

PERCEIVED OPPORTUNITIES AND CONSTRAINTS ON PARTICIPATION IN A MASSACHUSETTS YOUTH HUNT

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Abstract

The Massachusetts Division of Fisheries and Wildlife sponsors about 70 basic hunter education courses, serving an average of 2,700 students each year, of which more than 400 are 15- to 17-year-old minors. This study examined parent/guardian and youth participant attitudes toward a special youth hunt in Massachusetts and constraints toward participating in such a hunt. The study objectives were to: 1) determine the opportunities that would be important to both parents and youth for youth to participate in a specialized youth hunt, and concomitant differences in those perceived opportunities; 2) determine the extent of participation in hunting and shooting activities by both parents and youth who participated in the programs; and 3) examine the perceived constraints on youth in participating in hunting activities and the youth hunts. A total of 374 questionnaires were completed after three mailings. Because of the 30 percent response rate, a random sample of 150 subjects was selected for a short telephone survey from the 863 youth and parents who did not return a completed questionnaire, to test for non-response bias. The respondents indicated that parents and youth differed in their perceptions of opportunities and activities important in a youth hunt. An examination of the extent of participation in hunting and shooting activities by parents and the youth revealed similar patterns in hunting various game species. There were few

social constraints on youth participating in hunting, but time constraints as a result of school, work, and sports prevented youth from hunting as much as they would like. Similarly, non-participation in a youth hunt was a result of a lack of time and opportunity rather than a result of social constraints. Parents and their children agreed on several points on what opportunities are important to them to be offered in a specialized youth hunt that could prove helpful to the Massachusetts Division of Fisheries and Wildlife and local sportsmen's clubs in developing and implementing a specialized youth hunt program.

1.0 Introduction

A fundamental concern of wildlife management agencies at all levels in the United States is that their constituency base, the population of hunters, has been declining in recent years (e.g. Miller and Vaske 2003). Hunter decline is related to several areas of concern: operating revenue issues, economic impact issues, overall support for hunting and hunting-related wildlife management practices, and others (Mehmood et al. 2003). Subsequently, developing programs to support initial and sustained participation in hunting activities and understanding the factors that influence hunting participation such as constraints to involvement in hunting are of major interest to wildlife management agencies.

Two areas that have received attention are those related to hunter education and youth hunting activities. Both program areas emphasize socialization into proper hunting and firearm handling practices as well as introduction to the broader hunting community. The Massachusetts Division of Fisheries and Wildlife and the Office of Environmental Law Enforcement have sponsored hunter education courses since 1954 (Chaplin 1954) and youth-oriented hunts since 1969 (Pollack 1969). The objectives of this study were to examine selected elements of these programs, specifically: (1) describe perceived opportunities available to both parents and youth of a youth hunt; (2) determine the extent of participation in hunting and shooting activities of both parents and youth who participated in the programs;

and (3) examine the perceived constraints on youth in participating in hunting and the youth hunts.

2.0 Methods

A 12-page self-administered questionnaire booklet was developed that asked a battery of questions of the parent and youth about: 1) their satisfaction with the hunter education course; 2) participation in hunting and shooting activities; 3) opportunities that they perceived important in a specialized youth hunt; 4) parental concerns about participation in, and specialized training they would like their child to receive prior to engaging in a youth hunt; 5) socio-demographic questions of both parents and youth; 6) constraints on hunting related activities; and 7) questions on youth on employment and other time commitments that could be used to explore constraints on participating in a specialized hunt or harvesting activities

The Massachusetts Division of Fisheries and Wildlife provided a list of 1280 youth, 15 to 17 years old, who had completed hunter education over 2001 through 2003; the list included youth and parent names and addresses. Using Dillman's Total Design Method, we mailed parents and youth three survey waves of the questionnaire and a postcard reminder over a two-and-a-half-month period.

After accounting for undeliverable questionnaires and refusals an effective response rate of 31 percent (or 374 parent and youth respondents) was achieved. To check on non-response bias, a randomized sub-sample of 150 households was drawn from the 863 non-respondent parents and youth. We were only able to obtain current telephone numbers for 64, who were telephoned and questioned with a reduced set of questions.

