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Evaluating Literacy Sensitive Client Education Materials for the SMMART Clinic

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Contents

Chapter 1: Introduction

This master's project was completed in collaboration with the St. Mary's Medical and Rehabilitative Therapies (SMMART) Clinic, located on the campus of St. Catherine University in St. Paul, Minnesota. Through the completion of literature reviews, a needs assessment, and project activities, nine graduate occupational therapy students analyzed the needs of this clinic and aimed to improve client care. The SMMART clinic serves primarily Spanish-speaking clients who are low-income, uninsured, or underinsured. This population often faces obstacles in accessing primary health care and rehabilitation, including language and literacy-related barriers. Occupational therapy can play an important role in addressing these barriers and providing high quality care and education that is sensitive to clients' literacy and language preferences.

While the SMMART clinic does provide free healthcare to underserved clients and is staffed with bilingual interpreters, they lack accessible client-education materials designed with their unique client population in mind. In order to meet the needs of the SMMART clinic and its clients, our master's project group created 15 new literacy-sensitive client-education handouts in both Spanish in English. Our newly developed handouts were then reviewed and evaluated by the clinic volunteers for their usefulness and understandability.

This portfolio contains a written literature review about occupational therapy in primary care with a particular focus on treating Hispanic clients in this setting. Each student's full literature review can be found in Appendix A. Following the review of the literature is a needs assessment for the SMMART Clinic, which includes more background information about the clinic itself, its primary population, as well as its needs and overall strengths. The portfolio also

includes an explanation of our project activities and creation of our materials, our methods for assessment, results, and a personal reflection on the project.

Chapter 2: Literature Review

Occupational therapy and primary care are integral to the health and wellbeing of people and communities. On their own, they each serve a crucial need. When combined, the benefit to patients can be even greater. The holistic role of occupational therapy complements the medical model role of primary care by assisting with early intervention in chronic disease, identifying and treating functional impairments, improving patient satisfaction, and improving patient participation with the use of modifications (Muir, 2012). Current experiences and perspectives of many medical professionals support and accept a multidisciplinary approach of incorporating occupational therapy into primary care, however, barriers continue to exist especially for a Hispanic/Latino population. Working together, occupational therapists and primary care providers are coming up with strategies to overcome those barriers to improve patient outcomes by creating and practicing collaborative multidisciplinary health care models.

An Overview of Primary Care

Access to primary care is immensely important to health and well-being. But what exactly is primary care? Primary care, or primary health care, has been defined as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Institute of Medicine (US) Committee on the Future of Primary Care, 1996). Primary health care is comprehensive and includes disease prevention and treatment, rehabilitation, and palliative care. Often a patient's first point of contact into the health system, primary care is also a cost-effective and efficient way to meet health needs (World Health Organization, 2021).

Access to primary care can predict positive health outcomes, and conversely, a lack of access to primary care may predict negative health outcomes. Therefore, access to primary care is critical to improving public health and reducing health disparities (Office of Disease Prevention and Health Promotion, 2014). The inclusion of a multidisciplinary primary care team may contribute to a reduction in some of these disparities.

Multidisciplinary care is defined as multiple professionals from at least two disciplines working on the same care team (D'Amour et al., 2005). Effective collaboration between team members is necessary to provide the most positive and effective care for the clients (Saint-Pierre et al., 2018). Currently, multidisciplinary team members in primary care often include physicians, nurses, midwives, dentists, physiotherapists, social workers, psychiatrists, dietitians, pharmacists, administrative staff, and managers (WHO, 2008). Although different team members provide a unique background to their services, there are various approaches or models used to distribute care between team members across settings (Leach et al., 2017; Saint-Pierre et al., 2018). These approaches may change who is responsible for preventive care, patient education, and health coaching among the team members (Leach et al., 2017; Saint-Pierre et al., 2018). Other teams may be small and mainly consist of a doctor, physician assistant, or nurse practitioner (Leach et al., 2017), or may have certain team members take roles as a clinical leader, case manager, or expert consultant and collaborate to provide a more holistic care to their clients (Saint-Pierre et al., 2018). These various approaches allow for flexibility of integrating multidisciplinary care that best suits each setting based on their staffing, clients, and additional factors (Leach et al., 2017; Saint-Pierre et al., 2018).

Physicians and other team members sometimes lack education on other team members' roles and expertise and may have difficulties communicating with each other or agreeing on plans for client care (Hassan et al., 2021). There is also a lack of providers in certain geographic areas, such as rural clinics, which makes it difficult to create multidisciplinary teams and creates challenges for providers of clients with more complex situations that require mental health needs (Leach et al., 2017). There may also be confusion about financial reimbursement and insurance coverage (Leach et al., 2017). Although multidisciplinary care helps distribute roles, there may be unequal distribution of roles and responsibilities between team members (Saint-Pierre et al., 2018). With the overwhelming responsibilities providers currently have in patient care, it creates an opportunity and need for occupational therapy to join multidisciplinary teams and take on some of the responsibilities.

Occupational Therapy Practitioners Role in the Primary Care Setting

Occupational therapy practitioners can play a crucial role in the primary care setting. Occupational therapy practitioners can blend with the interprofessional team to provide quality, client-centered care (AOTA, 2020). Client-centered care puts the client first and allows the client to feel heard which is crucial in primary care. Occupational therapy practitioners are skilled in evaluation, intervention, and understanding how roles and routines can impact daily life, which can translate to the primary care setting (Role of occupational therapy in primary care, 2020). There are many different diagnoses commonly seen in a primary care clinic that an occupational therapy practitioner can help to evaluate and provide quality interventions for. Common diagnoses include, "Diabetes, hypertension, abdominal pain, thyroid issues, respiratory issues, general illness, mental/behavioral issues, neck and back pain… lower

extremity pain, reproductive system, upper extremity pain…" (Trembath et al., 2019, p. 7-8). General occupational therapy interventions for these diagnoses can include, medication management, self-management of conditions, health education such as healthy habits, diet modifications, and exercise management, and provided information on assistive technology (Bolt et al., 2019; Role of occupational therapy in primary care, 2020; Trembath et al., 2019).

Integration of Occupational Therapy into Primary Care

Several strategies can be utilized for occupational therapists integrating into the primary care setting. Education on occupational therapy's role is essential for integrating occupational therapy into primary care (Donnelly et al., 2013; Trembath et al., 2019). It is necessary to educate practitioners in other disciplines on how occupational therapy can benefit their interdisciplinary teams and to inform clinic administrators of the cost-effectiveness of bringing occupational therapy into their setting (Donnelly et al., 2013; Laguex et al., 2018; Trembath et al., 2019). Educating other healthcare professionals on the role of occupational therapy in primary care is especially important in the early stages of integration as both occupational therapists and physicians agree that a solid understanding of the benefit occupational therapy can bring to this setting is crucial for successful integration (Donnelly et al., 2013; Jordan, 2019; Trembath et al., 2019)**.** Additionally, using occupation-based interventions demonstrates to practitioners and the primary care team the unique value occupational therapy can add to primary care. When occupational therapists can intervene and take on some of the more occupation-based aspects of primary care, this allows physicians to focus on more medically complex cases (Laguex et al., 2018; Trembath et al., 2019). This delegation of expert areas is one way occupational therapy in primary care is cost-effective.

Occupational Therapy Interventions for Primary Care

Occupational Therapy interventions positively contribute to the treatment and management of conditions seen in primary care. In Ireland, community-based OCCUPATIONAL THERAPY interventions are used in primary care for dementia prevention and management of multimorbidity (Bolt et al., 2019; Garvey et al., 2015). By addressing risk factors, educating on healthy aging, and lifestyle modification, participants, indicated increased occupational performance and improved frequency of activity participation, self-efficacy, and quality of life (Bolt et al., 2019; Garvey et al., 2015). occupational therapy interventions can positively impact a patient's physical, emotional and mental health, in addition to overall functioning. An occupational therapy-led intervention focusing on diabetes self-management techniques used the Lifestyle Redesign® (LR) model to support PCP medical recommendations and helped patients manage symptoms through modification of current lifestyle (Dahl-Popolizio et al., 2021). Despite the sample size being small and concerns with reimbursement, the study did support the intervention and showed improvement in physical functioning, fatigue, mood, and pain levels. Although studies conducted in a primary care setting are limited, the research available validates the positive contributions occupational therapy interventions can have for conditions typically treated by PCPs and additional areas that could benefit from occupational therapy. Adding occupational therapy to a primary care team may address social determinants of health that could lead to negative health outcomes for historically underserved populations.

Susceptibility to Negative Health Outcomes

There are predisposing factors that make primary care patients more susceptible to having negative health outcomes in primary care. The homeless population and those who are

considered housing unsure face the inability to receive medical attention, thus associated with poor health outcomes (Baggett et al., 2010; Martin et al., 2019). Such vulnerable populations are primarily uninsured, have additionally experienced food insecurity, and have obtained two or more medical conditions that are often left untreated. They likely cannot afford proper care nor prescriptions to alleviate pain or mental health symptoms (Baggett et al., 2010). Participants who have experienced housing insecurities were female, middle-aged, lower incomes, and of black or Hispanic ethnicity who struggle with "health-related risk behaviors, chronic health conditions, and health services utilizations" (Martin et al, 2019, p. 522). Because of the financial burden, participants have reported declines in preventative care and opting out of having a primary care provider, thus continuing to encounter poor health outcomes (Martin et al., 2019). As an ethnic minority in the US, the Hispanic population face many barriers to accessing primary care.

Barriers for the Hispanic Population in Accessing Primary Care

Due to barriers in accessing primary care, Hispanics in the US tend to underutilize health care services, especially preventative care, rehabilitation, allied professional care, and screenings (Suarez-Balcazar et al., 2005). Cost or lack of insurance, transportation and proximity to services, and language-related barriers are often cited in the literature around this topic (Cheng et al., 2007; Pearson et al., 2008; Tapp et al., 2013; Tolbert & Orgera, 2020; Wolfe et al., 2020). These barriers can have a direct impact on health.

Cost and Lack of Insurance

A lack of health insurance or cost can be a major obstacle in accessing primary care, which is often the case with many Hispanic-Americans and immigrants. Hispanic individuals

represent 19% of the overall U.S. population, but 29% of the uninsured. There are also elevated uninsured rates present in regions with large Hispanic communities (Bosworth et al., 2021). This disproportionate ratio leads to many disparities for the Hispanic population. Cost is often a barrier to becoming insured, as 73.7% of uninsured adults in 2019 reported that they were uninsured due to coverage not being affordable. Those who are uninsured have worse access to care than those who are insured, and uninsured people are more likely to face unaffordable medical bills when they do seek care (Tolbert & Orgera, 2020). Thus, uninsured Hispanics in the U.S. may choose to not seek out primary care in general due to these unaffordable costs of care and insurance. However, even if they do have insurance, individuals may face additional obstacles such as lack of transportation and proximity to the clinic.

Transportation and Proximity to Services

Geographic and transportation-related barriers may also impede access to primary care, and these barriers often disproportionately affect certain patient groups. An estimated 5.8 million people in the U.S. delayed seeking medical care in 2017 due to not having transportation (Wolfe et al., 2020). Hispanics are more likely to experience a transportation barrier than non-Hispanic whites. Transportation barriers also appear to be more common among people of lower income and people who are uninsured or underinsured (Wolfe et al., 2020). Despite the growing Hispanic population in the U.S., there are often large geographical areas of Hispanic residents with no clinic representation (Tapp et al., 2013). This leads to longer travel times and overall greater difficulty seeking care. However, Hispanic patients are often willing to travel greater distances for a clinic with bilingual front desk staff and service providers (Tapp et al., 2013).

Language-Related Barriers

Arguably one of the most substantial barriers to primary care access among Hispanics in the United States is a lack of English language competency or lack of access to bilingual services. The presence of bilingual staff has been found to be the most important factor in choosing a clinic for Hispanic patients (Tapp et al., 2013). Unfortunately, these services are not always available, which can result in vast health consequences for Hispanic Americans, especially those who are Spanish-speaking. Individuals with a Spanish language preference are less likely to have health insurance coverage, less likely to have a go-to primary care provider, and less likely to have had a routine checkup appointment in the last five years. This is based on a large sample of U.S. adults (n=20,400) who identified as Hispanic (Pearson et al., 2008). Furthermore, simply speaking a non-English language in the home puts Hispanics at a higher risk for not receiving necessary medical or health care, no matter their level of comfort in using English (Cheng et al., 2007). In this study, Hispanics who did use English at home reported receiving recommended services at a similar rate to non-Hispanic whites. Researchers acknowledge that this disparity could also be attributed to confounding factors associated with language, such as income and quality of insurance (Cheng et al, 2007). Hence, the barriers discussed in this paper often overlap.

Hispanic Healthcare Needs and Concerns

The above-mentioned barriers impede many Hispanic Americans and immigrants from being able to receive the health care they need. Several key needs and concerns have been identified for the Hispanic and immigrant population. Leading causes of death among Hispanics include cancer and heart disease, which is the same for whites. Meanwhile, Hispanics are 50%

more likely to die from diabetes or liver disease compared to whites. Additionally, Hispanics have 20% more poorly controlled high blood pressure, despite similar prevalence of hypertension among whites. Whether Hispanics were born in the U.S. also plays a role in the severity of disease and infection. For instance, certain cancers that are related to infections are more common among Hispanic immigrants than U.S. born Hispanics (Centers for Disease Control and Prevention, 2015). Living with any of these conditions can have an impact on quality of life and functional performance of daily tasks, especially if it is difficult to access treatment and preventative care. Therefore, there is a need to minimize the barriers for Hispanics in accessing primary care, and there is an important opportunity for occupational therapy.

It is also important to explore the areas of priority in regard to health from the perspective of Hispanic patients themselves. Six areas of concern have been identified by late-middle-aged Latino adults. These include: weight management; disease management; mental health and well-being; personal finances; family, friends, and community; and stress management (Schepens Niemiec et al., 2015). This helps to highlight some of the occupational need areas in which occupational therapy practitioners can target their interventions with this population.

Conclusion

Primary care is often the first and most accessible healthcare option in the United States. A multidisciplinary approach, including occupational therapy can result in better health outcomes, especially for the underserved Hispanic population. This project worked with a free, primary care, multidisciplinary clinic to address barriers to healthcare.

Chapter 3: Needs Assessment

Before determining the purpose of the project, the master's project team first conducted a needs assessment with our community partner, SMMART clinic. We first gathered demographic data of the geographical area of the clinic and the background of the clinic. We then conducted a series of interviews of key stakeholders to determine the main assets and needs of the clinic.

Clinic Background

The St. Mary's Health Clinics are a network of clinics in the Twin Cities area that aim to provide high-quality, affordable, and accessible health and medical services to underserved populations. Founded by Sister Mary Madonna Ashton in 1992, the St. Mary's Health Clinic system is a part of the ministry work of the Sisters of St. Joseph of Carondelet (St. Mary's Health Clinics [SMHC], n.d.). The Sisters of St. Joseph believe that healthcare is a basic human right, and their mission is to "... carry out the healing ministry of Christ by providing necessary and accessible health services to the medically uninsured and underserved" (SMHC, n.d., para. 1). Patient populations served by the St. Mary's Clinics include low-income, uninsured individuals and families who do not qualify for government healthcare programs (SMHC, n.d.).

In collaboration with St. Mary's Health Clinics, St. Catherine University established the St. Mary's Medical and Rehabilitative Therapies (SMMART) Clinic in 2018. This on-campus clinic is run by an interprofessional team of volunteer students and faculty that provide a variety of outpatient healthcare services including medical evaluation and treatment, occupational therapy (OT), physical therapy (PT), and nutrition services (St. Catherine University, 2022).

The clinic has four tenets: patient as teacher, interprofessional care, social justice, and empowerment. Patient as teacher means that the student and faculty volunteers recognize that the patients are the experts on themselves, and volunteers can learn from the patients. Interprofessional care means that the model of care is provided by a variety of healthcare disciplines. The team includes nursing, pharmacy, occupational therapy, physical therapy, nutrition, and medical providers. Social justice is a tenant because the services at the clinic are provided to a population that otherwise would not have access to healthcare. Lastly, the clinic works to empower patients to take control of their health by providing educating and collaborative care.

The clinic runs on the first and third Thursday of each month from 4:00-8:00pm. All appointments are made in advance and are by referral from St. Mary's health clinics or partner sites. Patients are initially seen by a primary care physician assistant student, then they can be referred to an onsite physical therapy, occupational therapy, and/or nutrition student depending on need. All students are supervised by licensed healthcare professionals. Length of appointments ranges from one to two hours depending on need.

The SMMART clinic is located on the 4th floor of the university's building, Whitby Hall. The clinic is near several convenient and frequently running bus routes and nearby, limited parking. The clinic previously offered free transportation to the clinic but it is currently not offered (A. Kelly, personal connection, 2022). The entry gate for the clinic has recently reopened after several months of construction. There is a 3-foot fabric sign standing outside the building to guide patients to the correct building and physician assistant students by the front door to assist patients to the correct floor. Signs throughout the clinic are in English with

some also in Spanish. The clinic has eight patient rooms approximately 8x10 feet each. The current clinic has expanded from the original location, and there are plans to expand further within the following year (Coss, 2021).

The clinic collaborates with the local St. Catherine University food shelf to provide free groceries and household supplies for clients and other community members in need. Medication is available at no cost to patients through the clinic's partnership with Cub Pharmacy. The SMMART Clinic has many other collaborative partners that provide supportive services, including Allina Health, M Health Fairview, and Health Partners Park Nicollet (St. Mary's Health Clinics, n.d.).

Ramsey County Demographics

In order to learn more about the populations served at the SMMART clinic, we explored demographic information about the residents of Ramsey County, where the clinic is located. The total population of Ramsey County is 552,352. The demographic breakdown of Ramsey County consists of 67.1% White/Caucasian, 12.9% Black/African American, and 7.5% Hispanic or Latino (United States Census Bureau, 2021). Within this demographic, 30.1% of the population is under the age of 18. The socioeconomic status (SES) of this population is 12.6% in poverty. There are significant disparities in health insurance coverage in Ramsey County. In 2017, the overall uninsurance rate was 6.2%. However, among Hispanics, the rate of uninsurance was 17.1%, which is the highest uninsurance rate in Ramsey County (Ramsey County Public Health, 2018). English is the most commonly spoken language in the homes of Ramsey County residents (76.6%), followed by Asian and Pacific Islander languages (11.6%) and Spanish (5.3%) (United States Census Bureau, 2019).

Stakeholder Interviews

Identified program and population needs and assets were gathered from interviews with key stakeholders at the SMMART Clinic. Interviews were conducted with:

- Amy Kelly, MD, Medical Director of SMMART Clinic
- Carol Harrington, RN, Head Nurse SMMART Clinic
- John Fleming, EdD, OTR/L, Occupational Therapy Clinical Preceptor
- Darla Coss, OTD, OTR/L, Occupational Therapy Clinical Preceptor
- Ambria Crusan PhD, LD, RD, Nutrition Clinical Preceptor
- David Chapman, PhD, PT, Physical Therapy Clinical Preceptor
- Marlin Martinez, PA Student, SMMART Clinic Coordinator
- Sean Hawkinson, Physical Therapy Student, SMMART Clinic Advisory Board
- Occupational Therapy and Physical Therapy Student Volunteers

Needs assessment interview questions for stakeholders are found in Appendix B.

Patient Population

The SMMART clinic serves an adult primary care population with most patients ranging in age from 30-60 years old. The majority of patients are Spanish-speaking or bilingual. Some patients speak Hmong or other languages. Many patients are undocumented immigrants and therefore do not qualify for employer provided insurance or governmental health programs. Common diagnoses of patients included diabetes, hyperlipidemia, dyslipidemia, high blood pressure, high cholesterol, and some chronic kidney disease, back, shoulder, and neck pain are commonly addressed as well (D. Chapman, personal communication, March 1, 2022; A. Crusan & C. Harrington, personal communication, February 17, 2022).

Assets of Clinic

One of the greatest strengths of the clinic is the sincere care for patients, emphasizing St. Catherine University's covenant of "love of dear neighbor without distinction," and the 4 tenants of the clinic. Each member of the dedicated interprofessional care team exemplifies the mission of the clinic. All providers put an emphasis on cultural competency and attention to social determinants of health (A. Crusan, personal communication, February 17, 2022; A. Kelly, personal communication, February 21, 2022). Additionally, the SMMART Clinic is a safe space for patients, students, and faculty. It is truly a place of learning from one another, whether students learn from faculty, faculty learn from patients, or patients learn from students.

The SMMART Clinic provides healthcare services to a population that otherwise may not receive care due to a lack of insurance. Services at the clinic are provided pro bono, eliminating the restraints that billing and insurance can have on type and length of services. Providing healthcare to this population and connecting the patients to other community resources are major assets. Some free clinics take several years to fundraise so they can open a clinic with more resources. However, the SMMART Clinic recognized that it is better to open without state-of-the-art equipment or paid staff in order to meet this population where they are and serve their healthcare needs sooner (D. Chapman, personal communication, March 1, 2022).

The clinic has the benefit of having multiple disciplines in the clinic. The SMMART clinic is the only St. Mary's clinic that offers occupational therapy and physical therapy. Having multiple providers in the clinic gives individuals more hope of getting all of their needs met, including medical and therapeutic needs (J. Fleming, personal communication, February 17, 2022). For example, if an individual came into the clinic with chronic pain, they could first get

their medical needs met with the physician assistants. Then they could meet with occupational therapy and physical therapy to combat their chronic pain with therapeutic interventions (J. Fleming, personal communication, February 17, 2022).

The clinic includes resources that can be given to patients to take with them and continue care at home. The clinic still has a small budget from grants that allow providing some resources for the patients. Supplies include rice socks, theraputty, theraband, basic splints, and some educational handouts, which can be provided to all patients (B. Allen, A. Anderson, C. Miller & Z. Wells, personal communication, February 16, 2022; J. Fleming, personal communication, February 17, 2022). Handouts are primarily used from the OT Toolkit, English and Spanish Editions (Hall, 2013), as well as handouts from Ohio State University (D. Chapman, personal communication, March 1, 2022; J. Fleming, personal communication, February 17, 2022).

Needs of Clinic

The first need identified through our interviews revolved around general needs of the clinic and patients being seen. Social determinants of health play a big part in accessing the clinic and general health of patients. Many patients face barriers to health including not having the ability to take time off of work, language barriers, concerns about immigration status, health literacy, lack of ability to buy healthy food, access to safe places to exercise, having to work 2-3 jobs to support their family, and no time off for self-care (B. Allen, A. Anderson, C. Miller & Z. Wells, personal communication, February 16, 2022; A. Kelly, personal communication, February 21, 2022). Cultural matters related to illness impact patients' willingness to seek alternative treatments, specifically prescribed medications, that are not as

understood or accepted (A. Kelly, personal communication, February 21, 2022). The clinic does what it can to address social determinates of health, providing medical care and access to food, but they would like to do more regarding the barriers stated above.

Reliable and efficient transportation to and from the clinic is a primary need of clinic patients (A. Crusan & C. Harrington, personal communication, February 17, 2022). Many of the patients who seek healthcare at the St. Mary's Health Clinic take public transportation. This can make it difficult to access the clinic and extend the amount of time they need to dedicate to their healthcare appointments. Once at the university, the individual needs to find the building which can be confusing for patients who have never been to the clinic before (B. Allen, A. Anderson, C. Miller & Z. Wells, personal communication, February 16, 2022).

The capacity of the clinic can be an additional barrier. The clinic often needs to schedule appointments two months out which can be difficult for patients (J. Fleming, personal communication, February 17, 2022). Another need of the clinic is expanded hours of operation; the limited days of operation and only evening hours can make it difficult for patients to access the clinic (D. Chapman, personal communication, March 1, 2022; A. Crusan & C. Harrington, personal communication, February 17, 2022). The limited hours do not allow patients to be seen for rehabilitative therapies on a consistent schedule as they would in a traditional outpatient clinic, for example. If patients are able to come to the clinic every time it is open, they receive services twice a month, whereas they might receive therapy twice a week in other settings (D. Chapman, personal communication, March 1, 2022). This highlights the need for patients to follow through on home programming in order to make and maintain progress. Expanded or daytime hours may increase the availability of faculty volunteers at the clinic.

Long appointment length is also a weakness of the clinic. Specifically, medical appointments can sometimes last 2 to 2.5 hours, not including the commute to and from the clinic (C. Harrington, personal communication, February 17, 2022). Once the patient gets to the clinic, they usually see the physician assistants first, then if they see occupational therapy, physical therapy or nutrition, the provider goes in for the initial evaluation, comes back to discuss intervention with the faculty, and then returns to the patient to discuss intervention techniques (J. Fleming, personal communication, February 17, 2022). All of this takes time which can be a barrier for patients.

Providers often struggle to find appropriate patient education handouts in a timely fashion, which can also contribute to increased appointment times. Extended appointment time is a barrier to individuals receiving care because they must dedicate several hours to attend an appointment. Committing this much time is further complicated if the patient must find childcare services or miss work for the appointment. Many of the patients' jobs do not provide paid time off for medical appointments so the patients must decide between attending an appointment and missing out on income (C. Harrington, personal communication, February 17, 2022).

The clinic needs a method to formally measure patient satisfaction to ensure the best care possible is being provided (C. Harrington, personal communication, February 17, 2022). , Collecting information on patients' needs is an additional area that St. Mary's Health Clinic hopes to improve on, as they currently do not have a formal assessment or survey that can be

given to patients asking specifically about needs, assistance, and satisfaction with care (A. Kelly, personal communication, February 21, 2022).

The clinic does provide translators since the patients are primarily Spanish-speaking and the providers primarily speak English; however, the skill level of the translators varies which can affect the quality of communication between patients and providers. The language differences create a need for patient education materials provided in Spanish. The nutrition team creates many of their own patient education handouts because the existing materials available are not in Spanish or are too vague to be effective (A. Crusan, personal communication, February 17, 2022). The rehabilitation team has some materials in Spanish but these can take longer to locate which extends patient appointments further (D. Chapman, personal communication, March 1, 2022).

Securing steady funding to support needs is another area for growth. Currently, the clinic is funded through grants and requires reapplying to receive funds for resources and staff (A. Kelly, personal communication, February 21, 2022). Most of the clinic work is provided on a volunteer basis with no compensation for the licensed clinicians. A secure steady stream of funding would provide room for additional resources and expansion of services offered.

To enhance patient care, the interprofessional team to become more aware of the role of occupational therapists. When patients come into the clinic, oftentimes the first person they see are the physician assistants (PA). If the PA's learn about their needs and think they could benefit from specialized occupational therapy services, they have the ability to refer them to occupational therapy. If the PA's do not know the role of occupational therapists, they will not refer their patients to occupational therapy (B. Allen, A. Anderson, C. Miller & Z. Wells, personal

communication, February 16, 2022; J. Fleming, personal communication, February 17, 2022). This will often happen in the clinic, and patients are missing out on occupational therapy services just because they did not get referred to occupational therapy (J. Fleming, personal communication, February 17, 2022).

Conclusion

These findings guided the next steps on this project to further the SMMART clinic's resources and abilities. After completing interviews with the stakeholders, it was clear that although the clinic has successfully grown and expanded since it started, there were many hindrances impacting occupational therapy and all other disciplines' ability to consult and assist patients. The purpose of this project is to create understandable and actionable handouts that can be utilized in the SMMART Clinic. This is essential as many of the patients attending the clinic need at-home interventions they can use to enhance their recovery as they may be unable to attend the clinic for occupational therapy again. Additionally, print and electronic sources are necessary to accommodate for the external resources the client may or may not be able to access.

