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HUNTING AND FISHING ATTITUDES, BEHAVIORS AND ETHICS RELATED TO
GENDER AND AGGRESSION

by

Victoria D. Williams
Bachelor of Arts, University of North Dakota, 2015

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

In partial fulfillment of the requirements

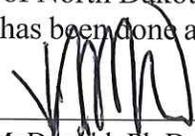
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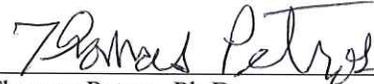
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This thesis, submitted by Victoria Williams in partial fulfillment of the requirements for the Degree of Master of Art from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.



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ABSTRACT

To date, no empirical studies have investigated the relationship between psychopathology (or other constructs) pertaining to hunting and fishing attitudes, behaviors and ethics relating to gender and aggression. Although experienced outdoorspeople assumedly adhere to, or are at least aware of, general hunting and fishing codes of ethics, many disregard them. This study investigates the differences between men and women on these variables by utilizing a newly developed measure of hunting and fishing attitudes and beliefs, the Sportsman Attitude Scale (SAS) (McDonald, Williams, Sargent & McDonald 2017). This measure was created in order to better understand the potential motivators and reinforcers of both positive and negative outdoor behaviors. In addition, the Aggression Questionnaire (BPAQ) (Buss & Perry 1992) will be utilized to investigate potential concurrent validity, as well to corroborate SAS characteristics. More specifically, this study will compare SAS and BPAQ scores to determine relationships between primary constructs each scale measures, and then further investigate these findings in accordance with gender, as well as other demographic items further detailed herein. Understanding the association between these variables may enhance one's understanding of motives behind unethical hunting behaviors and attitudes.

CHAPTER I

INTRODUCTION

Hunting and Fishing Attitudes, Behaviors and Ethics Related to Gender and Aggression

A lack of research exists examining differences between men's and women's attitudes towards hunting and fishing behaviors and ideology, as well as how these relate to other important constructs. Nearly half (40%) of the United States population takes part in outdoor-related activities every year (U.S. Department of the Interior, 2017). The field of psychology has generated very little interest or effort towards understanding the psychological and behavioral predictors and correlates of these obviously very popular activities. Overall numbers of people taking to the field and water are declining in recent years yet hunting and fishing violations are spiking. In North Dakota alone, hunting and fishing violations increased by 8% from 2016-2017, continuing a trend noted for several years (Kessler, 2015, Leier, 2015). Recent literature suggests that the sport of hunting and fishing is predominately male dominated (Lauber & Brown, 2000). According to the United States Census Bureau (2004-2005), in hunting, men outnumber women by five to one. The field of psychology has also taken no steps to identify potential personality, learning, or other variables associated with unethical and irresponsible hunting and fishing behaviors. The Aggression Questionnaire (Buss & Perry, 1992) has the potential to determine if aggression is associated with such behaviors. Generally, when comparing men and women, men are viewed as more aggressive in nature. Further, men typically score higher on aggression measures than women in regard to physical and verbal aggression as well as hostility. Additionally, they tend to exhibit more violent or anti-social behavior. (Anderson & Bushman, 2002; Archer, 2004; Buss & Perry, 1992; Ramirez et al., 2001; Tremblay & Ewart, 2004, Moffitt, Caspi, Rutter, & Silva, 2001). There are many different gender role expectations and

standards. Violation of gender roles has a greater impact for males than females. Specific gender role traits for males, such as aggression can be dysfunctional (Kimmel, 1987; Levant 1992). In regard to sport hunting research suggests women are typically more in favor of animal welfare (Herzog, 2007). Finally, research has shown men report greater satisfaction mastering the art of hunting and animal control (Evans, Gauthier, & Forsyth, 1998; Kellert & Berry, 1987; Plous, 1991).

