

Abigail Lemmy
UID: 112847128

Library Award for Undergraduate Research

I began writing my research paper, “Deleterious Chemicals Found in Nail Polish Raise Public Health Alarms,” in Professor Dr. Payne-Sturges course on Environmental Health, MIEH300. This course required us to write a persuasive essay for or against a public health issue and to support our argument utilizing scientific literature. To prepare for this research assignment, I completed a module on “Library Resources” that was developed by the Physical Sciences and Public Health Librarian, Ms. Nedelina Tchangalova.

I selected my research topic on the health hazards of triphenyl phosphate based off a recent study that was published by Duke University and the Environmental Working Group. This study was published in an environmental newsletter, *Above the Fold*, that deemed common nail polish chemicals such as triphenyl phosphate as suspected endocrine disruptors. After evaluating several research journals, I was startled to find that 1,500, or approximately half, of all nail polishes contain this chemical. A philanthropic organization, Teal Toes, utilizes painting toenails teal as a mechanism for raising money and awareness for ovarian cancer. I chose to target my essay towards this organization as it encompasses two conflicting interests. While the organization is successfully raising awareness for ovarian cancer, it is also jeopardizing the public health of those who participate based off of recent studies on the effects of triphenyl phosphate found in nail polish.

To create a strong argument against utilizing nail polish as a mechanism for fundraising it was vital that I found relevant and scholarly sources. After choosing my topic, I began doing preliminary research in which I began developing background knowledge on the organization Teal Toes as well as triphenyl phosphate and other endocrine disruptors. I utilized many resources provided by University of Maryland’s library to conduct research and find academic sources. I discovered various scholarly research journals through WorldCat UMD, a source for non-print media, reports, and government documents. I also utilized Research Port, which provided me with extensive journals on endocrine disruptors, hormones, and the environmental repercussions of these chemicals.

Originally overwhelmed by the topic, I immediately reached out to my professor and asked for advice on how to make my topic stronger and clearer. Dr. Payne-Sturges directed me on which academic sources to utilize as well as suggested I focus on the confliction between raising awareness for a cancerous disease while inevitably experiencing the pitfalls of utilizing nail polish. When selecting which academic articles to use, I had to differentiate whether a source was popular or scholarly. To effectively find accurate information on the subjects, I searched for primary sources in which the research was published by the original source. This allowed me to obtain credible resources and avoid secondary sources written by a journalist. I navigated through research articles by first analyzing the abstract of a publishing and determining whether or not it was relevant to my topic. To narrow down the amount of potential

sources, I utilized Boolean operators which are words such as, “and, or, not,” which allowed me to combine or eliminate keywords into a search. These strategies allowed me to effectively search archives for accurate and relevant information on my research topic.

While examining and differentiating between studies, I found a common issue to be the lack of research directly on triphenyl phosphate in nail polish and the adverse health effects associated with it. Most of the studies implicated correlation, rather than causation, between hormone imbalances and nail polish. Since my topic was based off a recent scientific finding, there was a lack of other studies that could be utilized to support my argument. To further support my claim, I chose to focus on other aspects of nail polish such as the environmental and social repercussions while also providing research done on other confirmed endocrine disruptors. There was compelling evidence that illuminated endocrine disruptors cause irregularities in wildlife growth and reproduction. I also examined the societal implications that dictate the social norms and cultural mainstreams surrounding nail polish. A cultural mainstream means to be “dominant” or in the “center” of a cultural norm. People who do not conform to the common ideologies fall into the margins and are denied opportunities and resources that would be normally available. The use of nail polish does not only result in adverse health effects, but also provide the foundation of sexism and privilege.

This research paper gave me an in-depth look into how to carefully analyze sources and differentiate from primary and secondary sources. It provided me with insight on how to formulate a research assignment with only a small amount of credible documents to support one’s claims. It forced me to be creative and not only analyze the direct health costs of nail polish, but also allocate the indirect costs of nail polish such as the environmental and social costs. Learning these skills will be instrumental in my professional career as I hope to pursue a job in either public health or conducting research as a health professional. Writing this research assignment was an enlightening experience, as it required patience, fervor, and scrutiny of each source. I would like to thank the research librarians at the University of Maryland as well as my professor for aiding me as conducted this research and endeavored through numerous academic journals, articles and other sources.