Chapter 4: Description of Project Activities

Purpose of Project Activities

Through the needs assessment, we found that the SMMART Clinic lacked accessible handouts that could help clients better understand their health concerns and methods to address and prevent worsened health conditions. We also found that there was a lack of patient education resources readily available in Spanish. Given our findings from the literature reviews and needs assessment, we decided to address the language and literacy-related barriers by developing new client-education materials for use in the SMMART Clinic. The intent of these handouts is to better serve this underserved population with necessary literacy-sensitive information. These handouts can be used for patients at home, continuing interventions provided by occupational therapists past their time in the clinic.

Our handouts align with the SMMART Clinic's mission to make health services accessible to underserved and uninsured individuals (St. Mary's Health Clinics, n.d.) as language and levels of health literacy can pose barriers to accessible healthcare. Providing updated, literacy-sensitive handouts may help fill this gap and reduce barriers to healthcare services for the populations served. Client education and advocacy are important roles within the practice of occupational therapy (American Occupational Therapy Association [AOTA], 2020), and the creation and implementation of literacy-sensitive handouts in multiple languages is one-way occupational therapy providers can provide these services.

Development of Handouts

The topics used to formulate our handouts were considered, evaluated, and chosen from our findings within our needs assessment with various participant interviews regarding

strengths and barriers in the clinic. Three general categories were identified that focused on occupational therapy's role in mental health, sleep/pain, and occupational therapy interventions for multiple conditions. The team determined there should be a total of fifteen handouts based on themes identified within the needs assessment. Handout topics were:

- Apps for Better Sleep
- Chronic pain
- Diabetes Management
- Diaphragmatic Breathing
- Energy Conservation
- Guided Meditation
- Hand and Wrist Pain
- Mindfulness
- Rice Socks for Pain Management
- Safe Body Positioning
- Sleep Positioning
- Sleep Tracker
- Stress Management
- What is OT?
- Work-Life Balance

Handouts were created based on current evidence and were aimed at an 8th grade or below reading level. We chose this reading level to ensure that the materials are understandable to the clients since an eighth-grade reading level is the average reading level

among U.S. residents (Stossel et al., 2012). All handouts were created with a template that featured one to two pages so each handout could be printed on one page, a black sans-serif font, with the font sizes ranging from size 12 for content up to size 22 for the headings, QR codes to link to videos or additional online information, and small pictures or icons for aesthetic purposes. All images and icons are either referenced accordingly or used without reference due to being copyright-free to the public through Stock Images or Microsoft Clip Art. Each handout was peer reviewed for content, formatting, and readability. All handouts are available in Appendix C.

Evaluating Readability

Our next step was identifying resources that could guide the process of designing health literate materials. Our large group used the following search terms to find guides and readability checkers: “creating health literate materials,” “how to write patient handouts,” “health literacy checker,” “health literacy guide,” and “how to assess patient medical handout.” Initial searches brought back over 6 million hits on Google, requiring us to evaluate webpage content to determine if it would be a good fit for the project. To assess the readability of the handouts, we chose Readable (Readable, 2022) and Maine Health’s Guide to Creating and Evaluating Patient Materials (Maine Health, n.d.).

Readable

Readable is a free online readability analysis tool. Many organizations, including Harvard University, NASA, and the American Red Cross, use Readable for their websites and resources (Readable, 2022). When text is entered into the site, scores for many readability assessments are provided. Our group decided to use the Flesch-Kincaid Grade Level, Gunning Fog Index, and

Simple Measure of Gobbledygook (SMOG) Index. All three evaluate what reading level is needed to comprehend information shared in our handout. Each of these measures readability using different methods (Readable, 2022) and we hoped that using multiple indexes would results in strong reliability. By using multiple readability measures, we aimed to increase the validity of our handouts and ensure the materials would be understandable to the client population of the clinic. Each handout was analyzed separately. If the score was higher than an eighth-grade level, the handout was revised and resubmitted until it reached this benchmark.

The first scale we used within Readable is the Flesh-Kincaid grade level which gives the minimum United States education level that can read and comprehend a text. All the handouts are at a seventh-grade reading level or lower on the Flesch-Kincaid Grade Level scale. The SMOG Index evaluates a text and determines the average years of education an individual would need to understand the text (Readable, 2022). Our handouts all fall at or below a sixth-grade education level on the SMOG Index. The SMOG Index is often used in healthcare literature. The Gunning Fog Index looks at sentence length and how many words are in a paragraph to determine clarity and readability. For the Gunning Fog, all of our handouts are at or below an eighth-grade reading level. See Table 1 for readability results of each handout.

Table 1

Readability Scores

Handout Name	Gunning Fog Score (7-8)	Gunning Fog Edited Score	Flesh Kincaid Score (<8)	Flesh Kincaid Edited Score	SMOG Score (<30)	SMOG Edited Score

What is OT - Patient Ed	4.9	4.7	5.5	5.4	8.3	8.2
Diabetes	4.1	4.2	3.5	3.5	7.7	7.7
Energy Conservation	5.5	6.4	2.9	3.4	7.6	8.1
Ergonomics	4.9	4.8	4.1	3.6	7.3	7.2
Guided Meditation	8.2	7.9	6.6	6.7	9.3	9.1
Diaphragmatic breathing	7.1	N.A.	5.7	N.A.	8.8	N.A.
How to maintain a balanced lifestyle	5.7	N.A.	3.1	N.A.	7.6	N.A.
Mindfulness	6.8	N.A.	5.9	N.A.	9.5	N.A.
Stress Management	6.7	N.A.	5.8	N.A.	8.2	N.A.
Sleep Positioning	6.5	N.A.	5.8	N.A.	8.6	N.A.
Apps for better sleep	8.1	7.1	6.9	6.1	8.7	8.3
Sleep Tracker	6	N.A.	3.8	N.A.	7.6	N.A.
Back pain/Chronic pain	5.5	N.A.	4.1	N.A.	7.4	N.A.
Hand and Wrist pain	5.4	N.A.	3.3	N.A.	7.2	N.A.
Rice Sock	4	N.A.	2.3	N.A.	5.9	N.A.

Maine Health's Guide to Creating and Evaluating Patient Materials

In addition to ensuring our handouts were at readability levels suitable for the intended population, we also used Maine Health's Guide to Creating and Evaluating Patient Materials to evaluate the health literacy of our materials (Maine Health, n.d.). We decided to use this resource because it was comprehensive, easy to read, and in a simple checklist format for ease of use. The checklist addressed content, format, structure, writing style, design, and cultural appropriateness (Maine Health, n.d.).

Handouts were peer reviewed using this checklist to assess the health literacy of our handouts. After review our handouts using the checklist, we made revisions based on their feedback. Feedback included decreasing sentence length, using simpler words, and changing the formatting to appear less cluttered, which aligns with the Maine Health checklist. These categories ensure that all aspects of the handouts will be accessible to the reader.

Spanish Translation of Materials

It was deemed important to translate all handouts into Spanish. This was an important part of the project because the majority of the population attending the clinic are Spanish-speaking or bilingual. It was determined that having both languages readily available will not only benefit the clinic but the clients and their families as well. Funding was secured through the Graduate Student Advisory Board (GSAB) at St. Catherine University to fund translation of 15 English handouts into Spanish. The translator was a first-year occupational therapy student who volunteered at the SMMART Clinic and is fluent in Spanish. This student was chosen for her experience to help ensure the translated handouts were both relatable and understandable for the client population. After initial translation, two project group members who understand the

written and spoken Spanish language, evaluated and made any necessary revisions to the Spanish version of the handouts for verification purposes.

After we received the translated handouts, we checked for Spanish readability using the Fry readability graph method through Readability Formulas (https://readabilityformulas.com/free-readability-formula-tests.php), a free online site. The Fry tool was chosen because it is the only readability checking tool currently validated in Spanish to predict U.S. grade levels. The tool considers both number of syllables and number of sentences, unlike other readability checking tools, making it more appropriate for assessing Spanish text (Tetteroo, 2016). Due to the structural differences of words and sentences in Spanish compared to English, syllable counts for 100-word passages tend to be much higher in Spanish. In order to account for this discrepancy, we used a modified Fry graph, as described by Gilliam et al. (1980). Using this method, we again analyzed the handouts for reading level. Among the Spanish handouts, 13/15 were at or below an 8th grade reading level on the modified Fry graph as noted in Table 2.

Table 2

Readability Scores

Handout Name	FRY Grade Level (Spanish text)
What is OT?	7
Diabetes	5
Energy Conservation	8

Ergonomics	9*
Guided Meditation	7
Diaphragmatic breathing	5
How to maintain a balanced lifestyle	8
Mindfulness	6
Stress Management	9*
Sleep Positioning	8
Apps for better sleep	7
Sleep Tracker	6
Back pain/Chronic pain	7
Hand and Wrist pain	10*
Rice Sock	7

* Indicates that the FRY level is above an 8th grade reading level

Perceived Effectiveness

Based upon the described readability and health literacy measures we used to assess our materials and the needs assessment we completed for the clinic, we believe the handouts will be successfully implemented by practitioners and well received by the patients at the clinic. Our hope is that these handouts can be a model for patient education materials for the clinic and act as a guide for future materials created for patients. We also hope that prepared

handouts can help decrease the length of appointments, as they will be readily available and accessible to the providers.

Ch. 5: Description of Data Gathering

Research Background

After the creation of patient education materials for the SMMART clinic, gathering data on our project activities and handouts was essential. This research project is centered around the question: Are the newly developed rehabilitation patient education handouts created for the SMMART clinic understandable and actionable for the populations served? This research question aligns with the identified mission of the SMMART clinic as these handouts are providing advanced quality healthcare education to a population with little healthcare resources or access. Prior to participating in the research process, all individuals involved in the research process completed the Social and Behavioral Health Collaborative Institutional Training Initiative (CITI) (CITI, 2021) and the study was approved by the Institutional Review Board at St. Catherine University.

Participants

After all our handouts were developed and translated, we distributed print and digital versions to the study participants. Participants were St. Catherine University occupational and physical therapy faculty and student volunteers who were currently or previously providing patient education at the clinic. Participants were recruited in person and via email with a request to complete the one-time anonymous survey. The estimated time commitment per participant to complete the survey was 10-20 minutes. After the one clinic session, study participants anonymously evaluated handouts using the Patient Education Materials Assessment Tool for Printable Materials (PEMAT) (Shoemaker et al., 2014) and qualitative feedback via electronic format.

Survey Instruments

The PEMAT (Appendix D) is a 26-item assessment created to evaluate healthcare print materials. The PEMAT was developed utilizing the Lexile analysis and Gunning Fog Index and measures the understandability and the actionability of patient education materials. Understandability refers to how easy the materials are for people from diverse backgrounds and people with different levels of health literacy to process and take away key points from the material. Actionability refers to when diverse patients and patients with varying levels of health literacy can identify what they need to do based on the educational material (Shoemaker et al., 2014). The PEMAT was designed by the Agency for Healthcare Research and Quality, which was led by researchers and experts in health literacy, content creation, patient education, and communication. The PEMAT has strong internal consistency, reliability, and construct validity (Shoemaker et al., 2014). This assessment was utilized by co-investigators due to its high face, content, and construct validity, as well as its moderate inter-rater reliability and high internal consistency (Shoemaker et al., 2014).

The PEMAT categorizes areas of evaluation into seven subsections; content, word choice, use of numbers, organization, layout and design, use of visual aids, and actionability. Items range from if the material uses common everyday language, to if the material section has informative headers. Responses to questions can either be agree or disagree. The score is determined by calculating the percentage of agreement. For use in this study, the PEMAT questionnaire was converted into a google form. This choice was made for ease of administering to study participants, collecting data, and participant anonymity.

In addition to administering the PEMAT form, it was also essential to administer a qualitative form to understand the effectiveness of our handouts in the clinic. Using a qualitative study provides a deeper understanding of the usefulness of provided materials. This qualitative survey was administered via the same google forms as the PEMAT (Appendix D). Qualitative questions on the survey were:

- How might you use these handouts in the clinic?
- What are the strengths of the handouts?
- What would you change/add to these handouts?
- Any additional comments?

Data collected was confidential with identifiable information including names, email addresses, or IP addresses collected. Consent is gained via the St. Catherine electronic survey form. Descriptive statistics were used to analyze the results of the PEMAT. The qualitative data was analyzed to identify themes. See Chapter 6 for results.

Conclusion

The PEMAT assessment and a short qualitative survey allowed past and current physical therapy students, occupational therapy students, and faculty members the opportunity to express their perceptions on how well the given handouts illustrated understandability and actionability. Though not every developed handout will be used during the one clinic session, the assessment results will further our knowledge of what may be beneficial to the population served at the SMMART clinic.

Chapter 6: Results and Recommendations

Response Rates

A total of 16 responses were collected. Response rates by type of participant are included in Table 3 The same participant could have evaluated more than one handout; thus, the number of participants may be fewer than 16. Of the responses, 75% (n=12) were completed by occupational therapy students and 25% (n=4) by faculty volunteers. No former or current physical therapy student volunteers participated.

Table 3

Participants

Type of Participant	**Frequency**
OT Student (currently at SMMART Clinic)	62.5% (n=10)
OT Student (formerly at SMMART Clinic)	12.5% (n=2)
PT Student (currently at SMMART Clinic)	0% (n=0)
PT Student (formerly at SMMART Clinic)	0% (n=0)
Faculty Volunteer	25% (n=4)

Results from the PEMAT-P

Table 4 depicts the frequency of responses for each PEMAT item. All participants, (100%; n=16) agreed that the handouts did not include distracting information, used common language, only used medical terms when necessary, used active voice, did not require calculations, used logical sequence, visual cues, and clear action items, directly addressed the user, and had easy to follow steps. Most participants, 93.75% (n=15), agreed that the material makes its purpose completely evident. Our interpretation of the results is that these high agreements are likely due to the effort we put in following Maine Health's Guide to Creating and Evaluating Patient Materials (Maine Health, n.d.) and in peer-reviewing our handouts to follow these guidelines. Many of these characteristics on the PEMAT are similar to the ones in the Maine Health resource, leading to high agreement rates.

Table 4

PEMAT Responses

PEMAT-P Question	Agree	Disagree	N/A
Purpose Evident	93.75% (n=15)	6.25% (n=1)	N/A*
No distracting information	100% (n=16)	0% (n=0)	N/A*
Uses common language	100% (n=16)	0% (n=0)	N/A*
Medical terms only used as necessary	100% (n=16)	0% (n=0)	N/A*
Active voice	100% (n=16)	0% (n=0)	N/A*
Numbers are understandable	43.75% (n=7)	0% (n=0)	56.25% (n=9)

PEMAT-P Question	Agree	Disagree	N/A
No calculations	100% (n=16)	0% (n=0)	N/A*
Chunks material into sections	81.25% (n=13)	0% (n=0)	18.75% (n=3)
Informative Headers	87.5% (n=14)	0% (n=0)	12.5% (n=2)
Logical sequence	100% (n=16)	0% (n=0)	N/A*
Summary provided	50% (n=8)	18.75% (n=3)	31.25% (n=5)
Uses visual cues	100% (n=16)	0% (n=0)	0% (n=0)
Visual aids for understanding	93.75% (n=15)	6.25% (n=1)	N/A*
Visual aids do not distract	62.5% (n=10)	0% (n=0)	37.5% (n=6)
Visual aid captions	56.25% (n=9)	0% (n=0)	43.75% (n=7)
Clear illustrations	50% (n=8)	0% (n=0)	50% (n=8)
Simple tables	37.5% (n=6)	0% (n=0)	62.5% (n=10)
Clear action item	100% (n=16)	0% (n=0)	N/A*
Directly addresses user	100% (n=16)	0% (n=0)	N/A*
Easy to follow steps	100% (n=16)	0% (n=0)	N/A*
Tangible tool	93.75% (n=15)	6.25% (n=1)	N/A*

PEMAT-P Question	Agree	Disagree	N/A
Simple instructions	12.5% (n=2)	0% (n=0)	87.5% (n=14)
Explanation of charts	12.5% (n=2)	0% (n=0)	87.5% (n=14)
Visual aids for instruction	93.75% (n=15)	6.25% (n=1)	N/A*

Note. *Refers to PEMAT items that did not have N/A as a response option.

Fifty percent (n=8) of participants agreed and 18.75% (n=3) disagreed that the material provides a summary while 31.25% (n=5) of participants thought this question was not applicable to the handout they reviewed. We believe there may be a misconception on what the PEMAT defines as "summary." Our interpretation of these results is that the participants who agreed with this prompt may have thought the PEMAT's intention with this question is to evaluate if the handouts were a concise understanding of the topics addressed. Other participants may have thought that it meant there is a summary paragraph provided in the handout, leading them to enter "disagree" or "not applicable." There are also some handouts that have more text than others, which some participants may have viewed as wordy. It is also possible that we missed important information that participants felt should be included in a summary. It is difficult to pinpoint the cause of these responses without direct qualitative feedback for each individual question. One participant disagreed that the material uses visual aids whenever they could make content more easily understood (e.g., illustration of healthy portion size) and one participant disagreed that the material provides a tangible tool (e.g., menu planners, checklists) whenever it could. Some participants likely thought more visual aids

could be used for the handouts that had more words than images. A few of the handouts mentioned tangible tools, such as creating checklists, but not every handout addressed this, or we felt needed it. This may lead to the mixed responses on this PEMAT question.

Finally, 93.75% (n=15) of participants agreed material uses visual aids whenever they could make it easier to act on the instructions. This question is similar to the previous question on visual aids yet focuses on following instructions. The reason for why this question has mixed responses is likely similar to the previous visual aid question in that visual aids may not be applicable to each handout topic, such as ones that focus on providing background knowledge on specific diagnoses. When making the handouts, we did not think a visual aid was necessary to explain instructions for every handout. However, the participants may have their own ideas on how a visual aid could be useful or based their answer solely on whether a visual aid is present or not.

Qualitative Results

How Might You Use This Handout in The Clinic?

Our first qualitative question was, "How might you use this handout in the clinic?" There were four main themes that became apparent and were consistent with our findings within the needs assessment. The themes were pain management, mental health, fatigue/sleep, and diabetes management. These themes tell us that our needs assessment results correlate with the main concerns that the clinic most often sees and treats. Client education handouts were frequently identified as a need by participants. One participant in particular stated, "it would be a great supplement to give to a client who could use Diaphragmatic Breathing for stress relief, anxiety, or chronic pain." Additionally, one participant identified that the use for the handouts

helps explain occupational therapy's purpose by stating they would use this material in the clinic if, "someone was hesitant to have occupational therapy or didn't know what it was." Making sure clients are aware of and confident in occupational therapy services can improve their overall experience.

What Are the Strengths of This Handout?

Our second qualitative question was, "What are the strengths of this handout?" Of all the strengths participants identified, three clear themes emerged: layout, language, and accessibility. Participants described the layout as being, "easy to read and follow," "visually pleasing," and "not too busy." Additional comments about the layout and template stated the handouts were clear and succinct, had understandable tables, and were branded appropriately with the St. Kate's logo. Layout clarity was our intention and why we chose to guide the creation of the materials with the Maine Health's Guide to Creating and Evaluating Patient Materials (Maine Health, 2022). Additionally, all the handouts were peer-reviewed to ensure consistency, usability, and clarity before being used in the clinic. Knowing that participants found the layout straightforward and appealing sets the foundation for the creation of uniformed handouts spanning more topics in the future.

The second theme identified as a strength centers around the language used and readability of the handouts. Participants identified the clear instructions, plain terminology, and clear purpose as advantages to legibility. One participant stated the handouts used, "simple lay language," and another commented, "clear instructions." Our evaluation process of the handouts ensured that our language stayed between a 6th and 8th grade reading level. This is a

strength in this study as it allowed all participants to understand the purpose of the handout. It leads us to believe our terminology is plain, clear, and concise for the appropriate audience.

The last theme is focused on the use of QR codes for accessibility. Participant responses indicated they liked having that resource. The inclusion of a QR code aimed to increase convenience and access to more resources for clients with smart technology. In all, participants responded well to the clear design and plain language of the handouts.

What Would You Change/Add to This Handout?

Our third qualitative question was, "What would you change/add to this handout?" Four themes emerged from this question. The first theme indicated that participants would not change anything about the handouts with 6 responses indicating no change or left the question unanswered. The second theme indicated that adding a figure or image would be beneficial for the handouts. Adding an image would make the handout more interesting and fill in the blank space. One participant stated, "add a picture or figure to make it fun!" Additionally, another participant stated there were too many words on the handout, stating, "maybe add a diagram or visual for ways to cope with stress- there are a lot of words." Due to copyright limitations, we were unable to add many pictures as the photos and graphics used needed to be from sites that did not require credit. This limited the amount available for us to use. In the future, we could create their own photos to eliminate the need of choosing graphics from free formats.

The third theme indicated needs for changes with formatting of the handouts. One participant suggested checking the format on the Spanish version handouts. They stated, "on the Spanish version, check formatting (example some words on the right side of the page)." Another participant suggested moving items around on the handouts. They stated, "perhaps

put the free apps first?" The last area for improvement indicated that the handouts had too much information or were too long. Participants suggested splitting the handouts into two different handouts. Specifically, "split 1-page chronic pain, 1-page low back pain/lifting" and "blood sugar management and separate healthy tips for Diabetes." As this project develops in the future, we could have individuals whose first language is Spanish look at the Spanish handouts to increase the validity of the translation as all the individuals involved in making the Spanish handouts have English as their first language. We could also split the longer handouts into two separate handouts. This would allow for more comprehensive handouts regarding each topic and would be more informative for clients.

The last theme was access to resources. Participants indicated that the links to the handouts were not as helpful. One participant stated, "not sure if the link is helpful, as it says basically the same info that is included in the handout." Additionally, another participant commented on how the tiny URLs were unclear. Copyright issues made this difficult as we needed to include where they accessed the information. Tiny URLs and QR codes were utilized to minimize confusion and maximize space on the handouts. A solution to this would be utilizing QR codes over tiny URLs and finding more comprehensive sources that give additional information that is not presented on the handout. This will also increase the accessibility of the handouts. Lastly, multiple participants expressed that a link or QR code to a video demonstration of what the handout is trying to express would be helpful for clients. One participant stated, "add a QR code that would link to a video showing how to do Diaphragmatic Breathing." In future expansion of this project, we could make or find these videos and add them to the handouts.

Limitations

There were several limitations of the project. This project was completed over one semester which was a short length of time. This limited how long the participants were able to implement the handouts in the clinic prior to reviewing them. Another limitation is, although the handouts were created for client education, we did not ask the clients for any feedback on the handouts. In the future it would be beneficial to receive feedback from the clients on the effectiveness of the handouts from their perspective. Another limitation is the handouts were not translated by a professional or native speaker. Overall, there was a limited number of participants who completed the survey. Although we recruited physical therapy students, they did not participate in the survey. We may receive different responses with interdisciplinary responses. Lastly, the readability scores were slightly higher than our goal for the Spanish handouts with 2 out of 15 Spanish handouts above an eighth-grade reading level.

Recommendations for Future Research

We identified several recommendations for further research and implementation of handouts in the primary care clinic. These include:

- Interview clients of the SMMART clinic to identify needs.
- Have created materials administered to and evaluated by clients.
- Use a broader interdisciplinary approach beyond rehabilitative team of occupational and physical therapy.
- Collect data for a longer duration of time.

Conclusion

Through this project, we clearly identified the barriers faced by Spanish-speaking, low income, and/or uninsured clients in accessing primary care. Our project activities attempt to address some of these barriers for clients at the SMMART Clinic. The evidence from the literature demonstrates that the provision of culturally- and literacy-sensitive services and materials is vital to improving care for diverse client populations. By creating handouts in the clients' primary language at a readable level, we can increase client understanding and hopefully contribute to better health outcomes. Our project and handouts can also serve as a model for clinics and practitioners, as we exemplify how to develop interventions and client education materials that are sensitive to clients' culture, language, and literacy levels. Printable versions of handouts can be used by practitioners for use in clinical settings and can be accessed by the QR code in Appendix G.

The project also helped to describe and support the role occupational therapy can play in the primary care setting. The interdisciplinary model of practice used in the SMMART Clinic is a great example of how occupational therapy can be incorporated into health care teams to fill this important role. As occupational therapy practitioners, we must advocate for ourselves and the unique perspective we can bring for disease prevention, health management, and health promotion in primary care.

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Chapter 7: Appendices

Appendix A: Individual Literature Reviews

Literature Review by McKenzie Brink

Occupational Therapists Role in Primary Care with Pain, Sleep, and Work-Related Injuries

Introduction

Working in a primary care setting is an emerging practice area for occupational therapy practitioners in which they have the potential for a unique and beneficial role. There are many common problems that an occupational therapy practitioner can provide quality interventions for, including pain, sleep, and work-related injuries. Additionally, some of these problems can coexist such as the correlation between pain and sleep and the correlation between pain and work-related injuries. Occupational therapy practitioners can also provide valuable services for the Hispanic/Latino population in the primary care setting. Occupational therapy practitioners can help Hispanic/Latino clients in a primary care setting with their chronic health conditions.

Occupational Therapy Practitioners Role in the Primary Care Setting

Occupational therapy practitioners can play a crucial role in the primary care setting. Occupational therapy practitioners can blend with the interprofessional team to provide quality, client-centered care (Role of occupational therapy in primary care, 2020). Client-centered care puts the client first and allows the client to feel heard which is crucial in primary care. Occupational therapy practitioners are skilled in evaluation, intervention, and understanding how roles and routines can impact daily life, which can translate to the primary care setting (Role of occupational therapy in primary care, 2020). There are many different diagnoses commonly seen in a primary care clinic that an occupational therapy practitioner can

help to evaluate and provide quality interventions for. Common diagnoses include, “Diabetes, hypertension, abdominal pain, thyroid issues, respiratory issues, general illness, mental/behavioral issues, neck and back pain… lower extremity pain, reproductive system, upper extremity pain…” (Trembath et al., 2019, p. 7-8). General occupational therapy interventions for these diagnoses can include, medication management, self-management of conditions, health education such as healthy habits, diet modifications, and exercise management, and provided information on assistive technology (Bolt et al., 2019; Role of occupational therapy in primary care, 2020; Trembath et al., 2019). Looking at a specific example, diabetes could be examined further. Specific diabetes interventions could include, diabetes education, motivational interviewing, medication management, routine management, and energy conservation (Pyatak et al., 2019; Trembath et al., 2019). Diabetes is also more common with Hispanics and those below the poverty line which would be prevalent in the primary care setting (Pyatak et al., 2019). There is a plethora of various occupational therapy interventions that can benefit primary care patients, and occupational therapy practitioners can play a special role with the Hispanic/Latino population.