Gender Effects and Hunting Behaviors

Buss and Perry (1992) measured the relationship between aggression and hunting attitudes with sex as a moderating factor. They conducted two studies. Study 1 measured the effect of sex on trait-level aggression and sport hunting attitudes among members of a general population sample. Study 2 measured the effects of sex and reasons for aggression (instrumental and expressive) on sport hunting attitudes among first-year psychology students. In Study 1, 124 participants were recruited, (72 women and 52 men) in a mail survey. The survey utilized the *Aggression Questionnaire* (AQ; Buss & Perry, 1992) a 29-question scale measuring global trait-level aggression with four subscales: Physical aggression, verbal aggression, anger, and hostility. Physical and verbal aggression depict proneness to behavioral aggression, whereas anger and hostility depict proneness to aggressive emotions. Participants specified how characteristic each statement was of themselves from 1 (“extremely uncharacteristic of me”) to 5 (“extremely characteristic of me”) Participants were all Wellington-area residents. 92% of the sample identified as Pakeha (New Zealanders of European ancestry), and 26% of the women and 47% of the men stated they had previous experience hunting, while 3% stated hunting was a current pastime. The results of Study 1 indicated trait-level aggression may be associated with hunting attitudes in a manner not supporting the characterization of the hunter as an angry and violent

character. The results of Study 2 indicated women equating hostility with the sport of hunting. While men may be stereotyped as less emotional than women in general, anger is a more male dominated emotion. Endorsement of hunting may serve as an outlet for women's counter-stereotypical aggressive emotion.

Gender Effects and Hunting Attitudes

Apostolou and Shialos (2017), conducted two studies examining gender effects and hunting attitudes. Study 1 measured how enjoyable individuals found hunting and gathering-related activities, and their willingness to engage in them in the future. The sample included 220 Greek Cypriots, 119 women, and 101 men. Participants were given a survey with four measures. In the first part of the study, participants were given seven activities (hunting, gathering, spearfishing, gathering plants, gathering roots, gathering herbs, and gathering flowers) and were asked to indicate how enjoyable they considered each activity to be, on a seven-point Likert scale. In the second part, participants indicated whether or not they had previously engaged in the activities before. In the third part, participants rated their willingness to engage in the seven activities using a seven-point Likert scale. The results of Study 1 indicated men found hunting more enjoyable, whereas women found gathering more enjoyable. The second part suggested men participated in more hunting activities in the past, while women engaged in more gathering activities. In the third part, they found men were more willing to engage in hunting, while women were more willing to engage in gathering. In Study 2 they measured the hypothesis 'men enjoy hunting and women enjoy gathering' by using a different methodology. They measured it by participants choosing between different activities. The sample included 415 Greek-Cypriots, 238 women and 177 men. The survey had two parts. The first part gave a scenario: "While on a cruise to the Pacific Ocean, you fall in a storm and you maroon on an isolated island. There is no

food available, so you and the rest of the survivors need to engage in food providing activity. It is now your turn to decide what activity to engage into.” (Apostolou & Shialos, 2017., p.14).

Participants chose one or more activity from the following list: hunting, fishing, gathering plants, and gathering roots. The second part of the survey included demographics. The results indicated 59.3% of men and only 12.2% of women chose hunting. In addition, 49.7% of men and 46.2% of women chose fishing. 22.6% of men and 58.4% of women chose gathering plants. Finally, 9.6% percent of men and 18.1% of women chose to gather roots (Apostolous & Shialos, 2017).

Gender Stereotypes

According to Fitzgerald (2005), the sport of hunting is male dominated, and the majority of hunting opportunities are suited for males. A number of recent studies support the recent increase in women in the sport of hunting. An increase of 12% for women in the past five years (U.S. Department of the Interior, 2017). According to Mary Stange (1997), female hunters must be feminists because they have to overcome the greatest challenges and negative pressure for other women to involve their selves in what is a male dominated activity. Fitzgerald (2005) argues promoting female hunters promotes “masculinization of the female” (Dworkin & Messner, 2000). An ecofeminist perspective argues hunting negatively effects the environment. According to Fitzgerald (2005), ecofeminists stated hunters “reaffirm their masculinity through the hunting process.” A hunter’s masculinity is measured by the amount of game they collect (Kheel, 1995). Fitzgerald (2005), examined the decrease in participation in hunting throughout the 80’s and 90’s. Efforts were made by State hunting and fishing organizations to increase the number of those taking part in hunting and fishing. Compared to history, the view of the hunter has shifted from the cruel sportsman to a softer view of conservationists.

Hunting Ethics and Masculinity

One popular anecdote that addresses the high degree of bad behavior in the field and on the water suggests some men are attempting to appear “masculine” or “macho” in front of their peers. The following section explores this notion in an empirical context, as well as providing some real-world examples of this possible phenomenon.

