

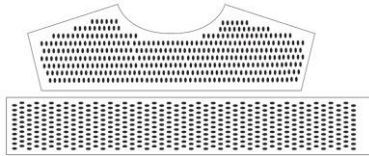
HUG The Human Understanding of Garments: An Exploratory Study on Technology Inspired
Clothing Design for Young Adults with Anxiety
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The focus of HUG was to research and understand anxiety in young adults, and then develop a clothing line that could help with their anxiety. Through secondary research, it was established that 18–25-year-olds struggle with anxiety almost daily (Newport Institute, 2021). With only a few clothing items currently on the market helping to aid anxiety (Core 77, n.d.), we identified this as a target area to focus and solve the need for trendy anxiety aiding garments tailored to young adults. Two surveys were conducted at the beginning of the project to gather primary research from the target market. Through this process, data was collected about anxiety and its relation to young adults and established that this is a much-needed area of development.

Throughout the research and design process, the group of undergraduate researchers used two types of library resources: 1) library databases and 2) The Sunderland Foundation Innovations Lab. Searching through the library's database network that is available to students, the main source the researchers used was World's Global Style Network (WGSN), a trend forecasting and analytical database that houses research on fashion trends. WGSN was evaluated and chosen as a reputable source due to it being a company of trend forecast professionals who provide this information network to be pulled upon by companies nationwide to create upcoming lines. Through WGSN's database, trend forecast research was completed to find color choices for a Spring 2022 clothing line as well as the category of garments that best fit the designated target market. This background research significantly informed the development of primary research questions. The first survey of the primary research had 156 participants. 65% of individuals claimed to have anxiety and 20% identified feelings of high-stress emotions. Less than half of the participants who identified with having anxiety had been medically diagnosed. 90% of participants said they feel less anxious in comfortable clothing. Many also stated that their clothing choices can affect their anxiety levels. The second survey included 22 of the original participants that were interested in further research and were able to give more insight into their body shape, preferred clothing style, and the correlation of clothing to their anxiety. A majority of those who were surveyed had an hourglass-shaped body (36%) and most respondents favored the oversized fit of clothing. From this information, the respondents' preferences were the fundamental elements that fueled the design and production process.

After completing the secondary research and primary survey research, the information found from the target market was used to develop the designs and start production. The clothing line created had four athletic-wear designs. Adobe software was used to create design boards and technical flats, which are 2D representations of the garments. Optitex 3D patterning software was used to develop the patterns to print and to 3D simulate the garments. One design was chosen to move to production which included a jacket, compression tank, and shorts. The Sunderland Foundation Innovations Lab Glowforge laser cutter was used on pieces of the tank design. Using the laser cutter took trial and error to find the best fabric, shape cut by the laser, and 2D pattern sizing. With more space in the Glowforge, the whole tank could have been cut,

but with limited spacing, we opted to create a mesh-like material with the laser cutter. The results gave a more breathable material on the shoulders and down the back of the tank design but allowed the compression technology to still be felt across the body. Having used the Glowforge, the researchers gained new skills and extensive knowledge on how to conduct research with library resources. Secondary research focused heavily on the technology that was incorporated in the final design sample. The jacket prototype included an insertable, inflatable vest with air channels and modular tightening elements created from a blow-up mattress. When inflated, the jacket created a hug simulation on the wearer's body that hits key target points. These target points mainly reside in the upper body and are proven to reduce anxiety levels through the oxytocin released from the “hug.”



At the end of production, a follow-up post survey was sent to participants. Feedback on the project and the designs was positive and the majority said they would wear the final production sample. The goal of HUG was to develop anxiety reducing clothing that is wearable for the designated target consumer. Mental health issues will continue to be an issue and normalized. The usefulness of developing more technologies and clothing for high emotion states will be an upcoming development. As students ourselves, this project is very prevalent to young adults struggling with anxiety. With a lack of trendy clothing items that aid with anxiety, this project is a step in the direction of combining technology with fashion.

References

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