Occupational Therapy Services and the Hispanic/Latino Population

Skilled occupational therapy services are valuable for the Hispanic/Latino population in the primary care setting. The terms Hispanic/Latino will both be used throughout this paper. The term Hispanic is often used with Spanish-speaking countries, whereas the term Latino is often used with people who are from Latin America (Lopez et al., 2021). Occupational therapy practitioners can play a special role with the Hispanic/Latino population and also clients who have limited English proficiency. It has been found that about one in ten U.S. individuals

experience challenges with speaking and comprehending English (Mirza & Harrison, 2018). This can cause a language barrier and create a disparity in the medical system. Occupational therapy practitioners are educated on the advantages of trained interpreters and how to work with them during interventions. The use of interpreters has been found to decrease readmissions in the hospital which shows the benefit of the use of trained interpreters during occupational therapy intervention sessions (Mirza & Harrison, 2018). Medically underserved populations experience disparities in the medical system, and occupational therapy can reduce that disparity by understanding and using cultural values throughout intervention (Murphy et al., 2017). Roles, routines, and values are a part of the framework and core of occupational therapy, which can aid in decreasing the disparity experienced by underserved populations in the primary care setting (Murphy et al., 2017). Occupational therapy practitioners can support the Hispanic/Latino population in the primary care setting and they may come in with many different problems, in which one of them could be sleep (Johnson et al., 2019). With all populations in the primary care setting, lack of sleep can be a common complication in an individual's life.

Sleep

Sleep is one of the most important occupations as it impacts every other meaningful occupation in an individual's life (Ho & Siu, 2018). Lack of sleep is a common concern in primary care settings in which an occupational therapy practitioner can play a specialized role. Lack of sleep can cause many short-term and long-term problems in addition to how well an individual can perform self-care, work, and leisure tasks (AOTA, 2021a; Ho & Siu, 2018). If an individual does not get enough sleep they could experience occupational imbalance (Ho & Siu, 2018).

Additionally, Hispanic/Latino adults have a higher chance of short sleep duration and a lower quality of sleep compared to non-Hispanic Whites (Johnson et al., 2019). As sleep is such an important occupation in daily life, there are many evidence-based occupational therapy intervention strategies to benefit sleep participation.

Occupational Therapy Interventions for Sleep

There are numerous occupational therapy interventions for sleep in primary care, as it is such an important occupation. Sleep hygiene is one beneficial intervention that has been found to improve sleep among various adults (Gutman et al., 2017; Järnefelt et al., 2020). Sleep hygiene can include behavioral, environmental, and other recommendations that can help a patient with improving their sleep quality (Gutman et al., 2017; Järnefelt et al., 2020). A few examples of implementing sleep hygiene could include education on maintaining a sleep schedule, limiting or avoiding TV or phone use before bed, and avoiding the use of alcohol or coffee before bed (Gutman et al., 2017). Sleep hygiene interventions can easily be implemented in the primary care setting in terms of patient education and environmental modification.

Audio pillows and sleep meditation programs are useful occupational therapy interventions for sleep (Gutman et al., 2017). The Dreampad Pillow and the iRest meditation program are beneficial in impacting the participants' total sleep time and fewer nighttime awakenings (Gutman et al., 2017). The mind-body self-care education which includes sleep hygiene, cognitive behavioral therapy, and mind-body wellness also increased sleep quality among participants (Smallfield, 2021). Mind-body self-care education includes a wide variety of information that could be implemented in the primary care setting through patient education. These interventions could benefit individuals in a primary care setting to improve quality of

sleep, decrease awakenings at night, and improve participation in occupations the next day. One barrier to sleep participation can include chronic pain in individuals (Finan et al., 2013). In addition to sleep, chronic pain is another diagnosis that is often outlined in the primary care setting.

Chronic Pain

Chronic pain can be debilitating for primary care patients. It has been found that in the United States, one out of four people has some sort of chronic pain, which severely limits their participation in meaningful activities (AOTA, 2021b; Role of Occupational Therapy in Primary Care, 2020). Chronic pain can impact work participation, leisure, social participation, and many areas in daily life participation. Worldwide, the prevalence of chronic pain is 20% to 30% (Hesselstrand et al., 2015). Chronic pain is prevalent in the United States, but also worldwide and can reduce an individual's quality of life. Chronic pain can also be very expensive from medical care but also lost productivity. It has been found that chronic pain costs $560 to $625 billion annually which altogether is more than the cost of heart disease, diabetes, and cancer (AOTA, 2021b). As chronic pain can be such a substantial burden and cost, occupational therapy practitioners can help to reduce the burden through intervention.

Occupational Therapy Interventions for Chronic Pain

Skilled occupational therapy interventions can be valuable in the primary care setting to combat chronic pain. Every individual's pain is unique and psychosocial aspects can exist alongside pain that can impact the perception of pain severity (Bridge & Anand, 2017; Schmid et al., 2019). A biopsychosocial approach, which understands the patient’s unique social and psychological contexts, is important to use with patients who experience pain (Bridge & Anand,

2017). Biopsychosocial interventions can include client education, fatigue management, cognitive behavioral therapy, and mindfulness, all of which can be implemented in the primary care setting (Bridge & Anand, 2017). Disparities in pain treatment have also been found to be higher in the Latino population (Pagán-Ortiz & Cortés, 2021). Latinos often face disparities including racial bias in treatment and often receive services that do not consider their sociocultural factors (Pagán-Ortiz & Cortés, 2021). To combat this disparity, an intervention that used a biopsychosocial approach and education on exercise, social wellbeing, and stress management decreased pain interference in life (Pagán-Ortiz & Cortés, 2021).

Another intervention that considers psychosocial aspects includes yoga (Schmid et al., 2019). Yoga as a means to combat pain in occupational therapy has been found to increase satisfaction scores in occupational participation on the Canadian Occupational Performance Measure (COPM) and decrease depression in individuals who experience pain (Schmid et al., 2019). Additionally, interventions focused on therapeutic exercise including range of motion, strengthening, and joint mobilization have been found to decrease pain (Bridge & Anand, 2017; Marik & Roll, 2017). Specifically, resistive exercise helped to reduce neck and shoulder pain, and range of motion and strengthening were found useful in rotator cuff tears (Marik & Roll, 2017). As pain can be very destructive in an individual's life and occupational satisfaction, it can also impact sleep quality (Smallfield, 2021). Occupational therapy practitioners can implement interventions regarding pain in the primary care setting, as well as sleep dysfunction.

Pain and Sleep

There is a correlation between pain and lack of sleep (Finan et al., 2013; Smallfield, 2021). When an occupational therapy practitioner is working with a patient who experiences

chronic pain, the practitioner should also be ready to ask about sleep and routines as it has been found that individuals who have chronic pain are also likely to experience trouble with sleep (Smallfield, 2021). Additionally, those who experience sleep disturbances are likely to have an increasing amount of chronic pain, indicating the two factors are highly correlated (Finan et al., 2013). When an individual experiences poor sleep quality, it can impact the processes that occur throughout the night to maintain chronic pain, such as pain inhibition (Finan et al., 2013). As pain and sleep are profoundly correlated, it is crucial that an occupational therapy practitioner can address both in the primary care setting through intervention.

Interventions that are beneficial for those who experience chronic conditions to benefit sleep include self-management training, mind-body self-care education, and exercise, all of which include consideration of daily routines and habits (Smallfield, 2021). Occupational therapy practitioners in the primary care setting should routinely provide education and interventions that address the pain experienced, sleep disturbances, and routines that could be alternated to incorporate self-management, self-care, and exercise (Smallfield, 2021). In addition to chronic pain and sleep disturbances, work-related injuries can also decrease quality of life and occupational satisfaction (Burgel et al., 2015).

Work-Related Injuries

Work rehabilitation in occupational therapy can include any means to help the individual to participate in work activities and to be satisfied with the work they are doing (AOTA, 2021c). Goals can revolve around function, a safe return to work, education surrounding the prevention of future injury, and helping the individual to get back to work after

unemployment (AOTA, 2021c). Anyone can benefit from work rehabilitation that is struggling with their current role from an illness or individuals that want to return to work (AOTA, 2021c). Latino day laborers are a group that can benefit from occupational therapy work rehabilitation.

Latino day laborers tend to have a higher amount of labor-intensive jobs such as painting, construction, and moving or hauling (Burgel et al., 2015). This can result in a higher amount of work-related injuries impacting upper extremities and lower extremities, and increased back pain (Burgel et al., 2015; Fernandez-Esquer et al., 2020). Work-related injuries can increase the number of sick days and workdays missed due to the injuries (Burgel et al., 2015; Fernandez-Esquer et al., 2020). Additionally, strategies to reduce work-related injuries such as job safety training and access to rest breaks are not very prevalent in these settings (Burgel et al., 2015). Work-related injuries can also increase mental health problems such as depression in Latino day laborers (Burgel et al., 2015). As work-related injuries can be very taxing on individuals in the workforce, occupational therapy practitioners can combat work-related injuries through intervention.

Occupational Therapy Interventions for Work-Related Injuries

Work-related injuries can be crippling for individuals in the workforce in which specialized occupational therapy services can provide support in a primary care setting. Patient education can be used and can include training on job safety and education on the increased possibility of a potential accident from lack of rest breaks (Burgel et al., 2015). Education can also include information on ways to modify the work environment to decrease risk for injury (Amini, 2011; Blas et al., 2018). As with chronic pain, a biopsychosocial approach to intervention can be useful for work-related injuries, such as handling the psychosocial demands

of a work-related injury (Amini, 2011; Blas et al., 2018). Additional specific biopsychosocial interventions can include using ergonomic products, skills training, strategies to address confidence, and coping skills for injury and work stress (Blas et al., 2018). Splinting, increasing range of motion exercises, and exercise can also be useful interventions for work-related injuries (Amini, 2011). An increase in work-related injury can also increase perceived pain in workers (Burgel et al., 2015). Work-related injuries and pain can be closely associated and can be addressed in therapy by an occupational therapy practitioner.

Pain and Work

Work-related injuries can correlate with chronic pain and have a detrimental impact on daily life satisfaction in which occupational therapy practitioners can have a functional role. Chronic pain drastically impacts work participation and work-related outcomes (Patel et al., 2012). When an individual experiences chronic pain it can be a detriment to work quality, increase sickness absence, and increase the loss of work productivity, which can be costly for the employee in addition to the employer (Patel et al., 2012). Additionally, when an individual experiences a work-related injury, it can increase chronic pain which can decrease work productivity (Burgel et al., 2015; Cervantes & Lechuga, 2004). When an occupational therapy practitioner is working with Spanish-speaking patients who experience work-related injuries and pain, the first consideration is the patient's culture (Cervantes & Lechuga, 2004). Cultural considerations that need to be thought of include views on pain, societal influences that can change the pain experience, family and their role with pain, and the experience of coping with pain for this population (Cervantes & Lechuga, 2004). It is important to be educated by the patient on their cultural beliefs and perception of their pain and work balance to provide

quality interventions (Cervantes & Lechuga, 2004). It is also important to consider potential stressors and the burden that lack of work could have on that individual (Cervantes & Lechuga, 2004). Language barriers are another consideration in which a translator is key to understanding pain and work perceptions (Cervantes & Lechuga, 2004). Occupational therapy practitioners are adequately positioned to consider psychosocial aspects of pain and work-related injury in addition to the actual pain and injury itself through intervention.

Conclusion

Overall, occupational therapy practitioners can play a crucial role in the primary care setting and skilled occupational therapy services can be valuable for the Hispanic/Latino population. Individuals that seek primary care services often seek services for sleep, chronic pain, and work-related injuries. Patients will often come into the primary care setting with more than one area of need and occupational therapy practitioners are skilled through intervention to benefit primary care patients. Although primary care is currently an emerging setting for occupational therapy practitioners, occupational therapy practitioners could be an essential piece of the primary care setting in the future.

Literature Review by Kelsey Colvin

Occupational Therapy's Role on an Interprofessional Team in Primary Care

Primary care is crucial within the healthcare system to prevent, treat, and educate individuals of various ages, ethnicities, genders, and socioeconomic statuses. It is essential for primary care providers to maintain a healthy relationship with their patients to better understand individualized long-term illness and to also promote better population health outcomes. This literature review examines key factors that promote patients' health such as impactful provider-patient relationships and interprofessional accessibility to care, while hindrances occur to patients' health by negative disregard for patient experience and predisposing factors as barriers to access primary care. Additionally, it highlights the emerging practice of occupational therapy within the setting and the contributions occupational therapy can offer to support the patients served. As occupational therapists continue to increase their roles in primary care settings, it is important to analyze the current barriers seen and how occupational therapy can benefit an interprofessional team.

Importance of Building a Relationship

Provider-patient relationships can be a determining factor to whether patients attain quality primary care access. Barriers to care occur when providers do not believe their patient's self-report or the extent of their illness (Upshur et al., 2010). This places not only distrust in providers, but also negative attributions to primary care settings. Participants with a chronic illness reported that their primary care provider had made unrealistic accusations of personal experiences and proceeded to be dismissive of the pain as if it were not real (Upshur et al., 2010). This disregards patient needs and lessens the importance of pain management

techniques, resulting in feelings of not being heard and needs left unmet. Individuals feel disregarded when their provider refuses to acknowledge or pay attention to them if they didn't use medical terminology (Ashcroft et al., 2021). Patients reported they felt they had to "earn respect" by learning medical terms for providers to take them seriously (Ashcroft et al., 2021). However, each provider creates their own therapeutic use of self and will treat or present themselves differently than the next.

Not all provider-patient relationships are inadequate. Multiple studies have provided an abundance of evidence regarding empathetic characteristics, shared decision-making, and open communication between providers and patients (Ashcroft et al., 2021; Rodriguez et al., 2007; Rowe et al., 2021; Kurklinsky et al., 2016). Patients believed their interactions with providers were more meaningful when their life experiences were acknowledged and when the provider could "speak the same language" (Ashcroft et al., 2021). These therapeutic relationship qualities reduce the suspicions of judgement while increasing the chances of desired needs being met. Participants reported that the more they visited or checked in with their provider, the higher quality of care they received (Rodriguez et al., 2007). Building a continuous relationship with your provider creates a collaborative decision-making environment and an honest communication line between the provider and the patient. Providers can be more authentically "real", so to speak, with their patients when they develop rapport (Ashcroft et al., 2021; Rodriguez et al., 2007).

There are times when providers and patients have a disconnect in their relationship. Such disconnect could be a result of misunderstandings including treatment services, education, or patient-centeredness (Ford et al., 2018). Age and the "social contract" of not

alarming your provider unless absolutely necessary can put a toll on older adult health outcomes, as they perceive providers' time as valuable and something that should not be overused (Ford et al., 2018). These perceptions could be correlated to the inability to reach your primary care provider directly, as they are busy and therefore patients end up having to share information with a receptionist or nurse, causing discomfort, frustrations, and dissatisfaction. Ultimately, the anxious feeling of not wanting to waste a providers' time can harm the mutual trust and understanding between the provider and their patient as well as the health and well-being of patients (Ford et al., 2018).

Susceptibility to Negative Health Outcomes

There are predisposing factors that make clients more susceptible to receiving negative health outcomes in primary care. The homeless population and those who are considered housing insure face the inability to receive medical attention, thus associated with poor health outcomes (Baggett et al., 2010; Martin et al., 2019). Such vulnerable populations are primarily uninsured, have additionally experienced food insecurity, and have obtained two or more medical conditions that are often left untreated. They likely cannot afford proper care nor prescriptions to alleviate pain or mental health symptoms (Baggett et al., 2010). Participants who have experienced housing insecurities were female, middle-aged, lower incomes, and of black or Hispanic ethnicity who struggle with "health-related risk behaviors, chronic health conditions, and health services utilizations" (Martin et al, 2019, p. 522). Because of the financial burden, participants have reported declines in preventative care and opting out of having a primary care provider, thus continuing to encounter poor health outcomes (Martin et al., 2019). It should be a priority to provide further support to those who are financially in need.

Patient Collaboration on an Interprofessional Team

To improve health outcomes for patients in primary care, collaboration with an interprofessional team is a vital piece to the overall puzzle. Patients on an interprofessional collaborative practice (IPCP) care team have received additional access to more specialized professionals, resulting in greater health outcomes (Rowe et al., 2021). There is evidence that certain disciplines make up an effective team for IPCP. One of which is social work, who aids in addressing social determinants of health, provide community resources, and assess and educate in diagnoses such as depression (Rowe et al., 2021). Similar to social work, occupational therapy is a profession that can contribute to an IPCP team by looking at the occupations that are meaningful to the individual and within the environment in which they participate, while adapting and modifying their surroundings, rather than solely focusing on the disability. This top-down approach is what adds meaning to an individual's everyday life and experiences (Rowe et al., 2021). While a top-down approach looks at the big picture, patients can also be seen for specific symptoms such as chronic pain.

Something that is commonly seen in patients within primary care is chronic pain. There are negative effects that come from chronic pain, for example, Kurklinsky et al. (2016) stated "From a psychosocial perspective, these people often experience high levels of emotional distress, insomnia, and impaired social and occupational functioning" (p. 1). Interdisciplinary teams can collaborate as a pain rehabilitation program to increase function and quality of life in patients who are suffering from chronic pain. Collaborative teams have consisted of both physical therapists and occupational therapist successfully. physical therapy would work on grading exercise activities to focus on reconditioning and strengthening, whereas occupational

therapy would focus on life balance with adaptations to enhance functional performance, independence, and participation. The Canadian Occupational Performance Measure (COPM) assessment would be used to measure performance and satisfaction, with pre and post-tests showing clinically meaningful significance in pain levels and function (Kurklinsky et al., 2016). The positive impact from pre to post difference on the COPM provides evidence that occupational therapy and physical therapy work successfully on an interdisciplinary team.

Education Among Health Professionals

Interprofessional teams can provide education to one another to enhance communication, accessibility, and confidence among one another while working together in a primary care setting (Carney et al., 2021; Rowe et al., 2021). Having a coaching system provides accountability and mixed professional resources, which offers reassurance when faced with difficult challenges and an increase in a positive atmosphere (Carney et al., 2021). For example, coaches help interprofessional teams discover a mutual understanding of different perspectives, as they tend to need "guidance in crossing these cultural divides" (Carney et al., 2021, p. 7). Additionally, having student-led care teams provides increased productivity and proficiency as an added value to the team-based primary care setting (Rowe et al., 2021). Seeking out knowledge from other professions as well as students can be advantageous when merging into a care team.

Knowledge and accessibility of other health professions is important in primary care settings. occupational therapy students who have worked within an interprofessional program (IP) recognize the roles and responsibilities of other health professionals on the team (Halle et al., 2019). Regarding geriatrics in primary care, students felt a positive change in perceptions

toward other professions when allowed the opportunity to gather structured information, observe specific skills, and have hands-on experience within IP (Halle et al., 2019). After students graduate and become practitioners, IP education can translate what they learned from other health professionals to maintain a positive perception and relationship with each team member (Halle et al., 2019). Likewise, having that close connection as an interprofessional team would make it easier for each health professional to know who to make a referral to when a service is out of one's scope of practice. Although it is important for all health care professionals to understand each other, it is just as important for patients of each profession to understand and be aware of the services that are being offered.

From a patient's point of view, health care teams can provide familiarity and an accessible centralized concept such as a one-stop shop (Ashcroft et al., 2021). Becoming familiar with the types of services that are available is important for pursuing support and addressing each patient's unmet needs. Primary care teams can assist with easier access to mental health services under the same roof as other typical services to reduce the fear of stigmatization, rather than patients having to attend organizations known to deliver mental health services exclusively" (Ashcroft et al., 2021). It is critical to provide confidence in each patients' recovery process within the same location as other services, not only to show it is a safe place, but to develop rapport for future discussions.

Occupational Therapy and Provider/Patient Perceptions

occupational therapy helps individuals at every stage of life complete the activities they want and need to do to feel successful each day, by providing strategies to overcome personal barriers (AOTA, 2021). It is one of the few professions that encourages all ages to strive for a

better quality of life, no matter the injury or disability, by providing full inclusion, supporting all life changes, and collaboratively motivating recovery every step of the way (AOTA, 2020; AOTA, 2021). Occupational therapists complete a wide range of training to identify supports and barriers from a holistic perspective that is both client-centered and occupation-based (Dahl-Poplizio et al., 2017). These characteristics add value to and compliment other health care professional roles in primary care.

Health care professionals have certain perceptions of an occupational therapy's role in a primary care team, depending on what they already know or learn about occupational therapy. Providers who have had no previous knowledge about an occupational therapy's role showed hesitations on collaborating as a team until given education about how occupational therapy can benefit and contribute to the team (Pyatak et al., 2019; Merryman & Synovec, 2020). Additionally, being under the same roof, providers can observe how occupational therapy's compliment what other team members cannot address. For example, Pyatak et al. (2019) stated, "what they brought to the table for a lot of our patients was something that a lot of us had been looking for and don't have the time or resources to be able to provide" (p. 6). Providers view occupational therapy as highly important when encountering complex conditions, due to their unique ability to identify deficits and understanding the unmet needs of the patient (Merryman & Synovec, 2020). Understanding concerns additionally provides a sense of relief and comfort to the patient.

Occupational Therapy's Role to Support Healthcare Needs

occupational therapy has a unique lens to focus on a patient's roles and routines while considering their context. This lens gives occupational therapy the ability to address underlying

conditions that co-occur with other commonly seen diagnoses in a primary care setting (Trembath et al., 2019; Leland et al., 2017). For example, many conditions such as chronic pain, depression, anxiety, and diabetes affect a person's sleeping habits. occupational therapy can address self-regulation simultaneously in each domain by addressing an array of environmental modifications to improve sleep and in turn, enhance occupational performance and overall health (Gutman et al., 2017; Leland et al., 2016). This solidifies the true value that occupational therapy has for primary care providers when further assistance on prevention, wellness, and health promotion strategies are needed.

Primary care providers described barriers to providing pain care as lack of expertise, low efficacy and safety measures, and lack of plans for how to manage pain within their scope of practice (Dorflinger et al., 2014). Pain management and prevention is one of the many key focuses within the scope of occupational therapy. While on an interprofessional care team, Occupational therapists support patients in coping with conditions that physically, mentally, or emotionally affect them, especially when other professions are not as highly skilled in that realm (Bolt et al., 2019). Strategies such as health education and assistive technology are utilized to prevent further disability or injury, increase social engagement, and continue prior activities in a modified way (Bolt et al., 2019). Occupational therapists help interprofessional teams practice more efficiently by communicating to the rest of the team how patients' routines, roles, and habits impact managing their chronic condition(s) and how it might look to develop new healthy lifestyles in collaboration with the patient (AOTA, 2020). It is important for occupational therapy to justify their roles and responsibilities as a generalist on an

interprofessional team in primary care by filling in the current gaps of existing services (AOTA, 2020; Pyatak et al., 2019).

Conclusion

Barriers to primary care include the lack of knowledge and abilities needed to address the unmet needs of the patients served. Enhancing provider-patient relationships is important for developing rapport to allow patients to feel acknowledged, motivated to take steps toward achieving progress, and have a mutual understanding regarding their health and well-being. Additionally, relationships will help guide the decision-making process with not only the patient, but their family as well. There are reasons, however, why some people cannot utilize or access health services as much as they would like to. Insecurities relate to the lack of preventative care and thus, have decreased health outcomes as a result. Interprofessional teams can improve health outcomes by connecting patients to more specialized and community resources that are both affordable and meaningful to the population. Interprofessional teams work most effectively when cultural perspectives and divides are understood among all health professionals. Accessibility and recognition of all team members' roles is just as important to maintain integrated together as one.

occupational therapy adds a holistic perspective to an interprofessional primary care team. They strive to reach full potential in all aspects of every patient's life. They also act as a generalist to compliment other professionals' roles by filling in the gaps of current services. Providers view occupational therapy as unique and value-added, for their expertise is something most providers search for but do not have the resources available to provide competently themselves. Primary care mainly focuses on health promotion, wellness, and

prevention, which are coincidentally the major approaches in occupational therapy. As an emerging area of practice, occupational therapists need to stand up, take action, and advocate for their spot at the table by emphasizing their unique abilities to bring forth to the team. It would be important for primary care to establish interprofessional education to promote and spread awareness on the integration of occupational therapy.

Literature Review by Kelsey Holmer

The Integration of Occupational Therapy into Adult Primary Care

Occupational therapy and primary care are integral to the health and wellbeing of people and communities. On their own, they each serve a crucial need. When combined, the benefit to patients can be even greater. The holistic role of occupational therapy complements the medical model role of primary care by assisting with early intervention in chronic disease, identifying and treating functional impairments, improving patient satisfaction, and improving patient participation with the use of modifications (Muir, 2012). Current experiences and perspectives of many medical professionals support and accept a multidisciplinary approach of incorporating occupational therapy into primary care, however, barriers continue to exist. Working together, occupational therapists and primary care providers are coming up with strategies to overcome those barriers to improve patient outcomes by creating and practicing collaborative multidisciplinary health care models.

Occupational Therapy

Occupational therapy supports people across the lifespan to participate in the things they want and need to do (AOTA, 2021a). Occupational therapy practitioners are certified and licensed healthcare professionals who help people live their fullest lives and participate in activities, known as occupations, that are significant and meaningful to the individual. Meaningful daily activities run the gamut from toileting and dressing, to preparing and eating meals, to sleep, recreation, employment and more. Common areas occupational therapists may help address include assisting people with recovery from illness or injury by maintaining or regaining skills, modifying tasks, or providing training to improve function. Improved function

can help clients across the lifespan maintain independence and enhance participation in a variety of ways including school, work, leisure, and social settings. Occupational therapists work in a variety of environments to enhance the potential and livability for people and communities. The occupational therapy process generally involves an evaluation with the client to determine needs, concerns, and goals. After the evaluation, an intervention plan is discussed and implemented. The intervention plan is guided by a holistic perspective that incorporates current research and evidence, practitioner knowledge, and the client's skills and environment (AOTA,2021). So how does this differ from primary care and how can they work together?

Primary Care

The scope and definition of primary care is considerable. From describing the healthcare setting, to the team involved and the services provided, primary care is explained in a variety of ways (American Academy of Family Physicians, 2021; Metzler et al, 2012). The American Academy of Family Physicians (AAFP) summarizes primary care as collaborative and accessible services provided by clinicians who are equipped to assess a diverse amount of health care demands, cultivate relationships with clients, and emphasize working with families and communities (AAFP, 2021). One key piece to the accepted definitions of primary care in the United States is that the service must be rendered by a physician, nurse practitioner, and/or physician assistant to be qualified as primary care (U.S. Department of Health and Human Services, n.d.).

Similar to occupational therapy, primary care practitioners are equipped to provide care across all age groups and demographics (AAFP, 2021). Primary care practitioners have a responsibility to provide effective client-centered patient care by utilizing a collaborative

approach with other healthcare professions and advocating for equitable treatment for all patients (AAFP, 2021). This is where the opening for occupational therapy within the primary care setting lies, as the goals for each profession to help people across the lifespan maintain better health, wellbeing, and function are well aligned. Incorporating occupational therapy into primary care settings can benefit the patients, the practitioners, and the communities at large.

Benefits of occupational therapy in Primary Care

The benefits of incorporating occupational therapy into primary care settings are vast. From assisting with mental health issues, to acute concerns, to chronic conditions, occupational therapy practitioners are skilled in analyzing a patient's history, personal and environmental factors, and supports and barriers to help implement the best individualized plan of care. occupational therapy practitioners regularly use health promotion strategies, education, routine modification, and mental health techniques to improve occupational performance and patient satisfaction. Patients receiving occupational therapy as part of their primary care have been shown to improve functional deficits in a variety of areas. Evidence from collaborative occupational therapy and primary care approaches show improved outcomes in several areas, most pointedly in stress management (Connolly et al., 2019), urinary dysfunction (Cunningham & Valasek, 2019), diabetes symptom management (Pyatak et al., 2019), and chronic pain (Hesslestrad et al., 2015; Müllersdorf, & Söderback, 2002; Richardson et al., 2010; Simon & Collins, 2017). This represents the value of the occupational therapy skillset in addressing a range of conditions that are seen in primary care.

