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## Data mining of body measurements of Indian youth population to develop body size charts

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**A**pan India anthropometric survey of 14 crucial body dimensions (required for bottom wear) of 2401 Indian male youth aged between 18-29 years was conducted. Data mining involved application of analysis of variance (ANOVA), bivariate and multivariate analysis, principal component analysis (PCA) and two step cluster analysis using SPSS 16.0 and the developed size charts were validated statistically by calculating the aggregate loss based on Euclidean distance. The aggregate loss values were observed between 1.81 cm to 2.42 cm and the percentage coverage of the population ranged from 76.22% to 97.21% with number of size categories ranged from 32 to 40. The research revealed some interesting insights regarding body dimensions and its patterns of Indian youth from different geographic regions and resulted into first ever comprehensive Indian size charts for bottom wear.

### Biography

Manoj Tiwari is working as an Associate Professor with De-

partment of Fashion Technology since 2009. After completing his Bachelor of Engineering Degree in Textile Technology, he further accomplished Masters in Fashion Technology from NIFT, Delhi and Diploma in lean management. He has worked on size chart standardization of bottom-wear for Indian male youth (18-29 years) in his doctoral research. With 12 years of industry and academic exposure and experience with reputed organizations in India and abroad, he has also worked as the Team Leader in Garment Technology at the Ethiopian Textile Industry Development Institute (ETIDI), Addis Ababa, Ethiopia for capacity building of the Ethiopian Garment Industry through knowledge and technology transfer. He has published and presented 40+ research papers and articles in the national and international level conferences and journals along with book titled "*Industrial Engineering in Apparel Manufacturing*", co-authored with Prof. Prabir Jana, NIFT Delhi. His key areas of interest include Industrial Engineering, Ergonomics, Apparel Production Planning and Control, Apparel Technology Management and Lean Management. Currently, he is involved in the historic and ambitious India size project as one of the member of core team member.

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