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Predictors of Occupational Competence in People Hospitalized with Chronic Conditions

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Predictors of Occupational Competence in People Hospitalized with Chronic Conditions

Abstract

Background: Chronic diseases limit participation in meaningful daily activities, roles, and routines, which can negatively impact occupational competence, a sense of self, and life satisfaction, especially when hospitalization is required to manage disease symptoms. Standardized measures of occupational competence and related functional, cognitive, and environmental factors may enhance occupational therapists' ability to identify potential barriers to and make targeted recommendations for self- and health management in the community.

Method: This cross-sectional study investigated occupational competence in patients hospitalized with chronic conditions. The participants completed measures of occupational competence, values, self-care function, environmental impact, and functional cognition while hospitalized.

Results: The participants (n = 51) reported moderate to high levels of occupational competence. The overall regression model was significant. Values, self-care function, and environmental impact were significant predictors of occupational competence.

Conclusion: Values, self-care function, and environmental impact predict occupational competence in people hospitalized with chronic conditions. Occupational therapists should incorporate standardized measures of occupational competence, values, self-care function, and environmental impact into current evaluation practices to support recommendations for follow-up care and community supports. Future research should include a larger sample that is more representative of an occupational therapy caseload and incorporate alternative measures of functional cognition to better measure this construct.

Comments

The authors declare that they have no competing financial, professional, or personal interest that might have influenced the performance or presentation of the work described in this manuscript.

Keywords

occupational therapy department, hospital, chronic disease, occupational competence, functional status, social values, environment

Cover Page Footnote

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Credentials Display

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In the United States, 6 in 10 adults have one chronic disease, and 4 in 10 adults have two or more chronic diseases (National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP], 2022). Chronic diseases, including heart disease and chronic lung disease, are a leading cause of death and disability across the nation. They account for 90% of the \$4.1 trillion the nation spends in health care costs annually (NCCDPHP, 2022). These chronic conditions require ongoing medical care and may limit participation in daily activities.

When people with chronic disease cannot complete activities that are relevant or meaningful to them, they may experience lower levels of occupational competence and quality of life. Occupational competence is the ability to engage in meaningful activities, roles, and routines successfully over time, and it is critical for participation, a sense of self, and life satisfaction (Taylor, 2017). Empirical evidence shows that people with select chronic diseases report lower occupational competence, worse physical function, and worse overall health quality than those without symptoms (Taylor et al., 2010). Furthermore, occupational competence is a significant predictor of quality of life in people with select chronic diseases (Wu et al., 2016).

Hospitalizations for acute symptoms and poor health quality may increase the challenges people with chronic diseases experience in daily life. Specifically, hospitalizations can trigger functional declines in patients regardless of prior levels of function (Leff et al., 2009; Zisberg et al., 2011; Zisberg et al., 2016). Notably, these functional declines negatively impact activities like bathing, dressing, hobbies, and housework, all of which people with chronic diseases identify as important in their daily lives (Duruturk et al., 2015; Toole et al., 2013; Vyslysel et al., 2021). Hospitalizations can also trigger cognitive decline. One in 3 older adults who is functionally independent upon hospital admission experiences cognitive decline during short-term hospitalizations (Zisberg et al., 2016). For those who were previously independent, these cognitive declines lead to unexpected challenges during daily activities at home, and for those with existing cognitive impairment, further cognitive decline reduces the likelihood that patients will discharge home (Burton et al., 2018; Mathews et al., 2014; Zisberg et al., 2016).

When discharged home, many people with chronic diseases continue to experience challenges in daily activities without adequate support to meet them. In one study, 52% of participants reported one or more difficulties with self-care and health management activities after hospital discharge (Greysen et al., 2017). Participants stated that inadequate social support, lack of reliable transportation, and an inaccessible environment interfered with their ability to care for themselves, and they felt like they lacked the adequate professional supports to manage their health conditions in the community (Greysen et al., 2017; Greysen et al., 2014). Ongoing difficulties in self-care activities and health management without adequate community supports place patients at increased risk of subsequent emergency department admissions and hospital readmissions (DePalma et al., 2013; Greysen et al., 2017; Greysen et al., 2014; Hass et al., 2017; Navathe et al., 2018; Spatz et al., 2020; Weiss et al., 2007).

Acute care interdisciplinary teams have the expertise to address functional, cognitive, and environmental barriers to self-care and health management before discharge. However, gaps may exist in the current approach to service provision. Only 37% of patients reported that providers asked about potential problems implementing parts of the discharge plan, such as medication management, following a new diet, or attending follow-up appointments (Greysen et al., 2017). A breakdown in communication among the interdisciplinary team regarding patient needs and progress may negatively impact outcomes as well (Okoniewska et al., 2015). Finally, a lack of family or caregiver involvement in discharge training and limited follow-up care for self-management after discharge can negatively impact patients' and

families' perceived ability to manage health conditions at home (Backman & Cho-Young, 2019; Flink & Ekstedt, 2017; Okoniewska et al., 2015; Weiss et al., 2010).

