

9/24/2024

Honors Thesis Prospectus: Tick-Borne Illness Prevention Measures Among Appalachian Trail Long-Distance Hikers: A Health Belief Model Approach

The purpose of this departmental honors thesis is to explore the health behaviors of Appalachian Trail long-distance hikers in relation to tick-borne illness prevention. Long-distance hiking poses unique risks when it comes to tick exposure and tick-borne illness due to the nature of living outdoors for extended periods of time. These risks include having limited access to hygiene facilities such as showers and limited access to appropriate medical treatment. Furthermore, ticks that transmit common tick-borne illnesses, such as the lone star tick and the blacklegged tick, live in the same areas that the Appalachian Trail traverses (Centers for Disease Control and Prevention [CDC], 2024). The combination of a high risk population living in a high risk environment leads to many questions about the health behaviors and perceptions of these hikers.

I will be working with Dr. Richard Christiana, Associate Professor in the Department of Public Health and Exercise Science, to learn more about this topic through the lens of the health belief model (Glanz et al., 2011). Our primary research question is “what strategies are long-distance Appalachian Trail hikers implementing to prevent tick-borne illness?” There is a significant gap in knowledge regarding this topic and we are aiming to understand this question in order to direct future research in the field. Our secondary research questions address aspects of the health belief model such as perceived risk and seriousness of tick-borne illness and perceived barriers of common prevention measures.

I have been working on this project with Dr. Christiana since January 2024. Our work so far has included conducting a thorough literature review, developing research questions, developing draft survey questions, and communicating with the Appalachian Trail Conservancy. During the Fall 2024 semester, we plan to seek IRB approval, continue developing our survey, and solidifying plans for data collection in the Spring of 2025. The data for this project will be collected through a survey addressing the research questions. We have received approval from Dakota Johnson, Director of Visitor Experience at the Appalachian Trail Conservancy in Damascus, VA, to collect data at their building at the annual Trail Days festival from May 16th to May 18th, 2025. We chose to conduct our survey at this event because it is one of the largest gatherings of Appalachian Trail hikers in the U.S., each year attracting an estimated 25,000 people. The Damascus Trail Center is a hub for hikers and visitors alike and by conducting our survey there, we hope to reach our intended audience of long distance hikers. After data collection, we plan to run analyses during the Summer 2025 and present our findings during Fall 2025. We hope to discover the most common prevention measures performed by long-distance hikers and learn more about some of the influential factors behind these health behaviors. I will prepare and defend a formal thesis in the Fall of 2025.

Thesis Chair (Dr. Richard Christiana):

References:

Centers for Disease Control and Prevention [CDC]. (2024, July 29). Where ticks live. Centers for Disease Control and Prevention.

<https://www.cdc.gov/ticks/about/where-ticks-live.html>

Glanz, K., Rimer, B. K., Viswanath, K., Champion, V. L., & Skinner, C. S. (2011). Health Behavior and Health Education: Theory, research, and Practice (4th ed.). John Wiley & Sons, Inc.