individuals of more disadvantaged identities experienced more constraints to recreation than individuals on top of the SSC. Similar to previous studies, we identified racism, harassment and dismissal of knowledge as constraints attributed to the Latino ethnicity; and language, and the inability to obtain a fishing license and fear of deportation because of immigration status as barriers exclusive to Latino immigrants (Schroeder, Nemeth, et al., 2008; Sharaievska et al., 2010; Shores et al., 2007; Stodolska & Shinew, 2010). White men anglers do not need to deal with these systemic constraints, therefore they would remain at the top of the SSC as expected, whereas the marginalized Latinos would be at the bottom.

Previous studies have also shown that the effect of constraints on outdoor recreation is multiplicative when more than one disadvantaged social identity interacts (Floyd et al., 2006; K. J. Lee, Scott, et al., 2016). Consistent with this, we observed the effect on Latina anglers' participation of being dismissed and harassed by other anglers, and the lack of safety in fishing sites was greater compared to men, because while both shared the disadvantaged identity of the Latino ethnicity, women also belong to a disadvantaged gender identity. This is exemplified by Latina anglers being talked down to by men

anglers and looked down upon by white men anglers who think neither women nor Latinos know what they are doing (Burkett, 2019; Evans & Anderson, 2016; Shores et al., 2007); thus, supporting the suggestion that the experience of constraints is likely to be greater than what researchers have described to date (Shores et al., 2007). More specifically, ours and others' findings also give light to the complex interactions among constraints and why the alleviation of individual constraints often does not translate into higher participation (Hudson et al., 2013; K. J. Lee, Scott, et al., 2016; Stodolska & Shinew, 2010).

## **Negotiation efforts**

Our research supports the early proposition that in order to get involved in recreation fishing and continue participation, Intrapersonal constraints have to be negotiated first to then negotiate additional constraints (D. W. Crawford et al., 1991; Hubbard & Mannell, 2001). This is exemplified by some Latino anglers reporting they had to overcome their perception of recreational fishing as a "white men's activity" before being faced by additional constraints to negotiate. Similar to Hines and colleagues' (2019) findings, ours' indicate participation is first constrained by the self-perception of an individual as a potential participant in an activity, thus there is a need to incentivize the outdoors as a component of Latino culture by increasing representation of Latinos in NR agencies' communications and personnel. Moreover, contrary to the original proposition, we found that Interpersonal and Structural constraints are more often experienced and negotiated simultaneously or in the opposite order; thus, the negotiation process was not sequential. These findings suggest recruitment efforts should aim to remove entry interpersonal and structural barriers simultaneously as this may increase the number of non-angler Latinos getting involved in recreational fishing.

Related to previous propositions of how motivations, constraints, and negotiation strategies interact to shape participation, we show that while Latino anglers' motivations to fish did not reduce their perception of constraints, they strongly influenced negotiation efforts as more motivated anglers overcame constraints more often compared to less motivated ones (Son et al., 2008; White, 2008). Our findings support previous studies' proposition that constraints triggered a negotiation process aimed to counter their negative effects (Hubbard & Mannell, 2001; Jackson et al., 1993). We posit that initiation

and success of negotiation efforts are not only dependent on the desire to negotiate constraints but also by an individual's freedom and power to negotiate them, thus in the absence of these negotiation efforts most likely will not be attempted (Jackson et al., 1993; Stodolska et al., 2020). This is supported by our finding that despite Latina anglers' perception of safety constraints, which was intensified by the fear of being assaulted by men (Henderson et al., 1996), they still fished by themselves. This may be most likely related to women's intrinsic awareness of danger in their daily life; thus, they already have negotiation strategies in place to negotiate potential assaults (Wilson & Little, 2005).

Overall, our findings suggest the general perception of constraints among Latino anglers' demographics from this study was relatively similar, which may be related to most of them being long time anglers and regardless of their experience being highly motivated. This may also be related to them already having negotiation strategies in place to overcome their constraints (Evans & Anderson, 2016; Hubbard & Mannell, 2001). The majority of them, regardless of their demographic, were in a relative social position of power compared to non-angler Latinos because they have successfully negotiated systemic and contextual constraints by getting involved in the activity (Stodolska et al., 2020). This was somewhat supported by the belief that anglers with higher education from this study are more willing to stand up to racism compared to less empowered Latinos. Latino anglers' perceived position of power to negotiate constraint is not only influenced by their position in the SSC but may also be influenced by their upbringing. This is supported by our findings of Latino anglers' upbringing without stereotypical gender roles in outdoor activities and the constant support from family and friends, which most likely influenced their conviction that outdoors spaces are also for them.

#### CONCLUSIONS

This study aimed to inform efforts to improve diversity in and access to recreational fishing with a focus on Latino communities in Colorado. In the context of the outdoor recreation framework, we adapted two leisure constraint models to investigate motivations, constraints, and negotiation strategies of Latino and Latina anglers, and how these, and ethnicity, and gender identity shaped fishing participation and experience. Latino ethnicity is key in shaping motivations and negotiation strategies to fishing. Recreational fishing represents part of Latino's culture and serves as medicine for many Latino anglers, thus shaping the entire fishing experience. Latinos of this study have internalized their responsibility of passing down their knowledge and encouraging Latino anglers' and non-anglers' participation by also serving as role models in their communities. Previous studies show a strong preference for family- and group- oriented outdoor activities among Latinos which was also observed in this study. For participants, fishing with others enables and improves the experience, but when families as a whole prefer other activities over fishing, family is prioritized.

