

**Empowering New Voices in the Outdoors - A Series of Workshops to Educate, Excite, and Engage Young Women in Outdoor Recreation**

Honors Thesis

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## **Abstract**

The discrepancy between participation levels of men and women in outdoor recreation is becoming well-documented. The goal of this honors thesis is to address this inequality by leading workshops that educate and empower young women to pursue outdoor adventure. Systemic issues such as sexism, lack of opportunity and fear of violence, as well as issues such as lack of representation of women in outdoor spaces, failure to include girls from a young age in adventure sports, and a disconnect in wilderness courses to address women-specific topics (e.g., menstruating in the outdoors) can be found in literature about this gender-gap in outdoor recreation. The three workshops addressed how to navigate snow sports, hygiene and menstruating in the wilderness, and how to plan a trip. By creating a safe-space to discuss previous obstacles, talking to women who have similar experiences, and taking before and after surveys of participants, the results of my honors thesis demonstrates that these workshops are an effective method to address the disparity between men and women in the outdoors that other communities can harness going forward.

## **Literature Review**

Recurring themes from relevant research on women and outdoor recreation includes the obstacles of fear and safety, invisibility of women leaders, and menstruation as barriers. In a study by Wesely and Gaarder, "The Gendered "Nature" of the Urban Outdoors: Women Negotiating Fear of Violence: Women Negotiating Fear of Violence", the study illustrates "how an ongoing negotiation exists for the women as the authors balance choices and concerns related to their outdoor recreation and what aspects of surveillance and control they consider, reject, or accept" (Wesely & Gaarder, 2004). This directly relates to my thesis because it's essential to understand what limits women from participating in outdoor recreation and address

these concerns. Women need to feel safe, understood and seen to be in the mental space to partake in outdoor recreation as it can be extremely dangerous or uninviting.

Furthermore, Kilgour sought to explore the relationship between "Gender, Spatiality and Fear: Young women's experiences of outdoor physical activity". This empirical study goes in depth about how choices to participate in outdoor exercise depends on how "safe" an environment is deemed (whether it's well lit, well populated, well-established pathways, etc.), experiences with male counterparts in the past, and previous experience in sports influences the way women engage with these activities. Interestingly, Kilgour writes that "it is evident that those young women who had 'sporting histories' and/or were presently involved in sport at university, appeared to be more confident, empowered and self-assured when partaking in any type of outdoor activity, whether during the day or night" (Kilgour, 2007). These topics were addressed in my workshops as well as I opened up the floor to discussion and obstacles women have faced in the past.

The idea of "sporting histories" in raising women's confidence is a topic that McNatty, Nairn, Campbell-Price, and Boyes addressed in "Looking back: the lasting impact of outdoor education for adolescent girls". Specifically, the retrospective research explored "11 young women's learning five to eleven years after they participated in a month-long, residential outdoor programme during high school... The research participants reported how the experience enabled their sense of a strong female identity up to 11 years later, empowered with practical skills and the capacity to contribute to the wellbeing of the environment" (McNatty, Nairn, Campbell-Price, & Boyes, 2025). This is especially impactful to my research and workshops as the demographic coming to learn are in pivotal years of their lives, and learning from other women in order to embark on outdoor adventure could have lasting impacts on their overall wellbeing.

As a woman leader in the outdoor education industry, the study of "The invisibility cloak: Women's contributions to outdoor and environmental education" by Mitten, Gray, Allen-Craig, Loeffler, and Carpenter was of special interest to me. They found that "Women leaders in outdoor environmental education (OEE) have begun to discuss the invisibility cloak that seems to envelope them. Women comprise approximately half the OEE professionals; however, women still face gender bias resulting in challenges of recognition and access to the upper echelons of the profession" (2018). This one is important because at least for me, I feel way more comfortable with women educators than men. But if women educators, including myself, don't feel supported or promoted among OEE professionals, retention will be a lot harder to maintain, and women like those that came to my workshops will have a much harder time finding women mentors they can look up to.

