

DETERMINANTS OF FREQUENCY IN ACUTE CARE OCCUPATIONAL
THERAPY

A Thesis submitted to the faculty at Stanbridge University in partial fulfilment of the
requirements for the degree of Master of Science in Occupational Therapy

by

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Abstract

Objectives: The provision, frequency, and quality of occupational therapy (OT) services in acute care is highly variable. This research aims to describe the primary outcomes influenced by provision of OT services in acute care, including readmission rates, functional outcomes, and length of stay. The goal is to identify the factors that influence the delivery of OT in acute care through both a literature review and a mixed methods survey.

Methods: The research study is a mixed methods survey including Likert scale questions and open-ended questions. We disseminated a survey regarding the factors that affect frequency. Participants were recruited through posts in online forums.

Results: A total of 11 occupational therapists explored perceptions of therapy frequency and its impact on patient outcomes through participation in our survey. Most participants (91%) believed OT frequency significantly influences outcomes with 82% linking higher frequency to reduced length of stay. Despite this, only 36% felt that patients received adequate weekly therapy.

Conclusion: Understanding the major influencing factors can help therapists make evidence-based decisions about intervention frequency that maximize functional independence and engagement in meaningful occupations. The outcomes are then more predictable, measurable, and aligned with the best practices in the field.

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Determinants of Frequency in Acute Care Occupational Therapy

In the acute care setting, occupational therapists are crucial in helping patients recover and regain the skills they need to perform their daily activities. Their primary purpose is to assist patients in adapting to changes in their physical and cognitive abilities following an illness, injury, or surgery. Occupational therapy (OT) interventions are provided to patients to maximize functional outcomes, prevent readmission, and promote safe discharge (George et al., 2021). Within acute care services, occupational therapists provide assessment and intervention simultaneously, with the facilitation of discharge as the focus.

In this setting, occupational therapists often do not follow a standardized protocol for determining frequency when delivering care, which can be considered a strength and weakness. The absence of a protocol allows occupational therapists to be flexible and tailor interventions to individual needs. However, flexibility can act as a double-edged sword. Without a clear, structured protocol or guidelines for frequency, there may be variability in the quality and consistency of care across patients. Increased variability in healthcare is associated with increased costs and lower quality of care (Capo-Lugo et al., 2021). The American Occupational Therapy Association (AOTA) recognizes that frequency is a crucial aspect of a therapeutic intervention that greatly influences patient outcomes (AOTA, 2020). Similarly, the American Occupational Therapy Foundation (AOTF) has identified that the "optimal dose, frequency, duration, and location" of OT are research priorities that all directly affect patient outcomes (AOTF, 2019, p.1).

The frequency of therapy impacts how quickly and effectively patients regain essential skills to engage in their daily occupations and activities, such as self-care and

mobility (AOTF, 2019). Inconsistency in the frequency of therapy sessions can make it challenging to track progress and may compromise outcomes. The lack of consistency in data makes it hard to analyze and less useful for protocol development in the future.

Establishing evidence-based guidelines for frequency and protocol can promote greater consistency of quality of care, which is important for functional recovery (Taylor, 2017). Therapists can make evidence-based decisions about intervention frequency that maximize functional independence and engagement in meaningful occupations, and the outcomes are more predictable, measurable, and aligned with the best practices in the field. By integrating structured protocols while maintaining the flexibility necessary to meet patients' individual needs in the acute care setting, OT can offer personalized interventions grounded in evidence-based practices to promote optimal recovery and participation in daily occupations.

This research aims to survey occupational therapists to identify factors that determine the frequency and common practice in the current frequency of care. The target population for the study is occupational therapists in acute care settings. The goal is to use their knowledge to contribute foundational research to establish future guidelines for appropriate patient frequency. This will give a better understanding of the experiences of these occupational therapists and increase information on the frequency of care in acute care settings.

Statement of Problem

Depending on the county or state, acute care OT services vary between hospitals and organizations. Because of this, patient therapy frequency can be impacted, which raises the question, "Is the specific amount of time spent in sessions with clients based on

diagnosis, provider availability, or a completely different reason?" To better understand the current frequency of OT services in acute care, it is important to investigate factors that influence the frequency of these services.

Literature Review

Social Significance

Researchers have identified the frequency of OT services to be an important factor for improving patient outcomes. Research has shown that a higher frequency of OT is associated with reduced hospital readmission rates, shorter lengths of stay, and improved functional mobility (Edelstein et al., 2022; Jenkins et al., 2024; Nakazora et al., 2018). These findings help to establish a need for further exploration of the frequency of OT services. Furthermore, they highlight the social implications for stakeholders involved in the therapeutic process.

Increasing therapy visits can enable occupational therapists to better address their patients' occupational needs. Cheah and Presnell (2011) found that activities older adult patients pursued before their hospitalization were considered personal and "full of meaning," whereas activities performed in acute care were the direct opposite. Moreover, older adults typically found themselves doing nothing but waiting for direction or status updates, which researchers believe resulted in occupational deprivation. For this reason, the holistic approach of occupational therapists is invaluable to determining the frequency of therapy services for individual patients. Occupational therapists can design therapeutic activities, exercises, and activities of daily living (ADL) retraining that hold more meaning to the client and make the transition from the hospital back into the community easier.

The frequency of OT can also dictate whether caregivers of hospitalized patients receive the appropriate education and training pre-discharge. In the case of recovery after a stroke, caregivers play a vital role in the lives of patients dependent upon them (Isma Hanis et al., 2025). They assist in ADL, provide companionship care, and act as liaisons between the patient and medical professionals. Isma Hanis et al. (2025) also performed a literature review that concluded that "tailored goal setting, caregiver education," and other interventions translated into "improved patient functioning, successful goal attainment," and even "reduced caregiver strain" (p.122). Mickelson Welding and Kirkevold (2022) report that individuals caring for disabled patients prefer to be included in the care process. As such, the frequency of OT is a necessary aspect of service delivery as it impacts the patient's and their caregivers' quality of life.