The results from the telephone survey were compared to five sub-samples randomly selected from the 374 completed questionnaires. No response bias was detected for 20 of 21 questions asked of parents and on 33 of 35 questions asked of youth. The results from the telephone survey were compared to five sub-samples randomly selected from the 374 completed questionnaires. Among parents, non-respondents were more likely to answer "yes" to the question "Do you hunt?" than were those who returned the questionnaire. In three of the five sub-samples, there was a statistically significant difference

between the two groups (Fisher's exact test $< .05$). Non-response bias was not apparent in any other of the 20 variables asked in the telephone follow-up.

Among youth, non-respondents were more likely to have participated in hunting-related activities as much as they liked. All five sub-samples of the respondents were statistically significantly different from the non-respondents (Fisher's exact test $p < .05$). Compared to all five sub-samples, non-respondents were also more likely to have been invited to participate in the Essex County League upland or waterfowl youth hunt ($p < .05$). Non-response bias was not observed in any of the other 33 variables.

3.0 Results

The average age of parents was 46.9 years, they were primarily male (84.9%), and 84.2 percent were currently married. Sixty-two percent of parental respondents had some college, 98.3 percent were non-Hispanic Caucasians, 81 percent were employed full-time, and 40.7 percent had incomes over \$75,000. As a sample they generally had less ethnic diversity, were a little better educated, and a larger percentage of the respondent households had higher incomes than the general Massachusetts' households.

The mean age of respondent youth was 17.3 years, 90.2 percent were male, 73 percent were in high school and 22.6 percent were either in college or working; 57.8 percent of the youth sample reported being employed for a median of 20 hours per week

3.1 Opportunities desired in a specialized youth hunt

Both parents and youths were asked a series of questions seeking to discover what opportunities are important to them to be offered in a specialized youth hunt (see Table 1). Parents and youths agreed on several points. Among the most important opportunities to both groups are the opportunities to learn how to hunt and find game with others, to learn from an experienced hunter, and to apply what was learned in the hunter education course. The single most important issue for the parents is the opportunity "to learn about guns and hunting safety," with 95.7 percent responding that it is "important"

Table 1.—Extent of parents’ (P) and youths’ (Y) agreement with statements concerning the importance that particular opportunities be offered for participation in a youth hunt.

	<i>N</i>	Very Important (%)	Important (%)	Neutral (%)	Unimportant (%)	Not At All Important (%)	Sig <i>d</i> (ES)
To learn about hunting with a shotgun	P368 Y329	51.6 27.7	36.4 33.7	9.8 25.5	1.1 6.1	1.1 7.0	< .001 <i>d</i> = 0.85
To learn proper field shooting techniques	P367 Y329	58.6 31.9	33.5 43.2	6.3 14.9	0.8 4.3	0.8 5.8	< .001 <i>d</i> = 0.79
To learn to hunt with dogs	P367 Y329	16.9 20.1	31.1 32.5	37.6 31.0	9.5 8.2	4.9 8.2	n.s.
To learn how to clean game	P367 Y327	41.1 31.8	40.6 37.9	13.9 20.8	2.7 4.3	1.6 5.2	< .001 <i>d</i> = 0.34
To learn how to cook game	P363 Y329	20.4 23.4	37.5 32.5	30.9 28.0	8.0 9.4	3.3 6.7	n.s.
To learn from an experienced hunter	P368 Y329	61.4 44.4	30.7 34.3	5.4 13.7	1.4 3.0	1. 4.6	< .001. <i>d</i> = 0.52
To learn how to hunt/find game with others	P366 Y330	48.6 33.6	40.7 45.8	7.9 13.6	0.8 2.1	1.9 4.8	< .001 <i>d</i> = 0.39
To learn about guns and hunting safety	P369 Y328	78.9 43.3	16.8 27.7	3.0 18.9	0.5 4.3	0.8 5.8	< .001 <i>d</i> = 1.18
To apply what was learned in the hunter education course in the field	P368 Y328	63.6 36.9	29.6 38.4	4.6 18.0	1.1 1.2	1. 5.5	< .001. <i>d</i> = 0.73
To learn how to identify game in the field	P368 Y329	60.9 36.2	30.7 38.3	6.3 16.7	0.8 3.0	1.4 5.8	< .001 <i>d</i> = 0.69