Supplementing current discharge practices with targeted questions and standardized measures of occupational competence and functional, cognitive, and environmental factors may enhance patient outcomes and quality of care. While self-care function, the physical environment, and cognition are routinely evaluated by occupational therapists in acute care, it is usually an unstructured approach that fits the demands of the setting (Blaga & Robertson, 2008; Britton et al., 2015; Robertson & Blaga, 2013). Information on perceived competence and values may be gathered in a similar unstructured manner. However, standardized data on occupational competence, values, self-care function, the physical and sociocultural environment, and cognition may spur recommendations for community supports that help patients and families successfully engage in self-care activities and health management, both now and in the future (Clemson et al., 2016; Flink & Ekstedt, 2017; Greysen et al., 2017; Raad et al., 2020; Weiss et al., 2010; Welch & Forster, 2003).

The purpose of this study was to investigate occupational competence and its predictors in people hospitalized for chronic conditions to inform best practices for occupational therapy in acute care. The specific research question was, “Do values, self-care function, environmental impact, and functional cognition predict occupational competence in people hospitalized with chronic conditions?”

Method

Study Design

This cross-sectional study used convenience sampling and was completed as one component of a more extensive study on the predictors of hospital readmission for people with chronic conditions (Tkach et al., 2023). The research occurred at a 312-bed hospital in the southern United States from June to December 2019. People admitted to the hospital for treatment of chronic conditions participated in a single assessment session while hospitalized. Hospital and university institutional review boards approved the research study.

Participants

People admitted to the hospital and referred for occupational therapy services were screened for eligibility via medical records review. Individuals 18 years of age or older with one of the following admitting diagnoses targeted by the Medicare Hospital Readmissions Reduction Program were included in the study: Coronary Artery Bypass Graft (CABG), Congestive Heart Failure (CHF), Chronic Obstructive Pulmonary Disease (COPD), Acute Myocardial Infarction (AMI), Pneumonia (PNA), Total Hip Arthroplasty (THA), or Total Knee Arthroplasty (TKA). People admitted for elective THA or TKA were only included if their medical history listed underlying osteoarthritis, a chronic condition. People admitted for CABG were only included if their medical history listed existing cardiovascular disease signifying a chronic heart condition. People admitted from long-term care or a nursing home, in the intensive care unit, with current hospice care, or with moderate to severe cognitive impairment as identified by a score of 23 or less on the Montreal Cognitive Assessment (MoCA) were excluded from the research study (Luis et al., 2009; Nasreddine et al., 2005). People with moderate to severe cognitive impairment were excluded because of a decreased ability to provide informed consent and validly complete self-report measures.

Measures

The Montreal Cognitive Assessment (MoCA) Version 7.1

The Montreal Cognitive Assessment (MoCA) version 7.1 was used as a cognitive screen. The MoCA measures visuospatial skills, naming, memory, attention, language, abstraction, and orientation. Overall scores range from 0–30. Higher scores represent better cognitive function (Nasreddine et al., 2005). The MoCA has good internal consistency, and all test items successfully distinguish between two of the following groups: mild cognitive impairment, Alzheimer’s dementia, and no cognitive impairment (Luis et al., 2009; Nasreddine et al., 2005). The sensitivity (96%) and specificity (95%) of the MoCA improves with a cutoff score less than or equal to 23, so a cutoff score of 23 was used in the current study to determine study eligibility (Luis et al., 2009).

The Boston University Activity Measure for Post-Acute Care “6 Clicks” Inpatient Daily Activities Short Form (AM-PAC)

The Boston University Activity Measure for Post-Acute Care “6 Clicks” Inpatient Daily Activities Short Form (AM-PAC) was used to measure self-care function, or the ability to perform personal care tasks. Self-feeding, grooming, upper-body dressing, toileting, bathing, and lower-body dressing are scored from 1 = *unable to complete* to 4 = *no difficulty*. Overall scores range from 6 to 24, and higher scores represent greater independence in self-care activities. The AM-PAC has high internal consistency (Cronbach’s alpha = 0.91) and interrater reliability (ICC = 0.78, 95% CI = [0.80, 0.85]), and it can predict discharge destination in acute care (Jette et al., 2015; Jette, Stiphen, et al., 2015; Jette et al., 2014). In this study, a staff occupational therapist documented self-care performance in the occupational therapy evaluation, and a member of the research team extracted that information from the electronic medical record.