Frequency and Readmission

The first common theme evident in many of the articles examined is that increased OT frequency in acute care settings leads to decreased hospital readmission rates. Lower readmission rates signify improved patient outcomes, such as lower risk for mortality and reduced healthcare expenses. Edelstein et al. (2022) focused on Medicare patients enrolled in the Hospital Readmissions Reduction Program (HRRP). The HRRP is a Medicare program that incentivizes hospitals to reduce 30-day readmission rates and covers conditions with high readmission rates, such as heart attacks, heart failure, pneumonia, chronic obstructive pulmonary disease, total hip and knee replacements, and coronary artery bypass graft (Centers for Medicare & Medicaid Services, 2023). Andrews et al. (2015) examined the relationship between rehabilitation frequency and hospital

readmission in stroke patients. Finally, Freburger et al. (2020) examined the impact of OT on readmission rates of patients with pneumonia across 12 acute care hospitals.

Although Edelstein et al. (2022) found that patients who received OT services had higher hospital readmission rates, patients who received a higher frequency of OT services had significantly lower rates of 30-day hospital readmission. The overall high baseline of hospital readmission rates in OT patients can likely be attributed to the greater initial severity of the patient's condition. Reducing readmission rates for diagnoses with historically high readmission rates, such as pneumonia or heart failure, signifies that increased OT frequency can improve difficult or complex situations. Edelstein et al. (2022) also found that patients who were not readmitted within 30 days received more ADL training. This suggests that higher rates of ADL training can lead to increased levels of safety for patients while performing ADLs and increasing functional independence.

Additionally, Andrews et al. (2015) discovered a negative correlation between therapy frequency (therapy consisting of a combination of physical therapy, OT, and speech therapy) and 30-day readmission rates in stroke patients. This retrospective cohort study revealed that the group with the highest intensity rating had a 14% lower likelihood of readmission than those with the lowest level of intensity. Patients who received no therapy had the highest risk of readmission, 30%, compared to those who received any level of therapy. This study highlighted the importance of early and frequent OT in relation to effective discharge planning and readmission rates.

Similarly, Freburger et al. (2020) conducted a cohort study that found that increasing the number of physical and OT visits leads to a decreased risk of 30-day readmission or death. Patients who received four or more therapy sessions and were

discharged to their homes had a 32% lower chance of 30-day readmission or death compared to patients who did not receive any therapy sessions. There was a negative association between therapy frequency and readmission rate in patients with worse mobility scores. This indicates that an increase in therapy can improve functionality, subsequently reducing readmission risk.

Chown et al. (2016) conducted a phenomenological study that explored the roles of occupational therapists in the emergency department. A common role for occupational therapists in the emergency room is making discharge recommendations and prioritizing patient safety. A discharge primarily consisted of conducting a safety assessment, providing adaptive equipment, and educating the patient and their family about managing their condition. Additionally, OT practitioners play a significant role in assisting the medical team in determining patient discharge locations. Each of these roles can potentially reduce unnecessary future readmissions.

Although these studies may have examined different populations and utilized different methodologies, they all concluded that increasing OT frequency in an acute setting decreases readmission risk. Edelstein et al. (2022) studied a broader HRRP-qualifying Medicare population. Andrews et al. (2015) focused on stroke patients, and Freburger et al. (2020) studied patients with pneumonia. Chown et al. (2016) concluded that OT practitioners play a crucial role in the discharge process by providing adaptive equipment, educating the patient, and planning the discharge destination. In summary, these studies emphasize the importance of allotting OT services at a higher frequency across many diagnoses and populations.

Frequency of Functional Outcomes

Another important aspect to consider when discussing the impact of OT in acute care settings is the patient's functional outcomes. A common theme found among the articles is that an increased frequency of OT services increases patient functional outcomes. Jenkins et al. (2024) looked at intensive care unit (ICU) patients' rehabilitation with physical and OT services and their impact on their post-acute discharge. They discovered that patients with an average median therapy time of 23 minutes a day score higher on the Activity Measure for Post-Acute Care (AM-PAC), which measures basic mobility and daily activity limitations. This measurement helps professionals predict potential post-acute care discharge destinations based on the scores recorded for the 6-item scale, with each item receiving up to 4 points. Domains on the AM-PAC for daily activity include upper body dressing, lower body dressing, feeding, grooming, bathing, and toileting. The higher the score, the fewer limitations the patient has in completing daily activities or improving functional outcomes. During admission and discharge, participants were also scored on daily activity and basic mobility measurements. Upon admission to the ICU, participants received a median score of 17 out of a maximum score of 24 for the AM-PAC. At the time of discharge, the results with a linear regression analysis revealed that patients who received services had an increase of 1.0% in basic mobility and 1.8% in daily activity scoring for each additional 10 minutes of therapy (Jenkins et al., 2024). Overall, the median improvement for basic mobility scores increased by 2 points, and the daily activity scores increased by 3 points, given that the median duration of a session was 23 minutes over the median length of stay (LOS) of 7

days (Jenkins et al., 2024). Consequently, the study showed that the patients demonstrated improved independence in mobility and activity tasks.

In Marston et al. (2022), adult inpatients started on a geriatric rehabilitation program upon acute admission were given a Comprehensive Geriatric Assessment measuring medical and psychological functional problems such as frailty, cognitive impairments, and performance of daily activities. Functional performance was assessed using the Katz Index of Activities of Daily Living and Lawton and Brody Scale of Instrumental ADL (IADL) at acute admission, before discharge, and after a three-month follow-up. The Katz Index of ADLs examines “bathing, dressing, toileting, transferring, continence”, and feeding with a comprehensive score of 6, indicating full functional performance (Marston et al., 2022). Additionally, the Lawton and Brody IADL measures a total of eight domains, a few of which include shopping, transportation, medication management, housekeeping, and the ability to manage finances. According to Marston et al. (2022), the "minimal important change (MIC) for both measures is approximately half a point (0.5). These assessments show that OT services greater than 30 minutes/day for 5 days resulted in two to three times the likelihood of patients showing "improvement in functional status at discharge," which is marked by an increase of 1 point on the ADL and IADL scores (Marston et al., 2022, p. 539). Considering these results, a set time for OT interventions increases patients’ abilities and optimizes their independence upon discharge.

