

COMPARISON OF ATTITUDES OF AVERAGE FISHERMEN AND FISHING CLUB MEMBERS

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Abstract: A telephone survey was conducted of a stratified, random sample of people holding Florida fishing licenses and of a random sample of members of selected fishing clubs. Questions were asked concerning demographic characteristics, their fishing habits and preferences, opinions about the Florida Game and Fresh Water Fish Commission and its projects, and their sources of information on freshwater fishing topics. A statistically significant difference was found between the responses of the average fishermen and the fishing club members in 72% of the questions asked in the survey.

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In some states, the leadership of organized fishing clubs are very vocal in expressing their opinions to members of the legislature and to their state game and fish commissions. Many times they report to be expressing the opinion of all fishermen about fishing preferences, and policies and procedures of the game and fish commissions. Since the membership on fishing clubs represents only a small minority of all of the licensed fishermen in the state, the Fisheries Division of the Florida Game and Fresh Water Fish Commission (FGFWFC) contracted with the Communication Research Center (CRC) of the Florida State University to conduct a telephone survey seeking information and opinions of the licensed fishing public and of the fishing club members in Florida. The purpose of the survey was to determine the demographic characteristics of both samples, their fishing habits and preferences, and their sources of information on freshwater fishing topics.

MATERIALS AND METHOD

The FGFWFC separates the geographic area of the state into 5 regions: South Florida, Northeast, Northwest, Everglades and Central. Based on proportions of licensed sales for the 1974-75 fiscal year, all counties were categorized into a small, medium or large classification. A small, medium and large county were randomly selected from each of the 5 regions, creating a total of 15 counties to be sampled. Copies of all fishing licenses sold in these counties for the first 3 months of the 1976-77 fiscal year were collected and random samples were drawn separately from each county.

Since the survey was to be conducted by telephone, 3 limitations on the method of sample selection were employed. First, only those licensed fishermen who lived in the county in which the license was sold were eligible. Second, only licenses that had legible names and addresses were used. Third, either the person's complete name or last name and address had to appear in the local telephone directory. These stipulations were imposed because phone numbers did not appear on the actual fishing license and had to be found in local telephone directories.

Organized fishing club members were randomly selected from membership lists furnished by various local clubs throughout the state. The statewide organizations of these clubs would not furnish names to be used in sampling. Since the membership lists were furnished by clubs that self-selected to participate, some bias was created in the sampling procedure of the fishing club members. This bias was minimized by the addition of club members found in the randomly selected license holders. The responses of these fishing club members are included in the statistics reported for both samples.

Fifteen female interviewers were trained in a 4 hour session. They thoroughly reviewed the questionnaire and participated in a supervised practice interview session.

After learning the proper procedure, they were assigned portions of the sample to interview.

All calls were placed during the work days of 10 January through 15 February 1977. A maximum limit of 5 attempts to contact each member of the sample was set with at least 3 of the attempts made in the early evening hours. These calls were spread over a minimum of 3 days. After the fifth attempt, the interviewer substituted one of the alternates who had been selected with the initial sample. Answers to the questionnaire were recorded on a code sheet. Each answer to a close-ended question was precoded with each possible response assigned a numerical value. Responses to open-ended questions were recorded verbatim in a space provided at the bottom of the code sheet.

The interviewer began the survey by asking to speak with the person whose name appeared on the attached license. If contact was made with that person, the interviewer read a standardized introduction and then immediately began the survey questions. The questions were asked in the order they appeared, and interviewers stuck as closely as possible to the exact wording of the questionnaire. Upon completing of the questionnaire, the interviewer thanked the respondent for his/her help and terminated the interview.

A member of the CRC staff coded all responses to open-minded questions. Another member of the CRC staff keypunched the coded answers for computer analysis. Verification of keypunching showed an extremely low error rate of .8%. A Statistical Package for the Social Sciences (SPSS) program for frequencies was obtained across all responses for each question. A cross tabulation program was conducted on all questions for evidence of statistical significance between the statewide response and the response of fishing club members. An alpha level of .05 was used.