The Craig Hospital Inventory of Environmental Factors Short Form (CHIEF-SF)

The Craig Hospital Inventory of Environmental Factors Short Form (CHIEF-SF) is a self-report assessment that was used to measure of environmental impact or how the physical and sociocultural context impacts participation. Frequency of barriers in the past year (0 = *never* to 4 = *daily*) and magnitude of the barrier (1 = *little problem*, 2 = *big problem*) are scored for each item. The frequency and magnitude scores for each item are multiplied to create an item score, and item scores are averaged for an overall CHIEF-SF score. Lower scores represent fewer and less significant barriers to participation. The CHIEF demonstrates content validity through factor analysis with distinct subscales that account for 48% of the cumulative variance, and it differentiates scores across disability groups (Craig Hospital Research Department, 2001).

The Executive Function Performance Test (EFPT)-Bill Pay Subtest

The Executive Function Performance Test (EFPT)-Bill Pay Subtest was used to measure functional cognition or the integration of thinking and processing skills needed to perform daily activities. The participants answered pre-test questions about checkbook experience and a pre-test insight question: Will you be able to pay the bills? (0 = *by yourself* to 3 = *I won’t be able to do this task*). Then, the participants completed the bill pay task. The test administrator assigned scores for initiation, execution, organization, sequencing, judgment, safety, and completion based on the level of assistance participants need to perform the task (0 = *independent* to 5 = *do for participant*). Subtest scores ranged from 0–25, where lower scores represented less severe impairments in functional cognition. The EFPT is reliably and validly used across a variety of diagnoses (Baum et al., 2008). Only the bill pay subtest was administered

in this study to match the time constraints of the acute care setting; this research design decision was made in collaboration with the EFPT developers.

The Occupational Self-Assessment Short Form (OSA-SF)

The Occupational Self-Assessment Short Form (OSA-SF) was used to measure occupational competence or the perceived ability to manage daily life activities, including meaningful roles, routines, and values, or perceived importance of daily activities, roles, and routines. Items focus on meaningful roles and routines and the ability to problem-solve, make decisions, and work toward personal goals versus self-care or activity performance. The participants rated their competence on a 4-point Likert scale ranging from 1 = *a lot of difficulty* to 4 = *extremely well*. Competence scores ranged from 0–48, with higher scores representing greater competence. The participants rated the importance of each item from 1 = *important* to 3 = *most important*. Values scores ranged from 12–36, where higher scores indicated greater perceived importance. The OSA 2.2 and OSA-SF have high concurrent validity for the competence ($r = 0.95, p < 0.001$) and values ($r = 0.93, p < 0.001$) subscales (Popova et al., 2019). The OSA-SF has strong construct validity and adequate rating scale functioning, dimensionality, and item and person goodness of fit (Popova et al., 2019).

Data Collection

We reviewed medical records and invited people who met the study criteria to participate. The research team approached potential participants about the research study after the staff occupational therapist completed the initial evaluation. We confirmed study eligibility with the MoCA and included those who scored 23 or more in the study. We obtained written informed consent from those who were eligible to participate. A member of the research team, who is a licensed occupational therapist, administered the assessment battery within 1–3 days of admission. The occupational therapist completed formalized training to administer the EFPT and MoCA and demonstrated competency of at least 80% accuracy in practice trials. The research occupational therapist was not involved in initial evaluations and was blind to the participants' prior level of function and home setup during test administration.

Data Analysis

An *a priori* power analysis with a power of 0.8 and an alpha level of 0.05 indicated that a minimum of 40 participants was required to conduct a regression with four predictive factors. After data collection, we checked all data for accuracy and completeness. We calculated descriptive statistics for occupational competence, values, self-care function, environmental impact, and functional cognition. We calculated a multiple regression model to determine whether values, self-care function, environmental impact, and functional cognition predict occupational competence. All analyses were conducted with IBM SPSS v27 (IBM Corp., 2020), $p < 0.05$.

Results

One hundred and thirteen people met the inclusion criteria. Eighteen people declined participation because of pain, fatigue, or pending discharge. Forty-two people were unable to participate because of low MoCA scores, discharge, or medical holds. Fifty-two participants were enrolled in the study from June to December 2019. One participant had no experience with checkbooks, a required criterion for the EFPT, so that participant was excluded from the study. See Table 1 for detailed demographic information. Most of the participants were European American, and a plurality had an admitting diagnosis of TKA. On average, the participants completed assessments in 38.8 min ($SD = 9.30$) and experienced an average of 1.44 interruptions ($SD = 1.43$) during the assessment session. The most common interruptions across the sample were phone calls ($n = 19$) and nursing care ($n = 15$).

