

GENDER-BASED CONSTRAINTS TO SPORTFISHING PARTICIPATION IN THE EASTERN LAKE ONTARIO AREA

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Abstract: Sportfishing in the eastern Lake Ontario area is the foundation of the coastal heritage of local residents, promotes the awareness of residents about the importance of coastal resources, and is essential to the area's economic base. With declines projected in sportfishing participation by 18- to 44-year-old anglers in New York State by 2005, understanding how constraints influence fishing participation could be essential for maintaining existing participation levels. The purpose of this study is to identify, through qualitative research methods, the major constraints influencing fishing participation by females and males during childhood, adolescence, and early to middle adulthood. Forty-one anglers (i.e., 20 females and 21 males) and 16 non-anglers (i.e., 10 females and 6 males) were interviewed. Constraints varied by life stage, with fishing opportunity constraints limiting participation during childhood, social constraints affecting adolescence, and time constraints limiting participation during adulthood. Female interviewees tended to have more constraints on their fishing involvement throughout the course of their lives than did male interviewees. Management implications related to the constraints identified are discussed.

Introduction

The eastern Lake Ontario area in New York State is an area strongly influenced by an abundance of coastal resources and the sportfishing heritage of its residents. Over the past decade, declines in sportfishing participation have occurred in this area, negatively impacting the economies of coastal communities. Fishing participation projections for New York State indicate that statewide angler participation will decline further by 2005 due to population shifts in the state (Connelly, Brown, &

Knuth 1999). In order to offset these projected declines in sportfishing participation, the elements influencing participation need to be identified. Because of the low percentage of New York State anglers who are females (i.e., 12%; Connelly, Brown, and Knuth 1997), the elements influencing female participation may be of particular interest to fisheries managers and promoters as they attempt to offset declines in participation by attracting specific angler markets such as female anglers.

Previous research has identified gender-based constraints to participation in leisure activities during specific life stages (Jackson and Henderson 1995; Culp 1998; McMeeking and Purkayastha 1995; Hultsman 1993; Shaw 1994). An analysis of constraints is likely to reveal insights into sportfishing participation as well. The purpose of this study is to identify constraints influencing sportfishing participation by females and males during childhood, adolescence, and early to middle adulthood. Interviews of anglers and non-anglers will be qualitatively analyzed to identify the constraints influencing participation. Management implications based on these results will be discussed.

Background

Constraints to leisure have been defined as anything that inhibit an individual's ability to participate in a leisure activity, whether by limiting the amount of time an individual can participate, preventing an individual from taking advantage of leisure services, or preventing an individual from achieving a desired level of satisfaction (Jackson and Henderson 1995; Jackson 1988). Constraints shown to influence leisure activities include the cost of participation, time limitations, lack of opportunity or access, and physical limitations (Jackson and Henderson 1995; Jackson 1988; Culp 1998).

Previous studies have shown that constraints to participation in leisure activities are often related to life stage and gender (Jackson and Henderson 1995; Culp 1998; McMeeking and Purkayastha 1995; Hultsman 1993; Shaw 1994). During childhood, participation in recreational activities may be influenced by external factors such as family (both parents and siblings), peers, teachers, media, and community programs (Mannell and Kleiber 1997). According to Connelly et al. (1999), when parents were asked why their oldest

child did not fish more, several reasons were provided, including the parent's inability to take the child fishing — an opportunity-related constraint. In addition, female children may have fewer individuals outside of their immediate family who are willing to take them fishing, further limiting their opportunity to fish (Kuehn 2003).

During adolescence, when individuals begin to socialize more with friends, social constraints such as peer pressure may influence sportfishing participation. According to Erikson (1963), adolescence is the developmental stage during which people develop a sense of identity, through both identification with others and individuation (i.e., defining themselves as unique from others). In identifying themselves as one with peer groups, adolescents may either continue fishing (if their peer group fishes) or stop fishing (if their peer group does not fish). In defining themselves as unique from others, adolescents may pull away from existing fishing partners such as parents. Because of the low number of females who fish, it is likely that peer pressure negatively influences female fishing participation to a greater extent than it does male participation during adolescence. Culp (1998), in her study of adolescent females and outdoor recreation, found that gender roles, peer relationships, an individual's self concept, access and opportunity problems, environmental factors, perceived and/or existing physical limitations, and safety considerations constrained female adolescent participation.

