

during the COVID-19 pandemic, with participants 35 to 49 having a significantly higher ( $p < 0.01$ ) use frequency than other groups. Regarding factors influencing the decision to use mobile technology, 64.1% of respondents aged 50 to 64 identified the necessity of using this technology during the pandemic as a significant factor, and 64.0% of participants in age 65 or older reported that the availability of functions on mobile devices is critical. Overall, the COVID-19 pandemic led to a significant increase in mobile technology use with people in different age groups differentially valuing the factors that affected their user behavior.

#### THE IMPACT OF HCBS USE PATTERNS ON OLDER ADULTS' PHYSICAL FUNCTION AMONG CONTINUOUS SERVICE USERS

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Background Taiwan, one of the fastest aging countries in the world, provides home-and community-based services (HCBS) care recipients through the second 10-Year Long-Term Care Plans (LTC Plans 2.0). The current study aimed to examine the impact of continuous use of HCBS offered by LTC plan 2.0 on older adults' physical function change overtime. Methods This study used the LTC Plan 2.0 database and the National Health Insurance Plan claim dataset, and included 157,682 clients who had applied for and were evaluated for LTC services for the first time from 2018 through 2020 and continuously used any LTC Plan 2.0 services for six months. Outcome variables were measured by activities of daily living (ADLs) and instrumental activities of daily living (IADLs) between baseline assessment and the assessment after the six months of service utilization. Latent class analysis and generalized estimating equations were used to investigate the influences of different service use patterns on the changes in physical functions. Results Three subgroups of LTC recipients with different use patterns, including home-based personal care (home-based PC) services ( $n = 111,976$ ; 71.01%), professional care services ( $n = 31,584$ ; 20.03%), and community care services ( $n = 14,122$ ; 8.96%) were identified. When compared to care recipients in the community care group, those in the home-based PC group improved more in IADL scores, and the professional care group improved more ADL scores. Conclusion Those receiving more professional services made more progress in ADL ability, but those in home-based PC made more progress in IADL ability.

#### THE IMPACT OF SUPERVISOR SUPPORT ON THE JOB SATISFACTION OF IMMIGRANT AND MINORITY LONG-TERM CARE WORKERS

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The need for long-term care workers (LTCW) will grow significantly as the American population ages. Understanding the factors that impact job satisfaction of this workforce has important implications for policy and practice. Previous research has demonstrated the effect of supervisor support on the job satisfaction of these workers; however, much less is known about how this effect differs among different race/ethnicity or immigration groups. This study examined how supervisor support mediates the associations between race/ethnicity, immigration status, and job satisfaction among nursing assistants (NAs). Data of 2,763 NAs were extracted from the National Nursing Assistant Survey (2004). Race/ethnicity groups included White (54%), African American (30%), Asian (2%), Hispanic (10%), and others (4%). Immigration status included U.S.-born citizens (87%), naturalized (7%) and resident/alien (6%). Bivariate analyses showed that Asian NAs perceived higher levels of supervisory support than other races, whereas U.S.-born NAs reported lower levels of supervisory support than naturalized and residents/aliens. Findings from multivariate analyses indicated that non-Hispanic Asians and Resident/Alien workers reported significantly higher levels of job satisfaction than their counterparts, and the associations were fully mediated by NAs' perceived supervisor support. These findings support prior research that supervisor support is important to improving job satisfaction and contribute to the literature that Asians/Residents/Aliens long-term care workers may be more sensitive to supervisory support and may be more grateful if they received support from supervisors. Managers should be aware of these racial differences and by being supportive they may improve NAs job satisfaction and reduce turnover rates.

#### THE ROLE OF RELATIONSHIP QUALITY FOR SOLITUDE EXPERIENCES DURING THE PANDEMIC

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As time spent at home has significantly increased during the pandemic, reports of household conflict has also risen among people living with others (Usher et al., 2020). One solution to alleviate the potential stress of increased time with others could be carving out time to oneself. The present study investigated how living conditions (e.g., with others vs. alone) are associated with everyday desire for solitude and whether daily solitude experience comes with improved daily emotional well-being in people living with others. Furthermore, it also explored whether relationship quality is associated with solitude experience in a similar manner as living conditions. To do so, we used repeated daily life assessments from a lifespan sample ( $N = 215$ ;  $M$  age = 38.3 years,  $SD$  age = 17.5; 78 % female) collected during the early pandemic (April to August 2020). Findings indicate that neither living conditions nor relationship quality were

directly associated with daily desire for solitude, but higher relationship well-being was related to low preference for solitude when measured as an individual trait. In addition, relationship quality significantly moderated everyday solitude-affect links: higher relationship quality was related to reduced negative affect during solitude, and conflict was related to increased positive and decreased negative affect on solitude as compared to non-solitude days. The results imply that it is the subjective experience of relationships rather than objective living conditions that shape daily affective quality during solitude.