Finally, in an investigation of "The impact of menstruation on participation in adventurous activities. Sport, Education and Society", Prince and Annison examined the "effect of menstruation and premenstrual syndrome (PMS) on habitual participants in adventurous activities through the voices of women. In a survey to explore women's lived experiences (n=100), 89% of respondents noted that their participation is affected by menstruation/PMS" (Prince & Annison, 2023). This topic was of special interest to me as anecdotally, menstruation seems to be one of the most impactful limiting factors for women in their participation in outdoor activities. This is why I chose one of my topics to be "Hygiene and Menstruation in the Outdoors" to address this taboo topic and empower young women to know how to handle this natural process rather than letting it hold them back. Overall, this literature review helped inform and guide what workshop topics I decided to do. I have a lot of experience in snow recreation and knowing that there is a high barrier for entry in that area of recreation, my first workshop was a snow clinic. The second was the aforementioned hygiene and menstruation clinic, and finally I created a how to plan a trip clinic to empower and educate women to take these

decisions into their own hands, with the information they need to make informed choices. Ultimately, the goal is not to separate women from men in the outdoors; rather, it is to build confidence from the start for women new to the outdoor scene and give them the tools they need to recreate safely, confidently, and successfully with the entire population of outdoor recreators and to invite new voices in.

### **Methods**

I designed 3 workshops, based on previous workshop templates, information online from experienced guides, personal experience, listening to advice from other women, and the input from my honors thesis advisor. The presentations were an hour in length, with the intent of incorporating time for discussion and questions. A QR code was placed at the start and end of each presentation for data collection; each survey was designed with questions pertaining to the three topics (see Table 1, Table 2, & Table 3). The questions were designed as Likert scales (1-Not at all Confident to 5-Extremely Confident). In addition to the Likert scale data, participants provided open-ended feedback regarding their barriers relevant to the clinic topic. Anonymous ID's were collected (initials and birth month, e.g. JD01) in order to compare answers from the same people before and after the clinic.

**Table 1**

#### ***Snow Clinic Survey Questions***

Item	Survey Question
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1	How confident do you feel planning a snow-related activity (skiing, snowshoeing, etc.)?
2	How confident are you in identifying which student clubs offer organized carpooling or group trips for snow activities?
3	How confident are you in your ability to utilize CSU-specific resources (like SkiSU or Rec center gear rentals) to get to the mountains?
4	How confident do you feel in knowing where to go locally or online to find affordable, high-quality gear?
5	How confident do you feel in your ability to prepare your vehicle for a snow trip (e.g., checking tire pressure, packing survival kit, and monitoring road conditions)?

Table 2

*Hygiene Clinic Survey Questions*

Item	Survey Question
1	How confident do you feel preparing a hygiene kit for outdoor adventures?

2	How confident do you feel following the Dispose of Waste Properly rule from the "Leave No Trace" Principles?
3	How confident do you feel choosing between products (i.e. types of materials, whether something is biodegradable, reusable, free of certain chemicals, etc.) for your hygiene kit?
4	How confident do you feel pursuing an outdoor adventure knowing you will be on your period?
5	How confident do you feel knowing how the different phases of my cycle affect me (mentally, physically, etc)?

Table 3

*Trip Planning Clinic Survey Questions*

Item	Survey Question
1	How confident do you feel knowing what qualities to look for in outdoor partners (i.e. the friends you go on trips with)?
2	How confident do you feel asking and preparing answers to the big 6 before going on a trip: the Why, Where, When, Who, What (If), and How of trip planning?

3	How confident do you feel finding resources to prepare for your next trip (i.e. for weather forecasts, navigation, road conditions, etc).
4	How confident do you feel making your own trip planning documents (i.e. gear list, emergency situation preparation, etc).
5	How confident do you feel understanding what I need to know about the trail I'm interested in (i.e. Leave No Trace rules, recent trip reports, types of animals to be aware of, etc).
6	How confident do you feel knowing how to pack a backpacking backpack?

**Note.** Participants responded to all items on a Likert scale from 1 (Not at all Confident) to 5 (Extremely Confident).

### Analysis

Once data was collected ( n=6 for snow clinic, n=8 for hygiene clinic), a paired t-test was conducted to understand if the workshops made a significant difference in mean confidence scores before and after the clinic. Questions were tailored specifically to the clinic's topic, and qualitative information was collected at the end of each survey.