In adults with chronic conditions, when occupational therapy interventions are incorporated within the primary care setting, patients have reported improved patient

satisfaction, reduced planned hospital stays, improved function in daily activities, better management of pain symptoms, and an overall enhanced quality of life (Richardson et al., 2010; Simon & Collins, 2017). Adult patients with chronic illness report increased satisfaction with primary care health services after receiving rehabilitation interventions including individual evaluations, psychosocial treatment techniques, equipment and environmental modifications, and peer group activities (Richardson et al., 2010). occupational therapy practitioners are explicitly trained to provide these interventions, therefore providing a valuable need when collaborating with the primary care specialists. Identifying the specific interventions occupational therapy practitioners are utilizing with patients is important because it illustrates the scope of practice and how it varies from and can also complement the scope of practice of a primary care practitioner. Additionally, the reduction of planned hospital stays for patients with chronic conditions receiving rehab services (Richardson et al., 2010) can lead to money saved for the patient, and more open beds for the hospital, hence benefiting the wider community. With so many advantages to the collaboration of occupational therapy and primary care it is easy to see why there is support and acceptance in bringing the two professions under one roof.

Support and Acceptance

When the integration of occupational therapy into primary care is supported and accepted, patient satisfaction and well-being is improved. The unique skillset occupational therapy offers can be applied to several common conditions seen by primary care practitioners and is well suited for a larger role in primary care settings (AOTA, 2020a; Metzler et al., 2021; Trembath & Dahl, 2019; Winship et al., 2019). Physician perception of occupational therapy

involvement in primary care is improved when the occupational therapy role is clear (Mirza et al., 2020; Pyatak, 2019; Trembath, 2019). occupational therapy practitioners can help make their role clear through increased advocacy, education, collaboration, and networking with primary care providers (Metzler et al., 2012). When primary care providers see firsthand how occupational therapy practitioners implement interventions focused on preserving functional independence, they have reported being more receptive, supportive, and appreciative of the process and of the occupational therapy practitioners (Mirza et al., 2020). When healthcare professionals are familiar and open to working on interprofessional teams, they are more confident, accepting, and better suited to provide well-rounded treatment options for their patients (Halle et al, 2019; Pyatak et al., 2019).

One way to increase competency in interprofessional teamwork is by approaching it at the graduate school level. When medical students are introduced to roles of occupational therapy and physical therapy as part of their curriculum they show improved understanding of rehab roles and improved confidence in making occupational therapy and physical therapy referrals (Oldenburg, 2020). Additionally, occupational therapy students are more prepared to work on interprofessional teams when organized interdisciplinary education is implemented into their school curriculum (Halle et al., 2019). When relationships are strengthened between rehab professionals and primary care practitioners, coordinated care is improves through the use of relevant and appropriate referrals (Peranich et al., 2010).

Barriers

One of the most significant obstacles is the difficulty with reimbursement and payment for occupational therapy services (Dahl-Popolizio et al., 2017; Halle et al., 2018; McColl et al.,

2009). Because occupational therapy and other rehabilitation services are not listed as primary care providers and are considered additional services, they are not regularly covered by insurance (Metzler et al., 2012). If a service is not covered, the financial burden may be too great for many patients to utilize rehabilitation services.

Another pronounced barrier that has surfaced in the literature and was previously mentioned is the lack of knowledge and understanding of occupational therapy roles by primary care providers and patients (Dahl-Popolizio et al., 2017; Halle et al., 2019; McColl et al., 2009; Pyatak et al., 2019; Trembath et al., 2019). Primary care physicians are generally in favor of incorporating occupational therapy into their practices, however many physicians express curiosity and uncertainty about occupational therapy roles, along with the misperception of believing occupational therapy's need additional supervision to practice (Dahl-Popolozio et al., 2017). This is important because if the referring provider is confused about the benefit of occupational therapy or believes referring to occupational therapy will increase the workload or use up valuable time, there is little incentive for that provider to advocate or accept the integration of occupational therapy into primary care.

Implementing strategies to remove barriers for occupational therapists to practice within and alongside primary care professionals will be important to increasing occupational therapy's presence in primary care settings (Dahl-Popolizio et al., 2017; Donnelly et al., 2013; Oldenburg, 2020). An in-depth investigation into how occupational therapy has successfully been integrated into four primary health care teams came up with three main ideas for how to positively influence the collaboration of occupational therapy and primary care physicians; increase knowledge of occupational therapy, encourage a culture of collaboration, and build

trust and understanding among team members (Donnelly et al., 2013). Additionally, structured education on interdisciplinary teams for healthcare professionals while in school has shown to increase knowledge and preparedness, including how rehabilitation services work (Halle, 2018; Oldenburg, 2020). Therefore, one recommended strategy would be to increase opportunities and even implement requirements for healthcare students to interact and work together with students from other professional healthcare disciplines. Even with sizable challenges present, occupational therapy has been successfully incorporated into primary care models nationwide and worldwide.

Models for occupational therapy integration

Occupational therapy has had success being integrated into primary care settings in North America and across the globe. In Europe, the key concepts of occupational therapy and primary care are similar to that of the U.S; however, one fundamental difference is the European idea of Positive Health, the focus on resilience, self-management, and meaningful activities, which is encouraged and supported by the Council of Occupational Therapists for European Countries (COTEC) (Bolt et al., 2019). Positive Health emphasizes adaptation and management of symptoms regardless of ability (Bolt et al., 2019). This contrasts with the highly regarded yet outdated World Health Organization definition of health which reads as, “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 2006, p.1). An increase in use of the concept of Positive Health naturally aligns with the importance and necessity of occupational therapy. Positive Health highlights participation in meaningful activities and the perceived satisfaction and quality of life at different life stages and with different levels of function (Bolt et al., 2019).

This sounds very familiar to the goals and ideals of occupational therapy, and places occupational therapy practitioners in a prime position to help clients maintain or regain their own individual level of Positive Health. One way to support the concept of Positive Health is by combining occupational therapy into primary medical settings. Assessing how occupational therapy is implemented in primary care throughout Europe, shows most patients use health insurance to pay for rehab services, many clinics offer direct access to occupational therapy services, and many clients do not need referrals for rehabilitative services (Bolt et al., (2019).

In North America, a scoping review of 38 articles describing the integration of rehabilitative services and primary care came up with 6 different models in use; “clinic, outreach, self-management, community-based rehabilitation, shared care, and case management” (McColl et al., 2019, p. 1523). Of these models, clinic care was the most used and perhaps the most familiar to many professionals. A clinic model places the primary care practitioner in the same building as the rehabilitative professional, clients can move between the two as needed, and it allows opportunity for collaboration while also maintaining the autonomy of each profession (McColl et al., 2019). The outreach model suggests smaller satellite clinics that target high need communities. An advantage to this is bringing specialized care to the community and limiting barriers of transportation and accessibility. The self-management model highlights education and health promotion. This model suggests occupational therapy and primary care be co-located or have contractual relationships. The community-based rehabilitation model takes a wide scale community development approach by encouraging therapists to work with the broader community to bring about organizational and systemic change. This model is focused on public health to advocate for patients with

chronic illness and disabilities. The final two models, case management and shared care had limited evidence and may require a larger commitment of time and resources to implement. All six models have advantages and limitations, and they are an excellent jumping off point for generating ideas and solutions for increasing rehabilitative services in primary care clinics and making them accessible and feasible for individuals. In the U.S., the clinic care model may be well suited to replicate, due to the many large health organizations that currently house an array of specialists under one roof. Along with identifying models of care, common themes were seen across the approaches that either supported or inhibited the integration of rehabilitation services into primary care. These themes were grounded in team dynamics and included trust, leadership, communication, accountability, and referral process (McColl et al., 2009).

Conclusion

Occupational therapy and primary care are fundamental to health and well-being. Evidence supporting the collaboration of the two professions suggests improved patient outcomes for several conditions. Some barriers being addressed are interdisciplinary education and training to improve the understanding of roles and acceptance of each profession's expertise, and the financial feasibility of providing rehabilitative services in primary care settings. The professions can learn from existing models and approaches to help create best fit scenarios for individual clinics and practices. Prioritizing client needs, values, and function can lead to healthier and happier communities. The integration of occupational therapy into primary care settings can help in the process.

Literature Review by Rachael Kullas

The Role of Occupational Therapy with Hispanic Clients in Primary Care

Primary care is often considered an efficient way to meet health care needs and prevent disease; however, for the Hispanic population, there are obstacles that prevent access to needed care. This chapter will explore the primary care setting and the role of occupational therapy, the barriers faced by Hispanics in accessing primary care, the role of occupational therapy in treating these clients in this setting, and the overall best practices for treating Hispanics in primary care.

An Overview of Primary Care

Access to primary care is immensely important to health and well-being. But what exactly is primary care? Primary care, or primary health care, has been defined as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with clients, and practicing in the context of family and community" (Institute of Medicine (US) Committee on the Future of Primary Care, 1996). Primary health care is comprehensive and includes disease prevention and treatment, rehabilitation, and palliative care. Often a patient's first point of contact into the health system, primary care is also a cost-effective and efficient way to meet health needs (World Health Organization, 2021).

Research demonstrates that access to primary care can predict positive health outcomes, and conversely, a lack of access to primary care may predict negative health outcomes. Therefore, access to primary care is critical to improving public health and reducing health disparities (Office of Disease Prevention and Health Promotion, 2014). The inclusion of

occupational therapists into the primary care team may contribute to a reduction in some of these disparities.

Occupational Therapy in Primary Care

While many health care professionals are integral to primary care, occupational therapy can play a valuable and unique role in this setting to contribute to positive health outcomes. Occupational therapy helps people of all ages and abilities to do the things they want and need to do each day as independently as possible (AOTA, 2021). Occupational therapy practitioners help to enhance quality of life by promoting health, preventing injury, illness, and disability, or helping people live more independently and successfully with those conditions (AOTA, 2021). Because of this unique skillset, occupational therapy practitioners are well suited to contribute to interprofessional care teams in primary care settings (AOTA, 2020). Specifically, occupational therapy has an important, unique view of function that fills in the gaps of the team for understanding complex client presentations (Merryman et al., 2020). However, in order for occupational therapy to be successfully integrated into primary care settings, it is important that communication, trust, and an understanding of the occupational therapy role are established among the interdisciplinary team (Donnelly et al., 2013). Occupational therapists and other primary care practitioners must also be aware of the barriers clients might face in accessing primary care.

Barriers for the Hispanic Population in Accessing Primary Care

The Hispanic population in the U.S. faces many barriers to accessing primary care for their health needs. Due to these barriers, Hispanics tend to underutilize health care services, especially preventative care, rehabilitation, allied professional care, and screenings (Suarez-

Balcazar et al., 2005). Cost or lack of insurance, transportation and proximity to services, and language-related barriers are often cited in the literature around this topic (Cheng et al., 2007; Pearson et al., 2008; Tapp et al., 2013; Tolbert & Orgera, 2020; Wolfe et al., 2020). These barriers can have a direct impact on health.

Cost and Lack of Insurance

A lack of health insurance or high cost can be a major obstacle in accessing primary care, which is often the case with many Hispanic-Americans and immigrants. Hispanic individuals represent 19% of the overall U.S. population, but 29% of the uninsured. There are also elevated uninsured rates present in regions with large Hispanic communities (Bosworth et al., 2021). This disproportionate ratio leads to many disparities for the Hispanic population. Cost is often a barrier to becoming insured, as 73.7% of uninsured adults in 2019 reported that they were uninsured due to coverage not being affordable. Those who are uninsured have worse access to care than those who are insured, and uninsured people are more likely to face unaffordable medical bills when they do seek care (Tolbert & Orgera, 2020). Thus, uninsured Hispanics in the U.S. may choose to not seek out primary care in general due to these unaffordable costs of care and insurance. However, even if they do have insurance, individuals may face additional obstacles such as lack of transportation and proximity to the clinic.

Transportation and Proximity to Services

Geographic and transportation-related barriers may also impede access to primary care, and these barriers often disproportionately affect certain patient groups. An estimated 5.8 million people in the U.S. delayed seeking medical care in 2017 due to not having transportation (Wolfe et al., 2020). Hispanics are more likely to experience a transportation

barrier than non-Hispanic whites. Moreover, transportation barriers appear to be more common among people of lower income and people who are uninsured or underinsured (Wolfe et al., 2020). Despite the growing Hispanic population in the U.S., there are often large geographical areas of Hispanic residents with no clinic representation (Tapp et al., 2013). This leads to longer travel times and overall greater difficulty seeking care. However, Hispanic clients are often willing to travel greater distances for a clinic with bilingual front desk staff and service providers (Tapp et al., 2013).

Language-Related Barriers

Arguably one of the most substantial barriers to primary care access among Hispanics in the United States is a lack of English language competency or lack of access to bilingual services. The presence of bilingual staff has been found to be the most important factor in choosing a clinic for Hispanic clients (Tapp et al., 2013). Unfortunately, these services are not always available, which can result in vast health consequences for Hispanic Americans, especially those who are Spanish-speaking. Individuals with a Spanish language preference are less likely to have health insurance coverage, less likely to have a go-to primary care provider, and less likely to have had a routine checkup appointment in the last five years. This is based on a large sample of U.S. adults (n=20,400) who identified as Hispanic (Pearson et al., 2008). Furthermore, simply speaking a non-English language in the home puts Hispanics at a higher risk for not receiving necessary medical or health care, no matter their level of comfort in using English (Cheng et al., 2007). In this study, Hispanics who did use English at home reported receiving recommended services at a similar rate to non-Hispanic whites. Researchers acknowledge that this disparity could also be attributed to confounding factors associated with language, such as income and

quality of insurance (Cheng et al, 2007). Hence, the barriers discussed in this paper often overlap.

Hispanic Healthcare Needs and Concerns

The above-mentioned barriers impede many Hispanic Americans and immigrants from being able to receive the health care they need. Several key needs and concerns have been identified for the Hispanic and immigrant population. Leading causes of death among Hispanics include cancer and heart disease, which is the same for whites. Meanwhile, Hispanics are 50% more likely to die from diabetes or liver disease compared to whites. Additionally, Hispanics have 20% more poorly controlled high blood pressure, despite similar prevalence of hypertension among whites. Whether Hispanics were born in the U.S. also plays a role in the severity of disease and infection. For instance, certain cancers that are related to infections are more common among Hispanic immigrants than U.S. born Hispanics (Centers for Disease Control and Prevention, 2015). Living with any of these conditions can have an impact on quality of life and functional performance of daily tasks, especially if it is difficult to access treatment and preventative care. Therefore, there is a need to minimize the barriers for Hispanics in accessing primary care, and there is an important opportunity for occupational therapy.

It is also important to explore the areas of priority in regard to health from the perspective of Hispanic clients themselves. Six areas of concern have been identified by late-middle-aged Latino adults. These include: weight management; disease management; mental health and well-being; personal finances; family, friends, and community; and stress management (Schepens Niemiec et al., 2015). This helps to highlight some of the occupational

need areas in which occupational therapy practitioners can target their interventions with this population.

Occupational Therapy Interventions for the Hispanic Population in Primary Care

Occupational therapy practitioners working in primary care settings use a variety of intervention strategies to address these needs and improve daily life functioning and participation for the Hispanic and immigrant population. Considering the priorities of the Hispanic population, occupational therapy interventions targeting diabetes, obesity, and overall health management are common with this population in primary care settings (Pyatak et al., 2019; Rosal et al., 2011; Suarez-Balcazar et al., 2013). An occupational therapy intervention called Lifestyle Redesign for diabetes management administered by a bilingual provider was found to be effective in improving HbA1c levels, diabetes self-care, and overall health status when administered to English and Spanish speaking adult clients with diabetes in a safety-net clinic (Pyatak et al., 2019). Another program which provided literacy-sensitive and culturally tailored diabetes management education to Latinos was shown to be effective in changing HbA1c levels and improving clients' knowledge, self-efficacy, blood-glucose monitoring, and diet (Rosal et al., 2011).

Although much of the cited research is focused on Hispanic adults, occupational therapists in primary care may also work with Hispanic children to address similar health need areas. occupational therapy practitioners are well suited to address childhood obesity, because of their ability to help modify and adapt habits and routines and adjust interventions to meet the cultural needs of the client (Suarez-Balcazar et al., 2013). To address obesity among Latino youth, evidence supports the use of exercise programs, music and dance, and the incorporation

of interactive physical activity around traditional Latino family values. The use of story illustrations has also been demonstrated to be successful in educating Latino youth and their families about wellness. Researchers emphasize the need for cultural competence in the delivery of these services (Suarez-Balcazar et al., 2013). These three studies suggest that bilingual services, and the use of materials that are culturally and literacy-sensitive may have an impact on quality of care and health outcomes for the Hispanic population.

Occupation-based interventions focused on increasing occupational engagement may also help improve quality of life among Hispanic clients. Religious and spiritual activity, service to others, and having a regular routine have been found to be supportive of well-being and quality of life for Latino breast cancer survivors. Clients also express a need for a health care professional to help them establish routines, motivate them, and educate them on their diagnosis (Sleight, 2017). Thus, occupational therapists in primary care have an important role to educate clients as well as enhance occupational engagement in order to improve or maintain quality of life.

Best Practices for Treating Hispanic Clients in Primary Care

Best practices for occupational therapists and other primary care practitioners when working with this population include the provision of integrative, culturally tailored services offered in multiple languages.

Bilingual Services

Increasing the number of bilingual staff and health care providers at primary clinics is one of the most important steps that can be taken to improve health care access and outcomes for the Hispanic population. When asked about their health needs and priorities, Hispanics

most commonly responded that the availability of health care professionals who offer services in Spanish was a top priority (Suarez-Balcazar et al., 2005). Moreover, the availability of bilingual front desk staff and services is often the most important factor in choosing a clinic for Hispanics (Tapp et al., 2013). Interventions with interpreters and/or bilingual providers may help reduce the disparities related to language (Cheng et al., 2007). Therefore, for best practices, clinics should work to implement bilingual staff and providers to accommodate for potential language barriers for Hispanic clients.

Culturally-Tailored and Literacy-Sensitive Services

Treatments and interventions in primary care should also be culturally tailored and literacy sensitive when possible. Examples of cultural tailoring include using soap opera television programs with educational messages, culturally relevant situations, bingo games, traditions, and family values, which are often important to the Hispanic culture (Rosal et al., 2011); however, practitioners should be sure to get to know their clients individually before assuming values based on their culture. Additionally, materials presented in primary care clinics should be written in understandable language, sensitive to clients' varying levels of literacy, as this may contribute to increased patient knowledge and self-efficacy (Rosal et al., 2011). This is critical because self-efficacy and health literacy may increase positive health and preventative behaviors among Hispanics (Guntzviller et al., 2017). Hence, providing literacy-appropriate materials to Hispanic clients in primary care is an essential practice that can impact a client's ability to manage their condition and advance their overall health.

Additional Best Practices

Other best practices include having clearly listed, low upfront costs at primary care clinics for those who are low-income or lack insurance. In order to address proximity and transportation barriers, health professionals should also try to understand client travel needs and utilize service maps to identify clinic service areas and assist clients in using clinics closest to them (Tapp et al., 2013). Additional low-cost clinics should also be opened to help fill in the geographical gaps in which many Hispanics do not have a nearby clinic. Furthermore, more communication and partnerships should be established among low-cost and safety net primary care clinics, in order to streamline services (Tapp et al., 2013).

Training of Practitioners

It is also important that the health system be adapted to meet the needs of diverse clients. For this to occur, health care workers must learn to be sensitive to the unique concerns and beliefs of their clients (Martensson & Liedberg, 2016). There is a great need for occupational therapists and other health practitioners to develop cultural competence, including the knowledge, attitudes, and skills needed to work with diverse populations. It will also be important to recruit more minorities into fields like occupational therapy, and provide multicultural education to health care students while they are still in school (Suarez-Balcazar et al., 2005). When establishing community and health services in or around Hispanic neighborhoods, it is of utmost importance to actively involve the Hispanic community members themselves in order to best understand their needs from their perspective (Suarez-Balcazar et al., 2005). Occupational therapy practitioners can play an important role in creating and advocating for these changes.

Conclusion

Due to many barriers, Hispanics in the U.S. often have difficulty accessing primary health care, leading to disproportionate negative health outcomes. Occupational therapists have a unique role in treating Hispanics in the primary care setting, preventing further disease and disability, and enhancing quality of life. Occupational therapists and other primary care practitioners can work to implement best practices and promote the changes needed for increased access to care and more positive health outcomes for the Hispanic population.

Literature Review by Paige Loy

Occupational Therapy's Role in a Primary Care Setting Regarding Sleep, Chronic Pain, and Return to Work

The primary care system is essential for treating multiple conditions across the lifespan. Primary care physicians play an import role in diagnosing, treating, and providing referrals to patients. Occupational therapists are essential to link functionality with disorders and provide interventions to improve quality of life in patients. Occupational therapists fulfill a role in addressing common patient concerns regarding sleep, chronic pain, and return to work. Although there are barriers preventing occupational therapy from being utilizing on the primary care team, occupational therapists need to be embedded into the primary care setting to maximize patient care.

Role of Primary Care Physicians

In the midst of a pandemic, receiving healthcare has never been more essential. When feeling sick, most of the population typically seeks care from the same doctor, otherwise known as a primary care physician (American Academy of Family Physicians, 2021). Primary health care physicians are often the first point of contact for people when they are experiencing any sort of symptoms. Therefore, primary care physicians work with a variety of conditions and take on many roles to address patient needs. A primary care physician provides ongoing comprehensive care to a patient. The role of a primary care provider is quite extensive and broad. Primary care physicians not only diagnosis and treat conditions but also offer health counseling, monitor a patient's health status over a long period of time, administer preventative care, and provide patient education (American Academy of Family Physicians, 2021; Schroeder, 2017).

Primary care physicians are found in a variety of settings including family medicine, pediatric clinics, obstetrics, internal medicine, and gynecology clinics (Schroeder, 2017). Since primary care has such a large scope of practice, physicians in the field often treat an extensive list of conditions. The most common conditions treated in primary care include skin conditions, osteoarthritis and joint disorders, back pain, lipid metabolism disorders, and upper respiratory tract disease (Sauver et al., 2013). Similarly, Finley et al. (2018) found that the top ten conditions seen in primary care were upper respiratory tract infection, hypertension, routine health maintenance, arthritis, diabetes, depression or anxiety, pneumonia, acute otitis media, back pain, and dermatitis. Like primary care physicians, occupational therapists treat a variety of conditions and take on a holistic role when working with patients.

Role of Occupational Therapists

Occupational therapy assists patients reach their optimal functional performance and independence in meaningful occupations through the use of therapeutic activities (AOTA, 2021; Bureau of Labor Statistics, 2021). Occupational therapists are qualified to work with a variety of conditions spanning both physical and psychosocial areas across the lifespan (AOTA, 2021a; AOTA, 2021d; World Federation of Occupational Therapists, 2021). An all-inclusive list of disorders and diagnoses occupational therapists work with cannot be obtained due to the broad nature of the profession and the comprehensive qualifications occupational therapists obtain through their education and experience. Some examples of common conditions occupational therapists work with include pain management, sleep, disease rehabilitation, sensory-integration, arthritis, diabetes, cognitive changes, and chronic disease management (AOTA, 2021a; AOTA, 2021c). In addition, occupational therapists are qualified to practice in a

wide variety of settings including acute care, in-patient and out-patient rehabilitation, mental health, and schools (World Federation of Occupational Therapists, 2021). However, even with the variety of settings in which occupational therapists work, occupational therapists have yet to be embedded in the primary care setting.

Occupational Therapist's Role on a Primary Health Care Team

When occupational therapists are integrated onto the primary health care team, patient care is advanced. Occupational therapists have been addressing the primary health care concerns since the start of the profession, including health management, wellness, and prevention (Halle et al., 2018). Occupational therapists are suited to address hospital readmission prevention, assist patients in following the treatment guidelines outlined by the primary care physician, maintain independence, identify early intervention needs, assist in chronic condition management, and delay the need for a long-term care institution (Halle et al., 2018). Primary health care physicians fail to address the occupational and functional needs of patients (Winship et al., 2019). Whereas occupational therapists are specialists in addressing the functional needs of patients (Donnelly et al., 2014). Thus, indicating a need for occupational therapists to be integrated into the primary care team to address this limitation. When occupational therapists are embedded with primary care providers, patients receive more comprehensive and higher quality care because of occupational therapy's ability to fill in the necessary gaps.

Embedding occupational therapists into the primary care team is a dynamic process involving an already established interprofessional team. Primary care physicians, occupational therapists, and others on the interprofessional team need to maximize collaboration and

communication among each other to further patientcare. Interprofessional teams will have to adapt to the changing needs of the team and maintain internal organization to allow for a smooth transition while also providing quality care to patients (Leach et al., 2017). In addition, team coaching is a new concept that has been shown to be an effective form of communication among intra and interprofessional team members (Carney et al., 2021). Team coaching consists of giving and receiving feedback between team members that fosters further individual reflection of performance. This form of communication is beneficial in quick information exchanges between team members, as well as in longer meetings. Team coaching provides team members a way to professionally exchange information about patients while also maintain respect for others on the interprofessional team and enhancing knowledge (Carney et al., 2021). This skill will be essential when primary care physicians and occupational therapists work together to address sleep with patients.

Addressing Sleep in Primary Care

Occupational therapists have an important role in addressing sleep and implementing interventions with patients in primary care. Poor sleep quality is one of the most common patient concerns addressed by both primary care providers and occupational therapists (AOTA, 2021c; Tester & Foss, 2018). Sleep is also one of the most important occupations in which people participate in as it fosters engagement in all other occupations (AOTA, 2020; AOTA, 2021c; Tester & Foss, 2018). Sleep is vital for its influence on mood, behavior, energy, and overall wellbeing. Thus, when an individual is not able to engage in quality sleep due to an illness or disease, such as chronic pain, it can simultaneously exacerbate their symptoms and impact their functioning in all other occupations and roles (Tester & Foss, 2018). Without

quality sleep, one's ability to engage in mental processing and physical healing are insufficient. This can impact not only the patient's daily functioning, but also their health status as it can increase their risk of developing another condition, and affect their employment or work status, education, and social interactions (Tester & Foss, 2018).

Recently, there has been a shift in the treatment of sleep by primary care physicians. Even though the impact of poor-quality sleep is well researched, sleep was often viewed as a secondary problem and treatment was not adequately approached by health care providers (Tester & Foss, 2018). The shift in primary care to inquire about a patient's sleep is due to recent literature that brings awareness to the seriousness of sleep disorders, thus spiking additional primary care physician education in sleep (Simon, 2016). Sleep disorders and disturbances can increase the risk of developing a secondary medical condition (Grandner & Malhotra, 2015). Although the concept of having quality sleep as a primary concern is newer for the health care system, it is becoming incorporated into practice as there is an increase in primary care providers routinely inquiring and discussing sleep with patients. Asking patients about sleep in a routine visit decreases the likelihood of developing a secondary disorder and improves patient engagement in all occupations (Grandner & Malhotra, 2015). Occupational therapists are experts at addressing sleep and can offer the primary care team multiple non-pharmacological interventions to approach improved sleep.