#### UNDERSTANDING BARRIERS TO HEALTHCARE ACCESS FOR HEART FAILURE PATIENTS DURING THE COVID-19 PANDEMIC

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Early outpatient follow-up within two weeks after hospital discharge is an effective strategy for improving transitions of care in older patients with heart failure (HF). However, implementing timely follow-up care for HF patients has been challenging, especially during the COVID-19 pandemic. This convergent mixed-methods study identified patients' barriers to accessing care and ascertained their recommendations for addressing these barriers. We enrolled 264 HF patients admitted to the Duke Heart Center between May 2020 and August 2021. A standardized survey and electronic health records (EHR) were used to collect patients' sociodemographic, psychosocial, behavioral, and clinical data. For patients who reported some difficulty accessing their healthcare (n=30), semi-structured interviews were conducted to understand these barriers. Data were analyzed using rapid analysis techniques. Barriers to accessing care varied across participants, with scheduling an appointment being the most common barrier (12 of the 30 responses). Participants indicated that job-related conflicts, providers' availability, or COVID-19 contributed most to the difficulty in scheduling an appointment. Some participants experienced more difficulties during the pandemic due to fewer appointments available for non-acute and non-COVID-19 related needs. Transportation was another critical barrier, which was often associated with the participants' physical functional status. Participants identified the benefits of using telemedicine to address access to care barriers; however, they shared their concerns that telemedicine visits may not be sufficient to assess their HF conditions. Study findings highlight the need for more continual, tailored, and patient-centered interventions to improve access to care in older HF patients.

#### USING TAIWANESE UNIVERSAL HEALTH INSURANCE DATA TO ESTIMATE LTC NEEDS WITH MACHINE LEARNING

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One of the core issues in long-term care (LTC) policy is the growing imbalance between demand and supply of LTC services due to aging population. To estimate the imbalance and allocate LTC resources, the government regularly conducts surveys. These surveys are expensive given the sample size requirements and imprecise given their subjective nature. This study links the administrative records of the universal health insurance database with LTC program usage records in Taiwan to explore this issue. Machine learning algorithms are used in projecting LTC needs from administrative records. LTC program usage records provide detailed LTC needs information and the amount of service each individual used. In addition, health insurance claim data provides rich health information. Specific LTC needs are predicted for each individual. By further extrapolating to future demographics, long-term LTC needs could be projected. There are several findings in this study. Prediction of difficulties in activities of daily livings (ADL), measured by Barthel index, works best using the Gradient Boosting algorithm. The mean absolute error is 17.67 out of a 0 to 100 scale. In addition to dementia and stroke, diagnosis of pressure ulcer (ICD 10 code: L89) and pneumonia (ICD 10 code: J18) have high predictive power for LTC needs. Prediction of Instrumental ADL (IADL) also performs well with a mean absolute error 1.31. The prediction model suggests high LTC needs and excess demand as the demographics changing. Our study provides a reliable way of using rich information to estimate future LTC needs without conducting additional costly surveys.

#### VACCINE ACCESS SHRINKS DISPARITIES BETWEEN LONG-TERM CARE AND COMMUNITY RATES OF COVID-19 MORTALITY.

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This longitudinal secondary data analysis examines differences in COVID-19 incidence and mortality among long-term care facility (LTCF) residents with those living in the community in South Carolina (SC) throughout the pandemic, including the time of vaccine availability. Data came from the SC Department of Health and Environmental Control (SCDHEC). Descriptive statistics and trends for cases of infections and deaths were calculated. Cox proportional hazards were used to compare COVID-19 mortality in LTC residents to community dwelling older adults, controlling for age, gender, race, and pre-existing chronic health conditions. Until early January of 2021, significantly greater incidence rates of infection (116.2 per 10,000 per month) and hazard of death after infection (HR=1.83, 95% CI: 1.70-1.98) were experienced among LTC residents as compared to older adults in the community even after statewide mask mandates and visitation guidance. Since vaccine availability, COVID incidence rates among LTC residents fell by half (59.5