

SOAR Proposal: Summer 2018
Evaluating how nature experiences help us thrive

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Faculty mentor information: Dietlinde Heilmayr, Psychology, Assistant Professor

Student information: Adrianna Mantz, psychology major, expected to graduate Spring 2019
Noah Reiss, psychology major, expected to graduate Spring 2020

Dates: June 4, 2018 through August 10, 2018 (10 weeks)

Brief project overview:

Project 1: This is the main project of our SOAR proposal and will involve rigorously examining the effects of nature on health and well-being. Together, Noah, Adrianna, and I will evaluate the effects of a two-week nature intervention compared with a well-established positive psychology intervention (i.e. acts of kindness for others) and a control group (i.e. acts of kindness for oneself) on prosocial behavior and self-reported mental health, physical health, awe, conscientiousness, self-control, and other health-relevant variables. Much work has been done linking nature experience with health and well-being (e.g. see Bowler, Buyung-Ali, Knight, & Pullin, 2010), but most research to date has not employed random assignment, strong control groups, or longitudinal data collection—important components of a rigorous experimental design (Capaldi, Passmore, Nisbet, Zelenski, & Dopko, 2015). Project 1 will address these methodological shortcomings, thus strengthening the theoretical link between nature experiences and mental and physical health.

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Noah has already been involved in developing this research idea during his Independent Study with me this semester. We will soon begin working on the HSIRB proposal, which I plan to submit by the end of May. Submitting the HSIRB proposal prior to the start of SOAR is crucial to begin collecting data early enough to allow Noah and Adrianna to analyze and interpret the results. Other than these initial steps (i.e. idea development and HSIRB), Noah and Adrianna will take an active role in every phase of this SOAR project, including study set-up, data collection, data cleaning, data analysis, and writing up results for publication in a research journal (e.g. *Health Psychology* or *The Journal of Environmental Psychology*). Moreover, I aim for Noah and Adrianna to each develop and address their own original research questions within the framework of the study, which they will submit for a conference poster presentation at either a regional (e.g. EPA) or national (e.g.

with this population, thus providing an excellent opportunity to compile a rich dataset that will allow us to address important questions concerning how community gardening programs relate to self-identity, mental and physical health, community support, sense of belongingness and purpose, and food security in immigrant and refugee populations. If Adrianna and Noah enjoy this project, they will be invited to continue their work as research assistants into the future.

As this project involves data collection from an uncommon population (i.e. refugee and immigrant community gardeners), I cannot confidently state how many participants we will recruit in the summer of 2018, or whether we will gather enough data for analysis within the 10-week SOAR timeframe. Thus, this project is a secondary project that Noah and Adrianna will likely not see from beginning-to-end during SOAR, but that will nevertheless teach Noah and Adrianna a methodology that is unique from what we are doing in Project 1. Moreover, I believe it is meaningful to expose budding researchers to an important reality and constraint of psychological research—it is often a slow process that requires perseverance and tenacity above all else. Project 2 will expose Noah and Adrianna to this reality. In Project 2, Noah and Adrianna will learn about non-experimental methods employed in personality psychology (i.e. the study of narrative identities), how to analyze such data (which we will either discuss in theory or actually do, depending on the data collected), the types of questions non-experimental methods can address, and how these methods complement experimental methods in psychological research.

Summary of benefits:

Being involved in two distinct-yet-related projects simultaneously will provide Noah and Adrianna with an experience that is reflective of what it is like to conduct research in graduate school and beyond. Given that both want to pursue graduate-level training in psychology, this two-pronged SOAR experience will aid them in applying to and succeeding in graduate school.

Research skills By taking part in the projects described above, Noah and Adrianna will learn research skills that will develop their abilities as both consumers and producers of knowledge. Specifically, Noah and Adrianna will gain experience finding and reading relevant research articles; developing research ideas; writing and submitting HSIRB proposals; recruiting and scheduling participants; using Qualtrics for survey development and data collection; collecting quantitative and qualitative data; cleaning and analyzing data in SPSS; transcribing interviews; coding interviews for relevant themes; writing a publication-worthy manuscript; and creating and presenting a scientific poster. In other words, across these two projects, Noah and Adrianna will be involved in every phase of the scientific process and produce work that will contribute to the field in a meaningful way via peer-reviewed publications.

Peer-reviewed publications I aim for our SOAR summer work to culminate in three peer-reviewed publications: two poster presentations that will be first authored by Noah and Adrianna, and a manuscript. Should Noah and Adrianna continue working with me after the conclusion of SOAR, there is potential for additional publications. The publications that will result from SOAR serve two main goals for Noah and Adrianna. First, publishing work will aid Noah and Adrianna in their application to graduate school as it lends credibility to both their interests and abilities. Second, I aim for Noah and Adrianna to submit their poster presentations to either a regional or national conference in psychology. By presenting at a such a conference, Noah and Adrianna will have the opportunity to meet graduate students and professors in the field that they are interested in pursuing. This will not only serve as a networking opportunity but will also help Noah and Adrianna explore their options and learn about graduate school more generally.