Table 1
Demographics for Participants with Chronic Health Conditions

Characteristic	Respondents	
	n (%)	M(SD)
Gender	Female	27 (52.9)
	Male	24 (47.1)
Race	African American	7 (13.7)
	European American	44 (86.3)
Admitting Diagnosis	CABG	3 (5.7)
	CHF	8 (15.1)
	COPD	3 (5.7)
	TKA	22 (41.5)
	THA	5 (9.4)
	PNA	7 (13.2)
	COPD and CHF	1 (1.9)
	CHF and PNA	2 (3.8)
Age (years)		63.4 (11.8)
Education (years)		13.4 (2.67)
Number of Comorbidities		8.67 (4.82)

Note. *n* = 51. *n* = 50 for education due to missing data. CABG = coronary artery bypass graft; CHF = congestive heart failure; COPD = chronic obstructive pulmonary disease; TKA = total knee arthroplasty; THA = total hip arthroplasty; PNA = pneumonia. M = mean, SD = standard deviation. This table is included in a manuscript of a more extensive study with the same sample (Tkach et al., 2023). The authors provide permissions for reproduction in the current manuscript.

Variables Described

Table 2 includes the means and standard deviations for key variables by diagnosis and for the full sample. Means for self-care function ranged from 32.1 (CHF, PNA)–36.9 (COPD), with a sample mean of 34.5. Means for environmental impact ranged from 0.45 (TKA)–1.55 (PNA), with a sample mean of 0.78. Means for functional cognition ranged from 1.77 (TKA)–4.67 (COPD), with a sample mean of 2.73. Means for occupational competence ranged from 28.8 (CHF)–40.0 (CABG), with a sample mean of 37.4. Means for values ranged from 22.0 (CABG)–29.9 (COPD), with a sample mean of 24.81.

Table 2
Descriptive Information on Key Variables by Diagnosis

Diagnosis	Self-Care Function (AM-PAC) M(SD)	Environmental Impact (CHIEF-SF) M(SD)	Functional Cognition (EFPT – Bills) M(SD)	Occupational Competence (OSA-SF) M(SD)	Values (OSA-SF) M(SD)
CABG	33.7 (4.82)	1.22 (0.62)	2.67 (0.58)	40.0 (5.29)	22.0 (10.8)
CHF	32.1 (2.88)	0.98 (0.91)	2.53 (1.60)	28.8 (8.38)	22.9 (7.72)
COPD	36.9 (3.04)	0.72 (0.25)	4.67 (3.06)	39.3 (4.16)	29.9 (5.57)
PNA	32.1 (4.88)	1.55 (1.61)	3.57 (1.72)	31.6 (11.5)	25.1 (7.60)
THA	34.0 (2.02)	0.93 (0.94)	3.50 (2.95)	37.7 (5.75)	26.3 (6.15)
TKA	35.9 (1.77)	0.45 (0.57)	1.77 (1.31)	39.3 (5.91)	24.6 (6.20)
Total	34.5 (3.16)	0.78 (0.91)	2.73 (1.86)	37.4 (7.99)	24.81 (6.55)

Note. *n* = 51 for the full sample. See table 1 for the sample size of each diagnostic group. CABG = coronary artery bypass graft; CHF = congestive heart failure; COPD = chronic obstructive pulmonary disease; TKA = total knee arthroplasty; THA = total hip arthroplasty; PNA = pneumonia; M = mean; SD = standard deviation; AM-PAC = The Boston University Activity Measure for Post-Acute Care “6 Clicks” Inpatient Daily Activities Short Form; CHIEF-SF = The Craig Hospital Inventory of Environmental Factors Short Form; EFPT = the Executive Function Performance Test; OSA-SF = the Occupational Self-Assessment Short Form.

Predictors of Occupational Competence

A multiple regression model was used to predict occupational competence with values, self-care function, environmental impact, and functional cognition in the full sample of participants with chronic conditions (see Table 3). The overall model was significant, $F(4, 47) = 7.13, p < 0.001, R^2 = 0.38$. Values ($\beta = 0.40, p < 0.001$) and self-care function ($\beta = 0.31, p = 0.02$) were significant positive predictors of occupational competence, and environmental impact was a significant negative predictor of occupational competence ($\beta = -0.26, p = 0.04$). Functional cognition was not a significant predictor of occupational competence ($\beta = 0.06, p = 0.63$). Thus, higher self-care function and values scores were associated with higher levels of occupational competence, and lower environmental impact scores, or fewer perceived barriers in daily life, were associated with higher levels of occupational competence. Values, self-care function, environmental impact, and functional cognition accounted for 38% of the variance in occupational competence ($R^2 = 0.38$).

Table 3

Summary of Multiple Linear Regression Predicting Occupational Competence

Predictor	Unstandardized		Standardized	<i>t</i>	<i>p</i>	95% CI	
	<i>b</i>	<i>SE</i>	β			<i>LL</i>	<i>UL</i>
Values	0.49	0.14	0.40	3.38	0.00**	0.20	0.77
Self-Care Function	0.78	0.33	0.31	2.39	0.02*	0.12	1.44
Functional Cognition	0.26	0.54	0.06	0.49	0.63	-0.82	1.34
Environmental Impact	-2.26	1.07	-0.26	-2.12	0.04*	-4.41	-0.11

Note. $n = 51$. $R^2 = 0.38$, adjusted $R^2 = 0.32$. SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit. * $p < 0.05$. ** $p < 0.01$.