Our findings were generally consistent with previous studies of recreational fishing and other outdoor activities assessing constraints across demographics. Similar to these studies, constraints related to time management and financial resources were the most commonly reported by Latinos. However, there are significant unique barriers that Latino(a) anglers and non-anglers face because of their ethnicity including racism (System constraints), and harassment and dismissal (Interpersonal constraints). More significantly, Latinos may experience additional constraints to their participation compared to other demographics because of their ethnicity. We show that racism being systemic in society extends to the recreational fishing community. We also contend that System (e.g., racism, immigration policy) and Context (e.g., lack of learning opportunities focus on Latino communities and resources in Spanish) constraints may deter non-angler Latinos from becoming involved in the activity because individuals' do have the power to negotiate them by independently. Moreover, racism even when successfully negotiated,

may continue to shape Latino anglers' participation because constant negotiation of harassment and dismissal by non-Latino anglers must occur to continue fishing.

Contrary to previous findings, women anglers of this study did not experience significantly more numbers of constraints than men. Also, while stereotypical gender roles continue to present constraints for women and girls' entry into participation, we show that many Latina anglers are not constrained by gender roles, because on the contrary, they have the support and encouragement of their family and friends. However, not having role models may be a barrier for those wanting to try the activity or for those who believe fishing is a "white men" activity. In addition, Latina anglers' perception of constraints was indeed intensified, and how they are negotiated, when their ethnicity and gender identity intersect. This was observed with the constraint of being dismissed for being a woman and Latina; and even in the constraints experienced by men including harassment and fear of assault. Latina anglers try to remove barriers resulting from these gender roles by teaching others to fish and by being role models to show that angling is for Latinos and women.

Finally, supporting an early proposition, we observed that Intrapersonal constraints have first to be negotiated to start additional negotiation efforts; however, opposed to the proposition, Interpersonal and Structural constraints were negotiated non-sequentially. Consistent with previous findings, we showed that the negotiation of System and Context constraints relies on the participants' ability to negotiate the constraints, which is influenced by their social power, and society's "(un)willingness" to accommodate them (e.g., immigration status). This means that in order to remove barriers such as racism and immigration status and limited fishing resources offer to Latinos, society and NR agencies have to initiate the negotiation process.

#### LIMITATIONS

We are confident of this study's findings reflecting Latino anglers' participation and experience in recreational fishing but recognize several caveats. We only interviewed Latinos already involved in recreational fishing, which left a knowledge gap of non-angler Latinos' perspective of the activity, specifically of constraints. To address this gap to some extent, we assessed participants awareness of what constraints may prevent Latinos from getting involved in the activity. While the list of constraints reported in this study may not be extensive, we are confident that it includes major constraints experienced by non-anglers because more than half of participants work closely with Latinos and other minoritized groups to increase their access to outdoor spaces. Another limitation is that our findings are not comprehensive of Latino immigrants' participation, which can be further shaped by immigration status, language spoken, culture, and country of origin. Additionally, this study assessed participation of only men and women identities, thus excluding other gender identities' experiences. These and several more subgroups within the Latino demographic and their own nuances need to be assessed to continue to understand how to improve and increase Latino fishing participation. While this study did not assess them all, our findings can inform future studies' research design.

Our findings also are somewhat limited by participants' demographics. Participants are distributed fairly even among demographic categories, but this distribution is not necessarily representative of the Latino demographic composition in the state. Specifically, only a fourth of study participants reside in the West slope contrasting the state's census results that Latinos largely reside in the region. Related to this, the majority of participants live in the Denver metro area, thus this study does not fully reflect the nuances of Latinos' participation from more remote areas of Colorado or beyond. Latinas were more difficult to recruit compared to men and those recruited were not constrained by gender roles even though it still impacts Latinas. Age and income differences between genders may have resulted in slight differences in motivations, constraints and negotiation strategies such as placing importance on family versus friends.

#### RECOMMENDATIONS

Our findings corroborate the importance given to family and community by Latinos shown by other studies, thus largely shaping their participation simultaneously as a motivation, constraint, and negotiation strategies. This indicates the need of family-oriented recreational fishing opportunities that combine activities the entire family can enjoy as these opportunities may improve multiple aspects of Latino participation. Creating or improving the support of family and friend may foster negotiation efforts among Latinos and increase the likeliness of their success.

We also suggest that to ensure fishing participation is continuous NR agencies should offer longterm fishing programs instead of one-day fishing clinics, and to teach every aspect of recreational fishing so participants can eventually participate without the assistance of others. Efforts should have components that aim to increase involvement among young Latinos, especially among Latinas, through the involvement of the whole family. Additional efforts such as offering discounted licenses for first-time anglers and providing equipment could motivate participation among Latinos that do not want to make these investments as they might not enjoy the activity, or among the ones that do have the ability to negotiate their financial constraints.

There is a need for education and outreach efforts that incorporate cross-cultural awareness, antiracism, and inclusivity in their service and recruitment efforts for the broader public. It is also essential that these type of efforts directed to Latino communities include a strong component of written resources and learning opportunities in Spanish to improve angler awareness and involvement of non-English speaker Latinos. Finally, findings also suggest that communication efforts of changes in regulations and rules, that is especially relevant to this group such as changes in fishing license requirements, need to be more extensive among Latino communities.

# TABLES

# Table 1.

Themes covered in semi-structure questionnaire during interviews.