Constraints may also influence an individual's participation in leisure activities during adulthood. Duda et al. (1999) states that the lack of time available for fishing for both males and females is due to work obligations (69% of responding anglers), family obligations (22%), education-related activities (13%), and other recreational activities or hobbies (9%). Bryan (1977) suggests that the amount of time anglers spend fishing is likely related to the amount of time their jobs allow. Women who work and have children may have less available leisure time than working men with children because more of the women's time may be used for childcare and domestic work (Mannell and Kleiber 1997). Shaw (1994) suggests that economic and opportunity constraints may also limit the participation of both men and women in leisure activities, and that both men and

women are "channeled" into specific leisure activities that "perpetuate gender stereotypes." Thus, many women may believe that it is not suitable for them to participate in male-dominated recreational activities such as fishing. Female anglers may also view fishing as an activity that is not welcoming to them because of the relatively high number of males involved in the sport.

Methods

In order to identify elements influencing the fishing participation of both males and females during childhood, adolescence, and adulthood, a study comprised of preliminary qualitative interviews, a mail survey, and qualitative interviews of both anglers and non-anglers¹ was conducted in 2001 and 2002 with funding from New York Sea Grant and the State University of New York College of Environmental Science and Forestry. Data concerning constraints were collected during the qualitative angler and non-angler interview portion of this study.

The samples of angler and non-angler interviewees were selected through a three-step process:

1. Mail survey sample of anglers. For the mail survey portion of this study, an initial sample of anglers was collected from New York State Department of Environmental Conservation fishing license stubs for the 1999 calendar year. This sample was constrained by gender (i.e., 525 males and 525 females), location of license purchase (i.e., Wayne, Jefferson, and Oswego counties along the eastern shore of Lake Ontario), state of residence (i.e., New York state residents), and age (i.e., 18 to 44 years). Sampling constraints were used to ensure a comparable number of males and females in the original sample, a similarity in fishing experience between anglers, and ages appropriate for studying the projected decline in the number of New York State anglers (i.e., the 18- to 44-year-old age class in New York is projected to decline by 7.9% by 2005; Connelly et al. 1999).

2. Angler interviewee sample. Anglers were mailed interview permission form with the mail survey. Of the 279 anglers who responded to the mail survey, 44 males and 21 females returned this permission form, indicating their willingness to participate in

¹ Individuals who either do not fish or fish infrequently are termed "non-anglers" in this study for simplification purposes.

Table 1. — Numbers and percentages of male and females anglers indicating the existence of specific constraints during childhood.

Constraints	Females		Males	
	Number	Percent	Number	Percent
Lack of initiator	5	33%	1	5%
Access to a fishing location	2	13	4	19
Gender bias	1	7	0	0
Handling bait	1	7%	0	0%
N	15		21	

Table 2. — Numbers and percentages of male and females non-anglers indicating the existence of specific constraints.

Constraints	Females		Males	
	Number	Percent	Number	Percent
Boring/Lack of patience	4	40%	2	33%
Handling bait	4	40	1	17
Handling fish	2	20	0	0
Peer pressure	2	20	0	0
Other interests	1	10	3	50
Weather/Insects	1	10	1	17
Young children	1	10	1	17
Lack of partner	1	10	1	17
Gender bias	1	10	0	0
College	0	0	2	33
Work	0	0%	1	17%
N	10		6	

the interviews. Of those anglers who returned the permission form, 21 males and 16 females were contacted by telephone. An additional four females were selected randomly from the pool of survey respondents and asked to participate in the interviews.

3. Non-angler interviewee sample. During the angler interviews, interviewees were asked for contact information for friends and relatives who either do not fish or fish infrequently. Contact information for eight males and eleven females was obtained. Six males and ten females were identified as non-anglers and interviewed.