While these articles differ in the population evaluated, all have concluded that increased scores on functional outcomes correlate with decreased LOS. For the ICU patients, increased mobility and activity were associated with the average length of stay

being 1.2 days shorter (Jenkins et al., 2024). The study on geriatric rehabilitation patients showed that those who received longer services of 30 minutes or more had LOSs that were shorter by 8 days compared to those who received less than 30 minutes (Marston et al., 2022). Additionally, each study had a limit for the results regarding the time each patient received OT. In Marston et al. (2022), no statistical significance was found in the ADL and IADL scores of patients who received less than 30 minutes of therapy compared to those who received greater or equal to 30 minutes. In Jenkins et al. (2024), researchers excluded patients who averaged more than 90 minutes of therapy daily since this represents an outlier in treatment time for most patients in the study. The results from the remaining data revealed that the effects of therapy plateau after 25-30 minutes. These time limits provide a starting point in investigating different durations when finding a standardized practice for service time in the acute care setting.

Clinical Significance

The clinical significance of increasing the frequency of OT in acute care is simple: it helps mitigate the multifaceted problems of a patient's length of stay, high readmission rates, and poor functionality across many populations and diagnoses. Since there is no standardized frequency of services in the acute setting, this can affect the quantity of care given to patients by occupational therapists (Jenkins et al., 2024). In a qualitative study exploring the discharge process of acute care patients, researchers found that "standardized assessments were not used consistently as part of discharge assessment due to time constraints" (Crennan & MacRae, 2010, p. 37-38). Without thorough assessment, occupational therapists may not meet each patient's individual needs, leading

to insufficient support once discharged. This can lead to an increased risk of injuries and complications, potentially leading to hospital readmission.

With no standardization for intervention practices, novice occupational therapists in the acute care setting may have a difficult time providing appropriate recommendations for the plan of care. Therefore, investigating best practices for service frequency is critical to providing adequate patient care.

Remaining gaps in knowledge

The existing literature provided some insight into a research gap surrounding the frequency of OT in the acute setting. The evidence indicates that an increase in OT services led to decreased hospital readmission rates and improved functional outcomes that correlate with decreased LOS. However, there are remaining gaps in knowledge. Most of the existing research consisted of retrospective cohort studies. One limitation of retrospective cohort studies is the difficulty of maintaining contact with all patients' post-discharge, which can potentially lead to overlooking important outcomes (Nakazora et al., 2018). Due to the nature of the acute care setting, the data collected in this setting is retrospective, and there is no easy alternative to a clinical trial.

Researchers frequently encountered the problem of having a limited sample size due to many of them incorporating retrospective studies. Much of the research showed that data collected was from a single institution, which can affect the generalizability of the results. According to Nakazora et al. (2018), a future meta-analysis can help increase its generalizability and help determine the effects of the correct dose of rehabilitation. However, this could be challenging due to complications that could arise when implementing high rates of therapy, such as burnout of both patient and therapist, as well

workload and scheduling constraints. In Chown et al. (2016), OT practitioners agreed that it is unnecessary to be available 24/7. Finding a standardized practice of service time would be ideal.

Many studies acknowledged not having adequately accounted for potentially important covariates such as a patient's functional status, cognitive status, additional therapy received in a post-acute care setting in Edelstein et al. (2022), and the duration and severity of comorbidities in Andrews et al. (2015). These studies had unique limitations specific to their study, such as eligibility for Medicare and Medicaid in Edelstein et al., as coverage can affect the number of sessions a patient receives. Potential caps on therapy services and limited findings due to AM-PAC scores in Jenkins et al. (2024) may have failed to capture functional improvement in patients at the higher end of the range of AM-PAC scores. The evidence from existing research gave insight into the relationship between OT service frequency and positive outcomes in the acute setting. Eventually, investigating a standardized practice with a set duration would be beneficial in closing some of the remaining gaps.

Statement of Purpose, Hypothesis, and Research Questions

The purpose of our research is to identify factors that determine frequency and common practice in the current frequency because no current guidelines have been established. We found limited research on the specific factors occupational therapists consider when determining service frequency, which speaks to the need for our study. However, current research shows that OT implemented in the acute setting results in lower readmission rates and higher functional outcomes (Edelstein et al., 2022; Nakazora et al., 2018). With evidence supporting the use of OT in acute care and the AOTF

advocating for research that investigates "equitable access and use of health and community services," this study will play a role in informing occupational therapists of their provision of quality, effective care in the acute setting (AOTF, 2024, para. 6). This study will also demonstrate the Stanbridge University Master of Science in Occupational Therapy curricular threads of evidence-based practice and healthcare communication (Stanbridge University, 2025, "MSOT General Information"). Additionally, investigating the frequency of acute care services falls under the "impact on services provided for ADLs and health management" category in Table 2 of the "Occupational Therapy Practice Framework" (AOTA, 2020).

Our study seeks to answer the following research question: What factors do occupational therapists consider when determining patient frequency in acute care? To answer this question, we surveyed occupational therapists working the acute care settings on what factors influence frequency determination. We hypothesize that factors influencing OT services' frequency include diagnosis, functional status, and discharge planning. The anticipated outcome of the study is to identify the current factors that affect the frequency of OT in acute care

Theoretical Framework

The guiding theoretical framework for our research design is the Person-Environment-Occupation (PEO) model. The creation of this model underlines how the three components of person, environment, and occupation influence an individual's overall occupational performance (Evangelist, 2019). The goal of an OT utilizing the PEO model is to identify the dysfunction in the transactional relationship between each component and design interventions that will address each client's unique needs.

The PEO model is relevant to the frequency of OT in acute care due to the responsibility of the occupational therapist to determine the correct patient frequency. This requires the occupational therapist to identify and properly balance the patient's needs, the environmental factors of the acute care setting, and the occupations being therapeutically utilized for recovery. Each of these three components is crucial in developing the correct frequency for each patient.

The person component of the framework describes the patient and their diagnosis, comorbidities, functional ability, and treatment goals (Evangelist, 2019). Patients with more complex diagnoses, comorbidities, or lower functional ability may all require a higher treatment frequency. The prevalent environmental factors in the acute care setting are specific hospital policies, insurance coverage, and clinic staffing coverage. Each of these environmental factors can affect the treatment frequency a patient receives. Finally, a patient's occupation can also play a significant role. Occupations are meaningful tasks that can consist of anything focused on during treatment, such as mobility, self-care, and ADLs. Frequency can be determined by how fast a patient must return to completing these occupations for safe discharge.