Theme	Examples
Demographics	
	Age, town of residence, gender identity, ethnicity, education,
	marital status, occupation, income
Fishing Experience	
	Experience learning to fish, years fishing, fishing experience in
	general
Fishing Frequency	
	Frequency in the past year and past five years
Motivations	
	Motivating reasons for fishing and changes over time
Constraints	
	Barriers and challenges to participants' participation in fishing,
	barriers that prevent non-angler Latinos from getting involved
	in fishing
Negotiation strategies	3
	Strategies overcome constraints and perceived level of success
Species and Gear	
	Gear used and species targeted, and changes over time
Location and Habitat	
	Fishing locations, preferred location(s), changes over time

# Table 2.

*Constraints categories adapted from* Crawford and Godbey's (1987) and Stodolska and colleagues' (2020) *leisure constraint models used to group constraints emerged from this study.* 

Category	Definition
System	
	Resulting from policy, institutions, societal attitudes and
	beliefs
Context	
	Resulting from the social and physical environment of
	fishing sites and availability of opportunities and
	resources
Structural	
	Resulting from participants' socioeconomic context
Interpersonal	
	Resulting from participants' social relationships and
	interactions with other during participation
Intrapersonal	
	Resulting from participants' self-perception and
	physical condition

## Table 3.

Summary of the disaggregated and aggregated total coding references for each fishing motivation reported by study participants.

Variable	Men (n=16)	Women (n=12)	Group (n=28)	%
Gender				
Male			16	5′
Female			12	4
Interview Delivery				
Virtual	7	8	15	54
Phone	6	3	9	3
In-person	3	1	4	1
Ethnicity*				
Latino(a)	6	4	10	3
Hispanic	2	5	7	2
Chicano(a)   Indigenous Mexican	5	2	7	2
Mexican descendant or American	3	1	4	1
Region of Residence				
Denver metro area	9	9	18	6
Northern Colorado	2	1	3	1
Western slope	5	2	7	2
Age				
18-24	0	3	3	1
25-34	4	7	11	3
35-44	3	1	4	1
45-54	5	0	5	1
55-64	1	0	1	
65-74	3	1	4	1
Education				
Middle or high school diploma	2	3	5	1
Some college	3	2	5	1
Associate's degree	2	0	2	
Bachelor's degree	3	5	8	2
Graduate degree	6	2	8	2

# Table 3. (Continued)

Variable	Men (n=16)	Women (n=12)	Group (n=28)	%
Employment				
Full time	12	8	20	71
Part time	0	3	3	11
Retired	4	1	5	18
Income (\$)				
<25,000	1	3	4	14
25,000-49,999	3	3	6	21
50,000-74,999	5	5	10	36
75,000-99,999	3	2	5	18
$\geq$ 100,000+	3	0	3	11
Age at First Fishing Experience				
10 and under	12	6	18	64
11-18	3	2	5	18
19-25	1	4	5	18

Summary of the disaggregated and aggregated total coding references for each fishing motivation reported by study participants.

# Table 4.

Theme	Motivation	Total c	Total coding references <sup>a</sup>			
Ineme	Motivation	Men	Women	Group		
To Rest		42	20	62		
	To relax & recharge	34	14	48		
	For mental health	8	6	14		
To Enjoy Nature		33	29	62		
	To be outdoors	25	15	40		
	To experience the scenery	8	7	15		
	To explore new sites	0	7	7		
To Socialize		30	31	61		
	To spend time with family & friends	17	13	30		
	To teach others to fish	13	9	22		
	To be a role model for Latinos &	0 9		9		
	women	0	9	9		
Sense of Achievement		27	14	41		
	The challenge of fishing	15	11	26		
	To catch fish	12	3	15		
For Enjoyment		12	9	21		
	For fun	12	9	21		
For Sustenance		7	13	20		
	To source my own food	4	8	12		
	The taste of fish	3	5	8		

Summary of the disaggregated and aggregated total coding references for each fishing motivation reported by study participants.

# Table 5.

Category	<b>T1</b>		Num	ber of refe	erences <sup>a</sup>
	Theme Constraint	Constraint	Men	Women	Group
Context			36	13	49
		Habitat degradation	11	6	17
		Overcrowding	12	3	15
		Privatization of sites	7	2	9
		Safety	6	2	8
Structural			87	50	137
	Time Management		53	20	73
		Work	18	9	27
		Competing activities	16	8	24
		Family	19	3	22
	Financial Resources		21	15	36
		Increasing cost of fishing	16	11	27
		Non-fishing expenses	5	4	9
	Accessibility		13	15	28
		Distance & transportation	9	8	17
		Lack of access to resources	4	7	11
Interpersonal			28	34	62
-		Harassment	18	9	27
		Lack of fishing partner	10	6	16
		Being dismissed	0	14	14
		Lack of a teacher or role model	0	5	5
Intrapersonal			10	13	23
		Physical limitations	9	8	17
		Thinking fishing is not for them	1	5	6

Summary of the disaggregated and aggregated total coding references for each fishing constraint reported by study participants.

# Table 6.

Category	Constraint	Total coding references <sup>a</sup>	
System		133	
	Exclusion from outdoors spaces	44	
	Immigration status	33	
	Stereotypical gender roles	30	
	Racism	26	
Context		83	
	Lack of learning & fishing opportunities	36	
	Lack of or limited resources available in	27	
	Spanish	27	
	Lack of access to gear & transportation	20	
Structural		35	
	Time management	19	
	Financial resources	16	

Summary of total coding references for each broader constraints for non-angler Latinos' fishing participation reported by study participants.