Researchers have characterized ‘traditional masculinity’ as a constellation of attitudes reflecting such aspects as homophobia, emotional distancing and unfamiliarity, misogyny, risk-taking and impulsivity (Levant et al, 2003). Levant et al. (1992) proposed a set of seven traditional masculine male role norms: Avoiding femininity, restrictive emotionality, seeking achievement and status, self-reliance, aggression, homophobia, and nonrelational attitudes towards sexuality.

The development of appropriate gender role identity is viewed as a failure-prone process; and, failure for men to achieve a masculine gender role identity is thought to result in homosexuality, negative attitudes toward women, or hypermasculinity (Connell, 1991; Kimmel, 1991)

Masculinity among men in a culture can be granted by taking part in dangerous activities. In Missouri, “noodlers” place their masculine identity in the art of fishing called noodling. Noodling is essentially fishing with bare hands to find large catfish in the river water. This practice was outlawed in Missouri in 1919; however, the now illegal activity continues to take place. An analysis of the male Missouri “noodlers” helps one to understand their motivations and reasoning for continuing to take part in noodling. Noodling seems to be a mode for this subculture to express their worthiness as a man. According to Grigsby (2011) “Male noodlers are seen as men who are tough, fearless, and skilled at using their bare hands as predators to catch huge cat fish, close to nature, respected by other men in their group and looked up to by their

wives, daughters and girlfriends.” (p. 162) Many movements occurred to allow this hand fishing activity in Missouri to be legalized, but no efforts have been successful. Regardless, many men continue to fish this way illegally because they reject the idea of noodling as poaching, but rather a tradition in which they find community with other noodlers. In this community, they are able to gain authorization through the concept of hegemonic masculinity. Grigsby (2011) focuses on how male noodlers construct their masculinity worthiness within their own group of noodlers, as well as outside of their group. The research was based on qualitative methods by interviewing 18 men between 18-90 years of age, observing noodlers fishing in groups, and interacting at fish fry’s. The research occurred within the United States. After interviewing 18 men, a common theme between them emerged presenting the relationship between their masculine identities being shaped by the practice of noodling. These men have a willingness to become injured to profess their masculine characteristics to the others in their group. Interview data compared noodlers and non-noodlers, expressing a form of dominance over another social group. Men who do not involve themselves in noodling are seen as not physically tough or courageous enough by the local noodlers. In this study, it was concluded the male noodlers of Missouri, place masculinity rankings on their efforts with the practice of noodling. The interviews conveyed even though it is illegal, this practice is one the noodlers would never give up and would in fact pass down to forthcoming generations. The subculture of noodling will continue to serve as a manner to declare their masculinity with members of this community.

Currently, homophobia is a concerning issue across the United States of America, specifically in sports media. Hardin et al (2009) examined the analysis of media articles involving John Amaechi, a retired NBA player’s announcement about being gay.

Being antigay can be seen as a form of masculinity (Amaechi, 2007, Levant, 1992)

Dominant masculinity has been glorified in the culture of the U.S. There has been a focus on power, force, and occupational achievement associated with this. It is recognized with the comparison of considering feminine as “weak, passive, and subordinate.” Competitive sports have influenced this idea by illustrating the masculine characteristic of power over women. Gay men threaten this male hegemony because they are viewed as more feminine. In 2005, a survey was published in *Sports Illustrated* indicating 62% of sports fans claimed Americans were not ready to accept an openly gay professional athlete. Hardin et al (2009) conducted a study analyzing the newspaper columns regarding Amaechi’s announcement. It was February 2007 when Amaechi made his announcement. From this announcement came overt homophobia by fellow teammates and athletes in the NBA. Textual analysis was used as the approach for this study to uncover the meanings held by the text. Using the LexisNexis database, they searched the key term “Amaechi”. Thirty-one columns were discovered and analyzed. Examination sought to gain a better understanding of the views of sexuality, gender, and sports in the mainstream media. Special attention was given to columns regarding hypermasculine and heterosexual cultural norms. The majority of the articles found to support Amaechi’s coming out and overt homophobia was not in fact expressed regarding this announcement. Columnists disapproved of antigay teammate’s comments instead. Six of the thirty-one articles from Amaechi were misleading in that reports tried to conceal the fact he was gay. His ability as a basketball player was used to justify why this did not allow for the complete acceptance of gay athletes. It was claimed it would have to take a superstar player to break through the bias present among gays (Powell, 2007). Amaechi’s announcement gave the potential to challenge the dominant masculinity ideology among the sports media culture. However, the commentary among the

newspaper columns did little to push the definition of being an athlete or being masculine in high sport levels. Columnists portrayed Amaechi in a negative manner explaining he was less of an athlete and unable to compete at the professional level because he retired before the announcement.