Occupational therapists are highly qualified to assist patients in improving sleep patterns to foster engagement in all other occupations (AOTA, 2020; AOTA, 2021c; Tester & Foss, 2018). Occupational therapists take a holistic approach when working with patients on improving their sleep. Effective non-pharmacological approaches utilized by occupational

therapists to improve sleep include modifying a patient's performance pattern (habits, roles, and routines), increasing physical activity participation, creating a more conducive sleep environment, and introducing assistive technology that aids in improved sleep (Gutman et al., 2016; Leland et al., 2004). Occupational therapists often take a cognitive behavioral approach when working with patients which is highly effective since it combines multiple interventions together to assist patients in improving their sleep (Leland et al., 2004). A cognitive-behavioral approach consists of challenging negative thoughts to improve behavior. Another important factor occupational therapists consider when working with patients on improving sleep is controlling pain. Pain management is very important as pain is a contributing factor that can decrease quality of sleep (AOTA, 2021b; Rochman, 2014). Occupational therapists have an important role in addressing chronic pain and implementing interventions with patients in primary care.

Addressing Chronic Pain in Primary Care

Chronic pain is a form of persistent pain that can create difficulties in not only sleep but also mental health, work, social participation, and can reduce quality of life (Rochman, 2014). Pain is a useful neurological system that alerts the body of danger; however, chronic pain lasts beyond the point of threat and impacts healing (Hofman, 2021). Primary care physicians and occupational therapists are now more concerned with chronic pain and treating it early on to reduce the negative side effects and increase occupational engagement; however, chronic pain is often resistant to medical interventions, thus requiring a holistic approach of treatment (Rochman, 2014). Occupational therapists can offer holistic, non-pharmacological approaches to treat chronic pain and improve quality of life.

Occupational therapists offer a broad range of treatment approaches and find the best interventions to decrease chronic pain in an individual. Effective non-pharmacological intervention methods utilized by occupational therapists include education on body mechanics, ergonomic education, neuromuscular re-education, muscle tension reduction, improved communication skills about pain, education on anticipating possible problems with activities, pacing/energy conservation, environmental modifications, increased mindfulness, and redirection of attention (AOTA, 2021b; Hesselstrand, et al., 2015; Hofman, 2021; Rochman, 2014). Occupational therapists can individualize the intervention to the patient and to their normal routine.

Depending on the patient's preferences and what works best for them, occupational therapists assist in implementing a combination of interventions. The most effective intervention approaches apply a combination of pharmaceutical, sensory, physical, and cognitive-behavioral interventions to approach treatment of chronic pain (Lucio et al., 2018). Occupational therapists would be beneficial on the primary care team as they could implement these non-pharmacological interventions with the primary care physicians' pharmacological approaches simultaneously. To implement such interventions on the primary care team, greater patient education is necessary.

Occupational therapists commonly think that people are unaware that occupational therapy can help with chronic pain and the management of symptoms (Lucio et al., 2018). Occupational therapists also believe that patients value and desire their help when they receive it. Patients are unaware of the benefits of occupational therapy, thus, there needs to be greater education and advocacy from primary care physicians to refer patients to occupational therapy

for non-pharmacological approaches. Embedding occupational therapists within the primary care team will assist in overcoming this hurdle. Chronic pain is a debilitating condition that can influence all areas of occupations, including the patient's ability to work or return to school.

Addressing Return to Work in Primary Care

Occupational therapists play an important role in addressing return to work and implementing interventions with patients in primary care. Chronic pain symptoms negatively influence return to work as they can decrease the likelihood of returning to work post injury (AOTA, 2021b; Fishbain et al., 2000; Hamer et al., 2013). Chronic pain not only impacts biological factors in a person, but also negatively affects psychological factors, social factors, and quality of life (Dueñas et al., 2016). These factors create tremendous barriers for someone to overcome to be able to engage in work effectively. Hamer et al. (2013) reported that 3 months post injury, only 14% of participants had returned to work. Other participants were still severely limited by pain to return to work. Those who are injured are more likely to return to work if a return-to-work coordinator is available at their place of employment and if the employee is referred to treatment programs as soon as possible following an injury (Hamer et al., 2013). In addition, patients have an increased likelihood of returning to work after attending a pain facility (Fishbain et al., 2000). Occupational therapists are highly trained at providing effective interventions that reduce pain and facilitate return to work or school.

Occupational therapists can introduce multiple non-pharmacological and effective intervention approaches to address return to work with those experiencing chronic pain. Occupational therapists are highly trained professionals that can consult both the patient and employer to take a holistic approach to address pain and facilitate return to work by

maximizing function, retraining, prevention of future injury, identifying realistic goals, and facilitate the progression of returning to work (AOTA, 2021e; Hill & Macartney, 2019). Effective non-pharmacological approaches occupational therapists utilize to facilitate return to work with patient's experiencing chronic pain include introducing cognitive behavioral strategies, biopsychosocial strategies, ergonomic changes, environmental adaptations, biomechanical changes, and energy conservation education (Ammendolia, et al., 2009; Hill & Macartney, 2019). Occupational therapists can address the biological and psychosocial factors impacting return to work and quality of life within the primary care setting with others on the interprofessional team. This is pertinent as many patient issues are dynamic, interconnected, and impacting each other. For example, sleep impacts chronic pain which can impact return to work and healing.

Addressing the Connection between Sleep, Pain, and Healing

When a patient is not able to engage in quality sleep, it can severely limit their ability to heal following an injury and increase their pain (Finan et al., 2014; Grandner & Malhotra, 2016; Roehrs et al., 2012). Difficulties engaging in sleep can cause disruptions in the central nervous system's ability to decrease existing pain and increase pain sensitivity (Finan et al., 2014; Roehrs et al., 2012), resulting in delays to the person's ability to return to work. This will not only exacerbate pain but also make the body hyperaware of existing pain, thus impacting the body's ability to heal as it is under additional stress.

Sleep plays a big role in facilitating engagement in all occupations; however, it also impacts healing, which in turn decreases pain (Loomis, 2018; Roehrs et al., 2012). Those who slept seven to nine hours a night experienced faster wound healing rates compared to those

who were sleep deprived (Loomis, 2018). In addition, those who engage in additional sleep also experienced decreased pain sensitivity (Roehrs et al., 2012).

Pain, sleep, and healing is a very interconnected process. Primary care physicians and occupational therapists often help patients with these concerns. Therefore, having occupational therapists on the primary care team would enhance patient care as occupational therapists can address this interconnected relationship and implement interventions that are conducive to the patient's daily routine and environment. Occupational therapists have yet to be embedded on the primary care team due to multiple barriers even though they offer a dynamic approach to addressing patient concerns and fill in the necessary gaps for increased quality care.

Barriers to Placing Occupational Therapists on the Primary Care Team

There are many barriers preventing occupational therapy from being integrated into primary care. The most influential factors hindering the merge includes the lack of patient and primary care physician education regarding the role of occupational therapy, reimbursement barriers, interprofessional team collaboration considerations, occupational therapist education about their role in primary care, as well as concerns regarding occupational therapists needing to be generalists instead of specialists to assist the varying patient needs (Halle et al., 2018; McKenna, 2013). Donnelly et al. (2014) shows that when occupational therapists were embedded into a primary care team, they were able to step into a generalist role with function at the forefront of interventions. Occupational therapists were able to connect health conditions with daily function and provide valuable contributions to the team to increase patient functionality. Even though primary care physicians have the intent to discuss occupational concerns and limitations during primary care visits, they are commonly being

missed which is hindering patient care (Winship et al., 2019). A shift in education will provide great success at overcoming some of these barriers. Occupational therapists have certainly proven that they understand the connection between function and occupations, however greater education is beneficial to help occupational therapists better understand their role in primary care.

Greater patient and interprofessional team education around occupational therapy is needed to allow occupational therapists a smooth transition into primary care. Many health care professionals involved in the primary care interdisciplinary team are unaware of the benefits occupational therapy can offer (Halle et al., 2018). When primary care physicians understand occupational therapy's role, they are more receptive to working alongside them on an interprofessional team (Winship et al., 2019). Greater education and advocacy for the profession will help with this lapse in understanding about occupational therapy and the benefits the profession can offer to patients. In a primary care setting, an interdisciplinary team with occupational therapists embedded into it will lead to the best patient care and maximize success in reaching patient goals.

Conclusion

Occupational therapists fulfil a necessary role in a primary care setting to offer multiple non-pharmacological approaches to improve sleep, chronic pain, and return to work; however, there are many barriers preventing occupational therapists from being embedded into the primary care team. Educating primary care physicians, occupational therapists, and patients on the benefits and roles of occupational therapy in the primary care setting is pertinent for transitional success. Additional research is necessary to understand how to facilitate a smooth

transition without disruption of the already existing interprofessional team and how to gain reimbursement for occupational therapy services in this emerging setting. Occupational therapy is a dynamic profession that can further patient care when working alongside primary care physicians due to their broad knowledge about function in occupations across the lifespan.

Literature Review by Alexander Manos

How Can Occupational Therapists Fit into the Primary Care Setting for Adults?

Primary care is often the first point of contact within the healthcare system to treat a variety of illnesses and diseases. Primary care is beneficial because it has reduced United States healthcare costs while simultaneously increasing patient satisfaction. It has also decreased total hospitalizations and lowered overall mortality (Primary Care Collaborative, 2020). Primary care providers include physicians, nurses, and physician assistants. The development of trusting practitioner-patient relationships is an integral part of effective primary care (Muir, 2012; Tarrant et al., 2015). Primary care physicians are trained to provide person-centered care to individuals who can have biological, behavioral, or social health problems. Primary care physicians not only diagnose and treat acute and chronic health concerns but their job description also includes health promotion, disease prevention, health maintenance, counseling, and patient education (Muir, 2012). Primary care physicians will provide their patients with referrals when specialty services are required. Despite the benefits of primary care there are significant problems facing primary care.

Primary Care Barriers

A main barrier for primary care physicians is that they are disproportionately paid compared to their colleagues that work as specialists. In 2021 primary care physicians had an average annual salary of $242,000 and specialist physicians reported an average annual salary of $344,000 (Kane, 2021). The difference in pay has pushed physicians to specialist careers and has created a high demand for primary care physicians that will only increase with time. The Association of American Medical Colleges (2021) estimates by 2034 there be a 17,800-48,000

shortage of primary care physician in the United States. The lack of primary care physicians is only going to exacerbate the issues related to primary care as the demand increases.

Another main barrier with primary care is gaps in service due to communication and coordination errors (Tarrant et al., 2015). These gaps in coverage can be minimized by a strong and consistent physician-patient relationship. 58% of participants who left primary care had gaps in care and 74% of participants with chronic conditions experienced gaps in care, further exacerbating their health concerns (Tarrant et al., 2015). Patients and their caregivers reported to compensate for these gaps in coverage it required extra time, money, knowledge of outside resources, and strong advocacy.

Despite the physician-patient relationship being very important in minimizing gaps in coverage, primary care physicians only spend an average of 19-20 minutes with their patients each visit (Muir, 2012). Both physicians and patients don't see this as enough time but with such a high quantity of patients, time takes precedents over quality of care and continuity. Physicians handle this by making patient referrals to other services such as occupational therapy which can again possibly lead to discontinuity of care (Muir, 2012).

Occupational Therapy

Besides paying primary care physicians more money to attract physicians back to being generalists, a possible solution is to incorporate occupational therapists into the primary care setting. Occupational therapists are healthcare professionals that have a wide range of skills that can help the lives of people of any age and condition. This allows them to work in a variety of settings including but not limited to hospitals, senior living centers, transitional care units, pediatric clinics, schools, and outpatient orthopedic clinics. Occupational therapists take a holistic approach to improve or maintain mental, social, and physical health that has been

impaired by disease, injury, or other health conditions. Occupational therapists are "…trained in human development (cognitive, physical, social, emotional), health promotion, disease process intervention, activity analysis and behavior modification, lifestyle interventions, and use of adaptive equipment, the profession could be fundamental to reducing fragmentation in health care" (Muir, 2012, p. 507). With this kind of background, occupational therapists could provide a variety of services in the primary care setting. Occupational therapists could address preventative care to prevent disease and other health conditions, patient issues affecting occupational performance and participation, provide them with modifications and adaptive equipment to improve patient function. They can provide holistic care that addresses the patients' total well-being and not just focus on reducing symptoms. Occupational therapists could also help reduce healthcare costs by providing basic interventions and at home exercises before making a referral for a more expensive service. Lastly occupational therapists could take a community health approach and provide group education and intervention sessions (Muir, 2012).

The heart of occupational therapy is to help people engage in the day-to-day activities that improve or maintain their health and make their life meaningful (Boyt Schell et al., 2019). Although adding occupational therapists to primary care has been talked about for many years now, there are few instances in which occupational therapists work in primary care. Occupational therapy interventions would be greatly beneficial to primary care patients. Sleep and chronic pain are two specific practice areas that occupational therapists could immediately address in primary care.

Sleep

Proper sleep is an integral part of a healthy lifestyle but sleep is not addressed often enough in primary care (Grander & Malhorta, 2015; Ononye et al., 2019; Perry et al., 2013; Senthilvel et al., 2011; Sorscher, 2008). Sleep issues affect an estimated 50-70 million Americans every year (Grandner & Malhorta, 2015; Tester & Foss, 2018). Older adults (65+) are affected by sleep issues at a higher rate than other age groups, it is estimated that 40%-70% of older adults experience problems with sleeping (Leland et al., 2014). Despite the importance of sleep, 35% of adults report getting less than seven hours of sleep each night and 70% of high schoolers report getting less than eight hours of sleep each night (Perry et al., 2013).

There are more than 80 different kinds of sleep disorders but the most common ones are insomnia, sleep apnea, restless legs syndrome, and narcolepsy (Centers for Disease Control and Prevention, 2014; Cleveland Clinic, 2020). Insomnia is characterized by not being able to fall asleep or difficulties remaining asleep throughout the night. Sleep apnea is characterized as minor disruptions in sleep that are often accompanied by snoring, these disruptions add up and make someone sleepier during the daytime hours. Restless legs syndrome is an unpleasant feeling in your legs that are usually accompanied with aches and pains which is resolved with leg movements. Narcolepsy is characterized by sleepiness during the day and abrupt muscle weakness.

Lack of sleep is also costing our society a lot of money and human lives. Connor et al. (2002) found that 20% of serious car crashes were the result of driver sleepiness, independent of alcohol use. Another study found that individuals with sleep apnea are 2.5 times more likely to be in a driving accident than people without (Celmer, 2015). Lack of sleep is also associated

with increased work-related injuries and deaths (Åkerstedt, 2002; Leger et al., 2002) and falls in older adults (Institute of Medicine, 2006).

Sleep has become such an issue that in 2008 the American Occupational Therapy Association's Occupational Therapy Practice Framework (AOTA, 2020a) began recognizing sleep and rest as a distinct "area of occupation". Formerly, sleep was included in the "activities of daily living" area of occupation, this move further demonstrates the association's acknowledgement of how important sleep is (Leland et al., 2014). The quantity and quality of sleep are major determinants of health. Sleep affects our biological, physiological, and psychological well-being.

It is optimal for adults to sleep 7-8 hours a night and for adolescents to sleep for 9 hours a night (Perry et al., 2013). Getting good sleep can help day to day things like prevent sickness, reduce stress, make better decisions, have better interactions with people, and improve memory and learning (U.S. Department of Health and Human Services, 2021). Poor quantity and quality of sleep are associated with cardiovascular and metabolic disorders which can lead to obesity, diabetes, heart disease, and hypertension (Perry et al., 2013). There is not a relationship between sleep deprivation and amount of adipose tissue (Hargens et al., 2013). However, it was found that there was a positive influence of exercise in sleep disorders. Exercise can improve sleep, therefore improving the negative outcomes associated with poor sleep (Leland et al., 2014). There are social implications for lack of sleep as well, like limiting engagement in social activities, limiting driving, and limiting sexual intimacy with partners (Leland et al., 2014).

Despite the importance of sleep and the implications for lack of it, sleep and sleep problems are not addressed or screened for often enough in the primary care setting (Grander & Malhorta, 2015; Ononye et al., 2019; Perry et al., 2013; Senthilvel et al., 2011; Sorscher, 2008). One study found that of 121 primary care clinics only 43% screened for sleep problems while 100% of them asked questions related to smoking and drinking, 93% for proper nutrition, and 86% for adequate physical activity (Sorscher, 2008). This may be due to the lack of knowledge of the importance of sleep by primary care physicians as Perry et al. (2013) showed that only 10% of primary care providers reported that they felt good about their knowledge of sleep and sleep problems (Senthilvel et al., 2011). Sleep needs to be asked about because not only does it affect all aspects of our well-being but it affects our perceived pain.

There is a strong connection between sleep and chronic pain (Finan et al., 2014; Grander & Malhorta, 2015; Jank, et al., 2017; Prefontaine et al., 2013; Roehrs et al., 2012). Sleep has a greater effect on pain than pain does on sleep which may be a result of more effective intervention methods for pain (Finan et al., 2014). It was found that when chronic pain and sleep disorders co-occur the individual is affected more greatly than if they have one or the other, this causes more physical and emotional disability while decreasing functional capacity.

Chronic Pain

Chronic pain is a major health care concern, it costs the U.S. an estimated $560-$635 billion each year (Hoffman, 2021; Mills et al., 2016; Stanos et al., 2016) which is more than the individual cost cardiovascular disease, cancer, or diabetes (Stanos et al., 2016). The number of people with chronic pain is unknown but it is known that the prevalence increases with age (Mills et al., 2016). Chronic pain is persistent pain that continues even after the cause has subsided because pain signals in the nervous system stay on (Mills, 2016). Chronic pain can be

defined as pain that persists for three or more months (Hesselstrand et al., 2015; Mills et al., 2016; Schneiderhan et al., 2017; Stanos et al., 2016). Chronic pain has a negative effect on our physical, emotional, and psychological well-being. Chronic pain affects an individual's independence with self-care, work, community participation, physical activity, and sex (Robinson et al., 2011). It also changes the familial and social roles of an individual (Breivik et al., 2012; Robinson et al., 2011). There is also a strong association between chronic pain and social isolation, depression, and anxiety (Breivik et al., 2012; Dahlhamer et al., 2018; Rochman et al., 2012).

As with most general health concerns individuals with chronic pain will visit their primary care physician first for pain reduction interventions. The most common primary care intervention for chronic pain is prescription pain medication (Mills et al., 2016; Upshur et al., 2010; Van Erp et al., 2019). About 66% of individuals with chronic pain were using prescription pain medication (Mills et al, 2016). This contradicts the biopsychosocial model which many believe to be the best approach to chronic pain. This model takes a more holistic view of the individual and focuses on pain management and increasing functional capacity instead of just pain reduction (Debono et al., 2013; Mills et al., 2016; Schneiderhan et al., 2017; Stanos et al., 2016). More specifically in the context of chronic pain the biopsychosocial model considers the pertinent medical history, coexisting conditions, as well as psychological, economic, and cultural factors (Stanos et al., 2016). This model recognizes that everyone's pain response and response to pain interventions is different which creates a more-client centered approach and understanding of chronic pain (Stanos et al., 2016).

One of the limitations for addressing chronic pain in primary care is that many people don't feel like they are given adequate time with the physician. It is often reported that the physician comes in and asks about the pain and writes a prescription and does not offer other interventions or support (Stanos et al., 2016; Upshur et al., 2010; Van Erp et al., 2019). Another barrier to treating chronic pain in primary care is that patients often report that their physician does not believe their pain or the severity of their pain (Debono et al., 2013; Roper et al., Upshur et al., 2010). This may be because physicians are worried about over-prescribing opioids due to societal problems with increased opioid abuse (Breivik et al., 2012; Mills et al., 2016; Roper et al., 2021; Stanos et al., 2016). There is a need for alternative interventions to prescription pain medication and for a practitioner to take more time to be able to properly address all aspects of an individual with chronic pain.

Occupational Therapy and Chronic Pain

Occupational therapists have the skills and knowledge to provide interventions to people seeking help with chronic pain. Occupational therapists consider the person, their environment, and their occupations and how those each relate to their chronic pain. Occupational therapists first validate an individual's pain before getting a better understanding of their pain and how they feel in order to gain trust and respect (Hesselstrand et al., 2015; Hoffman, 2021; Rochman, 2012). Occupational therapists will then determine what limitations the individual with chronic pain has so that they can collaborate on goals to help support and motivate the client. (Driscoll & Baker; 2016; Hoffman, 2021; Rochman, 2012). Common interventions that occupational therapists use for chronic pain are energy conservation strategies, pacing education, thermal agents, and ergonomics for work and home (Hesselstrand et al., 2015; Robinson et al., 2011; Rochman, 2012). Keeping the body moving through

conventional occupational therapy interventions and home exercise programs have also been found to reduce chronic pain (Driscoll & Baker, 2016; Hoffman, 2021; Rochman, 2012). With the strong correlation between chronic pain and sleep, occupational therapists also have the skills and knowledge to properly address sleep related problems and provide sleep interventions.

Occupational Therapy and Sleep

Many people use over-the-counter sleep medication or are prescribed sleep medication from their primary care physician but they often have negative side effects and cause grogginess the morning after use (Gutman et al., 2017; Ho & Siu, 2018). Occupational therapists can provide other interventions that do not have side effects. Occupational therapists can educate clients on proper sleep hygiene which includes setting a sleep schedule, following a nightly routine, engaging in healthy behaviors, and modifying the environment (Suni, 2021). Occupational therapists can recommend sleep prioritization, having a consistent sleep and wake-up time, limiting the use of electronics an hour before bed, not eating before bed, and engaging in a nightly routine like teeth brushing or face washing (AOTA, 2017; Fung et al., 2013; Ho & Siu, 2018). Occupational therapists can also help improve sleep by recommending physical activity, getting sun exposure, refraining from smoking and drinking alcohol, reducing noise and light, and keeping the bedroom clean. (AOTA, 2017; Fung et al., 2013; Ho & Siu, 2018). Occupational therapists should be included in primary care because of their knowledge and skills that can be used to provide effective interventions for problems related to chronic pain and sleep.

Occupational Therapy in Primary Care

Occupational therapists should be incorporated into primary care settings because not only can they provide sleep and chronic pain interventions but they can provide interventions

for a number of issues seen in primary care. Due to occupational therapist's wide skill set occupational therapists have interventions for the 15 most common conditions seen by primary care physicians which range from respiratory issues to mental and behavioral illness (Trembath et al., 2019).

Occupational therapists are also needed in primary care because there are not enough primary care physicians to supply people with adequate care (Association of American Medical Colleges, 2021; Cunningham & Valasek, 2019; Muir, 2012). Occupational therapists would not have to change or design new interventions in primary care as the interventions they would use are already being used in a variety of other healthcare settings (Benthall, 2016; Halle et al., 2018). In the primary care setting, occupational therapist would focus more on function and condition management instead of curing the condition (Bolt et al., 2019; Donnelly et al., 2014; Halle et al., 2018).

The current barriers to occupational therapy being integrated in primary care is determining the way they will be reimbursed, if occupational therapy programs need to change their curriculum slightly to emphasize primary care more, and to clearly define the occupational therapy roles in primary care to create a seamless transition for another interdisciplinary team member (Halle et al., 2018). Occupational therapists should be able to be reimbursed as occupational therapy is a specialty service (Halle et al., 2018). All occupational therapy programs could be mandated to incorporate more primary care education into their programs to help the occupational therapists feel more competent and for their colleagues to trust them. To more clearly define occupational therapy's role in primary care we can look to different international healthcare systems and see the effectiveness of how they are having occupational

therapists fit into primary care (Halle et al., 2018). Despite these barriers evidence shows the need and benefits of integrating occupational therapy into the primary care setting.

Conclusion

Occupational therapists will continue to provide effective care in many different healthcare and community settings. As our country continues to age because of the baby boomer's generation and the demand for more primary care health care workers increases there will be an ever-increasing need for occupational therapy in the primary care setting. Occupational therapists are well positioned to address preventative care and help manage chronic illness. Occupational therapists will do a great job in this setting because they will look at the individual as a whole and aim to treat the person and not just their illness. Despite the barriers of occupational therapy becoming more common in primary care, occupational therapy will continue to show its effectiveness and will be an integral part of the primary healthcare team.

Literature Review by Gretta Obeid

How Can Primary Care Integrate Occupational Therapy to Address Preventative Care for Adults?

Primary care services have been a valuable aspect of addressing patient health for years. Although many health care visits rely on treatment, primary care plays an important role in preventative care as well (World Health Organization [WHO], 2021). Primary care involves a collaboration between patients and various health care providers, in which occupational therapy is starting to emerge (Koverman et al., 2017). As occupational therapy becomes embedded in various primary care services, their role within a multidisciplinary team and their skills in preventative care are evolving. This paper aims to address the state of preventative care in primary care settings and how occupational therapy can be utilized as a meaningful service to address these needs.

Primary Care

Primary care refers to a societal approach to health care provided by team members who work together to address individualized patient care and work to promote health and well-being through their focus on prevention, treatment, rehabilitation, patient education, and chronic health management (American Academy of Family Physicians [AAFP], 2021; WHO, 2021). Primary care team members often create a partnership with their patients as they see them through continued care (AAFP, 2021) and aim to provide accessible health care services to a variety of populations (Koverman et al., 2017). Providers in primary care are trained to evaluate new clients and collaborate with them to determine their diagnosis and health concerns. Primary care services are often administered in clinical settings but can also be

provided in various health care settings, such as inpatient, long-term, home care, schools, and telehealth (AAFP, 2021).

Primary care providers can work with adults with a variety of conditions. Common conditions seen in primary care settings include abdominal pain or GI discomfort, thyroid issues, respiratory issues, general illness, mental and behavioral health, and neck and back issues (Trembath et al., 2019). Diabetes and hypertension were found to be the most prevalent conditions seen in primary care settings (Trembath et al., 2019). Through primary care practitioners' broad scope of skills and services, patients can benefit from working with providers to address their various health concerns and improving their quality of life. According to The WHO (2021), primary care is the most cost-effective and efficient way to improve patients' physical, mental, and social health and well-being. Primary care involves more inclusive and equitable care than other health care services as it involves holistic approaches and addresses other determinants of health (WHO, 2021). However, while there are many beneficial aspects of current primary care services, there remain areas of need for working with adults in this setting.

Barriers to primary care can range from environmental, cultural, societal, and personal factors that limit patients' accessibility to care. Common barriers to primary health care include lack of health insurance, language barriers, disabilities, office hours conflicting with work schedules, location and transportation barriers, and a shortage of providers (Office of Disease Prevention and Health Promotion [ODPHP], 2021). A study by Tarrant et al. (2015) found that many clients experienced poor coordination between different services and providers and poor communication throughout their care experience, especially for patients with multiple

diagnoses. Additionally, there may be a shortage of primary care providers in the near future (Association of American Medical Colleges [AAMC], 2021; Petterson et al., 2012). Many of these issues are not ones that can be fixed quickly but may require larger and lengthy systematic and legislative changes to see positive results.

Another important area of need is an improved universal acceptance of client-centered and preventative approaches to care rather than the current focus that health systems have towards specific disease treatment (WHO, 2021). Primary care providers can work with various determinants of physical, mental, and social health and wellbeing and have the capacity to be holistic and client-centered throughout the lifespan; yet many health systems may focus on specific diseases and quick treatments of symptoms instead (WHO, 2021). Primary care plays a valuable role in improving general health outcomes for patients (ODPHP, 2021) which may be affected largely by the systematic approaches to preventative care.