## Table 7.

Category	Constraint	Negotiation strategy	Number of references <sup>a</sup>		
			Men	Women	Group
Context					• 0
	Safety		12	<b>16</b>	<b>28</b>
		Other protective actions	4	8	12
		Fish with others	4	6	10
		Carry protective gear	4	2	6
Structural			51	31	82
	Time Management		31	18	49
		Fish around or paired with other activities	19	11	30
		Fish with someone else	7	6	13
		Plan trip ahead of time	5	1	6
	Financial Resources		20	13	33
		Use or make low-cost gear	12	8	20
		Budget & save for expenses	6	2	8
		Borrow gear	2	3	5
Interpersonal			31	21	52
-	Lack of a partner		1	4	5
		Fish by myself	1	4	5
	Lack of a teacher		11	6	17
		Ask others & attend clinics	6	3	9
		Self-taught	5	3	8
	Harassment   Being dismissed		19	11	30
		Disregard attitudes & comments	10	9	19
		Fish where I feel comfortable	5	1	6
		I know what I am doing	4	1	5

Summary of the disaggregated and aggregated total coding references for each fishing negotiation strategy reported by study participants.

# Table 7. (Continued)

Summary of the disaggregated and aggregated total coding references for each fishing negotiation. strategy reported by study participants.

Catalan	Constraint		Num	Number of references <sup>a</sup>		
Category		Negotiation strategy	Men	Women	Group	
Intrapersonal			28	9	37	
	Physical limitations		6	4	10	
		I modify where & how I fish	6	4	10	
	Thinking fishing is not for them		22	5	27	
		Volunteer & work with minoritized groups	22	5	27	

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APPENDIX A: INTERVIEW INSTRUMENT



HUMAN DIMENSIONS OF NATURAL RESOURCES COLORADO STATE UNIVERSITY

# Project Questionnaire: Cultivating access and diversity of recreational fishing

in Colorado
Interview type: Phone | Email | Virtual | Face-to face
Name: Date: Time (start/finish):
Town of residence:
Occupation:
Fishing organization affiliation:
(If willing to disclose):
Age: Gender identity: Ethnicity/Race: Education:
Marital status:
Income: <20K | 20-<35K | 35-<50K | 50-<75K | 75-<100K | >=100K

- I. <u>Fishing experience</u>
  - 1. How many years have you been fishing (years of experience)? At what age did you start fishing?
  - 2. Can you explain your experience learning how to fish?
    - i. *If they didn't already discuss (measuring socialization)*: Can you tell us about who teach you how to fish or who you used to go fishing with when first starting out?
    - ii. What about these early experiences "hooked" you (or kept you coming back)?
  - 3. What are one or two favorite memories or experiences you had while fishing?
  - 4. Thinking back, about how many times have you gone fishing during the last 5 years (between 2017-2021)?
    - a. One or two times
    - b. Between 2-4 times
    - c. Between 5-10 times
    - d. Between 11-20 times
    - e. More than 20 times

- 5. Have you gone fishing in 2021 (Jan-Dec 21)? YES | NO *If yes,* approximately how often did you go fishing during 2021?
  - a. Once a week
  - b. A couple times per month, about how many?
  - c. Every other month
  - d. A few times per year about how many?
  - e. Once in the year

#### II. <u>Motivations</u>

- 6. Why do you enjoy fishing?
- 7. What motivates you to go (or keeps you interested in going) fishing?
  - a. *For example,* do you go fishing to get outside; for fun; for exercise; to escape; to be with friends or family; for food; etc.?
- 8. Who do you typically go fishing with (e.g., with friends/family, colleagues, etc.) or do you go by yourself?
  - **a.** Why do you go with others or by yourself?
- 9. How have the reasons why you fish changed over time (i.e., from when you started to now)? Why/why not?
- 10. Out of the all the reasons you just described, which one would you say is the primary reason why you currently enjoy fishing?

#### III. <u>Constraints</u>

- 11. What are some things that get in your way or prevent you from going fishing?
  - a. *For example,* lack of time; Family or work responsibilities; cost; not enough information; safety/fear of crime; poor health; etc.
  - **b.** If they say "lack of time" make sure to clarify why this is a constraint.
    - i. *For example, is this due to work, family commitments, interests in other activities, etc.*
- 12. Have you or others that you know, ever experienced social discomfort or felt unsafe while fishing? If yes, please explain these experiences.
  - i. Fear of physical or sexual assault, discrimination, or crime?
  - ii. How did you feel and/or navigated these negative experiences so that you are able to (and comfortable) continuing fishing in the future?

#### IV. <u>Negotiation Strategies</u>

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

- 13. How supportive is your family/friends/community of your interest in fishing?
  - a. How, specifically, do they encourage (or constrain) your participation?

#### 14. How did you overcome the constraints you have faced?

- a. Which ones you still faced?
- b. Of the barriers you weren't successful at overcoming, what was the breaking point at which you stop trying?
- c. What types of things would help you overcome any of these barriers?
- 15. Choose from the scale (show printed scale) the extent to which you agree or disagree with the following statements. In your opinion, [As participant why they believe they were successful or not]
  - a. How successful do you think you have been in overcoming constraints to recreational fishing? Why?
    - i. Not successful, slightly successful, successful, very successful

## 16. Do you have family or friends that want to start fishing but cannot?

- a. Do you know why?
- b. Are there any other things that get in their way from starting?

#### V. <u>Species and Gear</u>:

- 17. Do you target any species while fishing?
  - a. What is the reason of your preference for these species? (*Related to if* they fish to eat, do they prefer them for their taste, pollution, etc.?)
  - b. Have the availability and abundance of your preferred/targeted species change overtime? How has it changed?
  - c. Are these the same species you targeted or fished before?

#### 18. Do you usually keep what you catch, or catch and release, or both?

- a. *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.)?
- 19. What type of gear do you use? (Fly fishing, rod with live bait, ice fishing, snagging, trot lines, jugs, spear, net, other...)

- 20. What do you think are some of the biggest issues or challenges that Colorado's fishery is facing?
  - a. In your opinion what could be done to overcome these issues?
  - b. 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?