Discussion

This study examined occupational competence and its predictors for people hospitalized with chronic conditions. The results provide empirical evidence for occupational competence and its relationship to person factors, activity performance, and environments that can impact patient perceptions of preparedness for discharge in people with chronic conditions. Overall, the participants reported moderate to high levels of occupational competence, which suggests they felt capable of managing self-care and recovery at home. This finding loosely aligns with studies that report that most people feel prepared to discharge, yet 17%–24% were readmitted to the hospital (Coffey & McCarthy, 2013; Lau et al., 2016). The occupational competence data also showed that the sample did not report maximum levels of perceived occupational competence. The average perceived competence for the full sample was 37.4 out of 48 maximum competence points. These findings provide a preliminary picture of occupational competence in people with chronic conditions and suggest there is room for health care professionals to facilitate improvements in competence with daily activities, roles, and routines.

Values, self-care function, and environmental impact were significant predictors of occupational competence. The significant positive relationship between values and occupational competence signifies that people who perceive activities, roles, and routines as important have higher levels of occupational competence. People participate in activities, roles, and routines that they value to experience joy and fulfillment, and successful participation builds a person's competence to complete those meaningful activities, roles, and routines (Taylor, 2017; Taylor et al., 2010). Furthermore, a strong sense of occupational competence and long-term patterns of successful participation lead to health and well-being (Taylor, 2017; Taylor et al., 2010; Wu et al., 2016). These findings add to the occupational therapy

evidence base by capturing data on the level of value people with chronic conditions place on common daily activities, roles, and routines.

The significant positive relationship between self-care function and occupational competence suggests that patients who are more independent with self-care activities have higher levels of occupational competence, whereas those who are more dependent with self-care activities have lower levels of occupational competence. This finding also aligns with literature on the importance of competence for patients' and families' perceptions of preparedness to discharge and manage health conditions in the community (Greysen et al., 2017; Leff et al., 2009; Zisberg et al., 2011; Zisberg et al., 2016). This finding provides empirical evidence for the Model of Human Occupation postulates that state chronic conditions can limit participation self-care activities and negatively impact competency and quality of life (Taylor, 2017; Taylor et al., 2010; Wu et al., 2016). Finally, the significant relationship between self-care function and occupational competence shows that the participants had appropriate insight into their capacity for self-care activities.

The significant negative relationship between environmental impact and occupational competence indicates that people who perceive more environmental barriers in daily life also perceive lower levels of occupational competence. Specific items on the CHIEF-SF, the environmental impact measure, asked the participants to rate how community resources, comprehension of medical information, and access to medical care impact daily life activities. The participants in this study believed the environmental context can constrain health management in the community. This belief aligns with prior studies that have shown inadequate social support, lack of reliable transportation, and inaccessible environments can interfere with recovery at home (Greysen et al., 2017; Greysen et al., 2014; Weiss et al., 2010).

The non-significant relationship between functional cognition and occupational competence was unexpected. The participants with greater impairments in functional cognition may lack insight into their deficits, leading to overestimations of occupational competence. Data from the current study support this claim, as the participants with worse performance on the EFPT-Bill Pay Subtest reported that they would be able to complete the activity without assistance on a pre-test insight question. In addition, the sample includes many participants with elective joint replacements. These patients tend to be cognitively intact and may have emphasized physical, social, or environmental factors more when rating occupational competence. One final consideration is that the EFPT may not effectively capture functional cognition impairments in the acute care setting.

Implications

Occupational therapists in acute care should consider occupational competence and its predictors when evaluating and treating patients hospitalized for chronic conditions. Occupational therapists can accomplish this goal by supplementing current evaluation and discharge planning practices with targeted questions about what occupational competence and successful transitions home look like for each patient. They can also use standardized measures of occupational competence, values, environmental impact, and/or self-care function when warranted. A more standardized approach to evaluations may help patients and families anticipate barriers to discharge and help therapists objectively identify patients' post-discharge needs so that appropriate community is made (Clemson et al., 2016; Flink & Ekstedt, 2017; Raad et al., 2020; Weiss et al., 2010; Welch & Forster, 2003). In addition, the OSA-SF can guide goal settings and the intervention plan in acute care (Popova et al., 2019).

Limitations

The research study included a small sample of predominantly European Americans, which limits the generalizability of findings. The standardized assessment battery included self-report measures for occupational competence, values, and environmental impact, which may increase the likelihood of socially preferred responses. More than half of the sample was admitted with an elective joint replacement ($n = 28$), and these participants may have been healthier, more physically active, and more cognitively intact compared to other diagnoses in the sample. However, hospitalization can trigger cognitive and functional declines in patients regardless of prior functional status (Burton et al., 2018; Leff et al., 2009; Mathews et al., 2014; Zisberg et al., 2011; Zisberg et al., 2016). The participants may have received disparate occupational therapy service provisions since data were collected within 1–3 days of admission. These differences should be explored in future studies.

