

MORAL DISTRESS MOBILE APPLICATION
SOCIETAL CONTEMPT TOWARD NURSING AS A PROFESSION

An Undergraduate Thesis Portfolio
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School of Engineering and Applied Science
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Bachelor of Science in Biomedical Engineering

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A SOCIOTECHNICAL SYNTHESIS

Nursing burnout is a dangerous phenomenon that is perpetuated by the continued lack of interests and awareness from society and politicians. Targeting hospital interactions, the technical project aims at creating an application that supports the identification and submission of problems involving the impairment of a nurse's mental health from moral distress. This application addressed the increasing mental stress placed on nurses, and provided them with resources intended to alleviate such problems. The tightly coupled sociotechnical research provided a means in which hospital infrastructure and management can be better understood from a societal level. Since society fails to create a better suited working environment for nurses, the application of both the technical and research project created a system in which nurses can feel as though they are understood by their community.

The technical project serves as a mobile phone application in which nurses have the ability to report their level of moral distress. Current mental health resources are both lacking in funding and efficiency when gathering information. This application will enhance the speed at which events are received, as well as nurse proximity to the incident. It can often be difficult or exhausting when attempting to reach out to hospital services throughout the day. With the use of a mobile application the process becomes more private and allows for responses to be submitted during the rare short-lived breaks experienced when active in the field. The program was coded by a software engineering team using the dart language.

The final product was launched as a fully functional application that stores responses using Amazon Web Services. A small team of graduate nurses were used in a study to understand the efficacy and practicality of the product, before its implementation into a hospital setting. Feedback was generally positive and highly indicative of a successful launch in the

future. Due to setbacks in the project, the application is not available to be fully integrated into the current UVA moral distress consultation service. The product is however downloadable and its on-site resources are available for use.

The sociotechnical thesis seeks to understand the complexities behind why nurse burnout is continually increasing and how society fails to adequately respond to their acts of desperation. Using the Actor Network Theory framework stated by Kathrin Cresswall, each facet involved in the nursing profession was examined compared amongst each other. While many factors were identified, the framework leads toward the direction of better understanding hospital management, and why they neglect to properly protect nurses against burnout. The framework was developed through researching hospital hierarchies, typical hospital practices, as well as the societal portrayal of nurse culture.

The majority of research pointed to hospital management, more specifically, the placement of nurses among the hierarchies that exist within such management, as a main cause of burnout. Being lower on the list of responsibilities, nurses are seldom able to act in accordance with their own personal morals. This proves to create increased moral distress and strains their mental health. Similarly, since most hospitals operate on a for profit basis, they are often looking for the most effective way to cut back on operational costs. These include staffing of lower-level employees who don't generate significant amounts of capital, such as nurses. They further reduce resources available to nurses, and encourage them to work difficult hours. While this research does not come to one definitive answer, it highlights the various steps that can be taken in order to better care for those who care for everyone.

Very few professions are as deserving of assistance as those in healthcare. Nurses sacrifice their personal safety in order to ensure the safety and comfort of all who enter into their

world. While the mobile application begins to solve some of their problems, as identified in the research above, there is still a much-needed health care reform that needs to be upheld in order to provide a better working environment that facilitates a nurse's ability to be successful.

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PROSPECTUS

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