Levant et al. (1992) examined the Male Role Norms Inventory (MRNI) and discovered respondents comprised of mostly undergraduate college students. These respondents tended not to endorse many of the traditional norms of the male role. These included: requirement to avoid all things feminine; the injunction to restrict one's emotional life; the emphasis to achieve status above all else; nonrelational, objectifying attitudes toward sexuality; and fear of hatred of homosexuals. The endorsed measures included the norms of self-reliance and aggression. Similar studies have found the same results, where the participants endorsed items corresponding to the avoidance of femininity and being the breadwinner of the family. (Thompson, Grisanti, & Pleck 1985) These studies utilized the Brannon Masculinity Scale (Brannon & Juni 1984). The results of the studies demonstrated males endorsing aggression.

Current Study

To date, no empirical studies have investigated the causes or correlates of unethical or unsafe behaviors on the water and in the field or, the potential relationship between them on aggression. This study proposes to help determine the nature of these constructs' relationships. This study may provide mental health professionals working with outdoorsperson's in establishing more effective policies, and perhaps even best practice mental health care.

Hypothesis

Higher scores on the Aggression Questionnaire will correlate positively with higher Orion Scores.

Women are more likely to report lower SAS and BPAQ scores, while men will report higher SAS and BPAQ scores.

Men and women who are NRA (National Rifle Association of America) members will report higher scores on both SAS and BPAQ.

More years of hunting experience will correlate positively with lower SAS and BPAQ scores.

More citations and animals that are stuffed will correlate positively higher SAS and BPAQ score.

CHAPTER 2

METHODOLOGY

Participants

This study relied on a survey of national ($N=292$) respondents who were gathered through the use of Amazon's Mechanical Turk (Mturk) for financial compensation (40 cents). Respondents varied in gender (52.76% male; 47.24% female) and age (male $M= 36.44$, $SD= 12.88$; female $M= 38.99$, $SD= 12.16$, Range= 18-81). A subset of the initial respondents was not analyzed based on the inclusion and exclusion criteria described below.

Inclusion Criterion

Respondents were required to have a self-declared receipt of a hunting or fishing license in the past five years. A subset of initial respondents ($n=12$) failed to do so and were not included in the analysis. This MTurk sample was restricted to respondents of at least 18 years of age who completed the survey from the United States.

Exclusion Criteria

Account-specific identification and verification using payment monitoring, protects against multiple completions by the same respondents. Mturk has been reviewed favorably as a crowdsourcing research platform (Bygrnester, Kwang & Gosling, 2011; Gosling, Vazire, Srivastava, & John, 2004; Paolacci, Chandler, & Ipeiritis, 2010). A concern regarding this

methodology has been the potential threat posed by international bot farms that disguise their origination and contaminate the data set with errant responses (Kennedy, Clifford, Burleigh, Waggoner, & Jewell, 2018; Litman, 2018). Online proxy/VPN detection software (<https://iphub.info>) was relied upon as recommended (Burleigh, Kennedy, & Clifford, 2018) to identify and exclude initial respondents ($n = 0$) who attempted to disguise their international origin. Additional precautions were taken to exclude respondents who failed an English language reading verification ($n = 0$), missed an attention check item ($n = 4$), or completed the survey from a duplicated computer IP address ($n = 0$) or geolocation ($n=0$). Lastly, a subset of initial respondents ($n=31$) was not included due to inappropriate responding (i.e. Q- “How many citations have you had?” A- 2029, Q- “How old are you?” A- 2312).