#### VI. Location & Habitat

- 21. On which of the following types of water did you fish 2021 (Jan-Dec)? *Please check all that apply* 
  - a. Lakes or reservoirs at low elevations
  - b. Lakes or reservoirs in the mountains
  - c. Boatable and wadable, large rivers (e.g., Arkansas River, South Platte River, Colorado River, etc.)
  - d. Smaller rivers or streams (non-boatable) at low elevations
  - e. Smaller rivers or streams in the mountains
  - f. Urban small ponds (e.g., City Park Lake, Dixon Reservoir)
    - i. Is there one that you most prefer? (If so, which one?)
- 22. Can you share some of the locations you usually go to fish? *Bodies of water* and towns
  - a. How far are they from home?
  - b. How do you get to them? Drive?
  - c. What do you like about the locations?
  - d. Which one are your favorite?
- 23. How do you think \_\_\_\_\_impact Latino/Hispanic/Chicano participation in fishing?
  - a. Gender role (your own participation)
  - **b.** Immigration status
  - c. COVID (overall and your own participation)
- 24. Other: Please add anything else you would like to share about your fishing experience in Colorado.

## APPENDIX B: CODEBOOK

MOTIVATIONS		
Code	Description	Example
	TO RE	EST
To relax & recharge	Participants describe directly or indirectly how fishing allows them to escape from their daily	'[Fishing] makes things slow down and be intentional with what you're observing and what's going on around you.' (F009)
	routine.	'My job can be pretty stressful, so I like to be out there working through my problems in a nice pretty open area.' (M003)
For mental health	Participants describe directly or indirectly how fishing influences their	'It just contributes so much to my like mental health and bringing peace to my mind.' (F010)
	mental state.	'It is a medicine of our mind, body and spirit. But it is a reconnection to ourselves.' (M009)
	TO ENJOY	NATURE
To be outdoors	Participants express one of their motivations to fish is to be outdoors to enjoy and	'I think it's really getting out there and spending that time in nature' (F006)
	connect with nature.	'It was just being out there in the mountains what hooked me into fishing, just being outside.' (M003)
To experience the scenery	Participants express their enjoyment of the landscape and wildlife in fishing sites.	'Outside you're sitting in one place or standing in one place for a while, so you see a lot. I'm a big bird person, you see a ton of birds when you're out fishing especially dippers and stuff.' (F004)
		'Being in a beautiful place and the stream or the lake or the ocean or wherever you're at.' (M00)
To explore new sites	Participants express their desire to fish in new places and how they go to fish to places that otherwise they would not go.	'[I like] trying out different places, it's really cool to explore different bodies of water []. So, I think just exploring nature in different places.' (F004)
	-	'It brings me to very cool areas, places that I probably wouldn't usually go.' (F010)

Code	Description	Example
	TO SOCI	ALIZE
To spend time with family & friends	Participants refer to recreational fishing as a communal activity and their preference to fishing with others over by themselves	<ul> <li>'I would say definitely the people I go fishing with. They make it fun. I feel like if I was going alone, it still would be fun but definitely the people I go fishing with makes me want to go more.' (F005)</li> <li>'And as I grew older, it became a way of spending time with my father who worked 40 plus hours a week, sometimes nights and that</li> </ul>
To teach others to fish	Participants express their desire to pass down their knowledge of fishing to others.	was an activity he enjoyed.' (M006) 'I'm really big on education and the fact that I have the chance to call myself an educator as a 19-year-old and helping kids is really rewarding for me but also for them.' (F012)
		'It feels like it's something that I need to teach my kids because that's what my parents taught me.' (M004)
To be a role model for Latinos & women	Participants express their desire to change Latino's and women's perspectives that fishing is only a "white men's activity".	'It made me really want to get out there and really want to connect with other ladies. And you know, let them know they can do it. They can get out there and fish that's been the biggest thing for me.' (F006)
		'I want little kids who look like me and who have similar experiences to me to see that that's something that I enjoy and it's something that they can enjoy.' (F008)
	SENSE OF ACH	HEVEMENT
The challenge of fishing	Participants describe how every step from getting the bait ready to catching the fish is a different challenge and how exhilarating it is	'It's very rewarding to just sit there and wait for fish to bite on and then once they're on being able to take them off. I think the whole process is really cool.' (F005)
	for them.	'Outsmarting the fish, it's a challenge and then when something is not working being innovative. If this isn't working, let's go to somewhere else above, maybe over there. It's also a mental game, it's a mental challenge.' (M001)

Code	Description	Example
To catch fish	Participants describe catching a fish as their end goal to fishing and how this makes them feel.	'My motivation is to catch the biggest bass I car catch, and I only go bass fishing and so I just want to set a record for myself. I want to beat my own record.' (M007)
		'The feeling you get when you catch a fish it's a very exhilarating, kind of full of adrenaline when you catch a fish, you're like oh my god, I got one, makes your heart race.' (M016)
	FOR ENJO	YMENT
For fun	Participants express they enjoy recreational fishing as a whole and that it brings them joy.	'I find it very fun, especially the first time I went fishing. I think I got 32 fish, which is really memorable for me and made me want to keep fishing.' (F005)
		'[My mom passed away] and we went fishing because that was what she liked to do. So, after she passed away, we decided to have a big fishing trip in her honor.' (M004)
	FOR SUST	ENANCE
To source my own food	Participants describe their desire to source their own fish because of their perceived sustainability and of knowing where the	'I can feed myself with an animal that I know that lived a full life and wasn't farm raised and wasn't just wrapped in plastic and dropped on my dinner table.' (F008)
	fish came from.	'I can have \$4 and bring back some junk food to my family but I get to bring back something very nutritious and delicious.' (M009)
The taste of fish	Participants express their like for fish meat and how this fosters their fishing	'My mom loves fish, so that's why she just said we're gonna learn how to do this.' (F009)
	participation.	'I like fish, it is the best thing.' (Translation from M008)