Preventative Care

One service primary care can provide is preventative care. Preventative care refers to health care services aimed at preventing illness or poor health outcomes (Minnesota Department of Commerce, n.d.). These services may include routine exams, check-ups, immunizations, mental health screenings, preventive medications, and counseling (Minnesota Department of Commerce, n.d.). Hensrud (2000) labels the three main types of preventative medicine as primary, secondary, and tertiary. Primary prevention refers to behaviors that stops an event from initiating, such as immunization, smoking cessation, or exercising for disease prevention. Secondary prevention represents early detection of a condition and working to slow down or block the symptoms, such as screenings. Tertiary prevention aims to prevent

worsened consequences of an already existing condition, such as cardiac rehabilitation to prevent a second heart attack (Hensrud, 2020). These descriptions show how layered and encompassing preventative care services are and the many different approaches practitioners can take to provide preventative care.

Preventative care has an important role in health care promotion. Preventative care can lead to better long-term outcomes for adults and can decrease the frequency of primary care visits for patients (Borsky et al., 2018; WHO, 2021). It can reduce the risk for various diseases, disabilities, or even death (Healthy People 2030, n.d.), which is especially pertinent as the rates of chronic diseases and unhealthy lifestyles of American adults increased over the years (Asay et al., 2016) and the leading causes of death result from chronic conditions rather than infectious diseases (Hensrud, 2020). Many of the conditions seen in preventative care are like the ones seen in primary care, such as diabetes and hypertension (Asay et al., 2016).

An important aspect to preventative care is patient education and working with patients to modify health behaviors (Asay et al., 2016). About 40 percent of deaths in the United States are related to health behaviors that could be changed (Hooker et al, 2018). Common modifiable behaviors include tobacco, drug, and alcohol use, diet, physical activity, sleep, and medication management, all of which can lead to various diseases and poorer quality of life (Asay et al., 2016; Hooker et al., 2018).

Preventative Care in Primary Care Settings

Due to its capability of working in client education, primary care is an appropriate setting for preventative care interventions to address these issues and modify poor health behaviors (Hooker et al., 2018). This study compiled various intervention techniques that can

be used to modify health behaviors. A common technique is to collaborate with patients through goal setting. This method can help clients visualize what they need to do and are then more likely to do it. Another method is through problem-solving barriers to why patients are showing poor health behaviors which can lead to finding solutions. Patients may also self-monitor their behaviors to help them recognize any patterns. Other common interventions include addressing physical inactivity, poor diet, or lack of sleep, and educating clients on medication management and smoking cessation (Hooker et al., 2018). Many of these interventions can be used to reduce the risk or symptoms of chronic health conditions commonly seen in primary care (Hooker et al., 2018).

Although preventative care has a lot of evidence showing its importance in healthcare across the lifespan, many adults are not utilizing these services. Only about 8 percent of US adults 35 and older receive comprehensive preventative services and about 5 percent of adults have never received any preventative services (Borsky et al., 2018). Some reasons for these barriers are like those to primary care services (ODPHP, 2021). Additionally, preventative services are often not prioritized in primary care appointments as many providers feel limited on time and can only address acute concerns (Muir, 2012; Murugan et al, 2018). Because of time limitations, many providers often offer preventative services based on the age and gender of the patient and their overall health and wants rather than integrating it into each appointment. Furthermore, certain screenings may be prioritized over others in a visit, such as cancer screenings over depression screenings (Hensrud, 2000; Murugan et al, 2018).

Another barrier comes from the individual providers. Providers who are more likely to provide preventative services are those who are younger, residency trained, generalists, work

in group practice, and are experienced with the US Preventive Services Task Force guidelines (Hensrud, 2000). Some physicians also do not feel competent in their ability to work on behavioral modifications or think that patients will not follow their recommendations anyway (Hensrud, 2000). As physician qualifications and skills may pose a barrier to providing preventative care, it creates a valuable opening for the promotion of multidisciplinary teams in primary care settings to combine their skills and collaborate to provide preventative services to their patients.

Multidisciplinary Care

Multidisciplinary care approaches can be used in primary care settings to improve overall care of clients and address more client needs. Multidisciplinary care is defined as multiple professionals from at least two disciplines working on the same care team (D'Amour et al., 2005). Effective collaboration between team members is necessary to provide the most positive and effective care for the clients (Saint-Pierre et al., 2018).

Currently, multidisciplinary team members in primary care often include "physicians, nurses, midwives, dentists, physiotherapists, social workers, psychiatrists, dietitians, pharmacists, administrative staff, and managers" (WHO, 2008). Although different team members provide a unique background to their services, there are various approaches or models used to distribute care between team members across settings (Leach et al., 2017; Saint-Pierre et al., 2018). These approaches may change who is responsible for preventive care, patient education, and health coaching among the team members (Leach et al., 2017; Saint-Pierre et al., 2018). Other teams may be small and mainly consist of a doctor, physician assistant, or nurse practitioner (Leach et al., 2017), or may have certain team members take

roles as a clinical leader, case manager, or expert consultant and collaborate to provide a more holistic care to their clients (Saint-Pierre et al., 2018). These various approaches allow for flexibility of integrating multidisciplinary care that best suits each setting based on their staffing, clients, and additional factors (Leach et al., 2017; Saint-Pierre et al., 2018).

An important role for multidisciplinary teams is to address preventative care. Leach et al. (2017) found that more than 40% of chronic care and more than 70% of preventative care could be addressed by team members other than physicians and that multidisciplinary approaches could improve access to care, patient satisfaction, and lessen doctor and staff burnout. Even with these benefits, there are many areas in which multidisciplinary care is lacking within primary and preventative care settings.

Physicians and other team members sometimes lack education on other team members' roles and expertise and may have difficulties communicating with each other or agreeing on plans for client care (Hassan et al., 2021). There is also a lack of providers in certain geographic areas, such as rural clinics, which makes it difficult to create multidisciplinary teams and creates challenges for providers of clients with more complex situations that require mental health needs (Leach et al., 2017). There may also be confusion about financial reimbursement and insurance coverage (Leach et al., 2017). Although multidisciplinary care helps distribute roles, there may be unequal distribution of roles and responsibilities between team members (Saint-Pierre et al., 2018). With the overwhelming responsibilities providers currently have in patient care, it creates an opportunity and need for occupational therapy to join multidisciplinary teams and take on some of the responsibilities.

Occupational Therapy

Occupational therapy practitioners have the skills to be integrated in multidisciplinary primary care teams and provide holistic care to address client needs. Due to the broad scope of practice within occupational therapy, occupational therapy practitioners may have clients with a variety of conditions, ranging from mental health, physical impairments, neurological disabilities, and developmental diagnoses (Boyt Schell et al., 2019). Depending on the clients and their barriers to participation, occupational therapy interventions can work to promote, restore, or maintain good health, modify a task or environment to support health, or prevent disability or worsened health (AOTA, 2020b). Essentially, occupational therapy practitioners have the qualifications to work in multidisciplinary teams through their work in various settings and have the skills to address many conditions that are commonly seen in primary care settings.

Trembath et al. (2019) synthesized many examples of occupational therapy interventions that can be used to address common conditions seen in primary care settings. For example, diabetes, the most common condition seen in primary care, can be addressed in occupational therapy through medication management strategies, routine management, lifestyle modifications, adaptive equipment, educating the client on foot care, safety, fall prevention, and energy conservation techniques, developing compensatory techniques to assist with any sensory loss or low vision, address physical activity needs, and perform a home assessment to make recommendations for home adaptations (Trembath et al., 2019). Many of these strategies could be utilized or modified by occupational therapy practitioners for different conditions seen in primary care and may help reduce the workload of other multidisciplinary team members who took on similar roles in their own treatment plan.

Occupational Therapy and Primary Care

occupational therapy is already integrated in some primary care settings, yet there is a need for more promotion of occupational therapy's role in this setting. Many providers are still unsure of occupational therapy's role in these settings (AOTA, 2013; Donnelly et al., 2013; Hassan et al., 2021), creating a major barrier to integrating occupational therapy into primary care. To effectively integrate occupational therapy into primary care, it is important to educate other team members of occupational therapy's role and services (AOTA, 2013; Koverman et al., 2017) and increase occupational therapy fieldwork placements into primary care settings (Donnelly et al., 2013) so that team members, students, and clients can all learn how occupational therapy is beneficial to a primary care setting.

Occupational therapy practitioners have knowledge and skills that may benefit primary care. Within these settings, occupational therapy practitioners work with multidisciplinary teams and clients to address the impact of chronic conditions on daily activities and the contextual, social, and environmental demands that may be a barrier to the clients' well-being (AOTA, 2020a). Occupational therapy practitioners understand the importance of roles, habits, and routines and how to use them to promote healthy lifestyles and lifelong care (AOTA, 2020a). Occupational therapy and primary care share similar values as well, including holistic, client-centered, health promotion and preventative strategies (Bolt et al., 2019). Occupational therapy practitioners' ability to work with other health professionals, create a multidisciplinary plan of care, and provide health education, self-management techniques, and home and community resources qualifies them for appropriate integration into primary care settings as part of a multidisciplinary care team (AOTA, 2013). Occupational therapy practitioners can work

with adults in primary care settings with a focus on preventative care to help improve long-term client health (AOTA, 2013; Bolt et al., 2019).

Occupational Therapy and Preventative Care

Occupational therapy practitioners currently apply preventative techniques to their care (AOTA, 2020b), and can integrate these techniques into a primary care setting. occupational therapy prevention interventions can be used to address age-related physical, mental, and functional decline in abilities through helping clients implement diet, lifestyle routines, social supports, fall prevention strategies, and exercise into their daily routine (Hart & Parsons, 2020). Chronic pain is a common condition seen in primary care (Hassan et al., 2021) and can greatly impact a client's ability to function, which Occupational therapy practitioners can address through pain management strategies such as identifying pain triggers and recommending adaptive techniques to decrease pain during activities (Hart & Parsons, 2020; Thomas et al., 2021). Overall, a combination of educating clients on self-management of their conditions and utilizing adaptive strategies to perform meaningful activities are common ways Occupational therapy practitioners s can promote preventative care strategies to their clients in a variety of settings. Integrating occupational therapy into primary care provides an ideal setting for preventative strategies to be addressed and help reduce the need for physician appointments as overall health outcomes improve.

Conclusion

As rates of chronic disease and aging populations continue to rise, the demand for multidisciplinary primary care teams increases, and the need for occupational therapy's integration into these teams grows with it (Winship et al., 2019). Occupational therapy

practitioners can reduce the workload of current primary care team members by using their skills to address chronic conditions, self-management techniques, and preventative care and promote positive health outcomes and improve quality of life throughout the lifespan. Although there remain many barriers to the focus of prevention over treatment in healthcare and occupational therapy's role in primary care, evidence continues to show the benefits of occupational therapy in this setting to address the need of illness prevention and lifelong health. Further research is needed to better understand how to implement occupational therapy to effectively work in a multidisciplinary primary care team and provide the highest quality care to clients.

Literature Review by Kelly O'Connor

Occupational Therapy's Role on an Interprofessional Team in Primary Care

Primary care is crucial within the healthcare system to prevent, treat, and educate individuals of various ages, ethnicities, genders, and socioeconomic statuses. It is essential for primary care providers to maintain a healthy relationship with their patients to better understand individualized long-term illness and to also promote better population health outcomes. This literature review examines key factors that promote patients' health such as impactful provider-patient relationships and interprofessional accessibility to care, while hindrances occur to patients' health by negative disregard for patient experience and predisposing factors as barriers to access primary care. Additionally, it highlights the emerging practice of occupational therapy within the setting and the contributions occupational therapy can offer to support the patients served. As occupational therapists continue to increase their roles in primary care settings, it is important to analyze the current barriers seen and how occupational therapy can benefit an interprofessional team.

Importance of Building a Relationship

Provider-patient relationships can be a determining factor to whether patients attain quality primary care access. Barriers to care occur when providers do not believe their patient's self-report or the extent of their illness (Upshur et al., 2010). This places not only distrust in providers, but also negative attributions to primary care settings. Participants with a chronic illness reported that their primary care provider had made unrealistic accusations of personal experiences and proceeded to be dismissive of the pain as if it were not real (Upshur et al., 2010). This disregards patient needs and lessens the importance of pain management

techniques, resulting in feelings of not being heard and needs left unmet. Individuals feel disregarded when their provider refuses to acknowledge or pay attention to them if they didn't use medical terminology (Ashcroft et al., 2021). Patients reported they felt they had to "earn respect" by learning medical terms for providers to take them seriously (Ashcroft et al., 2021). However, each provider creates their own therapeutic use of self and will treat or present themselves differently than the next.

Not all provider-patient relationships are inadequate. Multiple studies have provided an abundance of evidence regarding empathetic characteristics, shared decision-making, and open communication between providers and patients (Ashcroft et al., 2021; Rodriguez et al., 2007; Rowe et al., 2021; Kurklinsky et al., 2016). Patients believed their interactions with providers were more meaningful when their life experiences were acknowledged and when the provider could "speak the same language" (Ashcroft et al., 2021). These therapeutic relationship qualities reduce the suspicions of judgement while increasing the chances of desired needs being met. Participants reported that the more they visited or checked in with their provider, the higher quality of care they received (Rodriguez et al., 2007). Building a continuous relationship with your provider creates a collaborative decision-making environment and an honest communication line between the provider and the patient. Providers can be more authentically "real", so to speak, with their patients when they develop rapport (Ashcroft et al., 2021; Rodriguez et al., 2007).

There are times when providers and patients have a disconnect in their relationship. Such disconnect could be a result of misunderstandings including treatment services, education, or patient-centeredness (Ford et al., 2018). Age and the "social contract" of not

alarming your provider unless absolutely necessary can put a toll on older adult health outcomes, as they perceive providers' time as valuable and something that should not be overused (Ford et al., 2018). These perceptions could be correlated to the inability to reach your primary care provider directly, as they are busy and therefore patients end up having to share information with a receptionist or nurse, causing discomfort, frustrations, and dissatisfaction. Ultimately, the anxious feeling of not wanting to waste a providers' time can harm the mutual trust and understanding between the provider and their patient as well as the health and well-being of patients (Ford et al., 2018).

Susceptibility to Negative Health Outcomes

There are predisposing factors that make clients more susceptible to receiving negative health outcomes in primary care. The homeless population and those who are considered housing insure face the inability to receive medical attention, thus associated with poor health outcomes (Baggett et al., 2010; Martin et al., 2019). Such vulnerable populations are primarily uninsured, have additionally experienced food insecurity, and have obtained two or more medical conditions that are often left untreated. They likely cannot afford proper care nor prescriptions to alleviate pain or mental health symptoms (Baggett et al., 2010). Participants who have experienced housing insecurities were female, middle-aged, lower incomes, and of black or Hispanic ethnicity who struggle with "health-related risk behaviors, chronic health conditions, and health services utilizations" (Martin et al, 2019, p. 522). Because of the financial burden, participants have reported declines in preventative care and opting out of having a primary care provider, thus continuing to encounter poor health outcomes (Martin et al., 2019). It should be a priority to provide further support to those who are financially in need.

Patient Collaboration on an Interprofessional Team

To improve health outcomes for patients in primary care, collaboration with an interprofessional team is a vital piece to the overall puzzle. Patients on an interprofessional collaborative practice (IPCP) care team have received additional access to more specialized professionals, resulting in greater health outcomes (Rowe et al., 2021). There is evidence that certain disciplines make up an effective team for IPCP. One of which is social work, who aids in addressing social determinants of health, provide community resources, and assess and educate in diagnoses such as depression (Rowe et al., 2021). Similar to social work, occupational therapy is a profession that can contribute to an IPCP team by looking at the occupations that are meaningful to the individual and within the environment in which they participate, while adapting and modifying their surroundings, rather than solely focusing on the disability. This top-down approach is what adds meaning to an individual's everyday life and experiences (Rowe et al., 2021). While a top-down approach looks at the big picture, patients can also be seen for specific symptoms such as chronic pain.

Something that is commonly seen in patients within primary care is chronic pain. There are negative effects that come from chronic pain, for example, Kurklinsky et al. (2016) stated "From a psychosocial perspective, these people often experience high levels of emotional distress, insomnia, and impaired social and occupational functioning" (p. 1). Interdisciplinary teams can collaborate as a pain rehabilitation program to increase function and quality of life in patients who are suffering from chronic pain. Collaborative teams have consisted of both physical therapists and occupational therapists successfully. physical therapy would work on grading exercise activities to focus on reconditioning and strengthening, whereas occupational

therapy would focus on life balance with adaptations to enhance functional performance, independence, and participation. The Canadian Occupational Performance Measure (COPM) assessment would be used to measure performance and satisfaction, with pre and post-tests showing clinically meaningful significance in pain levels and function (Kurklinsky et al., 2016). The positive impact from pre to post difference on the COPM provides evidence that occupational therapy and physical therapy work successfully on an interdisciplinary team.

Education Among Health Professionals

Interprofessional teams can provide education to one another to enhance communication, accessibility, and confidence among one another while working together in a primary care setting (Carney et al., 2021; Rowe et al., 2021). Having a coaching system provides accountability and mixed professional resources, which offers reassurance when faced with difficult challenges and an increase in a positive atmosphere (Carney et al., 2021). For example, coaches help interprofessional teams discover a mutual understanding of different perspectives, as they tend to need "guidance in crossing these cultural divides" (Carney et al., 2021, p. 7). Additionally, having student-led care teams provides increased productivity and proficiency as an added value to the team-based primary care setting (Rowe et al., 2021). Seeking out knowledge from other professions as well as students can be advantageous when merging into a care team.

Knowledge and accessibility of other health professions is important in primary care settings. occupational therapy students who have worked within an interprofessional program (IP) recognize the roles and responsibilities of other health professionals on the team (Halle et al., 2019). Regarding geriatrics in primary care, students felt a positive change in perceptions

toward other professions when allowed the opportunity to gather structured information, observe specific skills, and have hands-on experience within IP (Halle et al., 2019). After students graduate and become practitioners, IP education can translate what they learned from other health professionals to maintain a positive perception and relationship with each team member (Halle et al., 2019). Likewise, having that close connection as an interprofessional team would make it easier for each health professional to know who to make a referral to when a service is out of one's scope of practice. Although it is important for all health care professionals to understand each other, it is just as important for patients of each profession to understand and be aware of the services that are being offered.

From a patient's point of view, health care teams can provide familiarity and an accessible centralized concept such as a one-stop shop (Ashcroft et al., 2021). Becoming familiar with the types of services that are available is important for pursuing support and addressing each patient's unmet needs. Primary care teams can assist with easier access to mental health services under the same roof as other typical services to reduce the fear of stigmatization, rather than patients having to attend organizations known to deliver mental health services exclusively" (Ashcroft et al., 2021). It is critical to provide confidence in each patients' recovery process within the same location as other services, not only to show it is a safe place, but to develop rapport for future discussions.

Occupational Therapy and Provider/Patient Perceptions

occupational therapy helps individuals at every stage of life complete the activities they want and need to do to feel successful each day, by providing strategies to overcome personal barriers (AOTA, 2021). It is one of the few professions that encourages all ages to strive for a

better quality of life, no matter the injury or disability, by providing full inclusion, supporting all life changes, and collaboratively motivating recovery every step of the way (AOTA, 2020; AOTA, 2021). Occupational therapists complete a wide range of training to identify supports and barriers from a holistic perspective that is both client-centered and occupation-based (Dahl-Poplizio et al., 2017). These characteristics add value to and compliment other health care professional roles in primary care.

Health care professionals have certain perceptions of an occupational therapy's role in a primary care team, depending on what they already know or learn about occupational therapy. Providers who have had no previous knowledge about an occupational therapy's role showed hesitations on collaborating as a team until given education about how occupational therapy can benefit and contribute to the team (Pyatak et al., 2019; Merryman & Synovec, 2020). Additionally, being under the same roof, providers can observe how occupational therapy's compliment what other team members cannot address. For example, Pyatak et al. (2019) stated, "what they brought to the table for a lot of our patients was something that a lot of us had been looking for and don't have the time or resources to be able to provide" (p. 6). Providers view occupational therapy as highly important when encountering complex conditions, due to their unique ability to identify deficits and understanding the unmet needs of the patient (Merryman & Synovec, 2020). Understanding concerns additionally provides a sense of relief and comfort to the patient.

Occupational Therapy's Role to Support Healthcare Needs

occupational therapy has a unique lens to focus on a patient's roles and routines while considering their context. This lens gives occupational therapy the ability to address underlying

conditions that co-occur with other commonly seen diagnoses in a primary care setting (Trembath et al., 2019; Leland et al., 2017). For example, many conditions such as chronic pain, depression, anxiety, and diabetes affect a person's sleeping habits. occupational therapy can address self-regulation simultaneously in each domain by addressing an array of environmental modifications to improve sleep and in turn, enhance occupational performance and overall health (Gutman et al., 2017; Leland et al., 2016). This solidifies the true value that occupational therapy has for primary care providers when further assistance on prevention, wellness, and health promotion strategies are needed.

Primary care providers described barriers to providing pain care as lack of expertise, low efficacy and safety measures, and lack of plans for how to manage pain within their scope of practice (Dorflinger et al., 2014). Pain management and prevention is one of the many key focuses within the scope of occupational therapy. While on an interprofessional care team, occupational therapists support patients in coping with conditions that physically, mentally, or emotionally affect them, especially when other professions are not as highly skilled in that realm (Bolt et al., 2019). Strategies such as health education and assistive technology are utilized to prevent further disability or injury, increase social engagement, and continue prior activities in a modified way (Bolt et al., 2019). Occupational therapists help interprofessional teams practice more efficiently by communicating to the rest of the team how patients' routines, roles, and habits impact managing their chronic condition(s) and how it might look to develop new healthy lifestyles in collaboration with the patient (AOTA, 2020). It is important for occupational therapy to justify their roles and responsibilities as a generalist on an

interprofessional team in primary care by filling in the current gaps of existing services (AOTA, 2020; Pyatak et al., 2019).

Conclusion

Barriers to primary care include the lack of knowledge and abilities needed to address the unmet needs of the patients served. Enhancing provider-patient relationships is important for developing rapport to allow patients to feel acknowledged, motivated to take steps toward achieving progress, and have a mutual understanding regarding their health and well-being. Additionally, relationships will help guide the decision-making process with not only the patient, but their family as well. There are reasons, however, why some people cannot utilize or access health services as much as they would like to. Insecurities relate to the lack of preventative care and thus, have decreased health outcomes as a result. Interprofessional teams can improve health outcomes by connecting patients to more specialized and community resources that are both affordable and meaningful to the population. Interprofessional teams work most effectively when cultural perspectives and divides are understood among all health professionals. Accessibility and recognition of all team members' roles is just as important to maintain integrated together as one.

occupational therapy adds a holistic perspective to an interprofessional primary care team. They strive to reach full potential in all aspects of every patient's life. They also act as a generalist to compliment other professionals' roles by filling in the gaps of current services. Providers view occupational therapy as unique and value-added, for their expertise is something most providers search for but do not have the resources available to provide competently themselves. Primary care mainly focuses on health promotion, wellness, and

prevention, which are coincidentally the major approaches in occupational therapy. As an emerging area of practice, Occupational therapists need to stand up, take action, and advocate for their spot at the table by emphasizing their unique abilities to bring forth to the team. It would be important for primary care to establish interprofessional education to promote and spread awareness on the integration of occupational therapy.

Literature Review by Allison Park

Literature Review: Occupational Therapy in Primary Care

To an occupational therapy practitioner, occupational therapy has an obvious place on the primary care team. However, a lack of understanding of how occupational therapy can benefit clients in primary care impacts occupational therapy's integration into this setting. Empirical evidence demonstrates how specifically occupational therapy improves the lives of primary care patients through holistic and client-centered care. Research supports the success of occupational therapy interventions in pain management, diabetes self-management, and a combination of the two.

Primary Care Setting

Areas of Need in Primary Care

Although occupational therapy in primary care is emerging, the research identifies specific areas occupational therapy can benefit primary care. Typically, primary care involves a team of people collaborating and providing care (Jordan, 2019; Saint-Pierre et al., 2018). Primary care is often a starting point for patients in the healthcare system, and from there, physicians refer patients to specialized providers and services (Jordan, 2019). occupational therapy can benefit several areas of primary care because of its holistic view of health and the person (Garvey et al., 2015; Trembath et al., 2019). Evidence-based research shows occupational therapy can help with medical management, mental health and substance abuse, cognitive-behavioral issues, and occupational challenges **(**Trembath et al., 2019; Winship et al., 2019). Often, conditions treated by primary care physicians have underlying behavioral or mental health influences, and the holistic approach of occupational therapists makes them

uniquely fit to address the whole person **(**Jordan, 2019; Trembath et al., 2019). There are evidence-based occupational therapy interventions to treat the condition or underlying factors of the condition for the 15 most common diagnostic categories by ICD-10 codes in a primary care setting, such as diabetes (Trembath et al., 2019). It is clear how occupational therapists can benefit patients in the primary care setting, but first they must be accepted and valued as part of the primary care team.

Integration of Occupational Therapy into Primary Care

Several strategies can be utilized for occupational therapists integrating into the primary care setting. Education is essential for integrating occupational therapy into primary care (Donnelly et al., 2013; Trembath et al., 2019). It is necessary to educate practitioners in other disciplines on how occupational therapy can benefit their interdisciplinary teams and to inform clinic administrators of the cost-effectiveness of bringing occupational therapy into their setting (Donnelly et al., 2013; Laguex et al., 2018; Trembath et al., 2019). Educating other healthcare professionals on the role of occupational therapy in primary care is especially important in the early stages of integration as both occupational therapists and physicians agree that a solid understanding of the benefit occupational therapy can bring to this setting is crucial for successful integration (Donnelly et al., 2013; Jordan, 2019; Trembath et al., 2019)**.** Additionally, using occupation-based interventions demonstrates to practitioners and the primary care team the unique value occupational therapy can add to primary care. When occupational therapists can intervene and take on some of the more occupation-based aspects of primary care, this allows physicians to focus on more medically complex cases (Laguex et al., 2018; Trembath et

al., 2019). This delegation of expert areas is one way occupational therapy in primary care is cost-effective.

Pain

Pain Management in the Primary Care Setting

Pain management is one area occupational therapy can benefit clients in the primary care setting. Chronic pain affects millions of people. It is expensive due to the costs on healthcare systems and loss of productivity, and negatively impacts quality of life (Gatchel et al., 2014; Gautam et al., 2015; Simon & Collins, 2017). Pain management strategies that align with the traditional medical model, such as medications, do not always have long-term benefits, and people may become dependent on them (Gatchel et al., 2014; Gautam et al., 2015; Simon & Collins, 2017). The Center for Disease Control and Prevention (CDC) recommends not using opioid treatments for pain, when possible, to limit the risks associated with opioid treatment, such as opioid use disorder (Dowell et al., 2016; Simons & Collins, 2017). Occupational therapy can help individuals experiencing chronic pain live fulfilling and productive lives through non-pharmacological methods. For example, occupational therapists can work with clients to identify what makes the pain worse and adapt routines and ways of completing occupations to experience less pain (Hart & Parsons, 2020; Hesselstrand et al., 2012).

