

# FINDING ARTEMIS: PATHWAYS FOR RECRUITING AND CONSTRAINTS TO RETAINING FEMALE HUNTERS

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**Abstract.**—A total of 321 women (73 percent) responded to the 2001 Illinois Becoming an Outdoors-Woman (BOW) Survey. All had signed up for and/or participated in BOW workshops. Eighty-three percent of the women had attended one or more workshops and most participated in these workshops to develop or improve their skills in outdoor activities. During the previous 12 months, 72 percent of the women had participated in hiking, 60 percent had fished, and 19 percent had hunted. Three-fourths of the women participated in outdoor activities with their husband/boyfriend. “No one to go with” was identified by participants as the most important constraint to participating in outdoor activities. The most important inducements for participation were “Training to develop skills,” “Someone to go with,” and “More time.” Survey respondents’ personal characteristics and levels of participation in hunting and other outdoor activities are also presented.

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## 1.0 INTRODUCTION

Hunting and fishing license sales have steadily declined across the United States since 1996 (U.S. Dept. of Int., Fish and Wildlife Service, and U.S. Dept. of Comm., Bureau of the Census 1991, 1996, 2001, 2006). This decrease is detrimental to conservation agencies and programs, many of which derive a portion or all of their funding from license sales. Moreover, hunting- and fishing-related expenditures support conservation projects and programs through the Federal Aid in Wildlife Restoration Act and the

Federal Aid in Sport Fish Restoration Act (more commonly known as the Pittman-Robertson and Dingle-Johnson acts, respectively). During 2006, more than 37 million fewer people participated in outdoor activities than in wildlife viewing (U.S. Dept. of Int., Fish and Wildlife Service, and U.S. Dept. of Commerce, Bureau of the Census 2006). However, outdoor sportspersons spent \$30 billion more than wildlife viewers on their respective outdoor activities.

Though the past century has seen a change in traditional women’s roles, women still do not participate in various activities in the same numbers as their male counterparts. It is possible that the number of females participating in hunting and fishing has increased during the past century due to this shift of roles; however, the U.S. Fish and Wildlife Census Bureau’s hunting participation data are not available by gender before 1991. During 2006, 25 percent of anglers and 9 percent of hunters were female (U.S. Dept. of Int., Fish and Wildlife Service, and U.S. Dept. of Comm., Bureau of the Census 2006). Looked at from the perspective of the whole U.S. population, only 6 percent of all females in the United States fished during 2006 and only 1 percent hunted compared to 20 percent and 10 percent of males, respectively. Attracting and retaining additional females to hunting and fishing activities could financially benefit conservation agencies and programs. Ensign (1999) found that the Becoming an Outdoors-Woman program positively influenced sales of hunting and fishing licenses and park permits. Studies have shown, however, that females encounter a variety of constraints to participation in hunting and fishing which may or may not apply to males (Crawford and Godbey 1987, Henderson et al. 1988, Jackson 1990, Crawford et al. 1991, Henderson and Bialeschki 1991, Shaw et al. 1991).

Recruitment of new hunters tends to be within families that have a tradition of hunting participation;

a network of hunting family and friends usually maintains the individual's participation in the sport (Adams and Thomas 1983). Adams and Thomas (1983) found that the majority of male hunters were initiated into the sport during childhood by their father or another male relative while the majority of female hunters are initiated into hunting by their husbands. Research has also shown that those who are introduced to hunting as a child are more likely to remain in the sport throughout their lives than those who are introduced to the sport as an adult (O'Leary et al. 1987). Adams and Steen (1997) found that most females were initiated into hunting in their early twenties by their husbands. These studies suggest that women adopt the leisure preferences of their male companions or husbands and tend to choose family-oriented leisure activities.

