

## Conceptual Development of a Fashion-Forward Garment Aimed to Ease Anxiety through Fidget Components

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In the United States of America, around 40 million adults are affected each year by anxiety disorders, making them the most common type of mental illness. Generalized anxiety disorder (GAD) impacts the lives of 6.8 million adults, with only 43.2% receiving treatment (Facts & Statistics, n.d.). College students may be prone to experiencing anxiety. In 2018, the National College Health Assessment reported that 63% of U.S. college students had felt overwhelming anxiety in the past year (LeBlanc & Marques, 2019). Aside from professional support such as medications or counseling, coping strategies including grounding, fidgeting, keeping a routine, and more all assist in easing anxiety for individuals. Current products on the market that assist in easing anxiety include fidget spinners, tangle toys, and marbles encased in mesh. Current garments on the market are compression styles, meant to be worn under outer clothing. There is currently no affordable garment on the market that is meant to ease in anxiety in the wearer, while remaining fashion-forward.

This study explored the development of a stylish garment intended to ease anxiety in the wearer through discreetly incorporate fidget components. Following the functional, expressive, aesthetic (FEA) design model developed by Lamb and Kallal (1992), this study adopted the six design process steps; 1) problem identification, 2) preliminary ideas, 3) design refinement, 4) prototype development, 5) evaluation and 6) implementation, to develop the conceptual designs of fashion-forward garments aimed to ease anxiety in the wearer through use of fidget components.

**Problem Identification:** The need for a stylish, affordable garment meant to ease anxiety in the wearer through implementation of discreet fidget elements.

**Preliminary Ideas:** Concepts for designs were researched through literature review of current fidget products and garment trends. Consumer preferences were collected via an online survey. Respondents were asked preferences on garment types, color palettes, and fidget toys. The survey was sent out to students registered on the university campus with anxiety through the Student Disability Services office.

**Design Refinement:** Garment silhouettes, color palettes, and fidget components were narrowed down based on the data collected from the online survey. Data showed that hoodies and sweatshirts were the top preferred garment styles. Neutrals, earth tones, and pastels were the most preferred color palettes. Fidget cubes were the most preferred fidget toy, followed by the

marble encased in mesh, and textured items. Design criteria were established and formatted into an interaction matrix to examine any accommodations or conflicts.

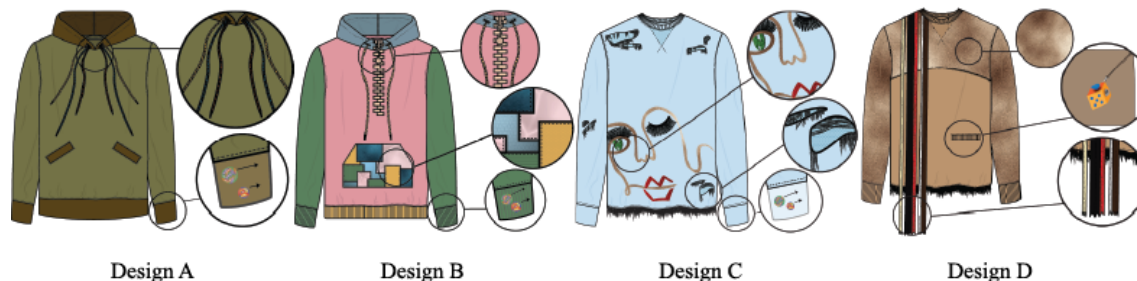


Figure 1: From left to right, Designs A-D featuring callouts to highlight fidget components.

**Prototype Development:** Four fashion-forward garments (Figure 1) were developed as flat sketches, including two hoodies and two sweatshirts. Each garment featured multiple fidget components as well as varied aesthetics based on preferences collected from the online survey. Elements such as textured fabrics, drawstrings, trim, zippers, and mancala marbles within hems were incorporated into the designs as functional fidget components.

**Evaluation:** Four participants were involved in the virtual focus group interview to review and evaluate the four prototype designs. The sketches were presented one at a time and were evaluated via the developed questionnaire. During the evaluation phase, Design B was selected as most preferred by most participants for both fidget elements and overall aesthetics. Of all designs, most fidget elements were highly valued, and the designs were well received. Participants suggested that the zipper in Design B was unnecessary and may be counterproductive in providing discretion, as the sound of the zipper could draw unwanted attention to the wearer. Participants believe that the development of this style of garment would fulfill a market need and that they would purchase said garment.

**Implementation:** Focus group participants provided suggestions that will be considered for implementation. Feedback included securing the mancala marbles on the top half on the sleeve hem so that they wouldn't bother the wearer while writing. Other suggestions were to include textured fabrics on the inside of the kangaroo pockets, rather than the outside, for a more reserved look. Additionally, participants expressed desire to customize the garments based on silhouette and colorways.

In this paper, the six design steps of the FEA framework were utilized to develop the fashion-forward garment aimed to ease anxiety. Based on literature review and online survey, four fashion-forward garments, which can help to cope the anxiety, were developed. Among four prototypes, design B with the various textures in the kangaroo pocket was selected as the most preferred design. To improve the prototypes, some design components may change as suggested from the focus group interview.

## References

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