RESULTS AND DISCUSSION

In analyzing the data, the survey questions were divided into 5 categories: 1. demographics; 2. fishing habits and preferences; 3. general opinions; 4. opinions and knowledge of specific projects; and 5. sources of information. Results are reported for overall statewide responses and the responses of fishing club members. Because of the space limitations for this paper, the authors have omitted questions that dealt exclusively with Florida interests.

Demographics

The ratio of sex of respondents in the sample was in correct proportion to previously known percentages of males and females buying fishing licenses in Florida: Males (76%) and Females (24%). A significant difference was found between the average fishermen and fishing club members in the demographic category of sex. A very low percentage (8%) of females were found in the club membership.

Fishing habits and preferences.

In the statewide survey of license holders, respondents were asked if they belonged to fishing clubs. Only 7% of those surveyed belonged to some type of fishing club. This 7% of the statewide fishermen is included in both the licensed fishermen percentages and in the fishing club percentages in all other questions. The resulting sample size was 1,132 for the average fishermen and 128 for the fishing club members.

Both samples were asked for the number of fishing trips they took per year. Statewide, 33% of the fishermen went approximately once a week and half went once a month or less. The fishing club members' largest percentage (43%) was also once a week but only 22% reported going once a month or less. Overall, club members went more often than other fishermen. The mean for average fishermen was 39 trips per year as compared to a mean of 65 trips per year for fishing club members.

Additional information gave the number of hours per fishing trip. Sixty-four percent of the average fishermen and 65% of the club members fished from 3 to 6 hours per trip. The mean was 5 hours and the median was 4.5 hours per trip.

The interviewees were asked if they preferred to fish from a boat, bank, dock, etc. Both average fishermen and club members preferred to fish from a boat (71% to 79% respectively). Fishing from the bank was second choice in both categories. In Florida, wading and docks were not widely preferred. As might be expected from the above response, a high percentage of the statewide sample and the club members reported owning boats and/or motors. A significant difference was found between the responses of average fishermen and club members. Sixty-two percent of the average fishermen owned a motor while 80% of the club members owned a motor. Sixty-four percent of the fishermen owned a boat compared to 79% of the club members.

When giving the types of tackle they preferred, there was a significant difference between the average fishermen and the fishing club members. The average fishermen showed a strong preference (41%) for a spinning rod, followed by 32% for a casting rod. An unexpectedly large percentage (17%) preferred a cane pole. Only 7% preferred a fly rod. The club members were split evenly between a casting rod (45%) and a spinning rod (44%). Only 2% preferred a cane pole and 3% liked a fly rod.

The respondents were asked about their preferences for different types of bodies of water. Responses were significantly different between the average fishermen and fishing club members. Lakes were preferred by 56% of the fishermen and 68% of the fishing club members. Rivers were next with 27% and 16% respectively. Nine percent of the fishermen preferred canals to only 2% of the fishing club members. Reservoirs and ponds are not widely preferred in Florida probably because they are not available in much of the state.

A question about the species of fish preferred revealed a significant difference between the responses of average fishermen and club members. The average fishermen showed 53% preferred bass, 19% bream, 13% crappie, and 8% catfish. Eighty percent of the club members preferred bass and no other species was preferred by more than 7% of the club members. Most of the fishing clubs are appropriately called bass clubs.

Related to the previous question, the respondents were asked to name the two species of fish that they tried to catch most often. Forty percent of the licensed fishermen try to catch bass while 52% of the club members try to catch bass. For the licensed fishermen, the second and third choices were bream (25%) and crappie (20%). The club members reversed this order with crappie being second (25%) and bream being third (13%). These results can be compared with the preferred catch of both the regular fishermen and club members. A trend was evident across these 2 questions for the top 3 preferences of fish. Bass was first choice. Bream and crappie were second and third, depending on whether the respondents were members of clubs or not.

The respondents were asked to indicate their criteria for evaluating whether a fishing trip was successful or not. Differences between the average fishermen and club members were again significant. For the average fishermen the most important criteria were fun or relaxation (33%), enough for a meal (27%) and the combined responses stating a certain number of fish (32%). Respondents reported in terms of a "number of fish" 32% of the time compared to terms giving "weight" only 3%. Club members were low (14%) on "enough for a meal" as compared to average fishermen (27%). Thirty-six percent of the club members thought of success in terms of a "number of fish." Four percent of the club members equated success with winning a tournament.

