USF UNIVERSITY OF SOUTH FLORIDA

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As people age, it is common for their mobility to decline, making it harder to function independently and accomplish everyday tasks like shopping, cleaning, and even moving around one's own home. In addition to physical limitations, a decline in mobility can impact relationships, social activity, and quality of life. Moreover, it can increase the probability of experiencing obesity, cardiovascular disease, diabetes, poor cognitive function, and depression. There are two primary ways to increase an individual's mobility: utilizing a mobility device (i.e. cane, walker, wheelchair, scooter) or obtaining personal assistance (i.e. when another person helps with tasks required for daily living). The goal of this study was to determine whether the use of mobility devices substitutes for personal assistance among U.S. older adults. This is important because device use has the potential to increase independence for those with mobility limitations, easing the pressure on family caregivers and a strained long-term care workforce.

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. The study utilized data from the 2011 wave of the National Health and Aging Trends Study (NHATS) to identify 3,211 community-dwelling older adults (65+) who reported mobility difficulties. Mobility difficulties were assessed by asking study participants if they had difficulty moving inside, moving outside, or getting out of bed in the prior month. The two primary outcome variables were (a) any use of mobility device and (b) any use of personal assistance for mobility. The NHATS survey assessed mobility device use with a yes/no question concerning use of a cane, walker, wheelchair, or scooter in sB e ′ d Variabl

with mobility were included as independent variables. These were gender, age, race/ethnicity, education, income, and insurance participation. Physical and social environment were evaluated with questions about whether participants lived alone or resided in a retirement community, and whether there were stairs or steps at their residences. Their physical capacity was determined through a series of questions concerning the ability to perform various physical tasks (e.g. climbing stairs, kneeling down). Probable dementia was determined based on the NHATS classification scheme, which included self-reported physician diagnosis, interviews, and tests of cognition. Depression was assessed with a validated two-item depression screener. Finally, physical impairment and health variables were evaluated using participant reports of pain, balance problems, or limited lower body or upper body strength, as well as height and weight (to assess body-mass index), if they had spent a night in the hospital within the last 12 months, and if they had been diagnosed with a stroke, arthritis, osteoporosis, or diabetes.

. Bivariate analyses were used to examine the independent variables by accommodation (mobility device alone, personal assistance alone, both, and neither). Recursive bivariate probit models were then used to jointly estimate the effect of independent variables on the likelihood of using mobility devices and personal assistance. This method is suitable for the joint modeling of two dichotomous dependent variables that are correlated and not assumed to occur in any order. The model consists of two equations, with the dependent variable of the second equation (device use) entered into the first equation (personal assistance) as an independent variable, thereby linking the two equations to form a recursive model.

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