Future Research

Future research should recruit a larger sample of hospital participants to promote the generalizability of results. Studies should also incorporate additional diagnoses so that the sample is more representative of an occupational therapy caseload in acute care. Future work should include alternative measures of functional cognition to identify the best way to capture potential functional cognition impairments in the acute care setting. In addition, future research should examine how standardized measures of occupational competence, values, self-care function, and environmental impact compare to the existing occupational therapy evaluation and discharge planning processes.

Conclusion

This study investigated occupational competence and its predictors for people with chronic conditions in acute care. The results provide empirical evidence to support the theoretical relationships between key Model of Human Occupation constructs. Perceived occupational competence was moderate to high for the sample but indicated room for improvement through targeted referrals and intervention. Values, self-care function, and environmental impact were significant predictors of occupational competence. Occupational therapists in acute care should consider occupational competence when treating patients with chronic conditions. Standardized measures of occupational competence and its predictors may help therapists objectively identify post-discharge needs and make referrals that promote successful recovery and management of health conditions at home. Future research should incorporate a larger sample size with diverse diagnoses to better represent occupational therapy caseloads in acute care and explore how standardized measures of values, self-care function, and environmental impact complement the current approach to occupational therapy evaluations and discharge planning in acute care.

References

- Backman, C., & Cho-Young, D. (2019). Engaging patients and informal caregivers to improve safety and facilitate person- and family-centered care during transitions from hospital to home—a qualitative descriptive study. *Patient Preference and Adherence*, 13, 617. <https://www.dovepress.com/engaging-patients-and-informal-caregivers-to-improve-safety-and-facili-peer-reviewed-fulltext-article-PPA>
- Baron, K., Kielhofner, G., Iyenger, A., Goldhammer, V., & Wolenski, J. (2006). *Occupational Self Assessment (OSA) Version 2.2*. University of Illinois of Chicago, College of Applied Health Sciences, Department of Occupational Therapy.
- Baum, C. M., Connor, L. T., Morrison, T., Hahn, M., Dromerick, A. W., & Edwards, D. F. (2008). Reliability, validity, and clinical utility of the Executive Function Performance Test: A measure of executive function in a sample of people with stroke. *The American Journal of Occupational Therapy*, 62(4), 446–455. <https://doi.org/10.5014/ajot.62.4.446>
- Blaga, L., & Robertson, L. (2008). The nature of occupational therapy practice in acute physical care settings. *New Zealand Journal of Occupational Therapy*, 55(2), 11–18. <https://search.informit.org/doi/10.3316/informit.195037977963734>
- Britton, L., Rosenwax, L., & McNamara, B. (2015). Occupational therapy practice in acute physical hospital settings: Evidence from a scoping review. *Australian Occupational Therapy Journal*, 62(6), 370–377. <https://doi.org/10.1111/1440-1630.12227>