CONSTRAINTS		
Code	Description	Example
	CONTI	EXT
Habitat degradation	Participants describe directly and indirectly human-induced threats to fishing sites and how their impact on fishing sites negatively impact their	<ul><li>'I haven't gone a lot, last summer was really ho too and the water levels weren't the greatest.' (F002)</li><li>'I know that before I'd be fishing, and it'd be a</li></ul>
	participation.	creek in which most parts were waist deep. And now I'll walk through and it's maybe this deep [point to below his knee].' (M002)
Overcrowding	Participants express the increasing number of anglers in fishing sites and how this	'There's just people everywhere, you want to fish and it is crowded.' (F004)
	negatively impact their participation.	'I know how overcrowded our state parks and public areas were, [ but the pressure] was much stronger on our natural resources during COVID than before.' (M015)
Privatization of sites	Participants express that fishing sites with more desirable conditions or where they used to fish have been made less accessible to the	'Areas have been made more inaccessible by private ownership who are fencing off access to the rivers and streams that I used to fish in.' (F007)
	general public.	'Walk in and there's a sign that says private lan like how did you get the land?' (M002)
Safety	Participants describe their own or others' experiences with crime or perceived crime while fishing that make them concern about safety in fishing	'I have one friend who used to go fishing at the same time every day in a certain spot and one day this one guy came down and tried to grab her.' (F006) 'There are some places that are kind of sketchy
	sites.	especially in the city [ places that] I can't go alone because there's people walking around and they're up to no good.' (M007)
	STRUCT	URAL
Work	Participants express work commitments as a factor preventing them from fishing or fishing as often as they	'I work Monday through Friday and by the tim Friday comes around I don't want to do anything because I'm mentally done.' (F002)
	would like.	'A lot of educators have summers off, but I don't. I'm a year-round employee now, so I'm really busy.' (M004)

Code	Description	Example
Competing activities	Participants express their general lack of time for recreation activities and other activities or commitments that they have to consider before	'I like to do a lot of different things in the outdoors and so it's hard to prioritize fishing when I also want to go climbing or I want to go camping.' (F010)
	they go fishing.	'You have other things to do that are more that are more pressing than going fishing.' (M005)
Family	Participants express family commitments as a factor preventing them from fishing or fishing as often as they	'There are a lot of games and practices which I want to be at and I want to support [my kids].' (F006)
	would like. Yet, they do not perceive them as constraints per se as for them family was their priority.	'If my children were doing a lot of homework, and they needed to stay there at the house and work and they said "Dad, I need your help", then we have a nice day [at the house]. [Family] always come first, everything I do comes back to family.' (M002)
Increasing cost of fishing	Participants describe how fishing costs were an entry constraint or how they had to get their equipment over a	'There is an initial investment that I don't think I would have made if I didn't have the opportunity through work.' (F008)
	long period of time. Costs expressed include gear, gas, licenses, and trip's expenses.	'Money is always a factor because fishing gear is kind of expensive.' (M016)
Non-fishing expenses	Participants express how other financial priorities take priority over fishing-related	'There are a lot of things that take priority over me wanting to like fish.' (F008)
	expenses and their limited disposable income for recreation expenses.	'When you first start teaching you don't make very much money, especially if you're living in Denver, and you could barely afford your apartment.' (M004)
Distance & transportation	Participants express how the distance to fishing sites and their lack of a well-equipped vehicle prevent them from	'Anywhere there's good fishing it's like an hour to two hours away and I 70 traffic is terrible.' (F002)
	fishing as often as they would like or in their preferred fishing sites.	'I can't go to a lake because it's in the mountains and I don't know if [my vehicle] would make it all the way there.' (M016)

Code	Description	Example
Lack of access	Participants describe how	'I don't have any [gear] and just having to go
to resources	lacking access to gear or	buying it and spending money just not on me
	knowledge of where to fish	but also on my siblings so we can do it
	prevent their fishing.	together.' (F003)
		'I don't know other lakes, and I am afraid of
		getting into a private area and get into troubles for fishing in it.' (Translation from M008)
	INTERPER	RSONAL
Harassment	Participants describe the	'A couple of times there were some people from
	attitudes other anglers have	out of state in these areas and along the Los Pinos
	towards them because of their	River who made us feel uncomfortable, like we
	Latino ethnicity or gender.	were not wanted there. [] they were actually
		kind of aggressive towards us.' (F007)
		'I would go by myself often for day trips, and
		then recently I stopped going by myself because
		of the racism within CPW. [] I know the way
		that CPW navigates outdoor spaces, especially o
		fishing, it is very white and racist, and those with
		power carry guns.' (M009)
Lack of fishing	Participants express their	'[Others] would rather go hiking or go rafting or
partner	family or friends dislike of	kayaking. It's that we don't all have the same
	fishing or lack of availability	interest.' (F008)
	to join them fishing.	
		'It's something that my wife doesn't enjoy, so, we
		do other stuff that we both enjoy.' (M004)
Being dismissed	Participants describe how non-	'I know a couple of times I have gone into
	white anglers believe they	different stores to buy different supplies and
	know better than Latino and	people will think that I don't know what I'm
	women anglers.	looking for or they'll say little dumb comments
		to me because I'm a woman.' (F008)
		'Sometimes when we're trying to explain things
		other people think they know more than us
		because we're people of color. So that's
		definitely a discomfort knowing that they think
		that they're better than us.' (F012)