d (Effect Size) of 0.20 is a minimal relationship, 0.50 is considered as a typical relationship, and 0.80+ is a substantial relationship, (see Vaske, Gliner & Morgan 2002)

or “very important.” Youths reported that “to be able to shoot in a hunting situation” was the second most important opportunity (parents were not asked this questions). Both groups found the opportunities to learn to hunt with dogs and to learn how to clean and cook game much less important than the other opportunities.

Parents and youth differed statistically, however, on eight of ten opportunities on the strength of the importance. In every opportunity in which there is a difference, the parent respondents rated it higher in importance than the youth, and based on the effect size the difference was moderate (typical) to substantial.

To further examine if youth and parents differed on the perceived opportunities, Principle Components analysis

was employed to see if there was an underlying set of components or sub-dimensions of such opportunities. The analysis resulted in two sub-components of the perceived opportunities in a youth hunt, accounting for 71.7 percent of the variance (see Table 2). A Field Experience component was identified by ratings of importance on opportunities for hunting with a shotgun, learn field shooting techniques, learn from experienced hunters, learn how to hunt/fid game, gun and hunting safety, apply what was learned in the hunter education course, and the opportunity to learn how to identify game in the field. Opportunities to learn to hunt with dogs, learn how to clean game, and learn how to cook game in a youth hunt were ratings that loaded on a second component which was labeled as a Periphery Activity component.

Table 2.—Sub-components of the importance that particular opportunities be offered for participation in a youth hunt.

	Field Experience (Comp1)	Periphery Activity (Comp 2)
To learn about hunting with a shotgun	.849	
To learn proper field shooting techniques	.854	
To learn from an experienced hunter	.776	
To learn how to hunt/find game with others	.707	
To learn about guns and hunting safety	.894	
To apply what was learned in the hunter education course in the field	.826	
To learn how to identify game in the field	.731	
To learn to hunt with dogs		.798
To learn how to clean game		.680
To learn how to cook game		.805
Cronbach's Alpha	.934	.756

Summative scales for each component were developed and an independent sample t-test indicated a difference between youth and parents on the Field Experience scale ($t = -8.874$, $p < .001$, $d = 0.91$), parents were more likely to see Field Experiences as more important than youth. There was no difference between youth and parents on the Periphery Activity scale ($t = -1.798$, $p > .05$)

3.2 Extent of Participation in Hunting and Shooting Activities

Both parents and youth were asked about the number of times they engaged in hunting and shooting activities over the past year; parents were specifically asked how frequently they participated with their son or daughter who had completed the hunter education course (see Table 3). Target shooting and deer hunting garnered the most frequent participation reported by parents, with 68.7 percent of parents saying they had participated in target shooting with their child and 62.3 percent participating with their child in deer hunting.

For all other hunting and shooting activities listed, more parents reported not participating than having participated with their child (e.g., 39% of parents indicated they had participated in upland bird hunting

compared to 61% who said they had not participated with their child in this activity).

Youth were asked the extent of their participation in hunting and shooting activities, a similar pattern to that of parental participation emerged. Almost three-fourths (73%) of youth respondents had deer hunted since completing the hunter education course, 86.1 percent had participated in target shooting, 51.8 percent engaged in archery target shooting, and slightly less than half of the youth (47.7 %) reported skeet or trap shooting. Less than half of the youth respondents (42.5 %) had participated in small game hunting, 41.1 percent reported hunting upland birds, about 30 percent of youth said they archery hunted, though they were not asked about specific species, 27.4 percent engaged in turkey hunting, and 23.4 percent hunted waterfowl

We also asked youth the extent of their participation in activities related to their hunter education course and periphery to hunting and shooting activities, and as can be seen in Table 5, over 82.9 percent of youth had eaten a meal of wild game and 68.1 percent had a meal from wild fish. However, only 64.6 percent had actually

Table 3.—Parent participation in hunting/shooting activities with child who attended hunter education.