The next 2 questions dealt with the way the fisherman perceived himself. There was a significant difference between the responses of the fishermen and club members on whether they considered themselves above average, average, or below average fishermen. Statewide 62% of the fishermen saw themselves as average with 24% seeing themselves as below average. The responses of the club members were skewed in the opposite direction with 52% viewing themselves as average and 39% choosing a rating of above average. A total of 91% of the club members thought they were at least average fishermen.

The respondents were also asked whether they thought it was primarily luck or skill when they caught a fish. They were allowed to also respond that it was a combination of

luck and skill. Again a significant difference was found between the club members and the average fishermen. The fishermen sample reported that catching a fish was the result of luck (28%) or a combination of luck and skill (53%). The club members also rated the combination very highly (63%) but 27% thought that skill was the reason. It was evident from these 2 questions that the club members think more highly of their fishing ability than the average fishermen.

General opinions.

The next set of questions dealt with general opinions about the duties, priorities and emphasis of the Florida Game and Fresh Water Fish Commission.

First, respondents were asked what they thought was the main purpose of the Commission. Significance was found between the responses of licensed fishermen and club members. Law enforcement and fish management were high in both the average and club responses. Twenty-two percent of the average fishermen saw law enforcement as the main purpose of the FGFWFC and 21% saw fish management as the main purpose. Of the club members, 18% selected law enforcement and 13% chose fish management. Twelve percent of the average fishermen and 19% of the club members did not have an answer to this question.

Following this question, respondents were asked where the Commission *should* place more emphasis. The average fishermen rated fish management (20%), law enforcement (18%), and pollution control (16%) very close together as the places where emphasis should be given. Weed control was suggested by 11% of the respondents. The fishing club members were significantly different, placing pollution control (16%), fish management (14%), and law enforcement (12%), in that order. Nineteen percent of the club members and 13% of the average fishermen had no answer to the question of what should be the purpose of the FGFWFC.

The interviewees were asked if the Commission's involvement in improving fishing is very satisfactory, satisfactory, neutral, unsatisfactory, or very unsatisfactory. Significant differences were found between responses of average fishermen and club members. The most common response for both groups was "satisfactory" with 59% of the average fishermen and 53% of the club members giving this response. Club members showed a wider range of responses with 14% very satisfactory and 10% satisfactory. More respondents were neutral in the statewide tally (18%) than in the club membership (13%). Overall, 65% of the fishermen in Florida felt that the Commission's involvement in improving fishing is either satisfactory or very satisfactory.

The Commission wanted to know if the fishermen thought policy decisions should be made on the basis of public opinion or scientific research. Two questions were used to get this information without biasing the responses. The first question was worded, "Some people think that the FGFWFC *makes* its decisions based on public opinion; others think that the Commission makes its decisions based on scientific research. Which do you think is the basis for their decisions?" The average fishermen were evenly split between scientific research (35%) and a combination of research and public opinion (34%). Forty-three percent of the club members said scientific research and 37% responded with a combination of research and public opinion. Eighteen percent of the average fishermen said that they did not know how the Commission made its decisions.

Following that question, the respondents were asked a similarly worded question on how they thought the Commission *should make* decisions. For the average fishermen, scientific research (37%) and a combination of research and public opinion (43%) were the most common responses. Thirteen percent of the respondents thought decisions should be based on public opinion alone. The difference between the licensed fishermen and club members was significant. For the club members, scientific research alone was chosen over half (52%) of the time; 38% of the club members chose a combination. A major difference between these 2 populations was the response to the single variable of

public opinion. Only 6% of the club members wanted public opinion to be the sole basis for decision making versus 13% of the average fishermen.

A comparative look at the responses to these 2 questions reveals several interesting ideas. Apparently, the statewide sample of fishermen believed that the Commission should continue to make decisions the same way they thought the Commission was already making decisions. On both questions, 13% of the respondents thought that the Commission made and should make their decisions on public opinion. The "don't know" response dropped from 18% on the "makes" question to 7% on the "should make" question. The combination answer received 9% of this shift. A similar drop in the "don't know" response was found for the club members, but the primary beneficiary was scientific research. The dramatic drop in the "don't know" response across both samples is evidence of the ability of the respondents to distinguish between these 2 questions.