- Burton, J. K., Guthrie, B., Hapca, S. M., Cvoro, V., Donnan, P. T., & Reynish, E. L. (2018). Living at home after emergency hospital admission: prospective cohort study in older adults with and without cognitive spectrum disorder. *BMC Medicine*, *16*(1), 1–12. <https://doi.org/10.1186/s12916-018-1199-z>
- Clemson, L., Lannin, N. A., Wales, K., Salkeld, G., Rubenstein, L., Gitlin, L., Barris, S., Mackenzie, L., & Cameron, I. D. (2016). Occupational therapy predischARGE home visits in acute hospital care: a randomized trial. *Journal of the American Geriatrics Society*, *64*(10), 2019–2026. <https://doi.org/10.1111/jgs.14287>
- Coffey, A., & McCarthy, G. M. (2013). Older people's perception of their readiness for discharge and postdischarge use of community support and services. *International Journal of Older People Nursing*, *8*(2), 104–115. <https://doi.org/10.1111/j.1748-3743.2012.00316.x>
- Craig Hospital Research Department. (2001). *Craig Hospital Inventory of Environmental Factors (CHIEF) Manual Version 3.0*. Craig Hospital.
- DePalma, G., Xu, H., Covinsky, K. E., Craig, B. A., Stallard, E., Thomas III, J., & Sands, L. P. (2013). Hospital readmission among older adults who return home with unmet need for ADL disability. *The Gerontologist*, *53*(3), 454–461. <https://doi.org/10.1093/geront/gns103>
- Duruturk, N., Tonga, E., Karatas, M., & Doganozu, E. (2015). Activity performance problems of patients with cardiac diseases and their impact on quality of life. *Journal of Physical Therapy Science*, *27*(7), 2023–2028. <https://doi.org/10.1589/jpts.27.2023>
- Flink, M., & Ekstedt, M. (2017). Planning for the discharge, not for patient self-management at home—an observational and interview study of hospital discharge. *International Journal of Integrated Care*, *17*(6). <http://doi.org/10.5334/ijic.3003>
- Greysen, S. R., Harrison, J. D., Kripalani, S., Vasilevskis, E., Robinson, E., Metlay, J., Schnipper, J. L., Meltzer, D., Sehgal, N., & Ruhnke, G. W. (2017). Understanding patient-centred readmission factors: a multi-site, mixed-methods study. *BMJ Quality & Safety*, *26*(1), 33–41. <https://doi.org/10.1136/bmjqs-2015-004570>
- Greysen, S. R., Hoi-Cheung, D., Garcia, V., Kessel, E., Sarkar, U., Goldman, L., Schneidermann, M., Critchfield, J., Pierluissi, E., & Kushel, M. (2014). “Missing pieces”—functional, social, and environmental barriers to recovery for vulnerable older adults transitioning from hospital to home. *Journal of the American Geriatrics Society*, *62*(8), 1556–1561. <https://doi.org/10.1111/jgs.12928>
- Hass, Z., DePalma, G., Craig, B. A., Xu, H., & Sands, L. P. (2017). Unmet need for help with activities of daily living disabilities and emergency department admissions among older medicare recipients. *The Gerontologist*, *57*(2), 206–210. <https://doi.org/10.1093/geront/gnv142>
- IBM Corp. (2020). *IBM SPSS Statistics for Windows, Version 27.0*. IBM Corp.
- Jette, A., Haley, S. M., Coster, W., & Ni, P. S. (2015). AM-PAC short forms for inpatient and outpatient settings: Instruction manual. Boston University.
- Jette, D. U., Stilphen, M., Ranganathan, V. K., Passek, S., Frost, F. S., & Jette, A. M. (2015). Interrater reliability of AM-PAC “6-Clicks” basic mobility and daily activity short forms. *Physical Therapy*, *95*(5), 758–766. <https://doi.org/10.2522/ptj.20140174>
- Jette, D. U., Stilphen, M., Ranganathan, V. K., Passek, S. D., Frost, F. S., & Jette, A. M. (2014). Validity of the AM-PAC “6-Clicks” inpatient daily activity and basic mobility short forms. *Physical Therapy*, *94*(3), 379–391. <https://doi.org/10.2522/ptj.20130199>
- Lau, D., Padwal, R. S., Majumdar, S. R., Pederson, J. L., Belga, S., Kahlon, S., Fradette, M., Boyko, D., & McAlister, F. A. (2016). Patient-reported discharge readiness and 30-day risk of readmission or death: a prospective cohort study. *The American Journal of Medicine*, *129*(1), 89–95. <https://doi.org/10.1016/j.amjmed.2015.08.018>
- Leff, B., Burton, L., Mader, S. L., Naughton, B., Burl, J., Greenough III, W. B., Guido, S., & Steinwachs, D. (2009). Comparison of functional outcomes associated with hospital at home care and traditional acute hospital care. *Journal of the American Geriatrics Society*, *57*(2), 273–278. <https://doi.org/10.1111/j.1532-5415.2008.02103.x>
- Luis, C. A., Keegan, A. P., & Mullan, M. (2009). Cross validation of the Montreal Cognitive Assessment in community dwelling older adults residing in the Southeastern US. *International Journal of Geriatric Psychiatry: A Journal of the Psychiatry of Late Life and Allied Sciences*, *24*(2), 197–201. <https://doi.org/10.1002/gps.2101>
- Mathews, S. B., Arnold, S. E., & Epperson, C. N. (2014). Hospitalization and cognitive decline: can the nature of the relationship be deciphered? *The American Journal of Geriatric Psychiatry*, *22*(5), 465–480. <https://doi.org/10.1016/j.jagp.2012.08.012>
- National Center for Chronic Disease Prevention and Health Promotion. (2022, August 10). *About chronic conditions*. <https://www.cdc.gov/chronicdisease/about/costs/index.htm>
- Nasreddine, Z. S., Phillips, N. A., Bédirian, V., Charbonneau, S., Whitehead, V., Collin, I., Cummings, J. L., & Chertkow, H. (2005). The Montreal Cognitive Assessment, MoCA: A brief screening tool for mild cognitive impairment. *Journal of the American Geriatrics Society*, *53*(4), 695–699. <https://doi.org/10.1111/j.1532-5415.2005.53221.x>
- Navathe, A. S., Zhong, F., Lei, V. J., Chang, F. Y., Sordo, M., Topaz, M., Navathe, S. B., Rocha, R. A., & Zhou, L. (2018). Hospital readmission and social risk factors identified from physician notes. *Health Services Research*, *53*(2), 1110–1136. <https://doi.org/10.1111/1475-6773.12670>
- Okoniewska, B., Santana, M. J., Groshaus, H., Stajkovic, S., Cowles, J., Chakrovorty, D., & Ghali, W. A. (2015). Barriers to discharge in an acute care medical teaching unit: a qualitative analysis of health providers' perceptions. *Journal of Multidisciplinary Healthcare*, *8*, 83. <https://doi.org/10.2147/JMDH.S72633>
- Popova, E. S., Ostrowski, R. K., Wescott, J. J., & Taylor, R. R. (2019). Development and Validation of the Occupational Self-Assessment—Short Form (OSA—SF). *The American Journal of Occupational Therapy*, *73*(3), 7303205020p7303205021–7303205020p7303205010. <https://doi.org/https://doi.org/10.5014/ajot.2019.030288>
- Raad, J. H., Papadimitriou, C., Jordan, N., & Heinemann, A. W. (2020). Allied health professionals utilization of standard measures assessing measurement practice in physical medicine and rehabilitation. *Journal of Allied Health*, *49*(2), 92–98.
- Robertson, L., & Blaga, L. (2013). Occupational therapy assessments used in acute physical care settings. *Scandinavian Journal of Occupational Therapy*, *20*(2), 127–135. <https://doi.org/10.3109/11038128.2012.737369>
- Spatz, E. S., Bernheim, S. M., Horwitz, L. I., & Herrin, J. (2020). Community factors and hospital wide readmission