While this model can easily be applied to the patient, on a broader scale, the occupational therapist prescribing the treatment plan is also affected and, therefore, adheres to the PEO model. In this case, the person component in the PEO model would be the occupational therapists. An occupational therapist's personal experiences and therapeutic skills can directly impact treatment planning. Therapists' values and beliefs play a significant role in their approach to care, and they influence how they interact with patients, set goals, and develop interventions. The environmental component would be

the acute care setting. Environmental factors such as hospital policies, patient volume, and available resources can similarly contribute to the frequency a therapist prescribes for a patient. Some hospitals can offer rehabilitative services 7 days per week, while others offer 5 days per week (Nakazora et al., 2018). The occupation component applies to the roles and responsibilities of the OT. These are all the tasks they engage in daily, such as documentation time, the number of clients in the workload, and rounds of clients.

The PEO model provides a thorough and holistic lens on how each variable determines a patient's therapy frequency. The PEO model is a fitting theoretical framework as it examines how an occupational therapist may develop a therapy frequency while being influenced by the patient's diagnosis or health status, environmental factors such as insurance coverage or staffing levels, and specific occupation goals. Our research will further explore the dynamics of the occupational therapist and the patient in determining what variables involve the patient, the therapist, or both in determining the number of sessions provided.

Methodology

The study utilized a cross-sectional survey design to collect information from occupational therapists working in acute care. We used this design because it is practical for collecting information from a single point in time and identifying the factors that affect treatment frequency (Thomas, 2020). To design the survey, we conducted a literature review using EBSCOhost Research Databases: Academic Search Complete, CINAHL Ultimate, MEDLINE Complete, and ERIC. We also used Google Scholar, PubMed, and Cochrane Library of Systematic Reviews. Keywords we used included frequency, acute care, functional outcomes, OT, readmission rates, and intensity. Articles

that did not focus on acute care practices were omitted from the review to narrow in on the current frequency established in acute care. The articles selected showcased gaps in guidelines determining the frequency and outlined potential factors affecting OT service in the acute care setting. We used these factors to create survey questions. Specifically, the survey aimed to address how patient, environmental, and occupational factors affect acute care treatment frequency. We included a mix of open and closed-ended questions to develop a more in-depth and accurate depiction of how occupational therapists determine the frequency. The open-ended questions allowed participants to share their experiences and elaborate on questions requiring more detail. One example of an open-ended question on the survey includes, "What barriers are there to changing the frequency of OT services in the acute care setting?" The closed-ended questions required participants to respond to 10 statements using the provided Likert scale to indicate their level of agreement. For example, the first statement reads, "A patient's discharge plan affects the number of sessions," and the participant will have to select one of the options between strongly disagree and strongly agree. Additionally, we created the cross-sectional mixed-methods survey with the guidance and feedback of a seasoned occupational therapist who is an expert in acute care and adult physical rehab.

The advantages of utilizing an online survey are that it is cost-conscious and an effective method of asking many occupational therapists nationwide. Additionally, using a mixed methods survey design allowed us to collect a combination of qualitative data, which will provide empirical numerical data, and quantitative data, which will provide details and context.

The target population for this study consisted of occupational therapists currently working in the acute care setting. The participants were contacted through the social media sites Facebook (AcuteCare4OT), Reddit (r/OccupationalTherapy), and the professional organization AOTA. These forums have specific guidelines for disseminating research surveys in the user agreements sections of the websites. We used these guidelines to ensure compliance with site agreements. Inclusion criteria for this study include being a licensed occupational therapist, currently or previously working in an acute care setting, being 18 years of age or older, being willing to complete an online survey, and being willing and able to understand English. Exclusion criteria include occupational therapists who no longer work in the acute care setting, OT assistants, and occupational therapists who operate outside the United States of America. To follow the inclusion criteria, participants had to attest to their status as a registered or licensed occupational therapist before continuing with the survey.

For one month, the survey was disseminated online through OT forums on Facebook, Reddit, and the AOTA website. Responses were collected on Google Forms and transferred to a secure Google Sheets document. We collected 11 responses and calculated the mean and mode of the quantitative questions. The open-ended questions were analyzed through a constant comparison analysis and manual coding to generate themes.

Ethical and Legal Considerations

To comply with the ethical regulations of Stanbridge University's Institutional Review Board, all responses received were anonymous. No identifying information or contact details were collected. Participants checked a box to attest that they were licensed

occupational therapists and met the inclusion criteria. To obtain participant consent, there was a clear form of consent at the beginning of the questionnaire that explained the purpose of the study, confidentiality, and the right to withdraw at any time. The consent form used was from Stanbridge University, and a checkbox at the beginning of the survey prompted participants to consent before continuing. Data was collected using the Google Survey platform and stored on secure password-protected computers. Research group members were the only ones with access to password-protected Google Survey accounts and information.

Results

A total of 11 occupational therapists with experience working in American acute care settings participated in the study. Many participants (91%) agreed or strongly agreed that OT frequency significantly affects outcomes, with 82% agreeing that greater OT frequency contributes to a shorter LOS. However, when asked whether patients received adequate therapy per week, responses varied, with 45% disagreeing, 36% agreeing, and 18% neutral. The theme of inadequate therapy continues with the following question: "How many days per week does the average patient receive therapy?" 73% of responses stated that it is 2-3 days. This directly contrasts the amount of therapy technically offered by clinics, with 55% of responses stating that therapy is offered 7 days per week. The most significant key factors identified behind an insufficient frequency of therapy were staffing constraints (73%), patient availability (36%), and patient willingness (18%). The most common suggestions to improve therapy frequency and effectiveness were to increase staffing (55%) and improve organizational culture/systems (45%).

Discussion

Our study aimed to identify factors that determine the frequency of OT services in acute care. The responses from surveyed occupational therapists in this setting suggest staffing levels are the most influential among all identified factors. Although several participants agreed that patient diagnosis and discharge planning were factors, as we hypothesized, the number of responses regarding staffing constraints made them pale in comparison. These results suggest it may not be feasible for a therapist to provide the optimal number of sessions for their patients due to their work environment.