## Results

### Snow clinic

#### Quantitative Results

Pre-test confidence scores for the snow clinic ranged from 1.67 (slightly confident) to 2.50 (slightly to moderately confident) (see Table 4). Pre confidence scores were highest for where to find affordable gear, CSU resources for snow adventures, and student clubs related to snow activities. Post confidence scores ranged from 3.33 (moderately to fairly confident) to 4.67 (fairly to extremely confident). They were highest for where to find affordable gear and knowledge of student clubs. Four of the five differences in confidence scores for the were statistically significant ( $p < .05$ ). Differences in average means ranged from 1.17 to 2.00. The largest pre and post survey difference was for the item related to affordable gear. The smallest pre and post difference was for vehicle preparation. This makes sense as we only talked about how to prepare vehicles for winter conditions; we did not actually practice doing so. There was no statistically significant difference between the pre and post scores for the survey item related to CSU resources.

### Hygiene clinic

#### Quantitative Results

Pre-clinic confidence scores for the hygiene clinic ranged from 2.5 (slightly to moderately confident) to 3.38 (moderately to fairly confident) (see Table 5). Respondents were most confident in adventuring on their period, waste disposal of period products, and knowledge of their menstrual cycle. Post-clinic confidence scores ranged from 4.50 (fairly to extremely

confident) to 5.0 (extremely confident). Post scores were highest for waste disposal, cycle knowledge, and how to prepare a hygiene kit. All differences in the pre and post scores for the hygiene clinic items were statistically significant ( $p < .05$ ). Differences in average means ranged from 1.25 to 2.00. The largest pre and post difference was related to knowing which products to choose. The smallest difference was for the item that asked participants how confident they felt going on an outdoor adventure while menstruating.

### **Trip planning clinic**

Due to constraints to the time of the semester, only 3 people (including one officer) came to my trip planning clinic, which I deemed too small a sample to collect pre and post survey data. Instead, we engaged in conversation rather than an information session around trip planning, which had benefits of its own around learning from each other and hearing one another's experiences in the good and the bad of working with peers to create a safe and enjoyable endeavor outside.

**Table 4**

***Pre- and Post-Workshop Confidence Scores: Snow Clinic (n=6)***

Question Area	Pre Mean	Post Mean	Change	P-Value

<b>Plan Snow Activity</b>	<b>1.67</b>	<b>3.67</b>	<b>+2.00</b>	<b>&lt;0.001*</b>
<b>Student Clubs</b>	<b>2.50</b>	<b>4.50</b>	<b>+2.00</b>	<b>0.033</b>
<b>CSU Resources</b>	<b>2.50</b>	<b>4.17</b>	<b>+1.67</b>	<b>0.054</b>
<b>Affordable Gear</b>	<b>2.33</b>	<b>4.67</b>	<b>+2.33</b>	<b>0.028</b>
<b>Vehicle Prep</b>	<b>2.17</b>	<b>3.33</b>	<b>+1.17</b>	<b>0.013</b>

**Table 5**

***Pre- and Post-Workshop Confidence Scores: Hygiene Clinic (n=8)***

<b>Question Area</b>	<b>Pre Mean</b>	<b>Post Mean</b>	<b>Change</b>	<b>P-Value</b>
<b>Prep Hygiene Kit</b>	<b>2.88</b>	<b>4.75</b>	<b>+1.88</b>	<b>0.001</b>

<b>Waste Disposal (LNT)</b>	<b>3.38</b>	<b>5.00</b>	<b>+1.62</b>	<b>0.003</b>
<b>Product Choice</b>	<b>2.50</b>	<b>4.50</b>	<b>+2.00</b>	<b>0.001</b>
<b>Adventure on Period</b>	<b>3.25</b>	<b>4.50</b>	<b>+1.25</b>	<b>0.011</b>
<b>Cycle Knowledge</b>	<b>3.13</b>	<b>4.63</b>	<b>+1.50</b>	<b>0.02</b>