Once recruited into hunting, women face a variety of constraints that inhibit participation. Crawford and Godbey (1987) categorize these constraints into three groups: intrapersonal, interpersonal, and structural. Crawford et al. (1991) expand this theory to include a hierarchical relationship among constraints. Before an individual will participate in an activity, intrapersonal constraints such as perceived lack of skill, prior experiences, or fear must be overcome. Then interpersonal constraints such as not having someone to go with or interactions with friends, family, and society must be worked through. Finally, structural constraints, such as lack of time, lack of funding, or lack of a place to go, must be overcome. Life stage is another factor that impacts women's leisure activities; outdoor activity levels typically decrease during early motherhood (Brown et al. 2001).

In 1990, a workshop was held at the College of Natural Resources at the University of Wisconsin-Stevens Point, to explore the barriers to outdoor recreation participation faced by women and strategies for overcoming them (Lueck 1995). The Becoming an Outdoors-Woman (BOW) program, established in 1991, was a direct outcome of this workshop. Three-day workshops are held in more than 40 U.S. states, Canada, and New Zealand in which women learn a variety of skills used in hiking, boating, camping,

hunting, shotgun and pistol shooting, and fishing in a supportive, comfortable, and non-threatening environment. In 1998, more than 12,000 women participated in more than 100 workshops (Ensign 1999).

## **2.0 STUDY PURPOSE AND OBJECTIVES**

This study investigated the attitudes and activities of women who participated in an Illinois BOW workshop in 1999, 2000, and/or 2001. Specific research objectives were to: 1) determine perceived constraints to outdoor activities; 2) describe the relationship between women's place of residence and their participation in outdoor activities; and 3) determine the effects of the workshop on subsequent participation in outdoor activities.

## **3.0 METHODS**

Data were collected using a mail questionnaire. The survey method followed a modified version of Dillman's (1978) Total Design Method. The mailing list was derived from the names and addresses of 453 women who signed up for and/or participated in a BOW workshop in Illinois during June or October 1999, June or October 2000, or June 2001. On July 12, 2001 survey participants were sent an eight-page, self-administered questionnaire that solicited information on workshop participants' outdoor activities and their attitudes toward the BOW workshops and related issues. A follow-up postcard sent 10 days after the questionnaire thanked recipients for participating in the survey and reminded nonrespondents to return the completed questionnaire. On September 10, nonrespondents were sent a second questionnaire followed by a postcard 10 days later.

## **4.0 RESULTS**

Twelve surveys were returned by the U.S. Postal Service as undeliverable, reducing the mailing list to 441 potential participants. Three hundred twenty-one usable questionnaires were received for a response of 72.8 percent. Coded data were transferred from questionnaires to a computer file and analyzed using SPSS, Pearson's chi square, and cross tabs.

#### 4.1 Perceived Constraints

Seventy-three percent of the study participants conducted their outdoor activities with their husband/boyfriend, which is similar to findings in other research (Adams and Steen, 1997). However, 37 percent of participants reported seeking the company of other women when going afield. A majority (55 percent) of participants indicated that “No one to go with” was the most important factor that hinders them from participating in outdoor activities. Moreover, 67 percent selected “Training to develop skills” and 47 percent selected “Someone to go with” as inducements to participate in listed activities. Although not statistically significant, one finding indicated that women were more likely to have a male companion than a female companion while hunting (Table 1). However, women who participated in archery for 1 day or for 5 or more days (Table 2) or hiked for 2 or more days were more likely to have a female companion (Table 3).

#### 4.2 Place of Residence and Hunting

Thirty-nine percent of the respondents reported living in a rural area or small town, and about a quarter (26 percent) lived in a medium or large city. Sixty percent of the respondents had no children living at home. Fifty-one percent listed “Not enough time” as the most important factor that hinders them from participating in outdoor activities. While 31.3 percent of rural residents hunted 5 or more days, only 14.3 percent and 15.0 percent of medium- and large-city residents, respectively, hunted 5 or more days (Table 4). However, this difference was not significant. A majority of residents of medium and large cities did not hunt at all (71.4 percent and 80.0 percent respectively). Residents of medium and large cities who did hunt most often participated for 2 or more days.