Procedure

The survey was administered online through Amazon Mechanical Turk (MTurk). Participants received a research packet including informed consent, demographics, the Sportsperson’s Attitude Scale (SAS) and the Aggression Questionnaire (BPQA). The informed consent forms were developed according to the guidelines of the University of North Dakota Institutional Review Board (IRB). Due to the research being conducted online, a participant cannot physically sign a consent form. Therefore, a box was provided indicating whether they wished to participate in the online survey. Individuals participating in MTurk surveys have been deemed reliable responders and tend to exhibit similar motivational characteristics and response variability compared to participants in a face-to-face sample. (Berinsky, Huber, & Lenz, 2012; Buhrmester, Kwang, & Gosling, 2011; Gosling, Vazire, Srivastava, & John 2004) Completion of the surveys required 3-5 minutes per participant. Upon completion of the research packet, participants were compensated for their time with 40 cents. All participant’s information remains

anonymous and confidential. Overall, MTurk has been termed a valid and representative source. (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010).

Instruments

The measures used for this study include the Sportsperson's Attitude Scale (SAS) (McDonald et al., 2017) and the Aggression Questionnaire (Buss & Perry, 1992). The term "Sportsperson" is reserved for those engaging in hunting and fishing (U.S. Department of the Interior, 2017, p.2). The Sportsperson's Attitude scale is a 10 item four-point likert scale (*totally disagree, sort of disagree, sort of agree, totally agree*) assessing various attitudes and opinions about hunting and fishing ethics (Refer to Appendix A). Items were purposely written and scaled such that higher total scores were indicative of illegal and unethical attitudes and behaviors (McDonald et al., 2017). Demographic variables recorded consisted of age, education, National Rifle Association (NRA) membership, number of hunting violations, and number of animal or fish taxidermy mounts. Participants were also asked to share the person(s) most responsible for encouraging their hunting and fishing interests historically. Refer to Appendix B.

The Aggression Questionnaire is a 29 item 5-point scale (*1= extremely uncharacteristic of me 2= somewhat uncharacteristic of me, 3=neither uncharacteristic nor characteristic of me, 4= somewhat characteristic of me, 5= extremely characteristic of me*) indicating how uncharacteristic or characteristic each of the statements describe you. The Aggression scale consists of 4 factors, Physical Aggression (PA), Verbal Aggression (VA), Anger (A), and Hostility (H). The scores are normalized on a scale of 0 to 1 with 1 being more aggressive. Subscale reliabilities range from .72 to .89 with widespread validation evidence provided in several peer-reviewed research articles (Archer & Webb, 2006; Gerevich, Bacskai, & Czobor, 2007; O'Connor, Archer, & Wu, 2001) Refer to Appendix C.

CHAPTER 3

RESULTS

Respondents varied in gender (52.76% male; 47.24% female) and age (male $M= 36.44$, $SD= 12.88$; female $M= 38.99$, $SD= 12.16$, Range= 18-81). The majority (40.7%) of respondents had a 4-year bachelor's degree (23.3% some college but not degree, 13.7% associate degree in college, 12% high school graduate or equivalent, 7.5% master's degree, 1% professional degree, .7% doctoral degree, .7% less than high school) Out of the total sample ($N=292$) 38 participants endorsed NRA membership. The majority (57.9%) of respondents indicated their father was the biggest influence on their hunting/fishing interests and experiences (20.2% friends 15.4% other, 3.4% self, 2.1% mother). Descriptive statistics with gender and NRA effects are included. See Table 1 for descriptive statistics with gender and NRA effect summaries.

Orion scores on the current study were compared to McDonald, Williams, Sargent and McDonald (2017), using a series of independent samples t-test. Results indicated female participants from the current study scored significantly higher than participants from McDonald et al (2017) study. No significance difference was found comparing males, suggesting similar responding among male participants of both samples. See Table 2 for descriptive statistics comparing both studies.

The Sportsperson's Attitude Scale was found to have questionable reliability with a Cronbach's Alpha of .66 (10 items). A potential explanation may be due to the limited number of items on the SAS.

An independent samples t-test was conducted to compare gender on SAS scores. There were significant gender differences found with males ($M=22.21$) scoring significantly higher than females ($M=20.55$) on the SAS $t(289) = 3.91$, $p<.001$. A further set of independent t-test

indicated, males ($M=15.24$) scored significantly lower than females ($M=15.74$) on number of years of hunting experience $t(280) = -.28, p < .05$, but scored significantly higher (male $M = .24$, female $M = .07$) on number of violations and citations $t(288) = 1.61, p < .05$.