**Note. All 5 questions showed statistically significant increases ( $p < .05$ ).**

### **Discussion**

My results indicate that these clinics address the obstacles that women in outdoor recreation face by educating and increasing the confidence in topics where their knowledge lacks. This is seen by the significant difference in confidence for every question asked on the pre- and post- surveys, (for an alpha level of .05, all p-values  $< .05$ ), except for the question regarding their confidence in finding Colorado State University specific resources for snow recreation. These results suggest that future work must be done with CSU to reach students without these resources, such as the Outdoor Program, which is a relevant resource for students in snow recreation. Furthermore, all questions had a significant difference in confidence for the hygiene and menstruating clinic, illustrating the lower level of understanding around this topic before the clinic. The largest gain in confidence was regarding understanding of Product Choice for menstruating while recreating at an increase +2.00 on a 5-point scale. Another interesting result was that the Waste Disposal topic reached the maximum score of 5.00 post-clinic, meaning the education tactics used in the workshop were effective at educating

the audience about how to properly follow Leave No Trace Principles concerning their period. Finally, while the how to plan a trip clinic surveys could not be administered due to lack of attendance, this means that careful consideration of time of year must be taken into account in order to reach the demographics this information is meant to reach. Though my results focused on the pre and post survey results, I also collected qualitative data from an open ended feedback question on my surveys (see appendix). The qualitative results highlight themes of not knowing where to start, lack of access due to financial constraints or community, and insufficient education surrounding topics like Leave No Trace, which informs why pre-clinic averages were so low in confidence. Member feedback was an integral aspect of my workshops as it can inform future officers to tailor clinics and education around these topics, as well as instilling the importance of open-ended feedback for women to discuss the obstacles they've individually faced when wanting to start recreating in the outdoors.

### **Takeaways**

From this experience, I have been able to learn a lot about the topics themselves (such as specific Leave No Trace principles) as well as the obstacles women have in starting outdoor activities. It appears that single-session, peer-led workshops are an effective way to significantly increase young women's confidence to engage in outdoor recreation. Future research could include creating multi-day clinics all on the same topic, going into the field after the workshop to apply the knowledge, or having members teach other peers the information they learned for retention purposes. My presentations are available to future WOLI officers who can continue to educate the next iteration of WOLI members and post it on our website for continued outreach. With this experience I am excited to pass on my knowledge to the next generation of outdoor adventurers.

### References

- Kilgour. (2007). Gender, spatiality and fear: Young women's experiences of outdoor physical activity.
- McNatty, Nairn, Campbell-Price, & Boyes. (2025). Looking back: the lasting impact of outdoor education for adolescent girls.
- Mitten, Gray, Allen-Craig, Loeffler, & Carpenter. (2018). The invisibility cloak: Women's contributions to outdoor and environmental education.
- Prince & Annison. (2023). The impact of menstruation on participation in adventurous activities. *Sport, Education and Society*.
- Wesely & Gaarder. (2004). The gendered "nature" of the urban outdoors: Women negotiating fear of violence.

**Appendix****Participant Qualitative Feedback: Snow Clinic**

<b>Theme</b>	<b>Participant Comments</b>
<b>Resources</b>	<b>Gear too expensive and lack of transportation</b>
<b>Experience</b>	<b>I have never done any snow-related activities so I have no clue what to do</b>
<b>Social/Financial</b>	<b>Too expensive and no community</b>
<b>Knowledge Gap</b>	<b>Not sure how to start</b>
<b>Technical Education</b>	<b>I know nothing about avalanche safety so I don't feel safe doing backcountry sports.</b>

**Participant Qualitative Feedback: Hygiene Clinic**

<b>Theme</b>	<b>Participant Comments</b>
<b>Waste Management</b>	<b>Disposal is the biggest issue!</b>
<b>Practical Anxiety</b>	<b>I was stressed about disposing of my tampons properly on a week-long river trip</b>
<b>Physical Barriers</b>	<b>Not wanting to go because of cramps</b>
<b>Knowledge Gap</b>	<b>I just don't even know!!</b>
<b>Ethics &amp; Health</b>	<b>Pain management, leave no trace</b>