Additionally, 91% of participants also broadly agreed that frequency impacts patient outcomes, and 73% believed their patients do not receive the appropriate number of sessions. Moreover, 55% of the occupational therapists identified that their facility provides therapy 7 days a week; however, the same percentage stated that the average patient received only 2 days of therapy. Furthermore, only 9% of occupational therapists stated their patients received up to 5 days of therapy, indicating that inconsistencies in treatment exist within this setting. These inconsistencies or variations of therapy can contribute to poor patient outcomes, presenting a real need to support occupational therapists in providing the level of care their clients deserve.

Unequivocally, staffing levels were the highest reported factor in determining the frequency of OT in acute care: 91% of participants said staffing levels were a barrier to changing frequency, with one occupational therapist stating that there is "a lack of leadership support to increase staffing levels and a lack of financial incentive for hospitals to increase staffing levels." This sentiment is also reflected in a study conducted by Algeo and Aitken (2019) in an English critical care unit. In addition, the participants

(occupational therapists working in critical care) suggested that acute hospital funding cuts may be the reason for poor staffing levels (Algeo & Aitken, 2019). Algeo & Aitken also noted a disparity between staffing and the number of patients to be seen following a unit's growth in size. Unfortunately, a lack of staff to address a large caseload means occupational therapists will be limited in determining the best frequency of sessions for their patients, thus impacting patient outcomes.

In our study, 64% of participants recommended addressing this factor to improve the frequency and effectiveness of therapy. Several articles addressing the delivery of OT services in acute care have offered potential solutions to these staffing issues. Researchers writing a Health Policy Perspective article published in *The American Journal of Occupational Therapy* suggested shoring up information identified in our literature review (Pritchard et al., 2019). They recommend making a case for increasing staffing by educating hospital administrators and OT managers on occupational therapists' role in decreasing LOS and hospital readmissions. OT's value in acute care extends far beyond these two statistics, but their relation to costs and, most importantly, patient outcomes could be persuasive in creating the necessary change. An Australian scoping review by Britton et al. (2015) stated, "Regular clinical supervision encourages professional growth and improved staff retention as therapists feel supported in their role." One of our participants experiences high turnover in their hospital, making this a potential solution to implement.

Based on the information uncovered in our literature review, we also determined it would be best to address discharge plans in our survey. Most of the participants, 91%, selected Agree or Strongly Agree in response to the statement, "A patient's discharge plan

affects the number of sessions." These results help answer our research question, and they support our hypothesis. The responses to our statement, "You have enough time to plan and execute a discharge plan," revealed something very interesting. Over half of the 11 participants selected Disagree or Strongly Disagree, while 27% selected Agree and 18% selected Neutral. Considering discharge planning is a significant priority of occupational therapists in acute care (George et al., 2021), it is concerning that there is a lack of unanimous agreement on this issue.

A therapist's discharge plan has several implications for the patient's future along the continuum of care. Implementing a discharge plan ill-suited for a patient's rehabilitation potential and medical status can harm the patient's health and well-being. Smith-Gabai (2016) also states that caregivers are impacted when discharge planning is insufficient, potentially leaving caregivers without the proper training to ensure the safety of discharged patients. Given that some participants need more time for discharge planning, it is clear that the frequency of services requires more attention than it is currently receiving. Similarly, organizational factors such as staffing levels will need to be addressed to support occupational therapists in creating more accurate and successful discharge plans.

The holistic approach to analyzing our results using the PEO model has enabled us to understand why developing a standardized protocol for acute care occupational therapists is invaluable. According to our results, it is clear that variation in determining service frequency exists across our participants' workplaces. This variation can be attributable to personal and environmental factors. Personal factors that we considered to be influencers of service frequency were coded as patient willingness, medical

complexity/severity, and availability. The environmental factors were coded as organizational policies/prioritization and staffing. Lastly, we did not have responses to code for the occupation component, meaning they took less precedence over personal and environmental factors. Some of our participants stated that personal and environmental factors influenced service frequency, while others chose one. If a standard protocol were implemented to address these factors, there could be fewer barriers to changing the frequency of OT. We could also see more occupational therapists agreeing that "their patients receive the appropriate number of sessions per week."

Our study has provided evidence of variation in the treatment of patients in this setting and highlighted major factors that contribute to determining service frequency. We also learned that occupational therapists agree that frequency significantly impacts patient outcomes and is linked to patient LOS and reduced hospital readmissions. Following AOTA and AOTF's stance on the frequency of OT services impacting patient outcomes, we believe this aspect of care should continue to be a priority in future research. Future research can provide new insights into how a standardized protocol might benefit acute care occupational therapists and their patients. Additionally, it would be useful to see what can come from implementing the participants' recommendations for improving the frequency and effectiveness of OT.

Limitations

Potential limitations of this project include obtaining a small sample size, either due to participants not meeting inclusion criteria or low engagement with the survey. Our sample size ended up being small, with only 11 participants. Even after posting the survey on multiple online forums with thousands of users exposed to our survey,

engagement was low because the survey got lost in the mix of many others who posted their surveys on the forums. A possible solution to this would have been to utilize word of mouth, connect with acute care occupational therapists, and have them mention it to their colleagues to increase engagement and dissemination.

Another limitation included questions that could have been misinterpreted and needed rephrasing. For example, the question, "On average, how many days does your facility offer therapy services?" may have been interpreted as "How many days does the average patient receive therapy?" This question could be misinterpreted, and participants could have conflated services offered with service actually received, due to the fact that these terms may be used interchangeably in the OT community. Questions could have been better crafted to avoid confusion or misunderstandings.

One final contribution to the limitations of this study is that variability exists in the acute setting. Staffing or the number of patients across different OT departments may not be comparable, thus impacting the data collected in the study. Variation in how acute care is delivered, differentiating a small local hospital vs. a level 1 trauma center is important as they operate very differently. A question should have been included as it can create a lack of consensus among occupational therapists.

Conclusion

OT in the acute care setting has proven effective in lowering readmission rates (Edelstein et al., 2022). Effective care that decreases time spent in the hospital and increases the likelihood that a patient would not be readmitted should be a top priority for medical practitioners. Current literature shows that another benefit of OT in this setting is an increase in patient functional outcomes and a decrease in LOS (Jenkins et al., 2024;

Nakazora et al., 2018). The need for OT in acute care is clear, but the guidelines or practices for establishing the frequency of OT are still unclear. This can open the door to many unanswered questions, such as, "Does more OT lead to better outcomes?" or "Is there a limit to the amount of OT provided and the improvements seen in patients?"