The angler and non-angler interviews were conducted by telephone using an interview guide and tape recorder, and ranged in length from 15 to 45 minutes for anglers and 5 to 10 minutes for non-anglers. All interviewees were asked for permission to have their interviews tape recorded for research purposes prior to the start of each interview. The interview question guides were developed through a literature review as well as from preliminary interviews conducted as part of

this study. Questions focused on the social and psychological elements (including constraints) influencing childhood, adolescent, and adult fishing participation or, in the case of non-anglers, lack of participation.

Recordings of both angler and non-angler interviews were transcribed and analyzed using NUD*IST, a qualitative research software program. Data for males and females were analyzed separately and coded according to the elements influencing participation during each life stage. Data concerning constraints were separated during coding from data concerning motivations for participation. Coded constraint data were studied for patterns in the similarities and differences between genders and life stages.

Results

Childhood constraints. Constraints during childhood for both males and females were related to opportunity (i.e., the interviewee's lack of access to a fishing location and/or lack of an adult willing to take them fishing during childhood) and individual inclinations (e.g., dislike of handling

bait and boredom). Opportunity-related constraints were common and appeared to be similar for female and male interviewees early in childhood, with children depending on their parents or other adults to take them fishing. Thirty-three percent of the female and 5% of the male anglers interviewed indicated that the lack of an adult to take them fishing constrained their participation during childhood (Table 1). Interviewees who grew up with a fishing location literally in their backyard were not as constrained by the need to have an adult take them fishing as were those living further distances from fishing locations.

INTERVIEWER: Were you close enough to water that you could go fishing on your own?

MALE INTERVIEWEE #1: No, not that close. It was about five miles from the farm to the bay, so I never went too much on my own as a child.

In two instances, the lack of an adult willing to take the interviewee fishing as a child was related to a gender bias (i.e., a gender-related lack of support) by the interviewee's parents. Although a gender bias was identified only by one female angler and one female non-angler, this constraint strongly influenced the decision of both individuals to drop out of the sport. In one case, the angler re-entered the sport as an adult due to the support she received from her significant other.

INTERVIEWER: Now what re-sparked your interest in fishing?

FEMALE INTERVIEWEE #2: When I got out of the military, I moved up to where I am now to help my parents out with their fish cleaning station. I wanted to get into fly-fishing and I had somebody that took the time to show me. And I love it. I always wanted to fly fish when I was a kid but my Dad never would show me.

INTERVIEWER: Did you Dad know how to fly-fish?

FEMALE INTERVIEWEE #2: Yeah. I don't know... once I got to be over eight years old, Dad was no longer interested in girls. He wanted a boy.

In the other case, the interviewee did not re-enter the sport.

FEMALE INTERVIEWEE (NON-ANGLER) #3: ... my mother did not feel like it was ladylike for us to be fishing and that's why we didn't fish. We had to be little girls and we were acting too much like little boys so... no more fishing.

Individual inclinations such as the dislike of handling bait or fish also often constrained participation during childhood. Five females and one male (Tables 1 and 2) indicated their dislike of baiting hooks. Five of these individuals dropped out of the sport largely because of their dislike of that aspect of fishing.

MALE INTERVIEWEE (NON-ANGLER) #4:

I never really liked it [fishing]. It was a little too icky... like worms and... I wasn't a real dirty kid. One female angler explained why she was able to adapt to handling bait.

FEMALE INTERVIEWEE #5: I liked the taste of the trout. I hated puttin' the worm on. Being a girl, you know, it's not your favorite thing to do but it was quite... my brother would pick on me so it was quite a thing to do it too. I had to be able to do what he could do so I would put the worm on .

Another aspect of fishing found to be constraining during childhood was the boredom that many male and female anglers associated with fishing. Many non-anglers reported boredom as the reason why they dropped out of the sport.

INTERVIEWER: Have you fished at any time in your life?