Code	Description	Example
Lack of a teacher or role model	Participants express that they did not have someone to teach them to fish or that fishing was an activity they could	'I never did it because our parents weren't focused on that, and they didn't know how to.' (F003)
	participate in.	'When I was an undergrad because I really wanted to get into [fly-fishing] but it's a hard skill to learn if you don't have like a coach or something.' (F004)
	INTRAPER	RSONAL
Physical limitations	Participants describe in which ways their health, old age, or disability constrain their	'I have like really bad my Achilles tendons that hurt a lot, especially when I'm fishing.' (F002)
	participation.	'I was in a plane crash in 2011 so that kind of messed up my back.' (M005)
Thinking fishing is not for them	Participants express how the lack of angler diversity made them believe that fishing was only a "white men's activity".	'Before I started fishing I didn't think that I could go fishing. I just thought it wasn't for people like me.' (F005)
		'I never thought that it will be something that as people of color could do.' (F012)

Code	NON-ANGLER LATIN	Example
	SYST	-
Exclusion from	Participants describe how the	'I don't know a lot of Hispanic families that
outdoors spaces	natural resources agencies portrays the outdoors as a	[fish] and that stands out for me is one.' (F002)
	"white people space" and how the absence of outreach efforts targeting Latinos heightened this perception among non- angler Latinos.	'Latino people have fished in this region for hundreds of years, and why aren't [our stories] being talked about? Why isn't that in our stories? [] Our storytelling is a huge break, I don't know how to explain it, but it's a missing culture there.' (M012)
Immigration status	Participants describe how undocumented Latinos experience additional constraints related to their immigration status.	'To get a fishing license you have to have a social security number or something of the sort And I feel like that scares a lot of undocumented people away from fishing.' (F005)
		'Individuals that have unauthorized entry into the United States are living in a hyper vigilant world and any type of interaction with government can be terrifying for them because of the fear to be sent back home.' (M013)
Stereotypical	Participants describe how	'In Latin culture women kind of seen as the
gender roles	"women stereotypical role" and the perception of fishing as a "men's activity" prevent non-	home maker or whatever and so it's hard to see ourselves in the space.' (F010)
	angler Latinas from seeing themselves in the activity and from getting involved.	'I think that there's a lack of outreach from those that inspires female or non-binary to feel included in that space.' (M013)
Racism	Participants describe how racism from society extends to the recreational fishing	'I feel that's just life in Colorado as a person of color, you're always a little bit guarded.' (F008
	community and how this makes non-angler Latinos unwelcomed which prevents them from becoming involved in the activity.	'I think the rangers have that bias and say 'Oh, you don't look like the guy in a Toyota four runner with all the equipment and gear. What are you doing here? Let me go and stop you an ask you why you're here' versus somebody in a Toyota Tacoma with all the gear from Orvis or somewhere else. They're not stopped and asked [for licenses].' (M006)

# NON-ANGLER LATINOS' CONSTRAINTS

Code	Description	Example
	CONTI	EXT
Lack of learning & fishing opportunities	Participants express Latinos often do not have access to programs or to someone to teach them to fish or the	'That form of accessibility and finding how to do these things and where to do these things.' (F012)
	regulations and someone to take them to fish which makes it difficult for non-angler Latinos to get involved in the activity.	'There's a lot of kids that I know that I work with that have not been able to get out and go fishing, even though we're surrounded by lakes.' (M003)
Lack of or limited resources available in Spanish	Participants express that there is a lack of or limited resources available in Spanish that represent a constraints to non- English speakers' participation.	'There's a lot of people who didn't speak English who were fishing and there wasn't from what I can remember much signage that was in Spanish.' (F004)
		'[CPW] do have individuals that speak Spanish but there are cultural nuances that we oftentimes don't feel comfortable with white individuals being raised white and having that privilege, even just passing along that knowledge because they can be a little bit insensitive sometimes.' (M013)
Lack of access to gear & transportation	Participants describe how the lack access to gear or a vehicle prevent non-angler Latinos' participation.	'They don't know what they need, what equipment and it's the same when I started. I didn't know what equipment I need.' (F004)
	1 1	'It would be nice to have fishing clubs that offer transportation and equipment. I'm financially able to go fishing on my own, but when we're talking families that aren't financial able that becomes an elite, an exclusionary sport.' (M011)
	STRUCT	URAL
Time management	Participants describe how Latinos tend to work more physically- and time- demanding jobs than other	'Some people don't have the luxury of, you know, finding time around [commitments].' (F006)
	ethnicities and how this intensified their inability to participate in recreation activities.	'We're barely making, we were working to jobs. That's a big constraint there, they don't have time to go do stuff.' (M001)

Code	Description	Example
Financial	Participants describe how	'I do have friends who are interested in fly-
resources	Latinos tend to work low-	fishing in particular and I hear from them the
	paying jobs or have large	cost barrier for equipment and entry.' (M006)
	families which intensified their	
	inability to afford recreation	'Right now Colorado is really expensive as far
	participation.	as rent, inflation, groceries, and gas, so I think
		right now [friends] have not been able to obtain
		their fishing license.' (M016)