The next series of questions dealt with the fisherman's attitudes toward the Fisheries Division of the FGFWFC. They were first asked if they were aware that there was a Fisheries Division in the FGFWFC. A significant difference was found between the awareness of the average fishermen and the fishing club members. Only 55% of the average fishermen were aware of the Fisheries Division as opposed to 70% of the fishing club members.

The next question dealt with where the Fisheries Division should place more emphasis. The difference in responses between the club members and the general sample of fishermen was significant. In the statewide sample almost one-fourth (24%) of the interviewees indicated that the area of fish management needed more emphasis by the Fisheries Division. Responses of pollution control (16%), stocking programs (15%) and weed control (11%) followed. The club sample was relatively high in desire for fish management (27%) emphasis. Their second choice was weed control with only 9% of the respondents. Thirty percent of the club members said that they did not know where the Fisheries Division should place emphasis.

The respondents were then asked the question, "Has fishing in Florida improved, declined or remained the same?" Answers of the statewide sample of fishermen were significantly different from those of club members. The highest percentage for both samples felt that the quality of Florida freshwater fishing had declined; however, the response was much greater among the club members (62%) than among the average fishermen (45%). The percentage responding that fishing had improved was approximately the same for average fishermen (22%) and for the club members (21%).

Those respondents who stated that the quality of fishing had declined were asked what they thought was the cause of this decrease. The percentage of average fishermen and fishing club members giving each answer was approximately the same, except a much larger percentage of club members said they did not now why fishing had declined (23% to 8%). Pollution (21%), not enough fish (18%) and too many people fishing (17%) were the most common reasons given. Fifteen percent of the fishermen felt that aquatic weeds were the cause.

Opinions and Knowledge of Specific Topics

Opinions were solicited from the sample of licensed fishermen and members of fishing clubs on 13 specific subjects of interest to the Fisheries Division.

Both samples were asked their attitudes toward fishing tournaments. The average fishermen favored the tournaments by 55% to 10% opposed. A very high 35% had no opinion on fishing tournaments. The members of fishing clubs were significantly different on this question. Sixty-four percent favored tournaments while 18% opposed. Only 18% did not have an opinion.

The samples were next asked if they favored or opposed having bass fishing tournaments regulated by the Commission. Both the average fishermen and club members favored having the Commission regulate bass fishing tournaments (61% to

66%). Only 12% of the average fishermen opposed regulation by the Commission, while 21% of the club members opposed regulation. On both questions about fishing tournaments, fishing club members apparently have more decided opinions both for and against fishing tournaments and their regulation than the average fishermen.

The respondents were asked if they believe that non-native fish, like the walking catfish and the tilapia, may cause a problem for fishing in Florida. Fifty-seven percent of the average fishermen believed that the non-native fish may become a problem, while 18% did not. A significantly higher percentage of fishing club members than average fishermen saw the non-native fish as causing a problem. Sixty-nine percent of the club members saw a potential problem as opposed to 57% of the average fishermen.

The next questions dealt with a specific non-native fish, the grass carp (white amur). The Fisheries Division wanted to know first if the respondents were familiar with the grass carp. In spite of all the publicity that the grass carp had received, only 41% of the average fishermen reported being familiar with the grass carp. Significantly more fishing club members reported being familiar with the grass carp. Seventy-six percent of the club members reported knowing about grass carp as opposed to only 41% of the average fishermen.

The interviewees who reported being familiar with grass carp were asked 2 follow-up questions. They were first asked if they believed that grass carp were effective in controlling weeds. Of the average fishermen, 29% felt that grass carp were effective in controlling weeds while 21% did not think grass carp were effective. The more important figure revealed that 50% of the fishermen who considered themselves familiar with grass carp did not know whether grass carp were effective or not. These fishermen were probably reflecting confusion from the information they had received and not an intellectual withholding of judgement until all of the evidence was in. Fishing club members also reported a mixed response to the effectiveness of grass carp. Forty-two percent considered grass carp effective, 23% did not, and 35% did not know. They were not significantly different from the average fishermen.