FEMALE INTERVIEWEE (NON-ANGLER) #6: Yes. When I was younger when my father wanted us all to fish but it just was not something that I took to.

INTERVIEWER: What didn't you like about it?

FEMALE INTERVIEWEE (NON-ANGLER) #6: ... I had no patience for just sitting there, waiting for something to happen. I just need something... I don't know. I just didn't care for that. That wasn't something that I was interested in.

Boredom was also mentioned by interviewees concerning their own children.

INTERVIEWER: When you go out on a fishing trip, it's your daughter, your girlfriend and you?

MALE INTERVIEWEE #7: Usually it's just me and my girlfriend. Once in a while my daughter comes along when we go for a short day cause she just gets bored so quick and don't want to be out there.

Adolescent constraints. During adolescence, interest in other recreational activities, the lack of a fishing partner, peer pressure (both to fish and not to fish), access to fishing locations, and time

Table 3. — Numbers and percentages of male and females anglers indicating the existence of specific constraints during adolescence.

Constraints	Females		Males	
	Number	Percent	Number	Percent
Other interests	5	33%	7	33%
Lack of partner	4	26	2	10
Peer pressure	3	20	3	14
Time constraints (work/school)	2	13	2	10
Access to a fishing location	2	13	2	10
Weather	0	0%	1	5%
N	15		21	

Table 4. — Numbers and percentages of male and females anglers indicating the existence of specific constraints during adulthood.

Constraints	Females		Males	
	Number	Percent	Number	Percent
Time constraints (work)	8	40%	14	67%
Lack of partner	7	35	2	9
Birth of Children/Young children	6	30	1	5
College	5	25	4	19
Weather	4	20	0	0
Safety (concerns for children)	3	15	0	0
Time constraints (family/marital)	2	10	5	24
Perceptions concerning male-domination of sport	2	10	0	0
Safety (concerns for self)	2	10	0	0
Handling boat alone	2	10	0	0
Other recreational interests	1	5	3	14
Military	0	0	3	14
Time constraints (house-related)	1	5	1	5
Access to a fishing location	1	5	1	5
Family emergencies	1	5	0	0
Poor catch rate	1	5	0	0
Handling bait	1	5	0	0
Temporary physical problem	0	0%	1	5%
N	20		21	

constraints influenced the fishing participation of interviewees. Thirty-three percent of both female and male anglers indicated that their interest in recreational activities other than fishing negatively influenced their fishing participation during adolescence (Table 3). In addition, the lack of a fishing partner constrained the participation of 26% of the female anglers interviewed and 10% of the males. Peer pressure acted as a constraint for 20% of female interviewees, but as both a facilitator and constraint to participation for males. While these three constraints (i.e., interest in other recreational activities, lack of a fishing partner, and peer pressure) appeared to strongly influence the fishing participation of both male and female interviewees during adolescence, they had a greater negative impact

on the participation of female interviewees. Because of the low number of females involved in the sport, female interviewees were less likely than the male interviewees to have peers that fished during adolescence. In order to satisfy a need for socializing as a teenager, females often sought activities other than fishing in which their peers were involved.

INTERVIEWER: Did you fish a lot as a teenager?

FEMALE INTERVIEWEE #8: Not really. No.

INTERVIEWER: Why did you not fish?

FEMALE INTERVIEWEE #8: Being more of a teenager...a female...it kind of quieted down because you were busy doing other things and it wasn't always really cool to go with your parents anywhere.

In contrast, many male interviewees indicated that adolescence was generally the time in their life when they fished the most, mainly because of having ample time to fish as well as many friends with whom to fish.

INTERVIEWER: Was there any time when you were a teenager when you stopped fishing or you fished less?

MALE INTERVIEWEE #9: No, actually it probably picked up.

INTERVIEWER: As a teenager, did you fish?

MALE INTERVIEWEE #10: That probably was when I would have done most of my fishing.

However, several male interviewees stated that they did stop fishing late in their teens because of their need for social interaction with their peers or other interests.

