ABSTRACT

Asymmetry of upper extremity is caused by *handedness*. There are *right-handed* and *left-handed.* The purpose of this research was to identify asymmetry of upper extremity between badminton players and non players. This research used quantitative and statistic for analysing differences in asymmetry of upper extremity between badminton players and non players. Differences in asymmetry was assessed by measuring upper extremity of badminton players and non players. Sample of this research were 50 badminton players in Suryanaga and 50 students of SMAN 9 Surabaya who non players. Variables being measured were upper arm length, forearm length, circumference of shoulder, circumference of upper arm, *biepicondylus humerus* (flexion), *biepicondylus humerus* (extension), circumference of forearm, grip strength and *styloideus radius-ulna.* This research used purposive sampling because this research prioritised the purpose of knowing differences in asymmetry of upper extremity between badminton players and non players using z-test statistic. Human activity with the muscle movement causes bones mass to increase, therefore asymmetry may occurred. The result of this research was that certain variables had asymmetries. Circumference of shoulder, circumference of upper arm, circumference of forearm, and grip strength had significant differences between left and right. Upper arm length, lower arm length, *biepicondylus humerus* (flexion), *biepicondylus humerus* (extension), and *styloideus radius-ulna* had differences but not significant. Badminton players had bigger defferences between right and left upper extremities than non players. Asymmetry of upper extremity is affected by *handedness.* Increased activity caused more asymmetry of upper extremity.

Keyword: *Handedness,* asymmetry, upper extremity, badminton