A second follow-up question was asked to those who were familiar with grass carp. The respondents were asked if they considered grass carp harmful to sports fishing. Both the average fishermen and club members had mixed opinions about the potential harm from grass carp. Of the average fishermen, 28% felt grass carp were harmful to sports fishing, 26% saw no harm and 46% did not know. The club members presented a very similar pattern (not significantly different). Thirty-three percent saw grass carp as harmful and 30% did not. Thirty-seven percent did not know whether grass carp were harmful to sports fishing or not. The reader should keep in mind that 59% of the average fishermen were not familiar with grass carp and were not asked this question, thus only 12% of the fishermen in Florida thought grass carp were potentially harmful to sports fishing.

Another series of questions probed the fishermen's knowledge of drawdowns of lakes. The first questions asked the respondents if they were familiar with drawdowns. Forty-one percent of the average fishermen reported being familiar with drawdowns. The fishing club members reported that they were significantly more familiar with drawdowns than the average fishermen. Seventy-nine percent of the fishing club members claimed they were familiar.

The respondents who said they were familiar with drawdowns were then asked what they thought was the purpose of drawing down lakes. Weed control was the most popular reason given by the respondents with 36% of the average fishermen and 41% of the fishing club members giving this reason. Improving fishing (14%), cleaning out pollution (12%) and improving lake bottoms (11%) followed in this order. Eighteen percent of the fishermen who were familiar with drawdowns did not know why they were used. The fishing club members were not significantly different from the average fishermen in stating purposes for drawdowns.

The other follow-up question asked these respondents if they thought drawdowns improved fishing. Fifty-four percent of the licensed fishermen who were familiar with drawdowns said the technique improved fishing. The other 46% were almost evenly split between "No" (22%) and "Don't Know" (24%). A significantly higher percentage (76%) of fishing club members thought that the technique improved fishing. The reader should remember that 59% of the statewide sample were not familiar with drawdowns, thus only 23% of all fishermen in Florida thought that drawdowns improve fishing.

The interviewees were next asked if they believed that a minimum size limit of 12 inches on bass would improve the quality of fishing. Both the average fishermen and the fishing club members gave strong support (73%) to having a 12 inch minimum size limit on bass.

The next question asked if they would support a revised bag limit requiring the release of all bass between 18 and 22 inches (4 to 8 pounds) in order to increase the number of trophy bass. This question received very mixed reactions from both samples. Of the average fishermen, 43% supported this type of bass limit while 47% opposed. For the fishing club members, 48% were for the bag limit while 47% were against it. These differences in the two samples were not significant.

To test the respondent's knowledge of the effect of releasing a fish after it had been caught, they were asked the following questions, "Do you think most fish that have been caught and released will live?" For the average fishermen, 44% said that they would live, 20% said they would not live, and 36% said that some would live. The responses of the fishing club members were significantly different. Fifty-seven percent of them felt that the fish would live. Eighteen percent and 25% said "No" and "Sometimes."

A series of questions were asked concerning the Commission's program of introducing additional game fish. The respondents were first asked if they were familiar with the striped bass and the sunshine bass. Twenty percent of the average fishermen were familiar with both of these 2 types of bass. Thirty-eight percent were only familiar with the striped bass and 9% with only the sunshine bass. A combined total of 58% were familiar with the striped bass and only 29% with the sunshine bass. The fishing club members were significantly different. Forty-four percent were familiar with both types, 36% with the striped bass only, and 7% with the sunshine bass only.

The fishermen who reported being familiar with either or both the striped bass and sunshine bass were asked a follow-up question. They were asked if they had fished for or caught these fish. Half of the fishermen who were familiar with these fish had neither fished for nor caught them. Sixteen percent had fished for them and 34% had caught them. Twenty-three percent of the fishing club members had fished for these fish and 39% had caught them.

All of the respondents were asked if they favored the introduction of additional game fish. Eighty percent of the fishermen of Florida favored the introduction of additional game fish. This support was the strongest of all of the projects covered in the questionnaire. The respondents of fishing club members were significantly different. They supported the introduction of additional game fish by 90%.

The interviewees were asked if they were aware that commercial netting of rough fish, bream, and crappie was allowed in Lake Okeechobee. Among the average fishermen only 33% were aware of the commercial netting in Lake Okeechobee. The fishing club members were significantly different in reporting a 52% awareness of the project.