A series of bivariate correlations were conducted on the SAS, years of hunting experience, number of violations and citations and BPAQ scores. There was a significant positive relationship between SAS and hunting and fishing citations/ violations $r(290) = .27, p = .000$, and more animals stuffed and or mounted $r(290) = .29, p = .000$. There was a significant positive relationship between SAS and BPAQ $r(290) = .35, p = .000$. There was a significant positive relationship between BPAQ and hunting and fishing citations/violations $r(290) = .26, p = .000$. There was a significant negative relationship between BPAQ and years of hunting experience $r(290) = -.14, p < .02$. There was a significant positive relationship between number of violations and number of animals stuffed or mounted $r(290) = .37, p = .000$. See Table 3 for bivariate correlations. When correlations were re-computed controlling for age, the same values were obtained.

Past research suggests hunting and fishing is associated with higher aggression levels in respondents, therefore additional analysis investigating aggression in the sample were conducted. Results suggest higher scores on the SAS are significantly associated with higher BPAQ scores. The aggression questionnaire is broken down into four different factors, physical aggression, verbal aggression, anger and hostility. In order to further examine the correlations reported above we re-computed bivariate correlations separately for males and females. See Table 4 for bivariate correlations by gender. The results further support past research suggesting outdoorsperson tend to be more aggressive. While both men and women tend to be more verbally aggressive if scores

on the SAS are high, women tend to be angrier whereas men tend to be more hostile. See Table 4 for further gender comparisons.

A 2 (Sex) x 2 (NRA Membership) analysis of covariance controlling for BPAQ was computed in order to determine the effects on the SAS. BPAQ as a covariate was significant ($F(1) = 35.43, p = .000, \eta_p^2 = .11$) There was a main effect of NRA membership ($F(1) = 5.01, p = .025, \eta_p^2 = .02$) but there was no main effect of sex ($F(1) = 12.60, p = .294, \eta_p^2 = .004$). There was no significant interaction effect ($F(1) = 15.95, p = .238, \eta_p^2 = .005$). This suggests NRA members tend to have higher Orion scores than non-NRA members.

A linear multiple regression was used in order to better understand how well the SAS is potentially able to predict unethical behaviors in the field of hunting and fishing, such as how many citations and violations participants endorsed, the number of years hunted and or fished by participants as well as BPAQ total scores were included in the linear regression to demonstrate the relationship they have with the SAS in predicting unethical behaviors. The regression model was statistically significant, $R^2 = .12, F(3,281) = 12.68, p = .000$. All three variables in the regression model demonstrated positive regression weights, indicating the higher the Orion score, the more years participants have hunted and or fished as well as higher BPAQ scores produced more hunting and fishing violations and or citations. See Table 5 for regression.

CHAPTER 4

DISCUSSION

As outlined previously, it was hypothesized participants with higher BPAQ scores would correlate positively with higher Orion scores. An inverse relationship was expected with gender.

Women would report lower scores on both questionnaires whereas men would report higher. NRA members would report higher scores on both questionnaires. Finally, another inverse relationship was expected with the more years of hunting experience one endorsed, the lower their Orion and BPAQ scores would be. Also, the more citations/violations and animals stuffed and or mounted, would report higher SAS and BPAQ scores.

Consistent with the literature by Buss and Perry (1992), the results demonstrated anger as a more male dominated emotion as indicated by the higher BPAQ scores for male sportspersons. Buss and Perry (1992) study 2, indicated women tend to be more hostile and anger is a more male dominated emotion. The current study found contrary results, men tended to be more hostile and women displayed higher scores on anger specific measures of the BPAQ. Together men and women were equally as verbally aggressive on BPAQ scores. Majority literature results display the number of male sportspersons compared to female as sizeable (Fitzgerald, 2005; U.S Department of the Interior, 2017) However, the current study's results indicate men ($N=153$, $M=22.18$, $SD=3.70$) and women ($N=137$, $M=20.55$, $SD=3.49$) are closer in proximity in regard to hunting and fishing related activities. Consistent with the literature, traditional masculinity (Levant et al, 2003) was found in hunters with violations and citations. Traditional masculinity is defined as a set of attitudes and beliefs including: emotional distancing, homophobia, misogyny, risk taking, and impulsivity. This was found significant in the current study regarding NRA membership sportspersons, who reported hunting and fishing violations parallel to increased BPAQ and Orion scores. Consistent with the literature by Brannon and Juni (1984), who demonstrated males endorse higher aggression than females. The current study adds validity to this statement using the BPAQ. More specifically, the current study demonstrated men and women both endorse verbal aggression, however differ on hostility which is a more male

dominated aggression aspect and anger which was more female dominated. Lastly, this study demonstrates the SAS's significant contribution to predicting hunting and fishing violations among sportspersons, even when considering the number of years participants have hunted or fished and their BPAQ scores.

