The Haptic Horizontal-Vertical Illusion Across Adulthood

Morton A. Heller*, Julia Mayas**, José Manuel Reales**, and Soledad Ballesteros**

* Northwestern Illinois University (USA)
*Universidad Nacional de Educación a Distancia, Madrid (Spain)

The haptic vertical-horizontal illusion is not dependent on the visual status or visual imagery, since similar illusory overestimation of the vertical occurs independently of the visual status (early blind, later blind, and low vision) of the perceiver (Heller et al., 2003). The present study was conducted to investigate whether this spatial misperception remains stable or increases across adulthood and the old age. In the present study participated young adults (22-40 years), middle age adults (41-59 years) and older adults (60-75 years). Participants examined unimanually or bimanually in a counterbalanced order 5 horizontal and 5 vertical curved shapes varying in size, and made size (horizontal/vertical) estimates using two sliding rulers. The results suggest that the illusion is independent of age: 1) all groups overestimated the vertical; 2) the illusion did not change as a function of stimulus size; and 3) the mode of exploration (unimanual or bimanual) did not affect the illusion.