MALE INTERVIEWEE #11: Probably from thirteen to sixteen I fished extremely a lot... every weekend. Then as I got more into sports and girls, fishing took the back seat. A fishing date doesn't cut it.

Obligations related to work and school also constrained participation by both 13% of female and 10% of male interviewees as they entered late adolescence (Table 3).

INTERVIEWER: Was there any time when you were a teenager when you stopped fishing?

MALE INTERVIEWEE #12: When I started working.

INTERVIEWER: At what age did you start working?

MALE INTERVIEWEE #12: I've worked since I was nine years old. But I really officially didn't work till I was about fourteen or so. And I stopped for a couple of years cause... girls and money... and you can get the aspects of life quickly. You can't go out with the girls unless you have the cash. Fishing would be my third thing when I was younger. It was work, girls, then fishing.

Access issues also constrained the fishing participation of 13% of the female and 10% of the male interviewees during adolescence (Table 3).

However, many of the interviewees indicated that this constraint was eliminated once they learned how to drive.

Adult constraints. Constraints to fishing development varied during adulthood. In early adulthood (Erikson 1963), a time often characterized by an individual's focus on specific life goals (e.g., marriage and education), participation tended to decrease temporarily. Many male and female interviewees stated that their early twenties was a time of low fishing participation, primarily because of attending college, being in the military, or being a newlywed. The lack of time available for fishing, as well as limited fishing access due to the location of their residence in college or the military, constrained fishing participation during these years.

INTERVIEWER: Has there been any time as an adult when you stopped fishing or fished less?

MALE INTERVIEWEE #13: Sure. During college I fished very infrequently. Probably eighteen to twenty-four I didn't fish much.

In addition, many males indicated that their fishing participation during the early years of their marriage decreased due to increased time constraints. In contrast, several women who did not fish prior to their marriage began fishing during the early years of their marriage because of their spouse's interest in the sport.

As anglers aged, fishing participation for both female and male interviewees was limited by time constraints related to work and family obligations. Sixty-seven percent of males and 40% of females described work as being a constraint (Table 4). Twenty-four percent of males and 10% of females indicated that family obligations limited the time they had available for fishing.

INTERVIEWER: Is there anything today that prevents you from fishing as much as you'd like to...

MALE INTERVIEWEE #14: Work. I'm sure that's the number one answer. Probably, work, because anything else... I make time to go fishin'

In addition, all of the female interviewees who had children, with the exception of one, stated that they had dropped out of fishing for several years following the birth of their children.

INTERVIEWER: Was there any time since you started fishing at age eighteen when you stopped fishing?

FEMALE INTERVIEWEE #15: I fished pretty much straight through... Well, when my

daughter was born, I probably didn't fish for a couple of years. She just didn't enjoy the boat too well, at first. Now we have her fishing.

While many males also stated that family obligations greatly limited their participation, none temporarily dropped out of the sport after the birth of their children. One male interviewee indicated that his participation was greatly limited by the birth of his child.

INTERVIEWER: Has there been any time since you started back fishing when you fished less?

MALE INTERVIEWEE #16: Yes, there was a two-year period where I hardly went and it was last summer and the summer before. And I just kind of gave it up for two reasons. The summer my daughter was born, I just couldn't justify going out there and leaving my wife home with a newborn all the time. So I eased back that summer. Then the following summer I started the business that I currently own so we've been busy building that for a couple of years. So I did ease back in light of those responsibilities.

As the children of anglers aged, participation of male and female anglers frequently increased as the anglers began initiating their children into the sport. However, after their children reached adolescence, the time that was available to both male and female interviewees for fishing was often constrained by the activities of the angler's children.

INTERVIEWER: Do you ever fish by yourself now?

MALE INTERVIEWEE #17: Occasionally. I drop my son off at karate class which takes an hour and it's right on the Salmon River so at times I drop him off and go wet a line... yeh.

For some male and female interviewees, the social nature of their fishing involvement also acted as a constraint. Several female interviewees indicated that the enjoyment they derived from fishing was exclusively based on social interaction, and that they did not fish when they did not have someone with whom to fish. Thirty-five percent of females and 9% of males indicated that the lack of a partner constrained their participation in the sport (Table 4).