- rates: Does context matter? *PLoS One*, 15(10), e0240222. <https://doi.org/10.1371/journal.pone.0240222>
- Taylor, R. R. (2017). *Kielhofner's Model of Human Occupation* (5th ed.). Wolters Kluwer.
- Taylor, R. R., O'Brien, J., Kielhofner, G., Lee, S.-W., Katz, B., & Mears, C. (2010). The occupational and quality of life consequences of chronic fatigue syndrome/myalgic encephalomyelitis in young people. *British Journal of Occupational Therapy*, 73(11), 524–530. <https://doi.org/10.4276/030802210X12892992239233>
- Tkach, M. M., Bowyer, P., Neville, M., Wolf, T. J., & Goodman, G. (2023). Predictors of hospital readmissions for people with chronic conditions. *Open Journal of Occupational Therapy*, 11(1), 1–10. <https://doi.org/10.15453/2168-6408.2045>
- Toole, L. O., Connolly, D., & Smith, S. (2013). Impact of an occupation-based self-management programme on chronic disease management. *Australian Occupational Therapy Journal*, 60(1), 30–38. <https://doi.org/10.1111/1440-1630.12008>
- Vyslysel, G., Barker, D., & Hubbard, I. J. (2021). The Canadian Occupational Performance Measure (COPM) as routine practice in community-based rehabilitation: A retrospective chart review. *Archives of Rehabilitation Research and Clinical Translation*, 3(3), 100134. <https://doi.org/10.1016/j.arct.2021.100134>
- Weiss, M., Piacentine, L., Lokken, L., Ancona, J., Archer, J., Gresser, S., Holmes, S. B., Toman, S., Toy, A., & Vega-Stromberg, T. (2010). Situational transitions: Discharge and relocation. *Transitions Theory: Middle-Range and Situation-Specific Theories in Nursing Research and Practice*, 153–168.
- Weiss, M. E., Piacentine, L. B., Lokken, L., Ancona, J., Archer, J., Gresser, S., Holmes, S. B., Toman, S., Toy, A., & Vega-Stromberg, T. (2007). Perceived readiness for hospital discharge in adult medical-surgical patients. *Clinical Nurse Specialist*, 21(1), 31–42. https://epublications.marquette.edu/cgi/viewcontent.cgi?article=1056&context=nursing_fac
- Welch, A., & Forster, S. (2003). A clinical audit of the outcome of occupational therapy assessment and negotiated patient goals in the acute setting. *British Journal of Occupational Therapy*, 66(8), 363–368. <https://doi.org/10.1177/030802260306600805>
- Wu, C.-Y., Pan, A.-W., Hsu, P.-N., Chung, L., & Chen, T.-J. (2016). The predictive models of quality of life for individuals with systemic lupus erythematosus—the application of the Path Analysis. *Mental Health in Family Medicine*, 12, 262–271.
- Zisberg, A., Shadmi, E., Sinoff, G., Gur-Yaish, N., Srulovici, E., & Admi, H. (2011). Low mobility during hospitalization and functional decline in older adults. *Journal of the American Geriatrics Society*, 59(2), 266–273. <https://doi.org/10.1111/j.1532-5415.2010.03276.x>
- Zisberg, A., Sinoff, G., Agmon, M., Tonkikh, O., Gur-Yaish, N., & Shadmi, E. (2016). Even a small change can make a big difference: The case of in-hospital cognitive decline and new IADL dependency. *Age and Ageing*, 45(4), 500–504. <https://doi.org/10.1093/ageing/afw063>