Without an established frequency of service, there can be a small amount of variability in OT, leading to lower quality of care (Capo-Lugo et al., 2021). The factors influencing frequency must first be determined before an established frequency can be recommended.

This thesis project aimed to discover what factors determine OT patient frequency in the acute care by disseminating a mixed methods survey to current acute care occupational therapists. The survey included Likert scale and free response questions and was disseminated via online OT forums. Responses collected offered qualitative and quantitative data that was analyzed to express numerical data and common themes. This information provides a look into frequency practices and the factors influencing them. Identifying these factors will potentially provide a baseline for future researchers to develop a standardized OT frequency protocol to decrease variability in acute care.

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Table 1*Survey Questionnaire*

1	A patient's discharge plan affects the number of sessions.
2	Staffing levels impact your ability to determine session frequency for your patients.
3	Your patients receive an appropriate number of sessions per week.
4	The frequency of therapy in the acute care setting has a significant impact on patient outcomes.
5	Greater frequency of OT contributes to a shorter patient length of stay.
6	On average, how many days per week does your facility offer therapy services to patients in the acute care setting?
7	How many days per week does the average patient receive therapy?
8	Which of the following patient populations you see have the highest frequency of occupational therapy services?
9	Increased OT frequency leads to decreased hospital readmission rates.
10	You feel you have enough time to plan and execute a discharge plan.
11	In your opinion, what factors influence the frequency of sessions?
12	Do your patients or other hospital staff provide you with feedback concerning the number of OT sessions patients receive in acute care? If so, what are their opinions?
13	What barriers are there to changing the frequency of OT services in the acute care setting?
14	What additional changes would help improve the frequency and effectiveness of therapy in the acute care setting?

Note: Questions 1-10 were Likert scale or multiple-choice questions. Questions 11-14 were free response questions.

Figure 1

Stacked Bar Graph of Likert Scale Survey Responses

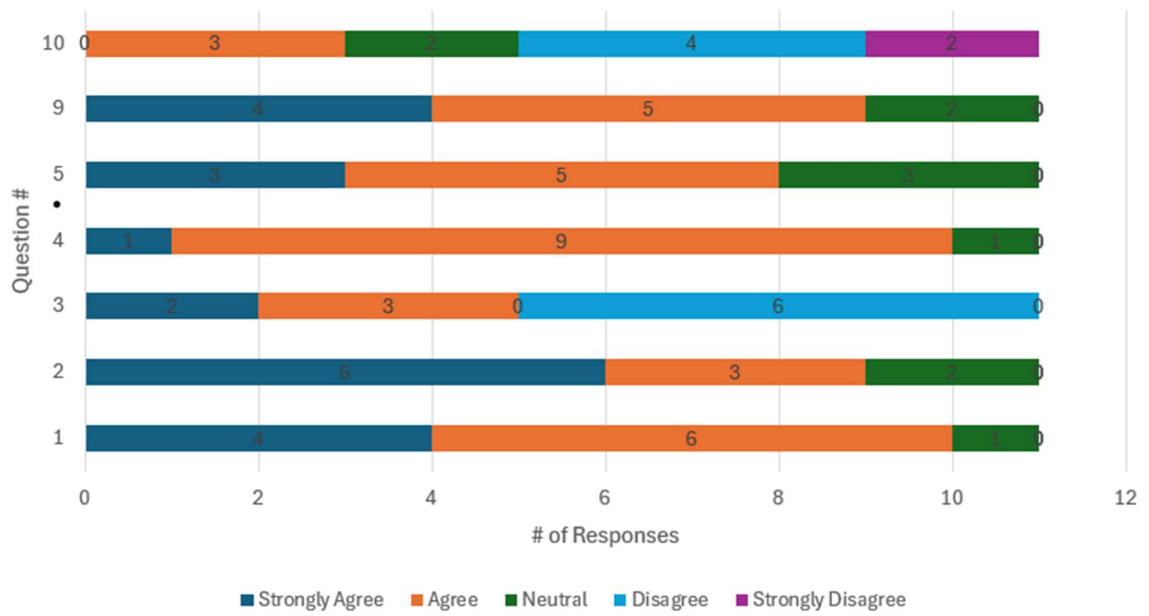
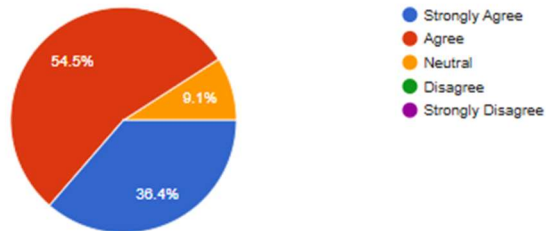


Figure 2

Pie Graph of Survey Reponses Questions 1-3

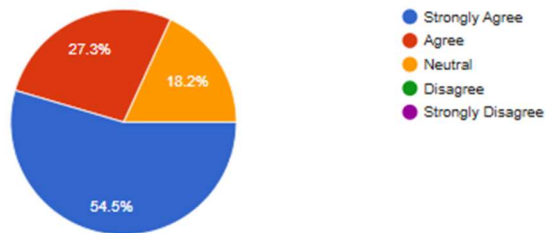
1. A patient's discharge plan affects the number of sessions.

11 responses



2. Staffing levels impact your ability to determine session frequency for your patients.

11 responses



3. Your patients receive an appropriate number of sessions per week.

11 responses

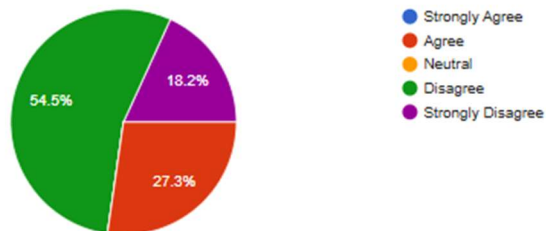
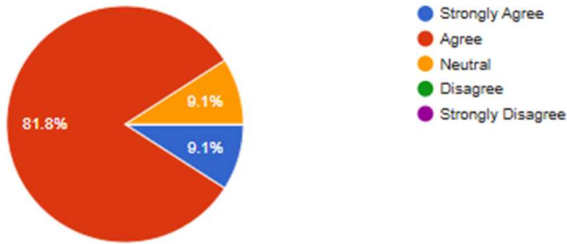


Figure 3

Pie Graph of Survey Reponses Questions 4-6

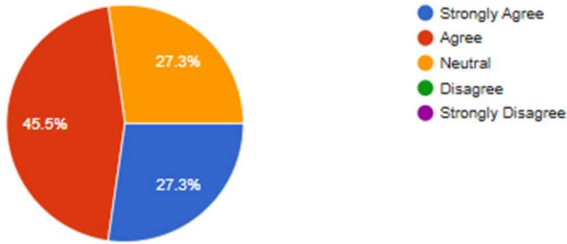
4. The frequency of therapy in the acute care setting has a significant impact on patient outcomes.