Although chronic pain is one of the most common complaints of patients in primary care, there is a disconnect between primary care physicians and their patients when it comes to pain. Not only in terms of communication but also disagreements on whether to use opioids for pain management (Upshur et al., 2010; Winship et al., 2019). Regarding her pain and

experience with a primary care physician, one patient said, "If they don't want to give you narcotics that's fine, give me [something else]. Don't tell me to go home and take Motrin" (Upshur et al., 2010, p. 1794). This patient's experience is an example of how occupational therapy could intervene and provide non-pharmacological interventions for pain. An occupational therapist can help bridge this gap between patients experiencing pain and their physicians by implementing non-pharmacological methods into patients' existing daily routines. Additionally, the occupational therapy approach is very patient-centered, which will help the patients feel like their concerns are being heard and addressed, which is an integral part of providing excellent patient care.

Occupational Therapy Interventions for Pain Management

Despite occupational therapy being new to the primary care setting, there is research being done on occupational therapy interventions for pain management that occupational therapists could implement into the primary care setting. Evidence supports that occupational therapy-led pain management programs have shown improved self-efficacy and confidence in participants' ability to manage their pain, which improves overall daily functioning (Simon & Collins, 2017; Thomas et al., 2021). Additionally, the evidence supports that lifestyle modification programs that address pain management through modifying routines and habits help mitigate their pain's physical and psychological effects (Nielsen et al., 2021; Simon & Collins, 2017). It is important to note that most of the literature on occupational therapy interventions for pain management has been completed on small sample sizes. It will be imperative for future research to increase the sample sizes to strengthen the literature and make this research more generalizable.

Diabetes

Diabetes Management in the Primary Care Setting

Occupational therapy can also benefit patients with diabetes in the primary care setting. Like pain, diabetes is a highly prevalent and costly health issue (Riddle, 2018; Shen & Shen, 2019; Skovlund & Peyrot, 2005). People living with diabetes are experiencing more challenges than they need to because diabetes is a complex disease to manage, and people are not equipped with the necessary tools to self-manage (Riddle, 2018; Shen & Shen, 2019; Skovlund & Peyrot, 2005). Self-management is where occupational therapy can intervene and improve the lives of individuals living with diabetes. Occupational therapy is uniquely positioned to help clients with self-management of diabetes by implementing lifestyle changes into their existing routines and habits (Pyatak et al., 2018; Shen & Shen, 2019; Trembath et al., 2019). Physicians may instruct patients to manage their condition, but follow-through can be difficult without guidance and strategies for implementing recommendations. Making the necessary lifestyle adjustments to manage diabetes can be overwhelming for patients and cause psychosocial concerns. There is evidence that there are gaps between patient and provider communication regarding diabetes self-management, especially the psychosocial aspects (Shen & Shen, 2019; Skovlund & Peyrot, 2005). The holistic nature of occupational therapy is uniquely fit for addressing the physical and psychosocial aspects of diabetes care and management and can address these concerns in the primary care setting.

Occupational Therapy Interventions for Diabetes Management

Self-management interventions are being studied for diabetes management in primary care. Self-management interventions help individuals learn skills to manage their disease and ways to implement these skills into their existing routines (Smallfield, 2021). The most common conditions treated in primary care require behavioral interventions, such as self-management and lifestyle modifications (Trembath et al., 2019). Occupational therapy self-management interventions for diabetes can improve glycemic control, quality of life, and diabetic foot care (Pyatak et al., 2018; Smallfield, 2021; Trembath et al., 2019). Although these studies show potential in how occupational therapists can improve the lives of patients with diabetes, the small sample sizes warrant further research to strengthen the evidence.

In addition to self-management interventions being effective, there is also evidence to support the effectiveness of peer-led diabetes interventions. Peer-led diabetes self-management groups are led by community health workers who share similar culture and are trusted by community members (Haltiwanger, 20212; Spencer et al., 2018). Having a group led by someone who is trusted by the participants and share similar values is especially important when working with minority groups who may have less access and trust in the healthcare system. Peer-led diabetes self-management groups can improve empowerment, self-efficacy, glucose levels, and attitude in participants (Haltiwanger, 2012; Philis-Tsimikas et al., 2018; Spencer et al., 2018). Additionally, intervening early after someone's diagnosis with diabetes can help them manage their disease early on rather than attempting to manage independently and getting discouraged when they are not successful (Haltiwanger, 2012). Occupational therapists can act as consultants for these programs to educate the community health workers leading the groups which can help lower costs and demonstrates why it is important for

occupational therapists to be a part of the primary care team to help with diabetes management right away. Peer-led diabetes self-management groups are also relatively low-cost (Philis-Tsimikas et al., 2018; Spencer et al., 2018). These studies had small sample sizes, which is a limitation in the evidence, but the initial findings are promising.

Pain and Diabetes Management

Some clients experience both chronic pain and diabetes simultaneously and it is important to address these conditions together (Andreae et al., 2018; Bair et al., 2020; Krein et al., 2005; Krein et al., 2007). Chronic pain impacts the ability to follow self-management programs for chronic conditions, which can already be difficult to follow without the complication of pain (Andreae et al., 2020; Krein et al., 2007). Therefore, individuals experiencing chronic pain and diabetes may need further support in following through with their self-management programs recommended by their physicians. Occupational therapists can address chronic pain and diabetes self-management, but also the psychological impact both chronic conditions have, such as depression (Bair et al., 2010; Krein et al., 2007). Occupational therapists address the whole person, which includes their mental health. occupational therapy can help clients develop coping skills and mindfulness strategies to manage their mental health symptoms that accompany their physical chronic conditions. Opioids may help with pain but do not address the mental health concerns that clients with chronic conditions experience. Non-pharmacological methods are better options for pain management when the person also has diabetes, because opioids can also impact diabetes self-management outcomes (Gatchel et al., 2014; Gautman et al., 2015; Rose et al., 2009). In addition to impacting the ability to follow diabetes self-management programs, using opioids for chronic pain management long-term can

put patients at risk for opioid misuse and psychological distress (Gatchel et al., 2014; Gautman et al., 2015). When a person is experiencing multiple chronic health conditions it is important to address the impact of their conditions on all facets of their health. The holistic approach of occupational therapy helps the individual live a fulfilling life despite their health conditions, whereas opioids are a quick fix that only address the physical aspects of a condition and can also have detrimental effects on mental health due to their high risk of dependency.

Conclusion

Ultimately, the evidence supports that occupational therapy can benefit patients in primary care. Occupational therapy interventions that address pain, diabetes, and the two simultaneously, are proven to be effective, however, further research is necessary to strengthen evidence-based practice in primary care. Intervention studies with larger samples will strengthen the evidence. Additionally, further research is needed to demonstrate the value occupational therapy can bring to patients in the primary care setting to supplement other disciplines and provide optimal patient care. This will help patients and other healthcare practitioners understand the benefits of occupational therapy which will allow occupational therapy to better integrate into primary care.

Appendix B: Needs Assessment Questions for Stakeholders

1. How do clients make appointments? With whom do they make appointments?

2. How do clients hear about the SMMART Clinic? How are they referred? How is the clinic advertised?

3. What information is given to the client? How do they prepare for an appointment? How are directions to the clinic provided?

4. When can they call the clinic? Is the person on the phone bilingual?

5. What is the history of the clinic or other information about the clinic?

6. How did the clinic start?

7. How were the four tenets of facility developed? Why are these the tenets?

8. What does the Mission & Vision of the clinic mean to you?

9. Where is the clinic going?

10. Where does the clinic get funding?

11. Which staff get paid?

12. How is equipment paid for?

13. How do people become volunteers?

14. What resources are provided for clients?

15. Where do these resources/equipment/supplies come from?

16. What current handouts are available?

17. What handouts are actually being used? What are the go-to handouts you grab?

18. What is missing regarding handouts?

19. What electronic resources (i.e., Mayo, Harvard) are used for client education?

20. Do translators get paid?

21. Is there training for translators?

22. How do you know when to refer to other providers?

23. What other professions would be a good addition to the clinic?

24. What ages can utilize the clinic?

25. What are common diagnoses seen at the clinic?

26. What are the primary languages spoken by clients?

27. How is client satisfaction measured?

28. What do patients want/need?

29. What do you see as the biggest barriers to accessing this clinic/health care in general?

30. What are the overall strengths of the clinic?

31. What would you change? How?

Appendix C: Patient Education Handouts for the SMMART Clinic

Apps for Better Sleep-English

ST. CATHERINE UNIVERSITY
Occupational Therapy

Apps for Better Sleep

Calm

- Ranked as the number one app for sleep, calm, and relaxation
- Guided meditation sessions in many lengths (3-25 mins)
- Bedtime stories to help with falling asleep
- Cost: $14.99/mo or $69.99/yr

Headspace

- Helps to decrease stress and increase sleep
- Meditations for dealing with sadness, anger, and change included
- Cost: $12.99/mo or $69.99/yr

Insight Timer

- Guided meditation and talks from professionals
- Helps with calming the mind, reducing levels of anxiety, managing stress, sleeping, and improving overall happiness.
- **FREE** with optional purchase

Sleep Cycle

- Sleep analysis with sleep cycle sound technology
- Detailed sleep facts and graphs
- Variety of alarm sounds and snooze options
- **FREE** with optional purchase

Sleepzy

- Smart alarm clock function and sleep pattern tracking
- Collection of sounds and music to help relax
- Breathing techniques and daily tips
- **FREE** with optional purchase

*All apps are android and IOS compatible.
*All apps are offered in English and Spanish.

Apps for Better Sleep-Spanish

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Aplicaciones Para Dormir Mejor

Calm

- Clasificado como la mejor aplicación para el sueño y la relajación
- Sesiones de meditación guiadas con variedad de duración (3-25 min)
- Cuentos para ayudar a dormirse
- Precio: $14.99/mes o $69.99/año

Headspace

- Ayuda a disminuir estrés y aumentar sueño
- Meditaciones para controlar la tristeza, el enojo, o cambios de vida
- Precio: $12.99/mes o $69.99/año

Insight Timer

- Meditación guiada y charlas de profesionales
- Ayuda a calmar la mente, disminuir niveles de ansiedad y controlar el estrés. Mejora la felicidad general
- **GRATIS** con compras opcionales

Sleep Cycle

- Análisis de sueño con tecnología de sonido del ciclo de sueño
- Gráficos detallados
- Variedad de sonidos de alarma
- **GRATIS** con compras opcionales

Sleepzy

- Despertador con seguimiento de patrones de sueño
- Sueños y música de relajación
- Técnicas de respiración y consejos diarios
- **GRATIS** con compras opcionales

*Todas las aplicaciones son compatibles con Android e IOS
*Todas las aplicaciones se ofrecen en inglés e español

Chronic Pain-English

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Occupational Therapy

Chronic Pain

WHAT IS CHRONIC PAIN?

- Pain that will not go away after a long period of time is chronic pain
- A common place people experience chronic pain is in the back
- Pain is important because it tells you when something is wrong or healing
- Not all pain means you're hurt

WAYS TO LOWER PAIN

- Decrease stress! Stress and pain are closely related
- Remain active and moving
  - Try going for walks, doing light stretching, or doing something else you enjoy
- Use relaxation methods daily
  - Try doing mindfulness activities
- Remain social and attend family/friend gatherings
  - Being in pain can decrease your ability to go to social events, but staying connected is important
- Continue doing the things you enjoy or find a new method to do those things
- Increase sleep
- Use a rice sock as needed
- Change your diet
- Keep a good posture throughout the day
- Limit the amount of lifting you do, if possible
- Push materials across the floor instead of lifting them if you can

SAFE LIFTING TECHNIQUES TO DECREASE BACK PAIN:

1. Position yourself in front of the object.
2. Have a shoulder-wide stance.
3. Place one foot a little in front of the other to increase your balance.
4. Lower yourself to the object by bending your knees.

- Do not bend with your back and stomach.

5. Grip the object firmly with both hands.
6. Bring the object close to your body.
7. Stand up keeping your back straight.
    - If the object is too heavy, set it back down

DOES DIET IMPACT PAIN?

- Yes, your diet can impact pain!
- Changing what you eat may decrease your pain.
- Things you can do:
    - Drink more water.
    - Increase the number of vegetables and fruits you eat.
    - Increase grains and fibers in your diet.
    - Eat more plant-based fats, like avocados, nuts, and seeds.
    - Substitute olive oil instead of butter, if possible.
    - Limit your salt and sugar intake.

HOW TO MANAGE PAIN AT HOME

1. What level is your pain right now?

2. What part of your body is in pain?

_____

3. What helped decrease your pain?

_____

4. What did not help your pain?

_____

FOR MORE INFORMATION GO TO:

Chronic Pain-Spanish

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Dolor Crónico

¿Qué es el dolor crónico?

- El dolor que no desaparece después de un largo período de tiempo
- Lugar común de dolor crónico es en la espalda
- El dolor es importante porque nos dice cuando algo es mal
- No todo el dolor significa que está herido

MANERAS DE REDUCIR EL DOLOR

- ¡Disminuya el estrés! El estrés y dolor son relacionados
- Mantenga una vida activa
  - Intente salir a caminar o hacer estiramientos ligeros
- Utilice métodos de relajación
  - Trate de hacer actividades de atención plena
- Permanezca social y asista a reuniones con familiares y amigos
  - El dolor puede disminuir su capacidad de asistir eventos sociales, pero manteniendo conectado es importante
- Continúe haciendo las actividades que disfruta o encuentre un nuevo método de hacer las actividades
- Aumente el sueño
- Utilice un calcetín de arroz según sea necesario
- Cambie su dieta
- Mantenga una buena postura durante el día
- Limite la cantidad de levantamiento que hace
- Empuje materiales por el piso en lugar de levantarlos si puede

TÉCNICAS DE LEVANTAMIENTO SEGURO PARA DISMINUIR EL DOLOR DE ESPALDA

1. Colóquese al frente del objeto
2. Tenga una postura de ancho de hombros
3. Coloque un pie un poco delante del otro para aumentar el equilibrio

4. Baje hasta el objeto, doblando las rodillas
    - No doble con la espalda ni el estómago
5. Sujete el objeto firmemente con sus manos
6. Traiga el objeto a su cuerpo
7. Ponte de pie, manteniendo una espalda recta
    - Si el objeto es demasiado pesado, vuelva a colocarlo

¿LA DIETA IMPACATA EL DOLOR?

- ¡Sí, su dieta puede impactar su dolor!
- Cambiando su dieta puede mejorar su dolor
- Cosas que puede hacer
    - Bebe más agua
    - Aumente su consumo de vegetales y frutas
    - Aumente los granos y las fibras en su dieta
    - Coma más grasas de origen vegetal, por ejemplo aguacates, nueces, y semillas
    - Sustituya el aceite de oliva en lugar de mantequilla
    - Limite su consumo de sal y azúcar

COMO MANEJAR TU DOLOR EN CASA

1. ¿Cuál es su nivel de dolor en este momento?

2. ¿Qué parte de su cuerpo tiene dolor?

_____

3. ¿Qué ayuda a disminuir su dolor?

_____

4. ¿Qué no ayudó a su dolor?

_____

PARA MÁS INFORMACIÓN:

Diabetes Management- English

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Occupational Therapy

Diabetes Management

Remember the Diabetes ABCs

- **A1C:** This shows your blood sugar levels for the past 3 months. For most people, the goal is less than 7%. Talk to your doctor to find out your goals.
- **Blood Pressure**: Monitor your blood pressure to work towards goals with your doctor.
- **Cholesterol:** "Bad cholesterol" can build up and clog your blood vessels. Ask your doctor what your cholesterol numbers should be.

Follow Your Diabetes Meal Plan

Make a diabetes meal plan with your doctor, and try to follow it! It will help you manage your blood sugar, blood pressure, and cholesterol. This means choosing foods like:

- Fruits and vegetables
- Chicken or turkey without the skin
- Less fatty meats and fish
- Low-fat milk and cheese
- Water instead of sugary drinks

Exercise and Stress Management

Exercise can help lower your blood pressure, blood sugar, and cholesterol. Try to move your body for 30 minutes each day. Walking and swimming are good ways to move. Diabetes can be stressful. Try these to help with your stress:

- Deep breathing
- Yoga
- Take a walk
- Gardening
- Listen to music
- Do a hobby
- Sleep 7-8 hours a night
- Quit smoking

Manage Your Medications

Take the medicine your doctor gives you for your diabetes and other health problems. Use a pill box or ask family if you need help taking your medicine. Tell your doctor if you have any side effects.

Check Your Skin and Feet

Some people with diabetes lose feeling in their feet. Check the bottoms of your feet each day for cuts, cracks, redness, swelling, or sores. Look for changes to the skin or nails. Use a mirror or ask a family member if you need help. Talk to your doctor if you notice any changes. ***Here are some tips to care for your feet:***

- Check your feet each day
- Wear shoes that fit
- Don't go barefoot
- Wiggle your toes throughout the day
- See your doctor often

Stay in Touch with Your Health Care Team

See your health care team at least 2 times a year. See them more if you have a hard time managing your diabetes. Your health care team may include a:

- Primary doctor
- Diabetes specialist
- Dietitian
- Pharmacist
- Nurse
- Dentist
- Eye doctor
- Foot doctor
- Social worker
- Counselor

What to Do if Your Blood Sugar is Too High or Low

If your blood sugar is high or low, talk with your healthcare team. You may need to change your exercise, medication, or diet. These may help at home:

When Blood Sugar is High *(More than 130 mg/dL before meals or more than 180 mg/dL after meals)*	**When Blood Sugar is Low** *(Less than 70 mg/dL)*
Exercise unless your blood sugar is more than **240 mg/dL**. Otherwise, call your doctor right away	Have a snack (½ cup of juice, fruit, crackers) and check your blood sugar after 15 minutes

For more information, see:
American Occupational Therapy Association https://tinyurl.com/2x3nnzcj
CDC https://tinyurl.com/3u9xyvss
Diabetes.org https://tinyurl.com/2p95k56p
Mayo Clinic https://tinyurl.com/3v57scc7
National Institute of Diabetes and Digestive and Kidney Diseases https://tinyurl.com/4atukvs2

Diabetes Management- Spanish

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Occupational Therapy

Control de Diabetes

Recuerde los Niveles

- **A1C:** Muestra sus niveles de azúcar en la sangre durante los últimos 3 meses. Para la mayoría de las personas, la meta es menos de 7%. Hable con su médico para conocer sus objetivos.
- **Presión Arterial**: Controle su presión arterial para trabajar hacias las metas con su médico
- **Colesterol:** El "colesterol malo" puede acumularse y obstruir sus vasos sanguíneos. Pregúntele a su médico cuáles deberían ser sus niveles de colesterol

Siga su Plan de Comida

Haga un plan de comidas para la diabetes con su médico. Le ayudará a controlar el nivel de azúcar en la sangre, la presión arterial y el colesterol. Elija alimentos como:

- Vegetales y fruta
- Pollo o pavo sin el piel
- Carnes y pescados menos grasos
- Leche y queso bajo en grasa
- Agua en vez de bebidas con azúcar

Ejercicio y Manejo de Estrés

El ejercicio puede ayudar a reducir la presión arterial, el azúcar en la sangre y el colesterol. Trate de mover su cuerpo durante 30 minutos cada día. Caminando y nadando son buenas maneras de moverse. La diabetes puede ser estresante. Pruebe estas actividades para ayudar con el estrés:

- Respiración profunda
- Yoga
- Dar un paseo
- Jardinería
- Escuchar a música
- Hacer un pasatiempo
- Dormir 7-8 horas al noche
- Dejar de fumar

Maneja sus Medicaciones

Toma los medicamentos que su médico le dé para su diabetes y otros problemas de salud. Use un pastillero o pregunte a su familia si necesita ayuda para tomar su medicamento. Informe a su médico si tiene algún efecto secundario.

Revise su Piel y Pies

Algunas personas con diabetes pierden la sensibilidad en los pies. Revise las plantas de los pies cada día para detectar cortes, grietas, enrojecimiento, hinchazón o llagas. Busque cambios en la piel o las uñas. Use un espejo o pregúntele a un familiar si necesitas ayuda. Hable con su médico si nota algún cambio.

Consejos para cuidar sus pies:

- Revise sus pies cada día
- Use zapatos que queden bien ajustados
- No andes sin zapatos
- Mueva los dedos de pies durante el día
- Consulte a su médico con frecuencia

Mantenga en Contacto con su Salud

Consulte a su equipo de médico al menos 2 veces al año. Les consulte con más frecuencia si tiene dificultades en controlar su diabetes. El equipo puede incluir:

- Médico primario
- Especialista de diabetes
- Dietético
- Farmacéutico
- Enfermero
- Dentista
- Oculista
- Podólogo
- Trabajador social
- Consejere

Diaphragmatic Breathing- English

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Occupational Therapy

Diaphragmatic Breathing

The diaphragm is a large muscle located at the base of the lungs that helps in breathing. The stomach muscles help the diaphragm empty the lungs of air when exhaling. Diaphragmatic breathing is also called belly breathing. It is used as a way to relax and slow down breathing rate. This can lower the body's need for oxygen.

Benefits

- Decrease stress
- Decrease anxiety
- Decrease pain
- Help with sleep disorders
- Lower blood pressure
- Reduce muscle soreness

How to Breathe using the Diaphragm

1. Find a quiet place and get into a comfortable position, either sitting or lying down

For more information: https://tinyurl.com/bdha2rae

2. If sitting, try to sit up straight and not slouch. If laying down, you can place a pillow under your head
3. Place one hand on the stomach and one on the chest
4. Breathe in for 4 to 10 counts through the nose, feeling stomach rise and letting the belly expand like a balloon.
5. Breathe out through the mouth for 4 to 10 counts, letting all the air out of the belly, and feel your stomach flatten again.
6. Repeat steps 4 and 5 for another 5 minutes or until you feel relaxed.

Diaphragmatic Breathing- Spanish

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Respiración Diafragmática

El diafragma es un músculo grande ubicado en la base de los pulmones que ayuda a respirar. Los músculos del estómago ayudan al diafragma a vaciar el aire de los pulmones al exhalar. La respiración diafragmática también se llama respiración abdominal. Se utiliza como una manera de relajarse y ralentizar la frecuencia.

Beneficios

- Reducir estrés
- Reducir la ansiedad
- Reducir el dolor
- Ayuda a dormir
- Disminuye la presión arterial
- Reduce el dolor muscular

Como Respirar Usando el Diafragma

Para más informacion: https://tinyurl.com/bdha2rae

1. Encuentre un lugar tranquilo y manténgase en una posición cómoda, sentado o acostado.
2. Si está sentando, trate de sentar recta. Si está acostado, puede usar una almohada para su cabeza.
3. Posicione una mano en su estómago, la otra en su pecho
4. Respire por 4-10 segundos, inhalando por la nariz, sintiendo su estómago expandirse como un globo.
5. Exhale por su boca por 4-10 segundos, dejando todo el aire de su cuerpo a salir.
6. Repita los pasos 4 y 5 por 5 minutos o hasta que se sienta relajado.

Energy Conservation- English

Saving your Energy

Saving your Energy

- Changing how you do your daily activities can make you less tired and your muscles less sore
- Look at what you usually do in your day and plan activities when you have more energy
- Decide which activities are important and must get done on a day
- Use these tips at work when doing activities for fun, and around the house

Order of Activities

- Do hard activities when you have the most energy
  - Most people have more energy when they wake up
- Do important activities first
- Save easy activities for when you have little energy

Speed

- Take many small breaks, not a few long breaks
- Do not rush
- Rest before you feel tired
- Breathe slow and steady
- Ask for help when needed

Plan

- Get all items you need before you start a task
- Plan time for work, fun, exercise, and rest

Position

- Sit down to complete a task when you can
  - Make sure your body is supported
- Do not work outside in the heat if possible
- Keep your back and neck straight so you can breathe easier

Sources:
https://tinyurl.com/3d5fbcea
https://tinyurl.com/ycymav9t
https://tinyurl.com/2bxd53z3

Energy Conservation- Spanish

ST. CATHERINE UNIVERSITY
Occupational Therapy

Conservando su Energía

Conservando su Energía

- Cambiando como hace sus actividades diarias puede hacerse menos cansado y sus músculos menos adoloridos.
- Refleje en lo que haces en su vida cotidiana y planee actividades para tiempos en que tiene más energía.
- Decida cuáles actividades son importantes y que necesitan ser completadas cada día.
- Use estos consejos cuando está haciendo actividades en casa o para pasar el tiempo.

El Orden de Actividades

- Haga las actividades más difíciles cuando tenga más energía
  - La mayoría de la gente tiene más energía cuando despierte
- Haga las actividades más importantes primeras
- Guarde las actividades fáciles para cuando tenga poca energía

La Velocidad

- Tome muchos descansos cortos en vez de menos descansos largos
- No se apresure
- Descanse antes que siente cansado
- Respire lentamente
- Pregunte por asistencia cuando lo necesita

El Plan

- Prepare sus objetos que necesitas antes de empezar la tarea
- Planifique tiempo para trabajo, divertes, ejercicio y relajación

La Posición

- Siéntase cuando complete una tarea.
  - Asegúrese que su cuerpo esté apoyado
- No trabaje afuera en el calor si es posible
- Mantenga una espalda y cuello recta para que puede respirar con más facilidad

Para más información:
https://tinyurl.com/3d5fbcea , https://tinyurl.com/ycymav9t , https://tinyurl.com/2bxd53z3

Guided Meditation- English

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Guided Meditation

What is guided meditation?

- A wellness practice that trains the mind to improve awareness, attention, and compassion
- Meditation involves focusing on your breath and allowing thoughts to come and go without judgment
- Guided meditation is when a person or a recording of a person helps lead you through the practice

Who is guided meditation for?

- Everyone!

What are the benefits of guided meditation?

- Lowers stress
- Improves focus
- Improves self-esteem
- Relieves pain
- Helps control anxiety
- Decreases chance of illness
- Improves sleep
- Help against addiction or cravings

Tips for Guided Meditation

- Start with short sessions of 2-5 minutes and slowly increase the time
- Find a quiet and comfortable location
- Meditate at the same time every day
- When your mind begins to wander, return to focusing on breathing

For more information, see:

Headspace https://www.headspace.com/meditation/guided-meditation
Insider https://www.insider.com/meditation-definition
Mayo Clinic https://www.mayoclinic.org/tests-procedures/meditation/in-depth/meditation/art-20045858
National Center for Complementary and Integrative Health https://www.nccih.nih.gov/health/meditation-in-depth
[Photograph of a person meditating]. (n.d.). https://tinyurl.com/bdetaxxm

Guided Meditation- Spanish

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Meditación Guiada

¿Qué es la meditación guiada?

- Una práctica de bienestar que entrena la mente a mejorar la conciencia, la atención, y la compasión
- Meditación implica concentrarse en la respiración y permitir a los pensamientos a salir sin juzga
- La meditación guiada es cuando una persona o tipo de media lo ayuda a una persona a través de la práctica

¿Para quien es la meditación guiada?

- Todos!

¿Cuáles son los beneficios de la meditación guiada?