! Team work and collaboration: The research goals set forth in this document are lofty and cannot be fully carried out as a team of two in 10 weeks. Should only one student be funded, we would need to scale back our goals, thus reducing the potential for scholarly growth and skill development. In other words, Noah and Adrianna are both motivated and responsible students, without whom these projects will not be possible. I have no doubt that both have the capability to grow personally and professionally through their SOAR experience, while also contributing to high-quality science.

! Working as a team of three emulates the reality of scientific research. Science is becoming more and more collaborative, and it is crucial to provide budding scientists with experience working as a team. Moreover, because Noah has already been involved in research with me through an independent study, he will have the opportunity to mentor Adrianna, who has not yet been involved in research; Adrianna, in turn, will have the opportunity to learn from both Noah and myself. Not only do I believe that Noah and Adrianna will benefit from this relationship in terms of peer-learning and teaching, but such a tiered system mimics the reality of graduate school, thus better preparing both Noah and Adrianna for graduate training.

! **Rough timeline of milestones and student roles:**

To emulate the reality of being a part of a graduate research lab, we will read and discuss 2-3 research articles every week.

! Weeks -2: Read and discuss background research; program Qualtrics measures; develop and disperse recruitment materials; set up lab space and equipment; practice running participants; develop own research question within framework for Project 1; develop coding scheme for Project 2

Weeks -3: Collect data for both projects; write introduction and method sections for manuscript and posters based on Project 1; transcribe and code interviews for Project 2

Weeks -9

Student Statement of Purpose

Title of Project: Evaluating How Nature Experiences Help Us Thrive

Student: Noah Reiss, Psychology Major, reissn@moravian.edu

Expected Graduation: May 2020

Faculty: Dr. Dietlinde Heilmayr, Assistant Professor of Psychology

On campus housing requested? Yes

Professional development
currently taking part in an
I learned a lot about the

research process, from writing literature reviews to analyzing data and formally writing up the results. Adrianna has not yet had any research experience, making this collaborative SOAR experience a mutually beneficial opportunity us to work together in the research process. While assisting Adrianna, I would be reinforcing concepts and skills I have learned myself; Adrianna would benefit from learning from both myself as well as Dr. Heilmayr. This experience would emulate what both of us could experience as students in graduate lab, or even as a psychology professor. The idea of becoming a college professor is a profession that I have been taking into great consideration because of the impact you can potentially have on the students you teach and on the community. Since I carry an immense amount of passion with what I set out to do, I know that I can potentially leave an impression on the lives of those who I might come into contact with down the road. This underlines the notion that participating in SOAR will put me on a direct pathway towards both my professional and life goals.

Moreover, working collaboratively allows for Dr. Heilmayr, Adrianna, and myself to take on the same project with different perspectives and ideas, some of which can turn out to be efficient, practical, and perhaps groundbreaking. Learning to view the same issue or question from different perspectives is crucial to being an engaged citizen and an effective researcher. Relatedly, working as a team of three can also help to sharpen my communication skills. I will need to learn to effectively communicate with a peer who has had no research experience, as well as with my faculty advisor who is an experienced researcher, again emulating a graduate lab environment. Further, I plan to share our research findings with the Moravian community as well as at a regional or national psychological conference. Presenting at a conference will develop my abilities to present scientific findings and will also allow me to talk to fellow undergraduates, graduate students, faculty, and other research professionals. Being able to meet such individuals enables the possibility of collaborating with those individuals in future research, and to learn

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Title of Project: Evaluating How Nature Experiences Help Us Thrive

Student: Adrianna Mantz, Psychology,

A big incentive for my applying to SOAR is the specific research we will be conducting. Dr. Heilmayr has discussed her research in our courses (The Psychology of Health Interventions; Experimental Methods and Data Analysis I and II), which made me curious and intrigued about nature-based health interventions. Learning more deeply about psychological contributors to health and holistic health interventions will not only aid my own life, but also the lives of others with whom I share the knowledge and experience I will acquire through SOAR. By conducting the specific research proposed in our project, this SOAR experience will allow me to achieve my goal of gaining knowledge helping others and myself live, happier, healthier lives.

Finally, the outcomes of this research could be very beneficial to the Moravian College community. By learning about the health benefits of the outdoors and nature, we can encourage students to spend more time outside! We can build relationships with our peers and create fun community activities to get everyone involved. It would be such a thrill to gain professional research experience at school, while also building relationships with the community.