INTERVIEWER: Why do you currently fish?

FEMALE INTERVIEWEE #18: My husband likes to fish.

INTERVIEWER: Do you get anything out of it, though, or is it just for companionship?

FEMALE INTERVIEWEE #18: Basically companionship for him. I wouldn't go by myself.

INTERVIEWER: Why wouldn't you?

FEMALE INTERVIEWEE #18: It's just not as much fun, fishin' by yourself. It's fun to go with people...

In addition, several female non-anglers indicated that they no longer fished because they had married a non-fishing male.

INTERVIEWER: Do you have any interest in fishing nowadays?

FEMALE INTERVIEWEE (NON-ANGLER)

#19: I probably would if Tom [husband] was.

Because he isn't, I haven't. But like if I'm around it, I'm interested by it. But I'm not around someone all the time that likes to fish...

Two males also indicated a preference for fishing with someone. Unlike the female interviewees above, however, the fishing activity of these anglers did not end completely when fishing partners were not available since the males were willing to fish alone.

INTERVIEWER: Do you ever fish by yourself?

MALE INTERVIEWEE #20: Not too often. I usually go with someone... I usually bring somebody along... I like to share the experience with somebody else. But I have [gone by myself]. I enjoy it enough that I would but t here's just a lot of people that I'm in contact with that appreciate the chance to go out and go fishing, so...

INTERVIEWER: Do you fish by yourself at all anymore?

MALE INTERVIEWEE #21: Yeh, occasionally when I can't get no one to go out with me in my boat so I go out. So occasionally I do fish alone but usually I like to go with someone.

Fishing participation by female interviewees was also constrained by a perceived lack of safety that they associated with fishing. Issues concerning personal safety and the safety of children were raised by 10% and 15% of female interviewees, respectively (Table 4).

FEMALE INTERVIEWEE #22: I'm an overcautious mother when my son goes. He's a hyperactive child and he wears chest waders. And I'm like "Robert, you have to please be

careful. Don't get in a hole. You know what to do if your boots fill up." "Yes, Mother."

INTERVIEWER: Why wouldn't you fish by yourself?

FEMALE INTERVIEWEE #23: Well, I'm really a busy person... and so if I happen to have a moment when I'm not with them, I'm usually working. I'm just at this stage in my life where actually being able to recreate on my own is not usually an option... or at least I don't feel like it is. So that's probably the major reason. But I would say a back one for me... kind of lurking in the background... is just a woman alone in the woods. I'm old enough now that I know that things happen out there. When I was younger it wouldn't have concerned me a bit. So... you know, that would be an issue.

Two female anglers also mentioned their discomfort with handling a boat by themselves. Several female interviewees who grew up fishing on a boat did not identify this constraint.

INTERVIEWER: Why wouldn't you [go fishing by yourself]?

FEMALE INTERVIEWEE #24: It's just not as much fun, fishin' by yourself. It's fun to go with people... and... I don't know if I could handle taking the boat to the lake on my own. He [her husband] does all that.

Female perceptions concerning fishing as a male-dominated sport were also identified as constraining by two female anglers and one non-angler. One female angler discussed how her perceptions concerning fishing as unwelcoming to females changed once she became more involved in the sport.

FEMALE INTERVIEWEE #25: But I've also found... the first few times I went out... I thought this is going to be like when I first started coxswaining in high school. We were operating out of a men's club and the men really didn't like seeing women around, girls [clarifies meaning], and I thought this was going to be like with the fishing. That it was going to be all these guys and you know, "Man, look at her." [Voice takes on insulting tone.] And they're going to be guzzling and... I found that there's only that kind of group in certain circumstances. It's the time when there's the big salmon run, you get kind of macho guys out there. But

generally, people are really supportive and they don't care about gender. And particularly when you've got a child with you. It seems people will do anything... So really, if anything, they just want to be as helpful as possible. So I've found it to be very positive.