Limitations to this study include self-report surveys which are an effective means of collecting data, however, one is relying upon the participants willingness to be honest regarding each item. Participants are not required to respond to all items listed if they do not feel comfortable answering a certain question. There is no obligation to do so. Responses from participants might be highly biased according to what is expected in regard to adherence of ethical hunting and fishing practices. Participants may be hesitant to admit any violations and or citations. If participants were willing to admit to violations and citations, not knowing the narrative surrounding the charges. Not knowing specific cultural differences and practices is also a limitation of this study. Lastly, the limited number of total NRA membership endorsed by participants may be a factor in regard to detecting the strength of the relationship.

Implications of this study may assist game and fish, law enforcement, state licensing officials, and even mental health professionals working with outdoorsperson's and their families in establishing more effective outdoor policies, and perhaps even best practice mental health care. Future research on ethical outdoorsperson behaviors is suggested in order to better understand the possible causalities of higher Orion scores.

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Table 1
Descriptive Statistics with Gender and NRA Effect Summaries

Predictor & Criterion Indicators	N	Label	<i>M</i>	<i>SD</i>	Range	Gender Effect		NRA Effect	
						<i>p</i>	<i>d</i>	<i>p</i>	<i>d</i>
Sportsperson's Attitude Scale	292	SAS	21.41	3.70	13-35	.00	-.03	.04	.10
Hunting Experience	283	Hunt	15.47	14.49	1-70	.77	.00	.14	.02
Buss-Perry Aggression Total	292	BPAQ	58.04	18.98	26-121	.00	.02	.99	.00
Physical Aggression	292	BPAQ-PA	16.88	6.81	7-39	.00	.10	.06	.05
Verbal Aggression	292	BPAQ-VA	10.75	3.15	4-20	.08	.07	.35	-.05
Trait Hostility	292	BPAQ-Hos	16.83	6.59	7-35	.41	.01	.16	-.04
Trait Anger	292	BPAQ-Ang	11.55	5.59	5-29	.06	.04	.91	.00

Note. Significant effects are bolded.

Table 2

Descriptive Statistics between previous Orion scores and current study

	<i>N</i>	<i>M</i>	<i>SD</i>
<u>McDonald et al. (2017)</u>			
Men	204	22.45	5.37
Women	132	19.70	2.92
Total	336	21.37	4.76
<u>Current Study</u>			
Men	154	22.21	3.71
Women	137	20.55	3.49
Total	292	21.41	3.70

Table 3

Bivariate correlations

	2	3	4	5
1. SAS	.353**	.005	.268**	.287**
2. BPAQ		-.140*	.261**	.101
3. Years			.092	.040
4. Violations				.368**
5. Mounted				

Note. ** correlation is significant at the 0.01 level, * significant at the 0.05 level

Table 4

Bivariate Correlations of Predictor and Criterion Indicators by gender

	1.	2.	3.	4.	5.	6.	7.
1.SAS	X	.15	.30**	.38**	.20*	.20*	.22*
2. HUNT	-.11	X	-.12	-.07	-.11	-.06	-.19*
3.BPAQ-Total	.36**	-.16	X	.85*	.78**	.84*	.91**
4.BPAQ-PA	.34**	-.04	.87**	X	.59**	.52**	.72**
5.BPAQ-VA	.12	-.04	.77**	.61**	X	.57**	.69**
6.BPAQ-HOS	.28**	-.21*	.90**	.63**	.77*	X	.69**
7.BPAQ-ANG	.41**	-.20*	.88**	.69**	.55**	.73**	X

Note. BPAQ = Buss-Perry Aggression Questionnaire. SAS = Sportsman's Attitude Scale. HUNT = years of hunting experience. Women coefficients above the diagonal. Men coefficients below the diagonal. * $p < .05$. ** $p < .01$. Shaded block indicates gender difference in strength.

