

Perceptions of Individuals with Stroke Regarding the Use of Walking Sticks: a Quali-quantitative Analysis.

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Introduction: Although biomechanical effects of walking sticks on gait parameters after stroke have been extensively investigated, the patients' perceptions regarding those devices remain unknown. Qualitative research has the potential to enhance information about how people perceive the effects of a proposed intervention. **Objective:** To comprehend how people after stroke perceive the use of walking sticks. The specific research questions were: (i) What was the percentage of positive perceptions regarding the use of walking sticks after stroke? Were the positive perceptions related to participants' walking ability? (ii) How people after stroke, naïve to the use of walking sticks, perceive the use of walking sticks? **Method:** A secondary study, based on a mix-method approach was conducted with 20 adults with stroke. Participants, naïve to the use of walking sticks, received instructions on how to walk with a single-point cane and their perceptions were registered. A quantitative analysis was used to classify the participants' perceptions into "positive" or "negative". The percentage of positive perceptions was calculated with all participants analyzed together and separated into functional levels based on their walking speed (slow: <0.4 m/s; intermediate: 0.4 to 0.8 m/s; and fast: >0.8 m/s walkers). A qualitative analysis was used to comprehend the participants' perceptions regarding the use of walking sticks, by analysis of their discourse (content analysis) as follows: pre-analysis (discourse reading), discourse exploration (data grouped according to themes), and discourse interpretation (emerged categories). The study was approved by UFMG Ethical Review Board (#ETIC 0538.0.203.00009), and participants provided written consent. **Results:** Individuals with severe and moderate gait disabilities i.e., slow and intermediate walkers, reported more positive perceptions regarding the use of walking sticks (100% and 50%, respectively), in comparison with those with mild disabilities, i.e., fast walkers (30%). The qualitative analysis revealed that four categories emerged from the content analysis. Two categories provided positive perceptions: (i) canes improve mobility and functional independence; (ii) canes improve safety and balance; and two categories provided negative perceptions: (i) canes represent lack of social confidence; (ii) canes reduce the use of the non-paretic upper limb. **Conclusions:** People after stroke with severe and moderate disabilities tended to have more positive perceptions regarding the use of walking sticks. Benefits were associated with improvements in mobility and functional independence, as well as in safety and balance during walking. Negative perceptions were associated with lack of social confidence and/or limitations regarding the use of their non-paretic upper limb during daily activities.

Key-words: Physiotherapy; Assistive Devices; Qualitative Research.

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