Introductory Information

Anthropometry of Law Enforcement Officers

The accommodation of worker anthropometric variability in the workplace and personal protective equipment (PPE) is key to safe and efficient completion of work tasks. Previously, the best data available was 46 years old, which has largely become outdated due to demographic changes. These data tables consist of 34 traditional semi-nude body dimensions without gear (e.g., chest depth, standing; foot breadth, horizontal, standing; hip circumference; stature; elbow rest height, sitting; and eye height, sitting) and 15 dimension measurements over clothing and with gear (e.g., abdominal extension depth, sitting; hip breadth, sitting; and should-grip length, sitting) of 756 male and 218 female Law Enforcement Officers (LEOs). For many LEOs, patrol vehicles are the workplace where they spend significant portions of their workday and PPE is vital gear to safeguard LEOs from the harm of assaults. Design improvements of vehicle console space, vehicle ingress/egress, and LEO body-worn equipment can result in reduced LEO fatigue, pain, or injury.

Data Collection Methods

Initiated in 2012, data collection used a stratified sampling plan (gender × race/ethnicity × age combinations) to collect anthropometric data in the United States. A total of 10 cells (2 gender × 3 age groups for White and 2 gender groups for Black and Hispanic/Other each) were proposed for the study to represent anthropometric differences among U.S. LEOs. The data were collected through a stratified national survey using a data collection trailer that traveled across the U.S. A total of 974 LEOs comprise the sample. Data tables consist of thirty-four traditional semi-nude body dimensions and fifteen with gear measurements of 756 male and 218 female LEOs. Detailed descriptions of the methods are provided here: Encumbered and Traditional Anthropometry of Law Enforcement Officers for Vehicle Workspace and Protective Equipment Design.

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Information on other anthropometry research projects at NIOSH is available on the Anthropometry page.

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