Code	Description	Example
	CONT	ЕХТ
Other protective actions	Participants describe multiple strategies use to address the lack of safety in fishing sites to still fish by themselves.	'If I do go by myself, I have three people who have my location on their phone, so they know where I'm at and then how long I expect to be there.' (F002)
		'I noticed I'm watching [others] more than enjoying fishing, so I have to pack up and I go to another lake or another place where they're not around.' (M002)
Fish with others	Participants express that they feel safer when they go fishing with others or in numbers.	'Personally, I have not felt uncomfortable or unsafe, but that also could have to do with the fact that's a community sport for me. It's something that we do in community and whether you have more strength in numbers.' (F009)
		'So that strengthen numbers and community is important. I intentionally go to Pagosa Springs because there is my generation of brown people those who are still there.' (M009)
Carry protective gear	Participants express they carry guns or pepper spray to protect themselves or their group from people trying to rob or attack	'We had a pistol for safety in the vehicle with us, if things really went south, we're able to defend ourselves.' (F001)
	them.	'I've taken my gun with me, I've taken pepper spray with me before. [] to certain areas I won't go without another person.' (M007)
	STRUCT	URAL
Fish around or paired with other activities	Participants how they find time around their commitments and how participants and their	'I can duck out of work early, so that I can like go live my life.' (F001)
	family find ways for them to fish despite their family not being interested or as much in fishing as the participant.	'This past Father's Day when deciding what to do, my teen daughters said we can go swimming, fishing, and take a picnic basket and so I think that was supportive, them knowing that I enjoy that activity.' (M006)

Code	Description	Example
Fish with someone else	Participants express that when someone else invites them to fish	'[My brother tells me] let's just go and it doesn't take much to convince me to go.' (F002)
	their negotiation efforts for their	
	time constraints are more	'A friend really encouraged me to go more
	intensive than if they were going by themselves.	often. He showed me some places where I could catch bigger fish than I thought I could.' (M007)
Plan trip ahead	Participants describe they plan	"(Moo7) "[My friend] and I are big nerds and we're in-
of time	Participants describe they plan	
of time	ahead of time to ensure fishing trips fit into their schedule.	depth planners. We had a calendar and a spreadsheet with estimated costs, we researched everything.' (F002)
		'Just planning it and say, well, it's going to be a two-day [trip], maybe take a Friday off for worl and then make it a three-day thing.' (M011)
Use or make	Participants describe what	'I tie my own flies, making my own materials. I
low-cost gear	alternatives to gear they use or	don't have paid more money to get the same
	how they access to low-cost gear.	thing when I can make it myself for less.' (F001)
		'My uncle also taught me how to fish with a bottle and a line and just normal bait cheap as a hotdog.' (M012)
Budget & save for expenses	Participants express they include fishing expenses in their budget or how they get involved in discounted fishing events.	'I did a guided trip with trout fly shop in the offseason, so it was pretty discounted they also offered you a \$100 gift card to their shop.' (F006)
		'I'm saving so I can buy my fishing license this year. I'm thinking six months ahead, so I gotta save around 100 bucks to buy my licenses.' (M009)
Borrow gear	Participants express they borrow	'If I didn't have a fly rod that I could use from
-	fishing gear from family, friends, or work.	work I probably wouldn't fish. I don't want to buy my own for a minute' (F008)
		'Just borrow my family's gear and all that stuff. (M004)

Code	Description	Example
	INTERPER	RSONAL
Fish by myself	Participants express despite not	'A lot of [my friends] will want to go fishing
	having a fishing partners they would still go fishing.	with me but then they'll change their plans and I'll end up going by myself.' (F008)
		'If [my brother] is unavailable then I'll still go out.' (M001)
Ask others &	Participants describe the	'When I first started, I really enjoy going with
attend clinics	strategies they use to learn to fish	people, with different groups and because I was
	or to improve their skills.	learning different things from different people.
		So, something I might learn from one person, I
		learned better from another person.' (F006)
		'If I'm not catching something and somebody is
		I walked by and I asked him what color [of fly]
		he is using.' (M002)
Self-taught	Participants express they taught	'Doing my own research.' (F009)
	themselves how to fish or new	
	techniques by researching what	'I just like to learn, so if there's something I
	they did not know.	don't know, I try to know it and I tried to apply it.' (M016)
Disregard	Participants express they no	'Just push through really. Definitely that
attitudes & comments	longer engage with anglers who	uncomforting feeling isn't gonna go away but
	are harassing them in fishing sites.	that's not gonna scare us away either.' (F012)
		'I'm at the point right now where I don't get
		intimidated by people anymore.' (M004)
Fish where I	Participants express they avoid	'I try to not have those [contentious] encounters
feel	interaction with specific types of	I just do a lot of avoidance around strangers in
comfortable	anglers or fishing where there is a large brown community.	the outdoors.' (F001)
	<u> </u>	'I go up there and it's mostly Mexicano,
		Chicano and we do it because it's a brown space.' (M009)

Code	Description	Example
I know what I am doing	Participants describe how they are knowledgeable of rules, regulations, and techniques to stand up to anglers that try to harass them or dismissed their knowledge.	'We showed them that we do know what we're doing. We don't always have to ask for help when it comes to outdoors though.' (F012) 'We're floating around in the water and some people come in and start complaining and
		telling us that we're not allowed to do that. But we only go to places where we're allowed to take our float tubes in the water, and we did all our research and everything.' (M007)
	INTRAPER	RSONAL
I modify where & how I fish	Participants describe the strategies they use to fish despite their health issues, old age, or disability.	'I injured my foot severely when I was younger, and arthritis set in when I hit 50 years old, and it started limiting the areas I could hike to go fishing in what I considered less traveled areas. So, I had to switch over to bait fishing at lakes and reservoirs.' (F007)
		'If I have trouble walking, I won't go to those back lakes and go to the lakes that are under paved roads that you could just pull up and get out and fish.' (M012)
Volunteer or work with minoritized groups	Participants describe the ways they foster and remove barriers for Latino participation in recreational fishing.	'Helping to create different spaces where people can come and learn and experience fishing and don't have to rely on the white old men like I had to.' (F010)
		'I run an organization where I get to provide that same medicine for my community. [] a lot of participants in my organization are first time camping, for some fishing, and I get to reclaim that medicine again of that first time experience.' (M009)