Attitudes towards catch-and-release recreational angling, angling practices and perceptions of pain and welfare in fish in New Zealand

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Abstract

Although there is still some debate regarding whether fish have the capacity to feel pain, recent scientific research seems to support the notion that fish can indeed suffer. However, the continued scientific discourse has led to questions regarding how members of the general public perceive issues of pain and welfare in fish. A questionnaire was developed and randomly distributed to 700 members of the general public in New Zealand. Questionnaires gathered basic demographic information, information regarding respondents' participation in and opinions on angling practice, and opinions about fish welfare and pain. The response rate was 62.4% (437/700). The primary aim of the study was to assess public concerns for the impact of catch-and-release angling (CRA) on the welfare of fish. Most respondents indicated a belief that fish are capable of feeling some pain although older respondents scored the capacity of fish to feel pain lower than younger respondents. Likewise, most respondents believed that CRA causes pain and compromises survival in fish. Principle Component Analysis identified two major components within responses. These were: i) importance placed on good fishing techniques; and ii) concern for pain and survival of fish. Female respondents showed more concern about angling practices and their impact on pain and survival of fish than male respondents. Respondents who participate in CRA and considered it acceptable showed less concern for pain and survival in fish than both respondents who do not participate and those who considered CRA unacceptable. The majority of respondents considered angling an acceptable pastime (65%; 284/435) but also indicated support for the introduction of guidelines and regulations to improve fish welfare in the future (76.4%; 334/434). Those respondents that did not believe regulations were necessary provided statistically lower importance scores for both pain and survival in fish and good angling practices than respondents that did. Education about good angling practices may provide the best route by which fish welfare can be improved.

Keywords: angling, animal welfare, fish, pain, public attitudes, regulations

Introduction

Recreational angling is a long-established pastime practiced by many cultures around the globe (Davie & Kopf 2006). Catch-and-release angling (CRA) is a branch of recreational angling in which caught fish are released either voluntarily or due to constraints imposed by harvest regulations (Cooke & Sneddon 2007). With the assumption that most of the released fish will survive, CRA is thought to be non-detrimental to fish stocks, and represents a sustainable method by which recreational fishing can continue to be enjoyed by many (Cooke & Sneddon 2007; Rose 2007; Arlinghaus et al 2012). However, as discussions of fish welfare issues have arisen in both social and political arenas, concern over the ethicality of CRA has also grown, and the place of CRA in the future of recreational fishing is being called into question (Arlinghaus et al 2007, 2012).

The central question in the debate of whether CRA is ethical would have to be 'can fish feel pain?' If fish cannot feel pain it could be argued there is no welfare compromise for fish caught by angling, and therefore no further need for consideration to be given to angling practices. However, if fish do perceive pain and can suffer, the impact of capture on fish welfare could be significant. Furthermore, if angling does indeed constitute a welfare compromise for caught fish, CRA for the purposes of entertainment, becomes ethically questionable.

Currently, the dominant viewpoint among the scientific community is supportive of the notion that fish are capable of experiencing pain (Arlinghaus et al 2012), and several recent studies support this (Sneddon et al 2003; Dunlop et al 2006; Braithwaite & Boulcott 2007). However, there continues to be some debate within the literature on the topic (Chandroo et al 2004; Arlinghaus et al 2009b, 2012) as neurological research on the capability of fish to experience pain remains limited (Davie & Kopf 2006), and structures required for conscious perception (commonly accepted as being required for the experience of pain)