Discussion

Both female and male anglers experience constraints to their fishing participation during all stages in their lives. These constraints appear to vary by life stage. For instance, opportunity, especially as it is related to access to a fishing location, appears to be an important constraint during childhood and adolescence, but has little importance during adulthood when individuals usually own a motor vehicle and are able to travel as needed. Dislike of handling bait and boredom were the two important constraints identified by male and female interviewees during childhood. During adolescence and adulthood, the need for social interaction as a component of fishing was important for both males and females. Time available for fishing in general appears also to change greatly with life stage, with individuals having more time to fish during childhood and adolescence than during adulthood when work and family obligations often make leisure time scarce.

Females tended to have more constraints on their fishing involvement throughout the course of their lives than did male interviewees. During childhood, a gender-based lack of encouragement (i.e., gender bias) during childhood caused two female interviewees to drop out of fishing. The fishing participation of female interviewees during adolescence was constrained by their need for social interaction while fishing and a lack of peers that fished. During adulthood, female participation continued to be constrained by the need for social interaction as a component of fishing experiences. Adult females were constrained to a greater extent than males by family obligations during the years immediately following childbirth. In addition, female participation was constrained by perceived safety risks, a factor that did not appear in any of the male interviews. Female perceptions concerning fishing as a male-dominated sport may also discourage females from participating to some extent.

Males were influenced by gender-related constraints as well. Specifically, males who married

non-fishing females were likely to have decreased levels of participation during the early stages of their marriage. Males who were able to successfully initiate their wives into fishing often satisfied their need to both spend time with their spouse and continue fishing. A greater percentage of males than females indicated that their fishing involvement was most constrained by work. Traditional societal perceptions of males as family providers may account for this difference between genders.

Management implications

Many of the constraints to fishing participation identified in this article can be minimized by specific fisheries management, education, and promotional strategies. For example, educating parents, through both seminars and publications, about how to successfully initiate their children into fishing could help alleviate the dislike of handling bait and boredom that many interviewees experienced during childhood. Using artificial lures when a child expresses a dislike of handling live or cut bait, and choosing locations suitable for children such as shoreline areas where catch rates are likely to be high (e.g., panfish ponds) are two strategies that could help prevent these common constraints from causing children to drop out of the sport.

For adolescents, providing social fishing opportunities for both males and females could encourage participation. Weekend fishing events, fishing teams, and teen fishing derbies could maintain participation by individuals during this highly social time of their lives. In addition, incorporating outdoor and fishing skills curricula in schools could help educate teens (especially those with parents who do not fish) about fishing. Teaching fishing skills in a school setting would also increase the number of females who fish, making it easier for females to find peers that fish during adolescence. Adding fishing trips to the activities of existing teen organizations, especially organizations for females, could also provide teens with highly social fishing experiences.

During adulthood, time constraints are frequently experienced by both males and females. Although it difficult to overcome time constraints, it is possible to utilize promotional and educational strategies to encourage fishing participation during leisure time. Specifically, promotions to both males

and females should focus on fishing as a family activity. The interests of female anglers should be carefully considered when placing fishing advertisements, since media used by female anglers will likely differ from those used by males. In addition, sportfishing clinics could be held to expand the fishing skills of adult anglers. Clinics targeted specifically to females interested in learning how to fish are highly recommended, but need to focus on the social interests of females.

Conclusion

Constraints appear to influence the fishing participation of both males and females during all life stages. In addition, female participation throughout life appears to be negatively influenced by a greater number of constraints, partially explaining why female participation in the sport is lower than that of males. In order to reduce fishing-related constraints to both males and females, it is important to understand the highly social nature of fishing and focus strategies designed to increase participation on the social needs of anglers. Eliminating constraints to fishing participation during each life stage is also important since adult participation appears to be closely linked to participation during childhood and adolescence. Finally, understanding how the traditional male-domination of the sport acts as a motivator for male participation and a constraint for female participation is essential to increasing fishing opportunities for females in family, organizational, and school settings.

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