11 responses



5. Greater frequency of OT contributes to a shorter patient length of stay.

11 responses



6. On average, how many days per week does your facility offer therapy services to patients in the acute care setting?

11 responses

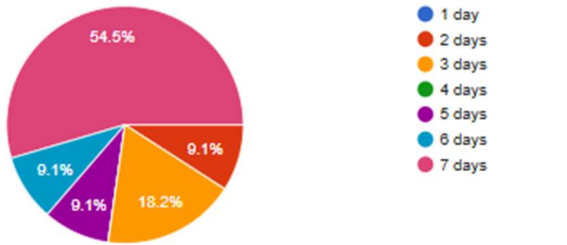
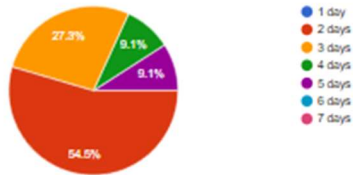


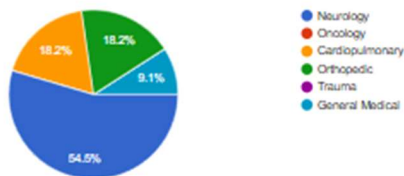
Figure 4

Pie Graph of Survey Reponses Questions 7-10

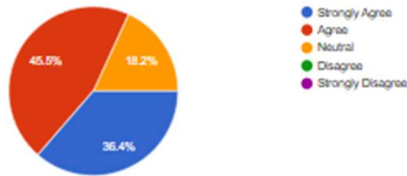
7. How many days per week does the average patient receive therapy?
11 responses



Which of the following patient populations you see have the highest frequency of occupational therapy services?
11 responses



9. Increased OT frequency leads to decreased hospital readmission rates.
11 responses



10. You feel you have enough time to plan and execute a discharge plan.
11 responses

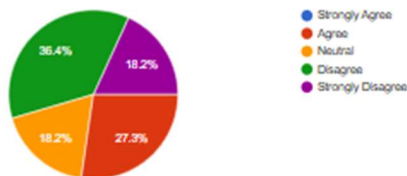


Figure 5

Pie Graph of Survey Reponses Question 11

In your Opinion, What factors influence the frequency of therapy?

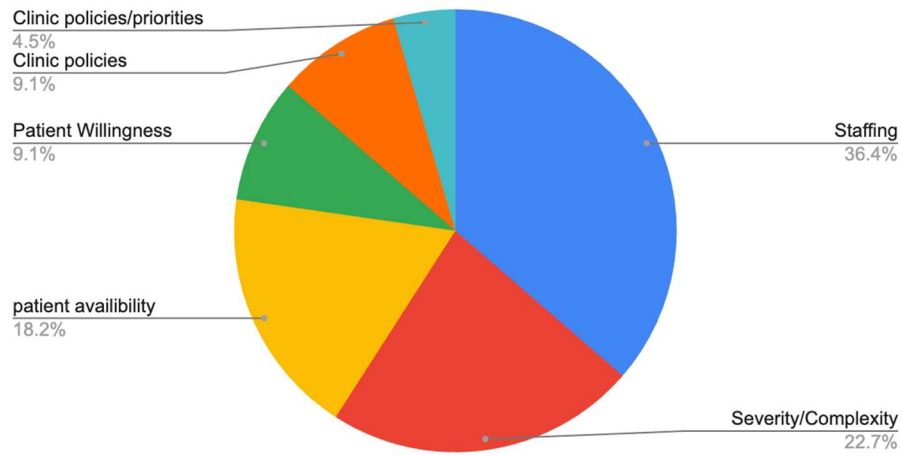


Figure 6

Pie Graph of Survey Reponses Question 12

12. Do your patients or other hospital staff provide you with feedback concerning the number of OT sessions patients receive in acute care? If so, what are their opinions?

