















transition and avoid discomfort or poor fit. Rather than rigidly adhering to proportional measurement charts and fixed ease values, garment pattern development should adopt a more realistic and scientific approach by considering the diverse body shapes of individuals.

The study's insights into the relationship between body shape and garment performance have significant implications for enhancing the precision of stretch pattern drafting. By addressing the concave and convex contours of the body, designers can create better-fitting garments that improve comfort, aesthetics, and overall wearer satisfaction. This research is particularly valuable in the fashion industry, where the demand for personalized, well-fitting garments continues to grow, driving the need for innovative approaches to garment design and construction. Furthermore, by increasing the sample size to analyse the variations in body shape, a better understanding of the proportionality of body measurements can be obtained. This will further reinforce the automated pattern creation.

## Limitations

The research exclusively examined the standard Alvaforms of UK sizes 10, 12, and 14. As a result, future studies will prioritize an in-depth analysis of body measurement variations within different sizes to better comprehend the integration of anthropometrics and biomechanics in pattern development to achieve optimal engineered garment fit.

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