	<i>N</i>	> 10 Times/ Year (%)	5 to 10 Times/Year (%)	< 5 Times/ Year (%)	I Have Not Participated (%)
Upland bird hunting (pheasant, grouse)	359	3.9	12.0	23.1	61.0
Waterfowl hunting (ducks, geese)	356	3.6	7.5	23.8	67.0
Small game hunting (rabbits, squirrel)	358	0.6	7.0	16.8	75.7
Turkey hunting	358	0.6	7.0	16.8	75.7
Deer hunting	369	14.4	16.3	32.0	37.4
Target shooting with a rifle	364	18.1	20.9	29.7	31.3
Archery shooting	360	12.5	9.2	15.8	62.5
Archery hunting	352	9.7	4.8	8.2	77.3
Skeet or trap shooting	358	8.9	5.9	20.9	64.2

Table 4.—Youths' participation in hunting activities since attending hunter education course.

	<i>N</i>	> 10 Times/ Year (%)	5 to 10 Times/Year (%)	< 5 Times/ Year (%)	I Have Not Participated (%)
Upland bird hunting (pheasant, grouse)	358	5.9	14.5	20.7	58.9
Waterfowl hunting (ducks, geese)	350	7.7	5.7	10.0	76.6
Small game hunting (rabbits, squirrel)	351	7.7	8.5	26.2	57.5
Turkey hunting	347	3.7	8.4	15.3	72.6
Deer hunting	352	19.9	20.5	32.7	27.0
Target shooting	360	32.2	24.7	29.2	13.9
Archery shooting	357	19.9	11.8	20.2	48.2
Archery hunting	355	13.2	5.6	11.8	69.3
Skeet or trap shooting	354	10.7	11.3	25.7	52.3

cleaned or prepared wild game to eat and 61.3 percent had cleaned or prepared wild fish.

3.3 Constraints

To assess time commitments of youth we asked a series of questions about their activities in school and the community:

- 54 percent of youth indicated they were involved in team sports,
- 19.9 percent said they were involved in club activities,
- 44 percent say they were involved in non-school related social activities

Table 5.—Youths' participation in hunting activities since attending hunter education course.

	<i>N</i>	> 10 Times/ Year (%)	5 to 10 Times/Year (%)	< 5 Times/ Year (%)	I Have Not Participated (%)
Had a meal from wild game	356	31.2	21.3	30.3	17.1
Cleaned or prepared wild game to eat	359	11.7	14.8	28.1	45.4
Had a meal from wild fish	360	17.5	16.7	33.9	31.9
Cleaned or prepared wild fish to eat	359	15.6	15.0	30.6	38.7
Wildlife viewing/watching	356	28.9	24.2	28.9	18.0

- 26 percent report they are involved in “other” activities such as snowmobiling, four-wheeling, Boy Scouts, etc.
- youth reported spending a median of 40 hours on these activities over the fall months, during the prime hunting seasons
- time commitments with friends averaged 19.14 hours per week.

In order to ascertain the ability of youth to access hunting activities we asked them about whether they had a driver's license and a car. Over 73 percent (73.6%) said they had a driver's license and 64.7 percent indicated they had a car.

The youth were then asked questions concerning their participation in hunting-related activities since they attended a hunter education course. Those who reported not having participated as much as they would have liked (62.8%) were asked what prevented them from doing so (see Table 6). “School” was the most common reason, with 81 percent saying it cut into their hunting-related activities. Work was an obstacle for 54.5 percent. Sports and hobbies were an obstacle for 30 percent; a lack of people to go with and a lack of opportunities were problems for 28.3 percent and 23.9 percent, respectively. Lack of interest, the disapproval of family or friends, and a lack of an understanding of fish and wildlife laws were problems for less than two percent of the respondents.

