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3D Body Scanning, Biometrics and Body Image Evaluation: Implications for Mental Health, Marketing, and Manufacturing

3D scans offer biometrically accurate images for estimating body shape and size, which may align mental constructs of the body with objective body assessment. However, undergoing 3D scanning, and viewing the resulting scans, might be stressful or anxiety provoking. Moreover, many companies are increasingly using 3D fit technology because consumers are changing how and what they purchase online. Therefore, the purpose of this study is to examine the effects of body scanning technology on body image and psychological well-being. Specifically, we seek to identify for whom body scan technology is stressful by examining the association between stress appraisal of the scan and proposed body variables. We will utilize a pretest-posttest control group experimental design, which includes an online survey of body image, eating attitudes, and psychological well-being measures, and a 3D full-body scan as the intervention. An understanding of the willingness and effects of 3D scanning is important because 3D simulation models may be a useful intervention for people experiencing lifestyle-related diseases and body image disorders, considering a scan provides a more realistic view of one's body. This study is also important because understanding the effects on body image and psychological well-being is essential for ethical usage of this technology.