Developing a Technological Garment to Aid those with Anxiety Disorder

Fashion Design and Merchandising
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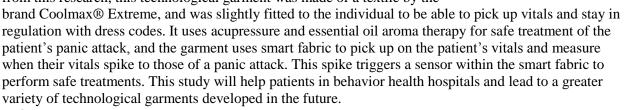
Type of submission: Poster

Conceptual Framework: Anxiety disorder is "the most common mental illness in the U.S., affecting 40 million adults in the United States age 18 and older, or 18% of the population" (Anxiety and Depression Association of America, nd). Panic disorder is categorized as a specific type of anxiety disorder, and can lead to "recurrent unexpected panic attacks, which are sudden periods of intense fear that may include palpitations, pounding heart, or accelerated heart rate; sweating; trembling or shaking; sensations of shortness of breath, smothering, or choking; and feeling of impending doom" (National Institute of Mental Health, nd). Technological garments have begun to develop for hospital patients in order to take a patient's vitals wirelessly with smart fabrics (Berglin, 2013). Although the patients with anxiety disorder need a technological garment to aid their pain, there has been little research about developing the smart garment in fashion area. Therefore, the purpose of this research was to develop a technological garment for patients in behavioral health hospitals with anxiety disorder. These patients will have access to a smart fabric garment as a way to easily monitor their vitals and potentially be able to reduce the severity of panic attacks with different forms of treatment provided by the garment. This research will take smart fabrics one step further from those in general hospitals: the developed garment will not only measure vitals of the patient, but also implement safe forms of treatment at the onset of a panic attack.

Method: To develop a proposal of this garment, quantitative methods of research were employed in this study. Information was found to determine what textile and fabric the garment should be made of through analyzing what new technological advanced fabrics are on the market. Behavior health hospitals have certain rules and regulations for what their patients can wear, so several examples of dress codes from different hospitals were analyzed to create one general list of rules and regulations for the garment. Next, the research of safe treatments for anxiety took place: acupressure and essential oils were popular forms of panic disorder treatment used by sufferers, so these were the forms of treatment the garment would need to perform. Specific symptoms of panic attacks were also researched to conclude when sensors in the garment would be triggered to perform these treatments. Technology in the garment is a large part of its development, and proposals of how the garment's technology would work were based on analyzing information about smart fabrics.

Results & Implications: After researching and analyzing each individual function and regulation of the garment from the behavior health hospitals, a prototype of the garment was determined. Based on the findings from this research, this technological garment was made of a textile by the brand Coolmax® Extreme, and was slightly fitted to the individual to be able to pick up vitals and stay in regulation with dress codes. It uses acupressure and essential oil aroma therapy for safe treatment of the patient's panic attack, and the garment uses smart fabric to pick up on the patient's vitals and measure when their vitals spike to those of a panic attack. This spike triggers a sensor within the smart fabric to perform safe treatments. This study will help patients in behavior health hospitals and lead to a greater variety of technological garments developed in the future.

References:

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