Out of the 374 youths who responded to the questionnaire, only 20 had ever been invited to a

specialized youth hunt. Of this 20, 14 decided not to participate in the hunt. These 14 youths were asked why they did not attend the youth hunt. Ten reported that a lack of time was a reason for not attending the youth hunt. Four responded that they had no one to go with and four said they lacked the equipment.

Generally, constraints were associated with the lack of time, which are structural in nature; or a lack of someone to go with or lack of opportunity, reflecting isolation (Crawford et al. 1991). Social constraints such as disapproval of friends or family affected few youth respondents.

4.0 Conclusions and Implications

Youth hunts are perceived by both youth and parents as providing opportunity for youth to be properly socialized into the overall hunting experience: proper gun handling, field shooting techniques, hunter safety were rated important to very important by parents and youth alike. Other elements of the field experience such as identifying game, learning how to hunt with others were also highly rated. Results also show that parents rated the youth hunt opportunity as more important than the ratings by youth for providing proper socialization into the field hunting experience. The commonalities among parents and youth provide an opportunity for Massachusetts Division of Fisheries and Wildlife to develop hunting and shooting opportunities that include both parents and youth, an opportunity that they have begun to implement with their upland game youth hunt initiative.

Table 6.—What has prevented youths from participating as much as they would like in hunting-related activities.

	N=226
School	81.0 %
Work	54.5 %
Sports or hobbies	30.1 %
Not having people to go with	28.3 %
Lack of opportunities	23.9 %
Lack of transportation	11.5 %
Other	9.7 %
Don't have the needed equipment	9.7 %
Can't afford to go	8.4 %
Don't know where to hunt	8.4 %
Difficulty getting a firearms permit	6.2 %
Family disapproves	1.8 %
Friends disapprove	1.3 %
Lack of interest	1.3 %
Don't understand fish and wildlife laws	0.4 %

Deer hunting and target shooting are the most frequently participated in by both parents and youth alike. Although over 62 percent of parents hunt deer, most hunted five times per year or less. What should be noted is the amount of non-participation in hunting activity by both parents and youth. About 76 percent of parents had not hunted small game, turkey, or archery the past year. Youth participation/non-participation generally followed the adult pattern. As early as 1969, Meyersohn (1969) and Burch (1969) noted that influences on outdoor recreation behavior may be more appropriately placed within groups rather than within individuals. Initiation into hunting for male adolescents is related to older, male family members who hunt (O'Leary et al. 1987; Bissell et al. 1998; Stedman & Heberlein 2001). The high rates on nonparticipation suggest that youth are not being socialized into the hunting culture by their families and will likely carry this forward to adulthood. Theory suggests that declining hunting participation may be related to value shift in modern societies (Manfredo et al. 2003). Some suggest that wildlife management agencies

can do very little to abate this shift (Mehmood et al. 2003; Manfredo et al. 2003). However, policy means can be developed to help retain the existing hunting population and ensure that hunting continues to be part of the social fabric of the community (Mehmood et al. 2003).

Constraints on leisure have been categorized as structural, interpersonal, and intrapersonal. (Crawford et al. 1991). Structural constraints include such things as time, money, health that negatively influence participation; interpersonal constraints involve family obligations, lack of leisure partners, and others; intrapersonal constraints suggest such factors as low self esteem that limit participation (Shogan 2002). Most of the important constraints on youth participation in hunting activities can be classified as structural: school, work, other sports and hobbies. Research suggests that such constraints can be negotiated (Jackson and Rucks 1995), and that such negotiations may have to occur within a particular category, as constraints may be sequential (Nadirova & Jackson 2000). Youth nonparticipation in hunting also includes interpersonal constraints, related to lack of family support and involvement in hunting throughout the year, suggesting that encouraging parental involvement with specialized youth hunts and providing programs to enhance skills among hunters of familial units may encourage youth and older family members to continue participating.

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