The fishermen who were aware of the commercial netting in Lake Okeechobee were asked if they favored the project. Fifty percent of the average fishermen favored the commercial netting and 60% of the fishing club members favored it. This difference was not significant. Since only 33% of the fishermen were aware of the project, only 18% of the fishermen were actually in favor of the project. Of those aware of the project, a sizeable 35% opposed the commercial netting of rough fish, bream and crappie in Lake Okeechobee.

The respondents were asked if they believed that aquatic vegetation was a problem in their fishing areas. Fifty-five percent of the average fishermen considered vegetation to be a problem and 62% of the fishing club members perceived it to be a problem. This difference was not significant. The fishermen who said that vegetation was a problem at least some of the time were asked a follow-up question. They were asked if the vegetation should be completely eliminated, partially eliminated or left alone. The vast majority (84%) of the fishermen who considered vegetation a problem in their fishing area felt that it should only be partially eliminated. Seventy-nine percent of the fishing club members had the same response.

When asked if stocking was necessary to improve fishing, 74% of the average fishermen felt that stocking was necessary to improve fishing and 70% of the club members said it was necessary. This difference was not significant.

The respondents were asked if they favored closed seasons during spawning. The average fishermen showed support with 60% being for closed seasons during spawning. Fifty percent of the fishing club members favored closed seasons. The difference was not significant.

The Commission wanted to know if fishermen were using the fish management areas around the state. Of the average fishermen in Florida 38% had fished in a fish management area. Significantly more (51%) of the fishing club members had used the fish management areas.

The project that received the least support, or the least use was the fish attractors that had been placed by the Fisheries Division. Only 5% of the average fishermen and 25% of the fishing club members had fished at a fish attractor. This difference was significant.

Sources of Information

Several questions were included in the survey to discover where and how the fishermen in Florida received their fishing information. The most popular media for the average fishermen was the newspaper (42%) while 62% of the fishing club members got information from the newspaper. Sixty-five percent of the fishing club members read magazines for fishing information and only 32% of the average fishermen used this source. The electronic media was not used extensively for fishing information. Only 14% of the Florida fishermen used the radio for fishing information. Television provided somewhat more fishing information with 26% of the fishermen using it as an information source. Twenty-nine percent of the respondents said that they had other sources of fishing information. Most of these were interpersonal communication. The average fishermen tended to get information from a friend. The club members relied on friends and to some extent on club meetings.

As a follow-up question, interviewees who said they read magazines for fishing information were asked to name up to 3 magazines they read for this purpose. By far the most popular magazine for Florida fishermen was *Field and Stream* which received 33% of the total responses. The other three magazines which received a high level of response were *Outdoor Life* (12%) *Florida Wildlife* (10%) and *Sports Afield* (10%). A total of over 50 magazines were named by one or more interviewees.

Since the Commission publishes *Florida Wildlife*, it received special attention in the survey. In the open-ended question which occurred first in the questionnaire, 10% of the respondents who read magazines for fishing information named *Florida Wildlife* as one of 3 magazines they read for fishing information. When all of the interviewees were asked specifically, "Do you read *Florida Wildlife*?" 52% of the average fishermen said yes and 67% of the fishing club members answered affirmatively. Since approximately 700,000 fishing licenses were sold in Florida, about 350,000 fishermen in Florida must read *Florida Wildlife*. The current circulation for *Florida Wildlife* is 24,500 so it must have a tremendously large pass-along rate. The pass-along rate for most magazines ranges from 3 to 10 additional readers. The pass-along rate for *Florida Wildlife* would be 13 additional

readers just among licensed fishermen. Even if the respondents were just referring to reading an occasional copy in a barber shop or doctor's office, this level of readership seems extremely large.

This study conducted by the Communications Research Center of The Florida State University for the Florida Game and Fresh Water Fish Commission revealed that the views of the membership of the organized fishing clubs do not represent the views of the average fishermen. A statistically significant difference was found between the responses of the average fishermen and the fishing club members in 72% of th questions asked in the survey. Apparently the fishing clubs either attract members whose attitudes are atypical from those of average fishermen or they lead their members to develop atypical attitudes after they join the clubs. Since organized fishing clubs can easily express their views to the state commission, the game and fish commissions should attempt to balance these atypical views by polling samples of average fishermen.