#### 4.3 Workshop and Participation

Respondents participated significantly less in rifle shooting, fishing, canoeing, hiking, boating, and archery after attending the workshop(s) (Table 5). However, respondents camped significantly more after

**Table 1.—Number of days spent hunting and gender of companion**

Number of days spent hunting	Female Companion	Male Companion
1	1	3
2-4	4	12
5 or more	13	26

p=.805

**Table 2.—Number of days spent participating in archery and gender of companion**

Number of days participating in archery	Female Companion	Male Companion
1	14	3
2-4	4	10
5 or more	17	12

p=.010

**Table 3.—Number of days spent hiking and gender of companion**

Number days spent hiking	Female Companion	Male Companion
1	8	11
2-4	31	27
5 or more	78	52

p=.291

**Table 4.—Number of days spent hunting and current place of residence**

Place of Residence	Days Hunted (% response by type of residence)			
	0	1	2-4	5+
Rural area	54.2	4.2	10.4	31.3
Small town	62.5	3.1	15.6	18.8
Suburbs	74.1	3.7	3.7	18.5
Small city	63.3	0	6.7	30.0
Medium city	71.4	0	14.3	14.3
Large city	65.2	0	5	15.0

attending the workshop(s). Participation in hunting and shotgun and pistol shooting did not change significantly after attending the workshop(s).

**Table 5.—Participation in outdoor activities by respondents before and after attending BOW workshop(s)**

Activity	n before	n after	T	p
Shotgun	78	77	0.126	.900
Hunting	65	53	1.669	.096
Pistol	54	40	1.950	.052
Rifle	70	53	2.266	.024
Fishing	231	153	8.347	.000
Canoeing	172	108	6.414	.000
Hiking	227	169	6.664	.000
Boating	160	102	6.414	.000
Archery	59	54	4.383	.000
Camping	94	142	9.901	.000

## 5.0 CONCLUSIONS AND IMPLICATIONS

Similar to previous studies, we found that “not enough time,” lacking “someone to go with,” and needing “more training to develop skills” were critical constraints to women’s participation in outdoor activities. The gender of women’s outdoor activity companions differed slightly with regard to activity. Study participants were more likely to have a male companion while hunting than a female companion; however, they were more likely to have a female companion while hiking or participating in archery. Our findings indicate that constraints differed by activity; in particular, more complex activities induced more constraints. For example, hunting is a more complex activity than hiking or archery because it requires more specialized skills and equipment and an array of knowledge about wildlife, wildlife habitat, and specific terrain. Introduction to hunting by husbands or boyfriends later in life is reflected in the gender of women’s companions for that activity. Initiating more females to hunting during childhood may increase their knowledge and skills, and minimize intrapersonal constraints. Jones (2007) found that women with fewer constraints had higher participation levels. Participating in workshops such as BOW will also aid in overcoming the “someone to go with” and “training to develop skills” constraints.

Current place of residence may be related to participants’ reported constraints on time. Females in rural areas hunted for 5 or more days more frequently

than females in urban areas. This difference may be because rural residents live closer to hunting sites and do not require as much travel time to participate in hunting. Hunting opportunities near urban areas do exist but are limited. Hunters who must travel from urban centers may be able to do so only once or twice a season. BOW workshops can introduce and encourage these urban women to participate in hunting as well as other outdoor activities, and programs such as Beyond BOW provide opportunities to utilize skills learned.

Women reported participating significantly less in the majority of activities after attending the BOW workshop(s), with the exception of camping. We attribute this increase in camping to workshop attendance where women encountered potential companions for the oftentimes sociable activity. Our small sample size and short time frame may have produced results that differ from previous studies, which found significant participation in outdoor activities increased after workshop attendance (Lueck 1995, Welch 2004, Jones 2007). Welch (2004) also noted that her results suggest that the BOW program helps women negotiate and diminish the effects of leisure constraints. Jones (2007) found women who attended BOW workshops had relatively lower levels of perceived leisure constraints and higher levels of perceived self-efficacy than their non-attendeo counterparts.

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