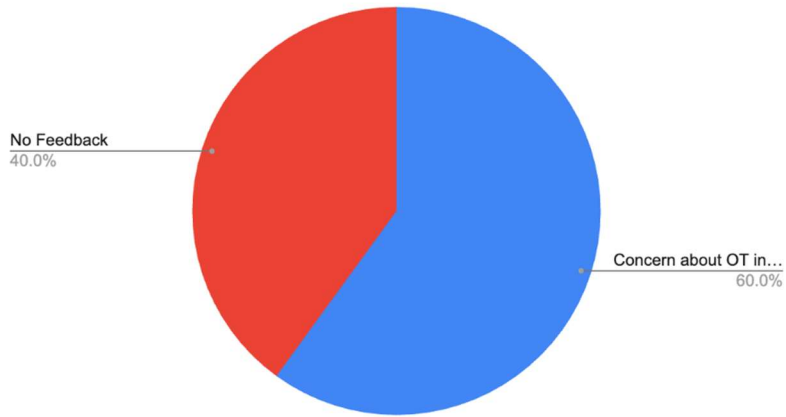


Figure 7

Pie Graph of Survey Reponses Questions 13

13. What barriers are there to changing the frequency of OT services in the acute care setting?

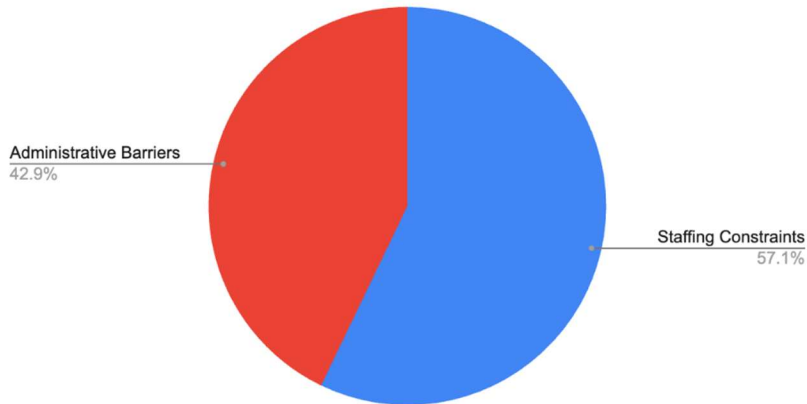
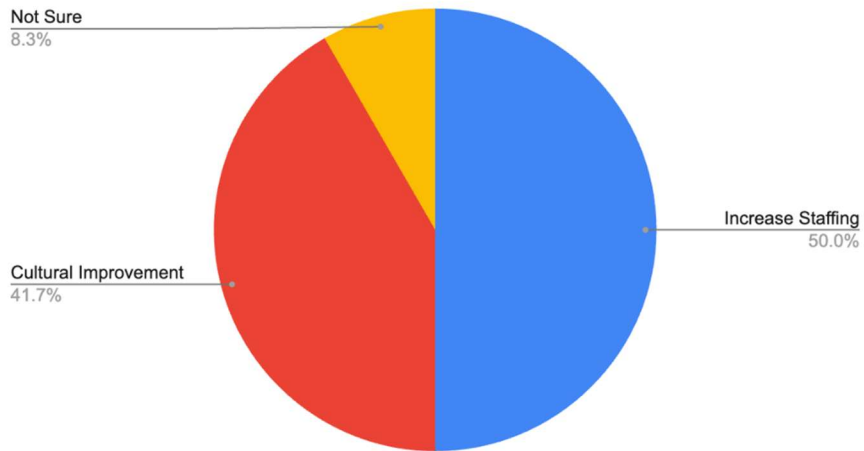


Figure 8

Pie Graph of Survey Reponses Question 14

14. What additional changes would help improve the frequency and effectiveness of therapy in the acute care setting?

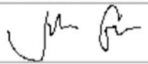


Appendix A

Institutional Review Board Approval

Dear Dr. Kaitlin O'Hara and Students,

The Stanbridge University Institutional Review Board has completed the review of your application entitled "Identifying Factors Contributing to the Frequency of Occupational Therapy Services in the Acute Care Setting." Your application (#01MSOTRS003) is approved and categorized as Expedited.

IRB Application Number	#01MSOTRS003
Date	04/09/2025
Level of Review	Expedited
Application Approved	X
Conditional Approval	
Disapproved	
Comments	The requested Minor changes have been reviewed and confirmed as completed by the IRB. (04/09/2025)
Signature of IRB Chair	

Please note that any anticipated changes to this approved protocol requires submission of an IRB Modification application with IRB approval confirmed prior to their implementation.

Sincerely,
Julie Grace, M.S., M.A.
IRB Chair

Appendix B
Site Approval Forms

Research Site Agreement Form
Stanbridge University

AGREEMENT

Research Site: Stanbridge University

Research Site Address: 2041 Business Ctr Dr Ste. 107, Irvine, CA 92612

Title of Proposed Research: Frequency of Acute Care

RESEARCH STUDY INFORMATION

Student Investigator(s) Name(s):

1. Lauren Dickson
2. Alexie Elder
3. Nicolas Rios
4. Melissa Viera

Principle Student Investigator Name: Nicolas Rios

Email address: nicoarios@gmail.com Phone Number: 4087977710

Duration of the study: 8 weeks

Authorization Effective Date: March 1, 2025 Authorization Expiration Date: July 1, 2025

Allowed Number of Contact Hours: n/a The study will be completed by (date): July 4, 2025

Description of Research:
This study has the aim to identify factors that influence how an occupational therapist will determine the frequency of therapy a patient receives in a acute care setting. The expected outcomes are to establish the framework for establishing future guidelines regarding occupational therapy frequency in acute care.



**Research Site Agreement Form
Stanbridge University**

Intellectual Property Statement:

Stanbridge University reserves the right to use, publish, and disseminate the results of the research findings. The University shall provide the research site with a copy of the final research product at the earliest practicable time.

Thesis Advisor Contact Information:

Name: Kaitlin O'Hara

Email address: kohara@stanbridge.edu Phone Number: 9495211919

RECRUITMENT PLAN

Means by which the researcher(s) will contact and/or recruit participants:

Research participation will be voluntary. Researchers will not directly contact participants, but disseminate intervention online to specific occupational therapy forums that have explicit guidelines and rules for disseminating surveys. Subsequently, there is no need to get explicit approval from forum moderators and website owners. No identifying information will be collected. We will be posting the survey link to AOTA, Reddit (r/OccupationalTherapy), and Facebook (AcuteCare4OT).

SITE REPRESENTATIVE AGREEMENT

I agree to the recruitment and data collection methods to be used in this study, and I authorize the investigator to conduct research at:

AOTA, Facebook(AcuteCare4OT), and Reddit(r/OccupationalTherapy)

Facility Name/Research Site Name: _____

Representative authorizing agreement: N/A

Title: N/A

N/A

Signature

N/A

Date



Research Site Agreement Form
Stanbridge University

STANBRIDGE UNIVERSITY AGREEMENT SIGNATURES

I/We accept the terms of this agreement.

Student Investigator 1: Lauren Dickson Title: _____

[Signature] _____ Date: 2/11/25
Signature Date

Student Investigator 2: Alexie Elder Title: _____

[Signature] _____ Date: 2/11/25
Signature Date

Student Investigator 3: Nicolas Rios Title: _____

[Signature] _____ Date: 2/11/25
Signature Date

Student Investigator 3: Melissa Viera Title: _____

[Signature] _____ Date: 2/11/25
Signature Date

Faculty Thesis Advisor: Kaitlin O'Hara Title: OTD, OTR/L, CNS

[Signature] _____ Date: 2/12/25
Signature Date

Program Director: Myka Persson Title: Dr.

Myka Persson Digitally signed by Myka Persson Date: 2025.02.18 14:02:30 -08'00'
Signature Date

Dr. Kelly Hamilton
Vice President of Instruction, Stanbridge University

[Signature] _____ Date: Feb 18, 2025
Signature Date

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