Table 5

Linear Regression Models of hunting and fishing violations and citations

Variables	B	β	t	<i>p</i>
YEARS	.007	.121	2.13	.034
SAS	.047	.198	3.28	.001
BPAQ	.010	.210	3.46	.001

Appendix A

Sportsperson's Attitudes Scale

Please mark the answer that *best describes your opinion* about these hunting and fishing attitudes. There are no right or wrong answers, simply state how you feel.

1. I believe I have the right to hunt and fish.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

2. I feel best when I catch/kill more fish, birds, deer, etc than others do.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

3. I would rather come home empty-handed than break any hunting/fishing rules.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

4. I think less of people who don't hunt or fish.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

5. I think its OK to hunt on someone else's land without asking as long as you don't mess it up.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

6. I like to hunt/fish to get away from family or work problems.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

7. I'd rather my hunting/fishing partner(s) did better than me.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

8. I always have all the latest hunting/fishing gear/equipment.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

9. I really enjoy taking my spouse/significant other hunting/fishing with me.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

10. I honestly think guys who don't want to hunt or fish are probably gay.

Totally Disagree	Sort of Disagree	Sort of Agree	Totally Agree
—	—	—	—

Appendix B

Traditional masculinity, self-esteem and ethical hunting and fishing behavior project

Demographics Form

Directions: Please complete the following items that will help us understand a little more about you. There are no right or wrong answers and your responses are completely anonymous – please do not include your name on this, or the other two forms.

1. Age: _____ Sex/Gender (circle one): Male Female Other
2. Level of Education (in years) _____
3. Number of years you've hunted and/or fished _____
4. Who was the biggest influence on your hunting/fishing interests and experiences (circle one only):
Father MotherFriend(s) TV/Media Self Other: _____
5. How many (if any) hunting/fishing violations have you been cited with? _____
6. How many (if any) fish or animals have you had stuffed/mounted? _____
7. Are you an NRA member (circle one): YES NO

Appendix C

Aggression Questionnaire (Buss & Perry, 1992) Instructions:

Using the 5 point scale shown below, indicate how uncharacteristic or characteristic each of the following statements is in describing you. Place your rating in the box to the right of the statement.

1 = extremely uncharacteristic of me

2 = somewhat uncharacteristic of me

3 = neither uncharacteristic nor characteristic of me 4 = somewhat characteristic of me

4 = extremely characteristic of me

- | | |
|--|----|
| 1. Some of my friends think I am a hothead | A |
| 2. If I have to resort to violence to protect my rights, I will. | PA |
| 3. When people are especially nice to me, I wonder what they want. | H |
| 4. I tell my friends openly when I disagree with them. | VA |
| 5. I have become so mad that I have broken things. | PA |
| 6. I can't help getting into arguments when people disagree with me. | VA |
| 7. I wonder why sometimes I feel so bitter about things. | H |
| 8. Once in a while, I can't control the urge to strike another person. | PA |
| 9.* I am an even-tempered person. | A |
| 10. I am suspicious of overly friendly strangers. | H |
| 11. I have threatened people I know. | PA |
| 12. I flare up quickly but get over it quickly. | A |
| 13. Given enough provocation, I may hit another person. | PA |
| 14. When people annoy me, I may tell them what I think of them. | VA |
| 15. I am sometimes eaten up with jealousy. | H |
| 16.* I can think of no good reason for ever hitting a person. | PA |
| 17. At times I feel I have gotten a raw deal out of life. | H |
| 18. I have trouble controlling my temper. | A |
| 19. When frustrated, I let my irritation show. | A |
| 20. I sometimes feel that people are laughing at me behind my back | H |
| 21. I often find myself disagreeing with people. | VA |
| 22. If somebody hits me, I hit back. | PA |
| 23. I sometimes feel like a powder keg ready to explode | A |
| 24. Other people always seem to get the breaks. | H |
| 25. There are people who pushed me so far that we came to blows | PA |
| 26. I know that "friends" talk about me behind my back. | H |
| 27. My friends say that I'm somewhat argumentative. | VA |
| 28. Sometimes I fly off the handle for no good reason. | A |
| 29. I get into fights a little more than the average person. | PA |