- Reducir estrés
- Mejorar el enfoque
- Mejorar la confianza
- Reducir el dolor
- Controlar la ansiedad
- Disminuir la enfermedad
- Mejorar el duermo
- Ayudar contra la adicción y los antojos

Consejos para la meditación guiada

- Empiece con una sesión corta de 2-5 minutos y lentamente aumenta el tiempo
- Encuentre un lugar cómodo y tranquilo
- Medite en el mismo lugar cada día
- Cuando su mente divague, vuelva a centrarse en su respiración

Para más información, visite:

Headspace https://www.headspace.com/meditation/guided-meditation
Insider https://www.insider.com/meditation-definition
Mayo Clinic https://www.mayoclinic.org/tests-procedures/meditation/in-depth/meditation/art-20045858
National Center for Complementary and Integrative Health https://www.nccih.nih.gov/health/meditation-in-depth
[Photograph of a person meditating]. (n.d.). https://tinyurl.com/bdetaxxm

Hand and Wrist Pain- English

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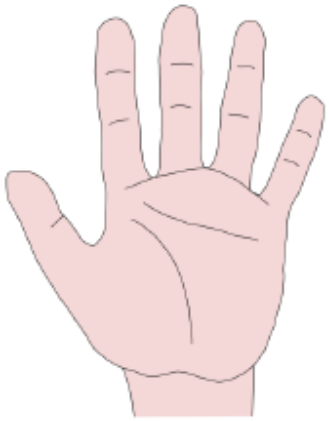
Hand and Wrist Pain

Common Causes of Hand and Wrist Pain

- Age, swelling, injury, or overuse of activity

How to Prevent the Pain



- Hand stretching before work
- Taking rest breaks often
- Switch hands
  - Change the way you do things
- Safe positioning practices
  - Keep hands and wrists straight as much as possible
  - Do not keep wrists bent for too long
- Avoid activities that make the pain worse
  - Repeated movements
  - Heavy lifting
  - Jobs that involve: typing, construction, assembly line, cleaning

How to Treat the Pain

- Use ice packs for up to 20 minutes at a time
  - Frozen peas wrapped in a towel works as well
- Use heat on painful body parts for up to 10 minutes at a time
  - Heated towel, rice sock, warm bath, or a bowl of warm water
- Switch between hot and cold treatments

For more information: https://tinyurl.com/4pkpd9u7

Hand and Wrist Pain- Spanish

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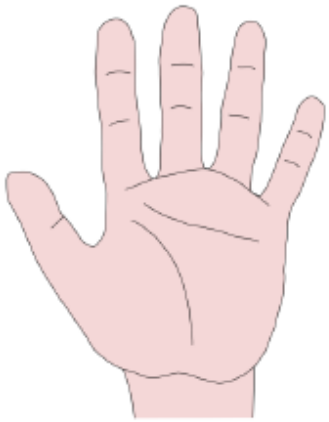
Occupational Therapy

Dolor de Manos y Muñecos

Causas comunes de dolor de manos y muñecos

- Edad, inflamación, lesión, uso excesivo



Cómo prevenir el dolor

- Estiramiento de la mano antes de trabajo
- Tomar descansos
- Cambiar las manos
  - Cambiar la forma de hacer actividades
- Posicionamiento seguro
  - Mantenga las manos y los muñecos rectos
  - No doble las muñecas por mucho tiempo
- Evitar actividades que empeoren el dolor
  - Movimientos repetidos
  - Levantando objetos pesados
  - Trabajos que involucran: mecanografía, construcción, línea de asamblea, limpiando

Cómo tratar el dolor

- Use paquetes de hielo por 20 minutos
  - Guisantes congelados envueltos en una toalla funciona también
- Use el calor en las partes del cuerpo doloridas hasta 10 minutos
  - Una toalla caliente, calcetín de arroz, baño cálido, o bol de agua caliente
- Cambie entre tratamientos fríos y calientes

Para más información: https://tinyurl.com/4pkpd9u7

Mindfulness- English

ST. CATHERINE UNIVERSITY
Occupational Therapy

Mindfulness

What is Mindfulness?

- Mindfulness is a way of thinking and understanding what is going on around you. It helps you to be aware of what your body is feeling.
- It can involve deep breathing and relaxation of the body.
- Using mindfulness can help to move thinking away from stressful thoughts and to interact with people around you.

What are the Benefits of Mindfulness?

- Decrease stress
- Decrease pain
- Decrease sadness
- Improve sleep
- Increase attention to loved ones or coworkers
- Recognize negative thoughts

How Can I Participate In Mindfulness?

- Anyone can practice mindfulness
- Mindfulness can be practiced anywhere: at home, at work, in the car, and more
- It can be practiced while sitting, walking, standing, moving, or laying down
- It is not just a practice, but also a way of living
- Examples:
  - Take time to take in your surroundings with your senses
  - Focus on your breathing when you have sad thoughts

Check out These Free Mindfulness apps:

In English:

In English & Español:

For more information visit:

Mindfulness- Spanish

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Occupational Therapy

La Conciencia Plena

¿Qué es la conciencia plena?

- La conciencia es una manera de pensar en lo que está pasando alrededor de usted. Ayuda a ser consciente en cómo su cuerpo se siente.
- Puede involucrar respiración y la relajación de su cuerpo
- Usando la conciencia puede mejorar su pensamiento fuera de los pensamientos de estrés y cómo interactuar con la gente alrededor de usted.

¿Cuáles son los beneficios de la conciencia?

- Reducir estrés
- Reducir dolor
- Reducir la tristeza
- Mejorar el sueño
- Aumentar la atención
- Reconocer pensamientos negativos

¿Cómo puedo participar en la conciencia?

- Cualquier persona puede practicar la conciencia
- La conciencia puede ser practicado en cualquier lugar: en casa, en su trabajo, en el coche
- Puede ser practicado sentado, acostado, caminando y moviendo.
- No solo es una práctica, es una manera de vivir
- Ejemplos:
  - Tome el tiempo a asimilar a su entorno con sus sentidos
  - Enfoque en su respiración cuando tenga pensamientos tristes

Prueba estas aplicaciones gratis:

En Inglés:

En Inglés y español

PARA MÁS INFORMACIÓN:

Rice Socks for Pain Management- English

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Rice Socks for Pain Management

Rice socks can help reduce pain on many different parts of the body when warmed up

- Shoulder
- Knee
- Neck
- Back
- Stomach
- Ankle
- Hand and wrist

To make your own rice sock at home, gather these materials:

- 100% cotton sock
  - Knee-high length for larger body parts
- Rice
  - Other safe choices: Dried Beans, Flaxseed, Barley
- Microwave

Then, follow these steps:

1. Fill the cotton sock with dry rice or one of the other safe choices with extra empty space at the top of the sock.
2. Tie a knot at the top of the sock to keep the rice from coming out of the sock.
3. Place the rice-filled sock in the microwave for a minute to two minutes. Do not go over three minutes.
4. Make sure the sock is not too hot, then rest the warmed-up sock on the body part that is in pain for up to 10 minutes.
5. Reheat the sock as needed, under three minutes.
6. Replace the sock and rice with new materials when the rice smells burnt

Rice Socks for Pain Management- Spanish

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Occupational Therapy

Calcetín de Arroz para Manejar el Dolo

Calcetines de arroz pueden reducir el dolor en muchos partes del cuerpo cuando son calentados

- Los hombros
- Las rodillas
- Los tobillos
- Las manos
- El cuello
- La espalda

- El estómago

Para hacer su propio calcetín de arroz en casa, recolecte estos materiales:

- Calcetín de 100% algodón
  - Altura de rodilla para partes del cuerpo más grande
- Arroz
  - Otras opciones: Frijoles secos, semilla de lino, cebada
- Microonda

Después, sigue estos pasos:

1. Llene el calcetín de algodón con arroz seco. Mantén algo de espacio en la parte superior
2. Ate un nudo en el calcetín para prevenir el arroz a salir del calcetín
3. Ponga el calcetín en el microondas por un 1-2 minutos. No más que 3 minutos
4. Asegúrese que el calcetín no es demasiado caliente, luego descanse el calcetín en la parte del cuerpo que duele, hasta 10 minutos
5. Recaliente el calcetín si es necesario, menos que 3 minutos
6. Reemplace el calcetín y arroz con nuevos materiales si el arroz huele quemado

Safe Body Positioning- English

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Safe Body Positioning

Background

- The way you position your body can help you not get hurt and make you comfortable
- Occupational therapists can help you position your body the right way. This helps keep you safe and comfortable at work and at home

Body Positioning

- **Straight back**

- **Straight neck, in line with your back**

- **Elbows at your sides**

- **Keep items you use often within reach**

- **Height of work**
  - Elbow height is good for most work

  - Do heavy work below elbow height

  - Detailed work about elbow height

Safe Lifting

- Use equipment like a cart to move heavy objects
- Lift heavy items with another person

Other Tips

- Stretch before and after work
- Take breaks when doing the same motion or holding a position for the same time

Sources: https://tinyurl.com/2czwfkdv https://tinyurl.com/2vbdswkm https://tinyurl.com/yc286x9p

Safe Body Positioning- Spanish

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Posicionamiento Seguro de Cuerpo

Fondo

- La manera en que posiciona su cuerpo puede evitar el daño y hacerse más cómodo
- Terapistas ocupacionales pueden ayudarse a posicionar su cuerpo en la manera correcta.

La Posicionamiento de Cuerpo

- **Espalda recta**

- **Cuello recto, en línea con su espalda**

- **Codos a su lado**

- **Mantenga los artículos que usa con frecuencia al alcance**

- **Altura de trabajo**
  - Altura de codo es mejor para la mayoria de trabajo

  - Haga trabajo más pesado debajo de la altura de codo

  - Trabajo detallado en altura de codo

Recogiendo Seguro

- Use el equipo como una carretilla para mover objetos más pesados
- Levante cosas pesadas con otra persona

Otro Consejo

- Estire sus músculos antes de y después del trabajo
- Tome descansos cuando hace una moción repetitiva o manteniendo una posición por mucho tiempo

Para más información: https://tinyurl.com/2czwfkdv https://tinyurl.com/2vbdswkm https://tinyurl.com/yc286x9p

Sleep Positioning- English

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Occupational Therapy

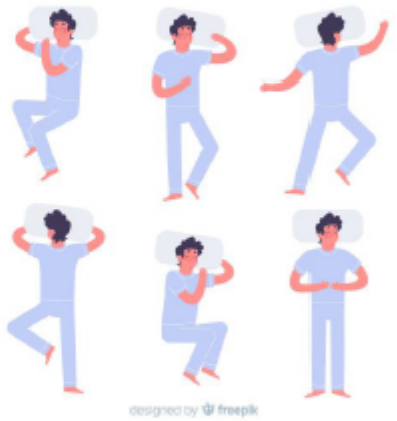
Sleep Positioning

Back Sleeping

- Generally the best position for reducing back pain
- Place a small pillow under knees and lower back to keep spine neutral
- Use a thin pillow under your head.
- Weight is more evenly distributed, reducing pressure points
- Can increase snoring

Side Sleeping

- Usually most comfortable with a slight bend in knees
- Use a thicker pillow and place only head on pillow, keeping shoulders off
- Place a pillow between the legs to reduce pressure on hips and lower back
- Avoid tucking in chin
- Recommended for pregnant women, specifically on the left side



Stomach Sleeping

- Not recommended
- Increases chance of neck and back pain
- Increases restlessness
- Can increase breathing difficulties
- Best to use a very soft pillow or no pillow so your neck can remain as neutral as possible

The most important thing is to find a position that is comfortable for you and keeps your head and spine neutral.

Why is sleep important?

- Sleep sets us up to participate in our daily activities.
- Sleep is essential for our health and safety, physical and mental well-being, learning, and memory.
- Sleep impacts everything we do

What is a healthy amount of sleep for adults?

- Between 7-9 hours each night

What can happen when you sleep TOO MUCH or TOO LITTLE?

- Increased stress
- Increased risk of illness.
- Fatigue
- Anxiety
- Memory problems
- Low mood
- Irritability
- Weight gain
- Decreased memory
- Difficulty concentrating
- Headaches
- Back pain

Sleep better, live better

For more information visit:

www.bettersleep.org

www.sleep.org

Sleep Positioning- Spanish

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Occupational Therapy

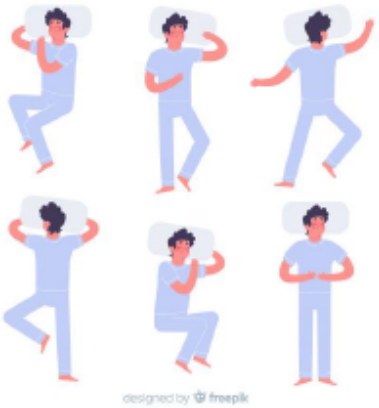
Posicionamiento de Dormir

Durmiendo boca arriba

- En general es la mejor posición para reducir el dolor de espalda
- Coloque una almohada pequeña debajo de sus rodillas y espalda inferior para mantener una espina recta
- Use una almohada delgada detrás de su cabeza
- Pesa es más distribuida en una manera uniforme y reduce los puntos de presión
- Esta posición puede aumentar los ronquidos

Durmiendo de lado

- Usualmente la más cómoda con una dobla en las rodillas
- Use una almohada más gruesa y solamente posiciona tu cabeza en lo, no los hombros
- Ponga una almohada entre las pierna para reducir la presión en las caderas y espalda baja
- Evite meter la barbilla
- Recomendado para las mujeres embarazadas, específicamente en el lado izquierda



Durmiendo en el estómago

- No es recomendado
- Aumenta la chanca de dolor en la espalda y el cuello
- Aumenta la inquietud
- Puede aumentar dificultades con la respiración
- Mejor a usar una almohada muy suave o ninguna almohada para mantener un cuello neutral

Lo más importante es encontrar una posición cómoda y mantener una cabeza y columna vertebral neutral.

¿Por qué el sueño es importante?

- El sueño prepara a participar en nuestras actividades cotidianas
- Es esencial para nuestra salud, seguridad, bienestar, aprendizaje y memoria.
- El sueño impacta cada cosa que hacemos

¿Cuál es la cantidad saludable de sueño para adultos?

- Entre 7-9 horas cada noche

¿Qué pasa cuando duermes DEMASIADO o NO SUFICIENTE?

- Aumenta estrés
- Aumenta el riesgo de enfermedad
- La fatiga
- La ansiedad
- Problemas de memoria
- Bajo estado de ánimo
- Irritabilidad
- Aumento de peso
- Reducido la memoria
- Dificultad con la atención
- Dolor de cabeza
- Dolor de espalda

Dormir mejor, vivir mejor

Para más información visita:

www.bettersleep.org

www.sleep.org

Sleep Tracker- English

Tips for Better Sleep and Sleep Tracker Directions

Sleep can be impacted by many factors. For the next week, track the factors that affect your sleep using the provided table to find patterns or habits you can change!

Strategies for Better Sleep:

Limit screen use

- Stop screen use an hour or two before going to bed
- Keep your cell phone in another room
- Use an alarm clock instead of your phone alarm
- Turn the clock out of your view so you can't watch the clock during the night

Relax before going to bed

- Take a warm shower
- Read a book
- Limit how much news and social media you see before bed

While sleeping

- Keep bedroom dark and quiet
- Use your bed only for sleep and sex – not for other things such as eating, talking on the phone, or watching TV • Cool room temperature (62-66 degrees)

Can't sleep after going to bed?

- Get up and do something calming until you feel sleepy (in a different room if possible)
  - o Read a book, take a warm bath/shower, stretch, journal

Create a routine

- Wake up and go to bed at the same time every day
- Reduce stress before bed by doing something each night - deep breathing exercises, journaling, yoga or light exercise, gratitude journal

For more information:
http://tinyurl.com/2drafbuy

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Fill out these questions for each day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time you got up for the day?							
Time you went to bed?							
Did anything wake you up in the night? If yes, what was it?							
What time did you stop having caffeine during the day?							
What time did you stop screen use during the day?							
Did you use anything to help you fall asleep or relax? If yes, what was it?							

Sleep Tracker- Spanish

Consejos para Mejorar el Sueño y Rastreador de Sueño

El sueño puede ser impactado por muchos factores. La próxima semana, siga los factores que afectan su sueño. Usando la tabla, puede encontrar patrones o hábitos que puede cambiar.

Estrategias para Mejor Sueño:

Limitar el uso de la pantalla

- Pare de usar una pantalla 1-2 horas antes de ir a la cama
- Mantenga su teléfono celular en otro cuarto
- Use una despertadora en vez de su teléfono celular
- Gire su reloj hacia el pared para que no mire el reloj durante la noche

Relajar antes de ir a la cama

- Tome una ducha caliente
- Lea un libro
- Límite cuantas noticias y redes de media que mira antes de ir a cama

Cuando dormiendo

- Mantenga un cuarto tranquilo y oscuro
- Use su cama solamente para el sueño y el sexo- no para otras actividades como comiendo, mirando la televisión, usando su telefono
- Temperatura ambiente fresca (62-66°F)

¿No puede dormir después de ir a la cama?

- Levantase y haga una actividad que se calma hasta que siente cansado
  o Lea un libro, tome una ducha, estírese, escriba en un diario

Crear una rutina

- Despiértese y acuéstese a la misma tiempo cada dia • Reduzca el estrés antes de cama por haciendo algo cada noche: ejercicios de respiración, yoga, diario de gratitud

Para más información:
http://tinyurl.com/2drafbuy

ST. CATHERINE UNIVERSITY
Occupational Therapy

Rastro de Sueño

Llena estas preguntas cada día	Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado
¿A qué hora se levantó usted?							
¿A qué hora se acostó esta noche?							
¿Algo se despertó en la noche? En caso afirmativo, ¿qué fue?							
¿A qué hora paró de beber cafeína durante el día?							
¿A qué hora paró de usar una pantalla durante el día?							
¿Usó algo para ayudarse a dormir o relajarse? En caso afirmativo, ¿que usó?							

Stress Management- English

ST. CATHERINE UNIVERSITY
Occupational Therapy

Stress Management

Stress is a part of life and is a natural human reaction. It can look different for everyone. If you are stressed often, it can impact your health.

Symptoms of Stress

- Trouble falling or staying asleep
- Worrying or feeling anxious
- Irritability or mood changes
- Aches in body
- Frequent headaches or migraines
- Hives, rashes, skin breakouts
- Weakened immune system
- Changes in appetite
- Chest pain or racing heart
- Upset stomach

Ways to Cope with Stress

- Identify triggers
  - Figure out where the stress is coming from in the first place
- Work on sleep habits
  - Stop using electronics 1 hour before bed
  - Stop caffeine 4-6 hours before bedtime
- Create an exercise routine
  - Exercise makes you feel good
  - Pick from a variety of exercises that you enjoy – walking, biking, swimming, yoga, gym classes, or sports
- Do things that you enjoy
  - Spend time with family or friends
  - Find a hobby and try out new activities
  - Listen to music or read a book
  - Get outside and enjoy nature
- Use relaxation strategies
  - Try deep breathing
  - Mindful meditation or guided imagery

For more information:

https://tinyurl.com/3b7nwmfz

https://tinyurl.com/msx5eurz

Stress Management- Spanish

ST. CATHERINE UNIVERSITY
Occupational Therapy

El Manejo de Estrés

El estrés es una parte de la vida y una reacción humana natural. Puede parecer diferente para cada persona. Si está estresado a menudo, puede impactar su salud.

Síntomas de Estrés

- Dificultad durmiendo o quedando dormido
- Ansiedad
- Irritabilidad
- Dolores en el cuerpo
- Dolores de cabeza o migrañas
- Urticarias, erupciones cutáneas, brotes en el piel
- Sistema inmunológico debilitado
- Cambios de apetito
- Dolor de pecho
- Dolor de estómago

Maneras de lidiar con el estrés

- Identificar desencadenantes
  - Averiguar de dónde viene el estrés en primer lugar
- Trabajar en hábitos de sueño
  - Para de usar electrónicos 1 hora antes de ir a la cama
  - Para de beber cafeína 4-6 horas antes de ir a la cama
- Crear una rutina de ejercicio
  - Ejercicio hace que sientes bien
  - Escoge de una variedad de ejercicios que te gustas hacer- caminando, bicicleta, nadando, yoga, clases de gimnasio, deportes
- Hacer cosas que disfrutes
  - Pasa tiempo con familiares o amigos
  - Encuentra un pasatiempo y trata nuevas actividades
  - Escucha a música o lee un libro
  - Ir afuera y disfruta la naturaleza
- Usar estrategias de relajación
  - Respiración profunda
  - Meditación consciente

Para más información:

https://tinyurl.com/3b7nwmfz

https://tinyurl.com/msx5eurz

What is OT?- English

ST. CATHERINE UNIVERSITY
Occupational Therapy

What is Occupational Therapy?

What is Occupational Therapy (OT)?

Occupational therapy helps people do the activities they need and want to do each day. We want you to enjoy a healthy life as independently as you can!

Who might see an Occupational Therapist?

We can be helpful for lots of people of all ages, including those who have:

- Injury
- Stroke
- Surgery
- Illness or disease
- Diabetes
- Pain
- Sleep problems
- Stress and anxiety
- Vision or hearing loss
- Mood changes

What can OT help me with?

We can help with all kinds of daily tasks and difficulties, such as:

- Getting dressed, bathing, and grooming
- Doing household chores
- Completing work duties
- Managing pain
- Sleeping
- Changing your home or work environment
- Dealing with stress
- Saving energy
- Creating a routine

What is OT?- Spanish

ST. CATHERINE UNIVERSITY
Occupational Therapy

¿Qué es la Terapia Ocupacional?

¿Qué es la terapia ocupacional (TO)?

La terapia ocupacional ayuda a la gente a hacer las actividades que necesitan hacer cada día. ¡Queremos que viva la vida lo más saludable e independiente que pueda!

¿A quien podría ver una terapista ocupacional?

Las terapistas ocupacionales pueden ayudar a gente de todos edades, incluyendo los con:

- Lesion
- Derrame Cerebral
- Surgia
- Enfermedad
- Diabetes
- Dolor
- Problemas de dormir
- Estrés y ansiedad
- Pérdida de visión y audición
- Cambios de autoestima

¿En qué me puede ayudar un TO?

Las terapistas ocupacionales pueden ayudar con cualquier tipo de actividad o tarea cotidiana, por ejemplo:

- Vistiéndose y bañandose
- Tareas del hogar
- Completando tareas del empleo
- Manejando el dolor
- Dormiendo
- Cambiando el ambiente de su trabajo o hogar
- Manejando el estrés
- Conservando la energía
- Creando una rutina

Work-Life Balance- English

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Occupational Therapy

Work-Life Balance

What is a work-life balance?

- Balancing work, relationships, things that need to get done, self-care, and interests in life

Why does it matter?

- Affects health
  - Lowers stress
  - Improves sleep
  - Mental and emotional health
    - Less annoyed or sad
- Affects relationships
  - With loved ones
  - Mood changes
- Increases productivity and quality of work and life

What can I do at Work?

- Add breaks to your schedule
  - Even a five minute break can help clear your mind
  - Take a break outside
- Set daily goals that can be met
- Listen to your favorite music
- Set boundaries
  - It is okay to say "no" sometimes
- Ask for help when you need it - if you don't get a break, ask your boss for one. If you feel behind, talk with your boss or coworkers

What can I do at Home?

- Divide things that need to get done at home - talk with loved ones about who will do what chores
- Stay active - exercise can lower stress
- Relax - take time at home to give yourself a break and ease your mind
- Get help if needed- From a professional, friend, or family member

For more information visit:

Work Life Balance- Spanish

ST. CATHERINE UNIVERSITY
Occupational Therapy

Equilibrio de Trabajo-Vida

¿Cuál es el equilibrio entre el trabajo y la vida?

- Creando un equilibrio de trabajo, relaciones, tareas que necesitan ser completado, cuidados personales, e intereses
  de vida

¿Por qué es importante?

- Afecta el salud
  - Reduce el estrés
  - Mejora el sueño
  - El Salud mental e emocional
    - Menos irritable o triste
- Afecta relaciones
  - Con familiares
  - Cambios de estima
- Mejora productividad y calidad de trabajo y vida

¿Qué puedo hacer en el trabajo?

- Incorporar descansos en su calendario
  - 5 minutos puede ayudar a aclarar su mente
  - Tome un descanso afuera
- Fijar metas que pueden ser alcanzada
- Escuchar a su música favorita
- Establecer límites
  - Está bien decir "no"
- Pregunte para ayuda cuando lo necesita- Si no tiene un descanso, pregunta a su jefe para uno. Si se siente atrás, hable con su jefe o compañeros

¿Qué puedo hacer en casa?

- Divida tareas en que necesita hacer en casa- hable con familiares en quien va a hacer cual tarea
- Mantenerse activa- ejercicios pueden reducir estrés
- Relajarse - tome tiempo en casa para tomar un descanso
- Encuentre ayuda si lo necesita- con un profesional, amonio, o familiar

Appendix D: Patient Education Materials Assessment Tool for Printable Materials (PEMAT)

UNDERSTANDABILITY

Item #	Item	Response Options	Rating
Topic: **Content**			
1	The material makes its purpose completely evident.	Disagree=0, Agree=1	
2	The material does not include information or content that distracts from its purpose.	Disagree=0, Agree=1	
Topic: **Word Choice & Style**			
3	The material uses common, everyday language.	Disagree=0, Agree=1	
4	Medical terms are used only to familiarize audience with the terms. When used, medical terms are defined.	Disagree=0, Agree=1	
5	The material uses the active voice.	Disagree=0, Agree=1	
Topic: **Use of Numbers**			
6	Numbers appearing in the material are clear and easy to understand.	Disagree=0, Agree=1, No numbers=N/A	
7	The material does not expect the user to perform calculations.	Disagree=0, Agree=1	
Topic: **Organization**			
8	The material breaks or "chunks" information into short sections.	Disagree=0, Agree=1, Very short material*=N/A	
9	The material's sections have informative headers.	Disagree=0, Agree=1, Very short material*=N/A	
10	The material presents information in a logical sequence.	Disagree=0, Agree=1	
11	The material provides a summary.	Disagree=0, Agree=1, Very short material*=N/A	
Topic: **Layout & Design**			
12	The material uses visual cues (e.g., arrows, boxes, bullets, bold, larger font, highlighting) to draw attention to key points.	Disagree=0, Agree=1 Video=N/A	

Item #	Item	Response Options	Rating
Topic: **Use of Visual Aids**			
15	The material uses visual aids whenever they could make content more easily understood (e.g., illustration of healthy portion size).	Disagree=0, Agree=1	
16	The material's visual aids reinforce rather than distract from the content.	Disagree=0, Agree=1, No visual aids=N/A	
17	The material's visual aids have clear titles or captions.	Disagree=0, Agree=1, No visual aids=N/A	
18	The material uses illustrations and photographs that are clear and uncluttered.	Disagree=0, Agree=1, No visual aids=N/A	
19	The material uses simple tables with short and clear row and column headings.	Disagree=0, Agree=1, No tables=N/A	

ACTIONABILITY

Item #	Item	Response Options	Rating
20	The material clearly identifies at least one action the user can take.	Disagree=0, Agree=1	
21	The material addresses the user directly when describing actions.	Disagree=0, Agree=1	
22	The material breaks down any action into manageable, explicit steps.	Disagree=0, Agree=1	
23	The material provides a tangible tool (e.g., menu planners, checklists) whenever it could help the user take action.	Disagree=0, Agree=1	
24	The material provides simple instructions or examples of how to perform calculations.	Disagree=0, Agree=1, No calculations=NA	
25	The material explains how to use the charts, graphs, tables, or diagrams to take actions.	Disagree=0, Agree=1, No charts, graphs, tables, or diagrams=N/A	
26	The material uses visual aids whenever they could make it easier to act on the instructions.	Disagree=0, Agree=1	

Appendix E: Qualitative Questions

Follow-Up Questions For SMMART Clinic Handouts

Please answer the following questions regarding your experience with the newly-developed SMMART Clinic handouts. The data collected from this form is anonymous.

How might you use this handout in the clinic?

Your answer

What are the strengths of this handout?

Your answer

What would you change/add to this handout?

Your answer

Any additional comments?

Your answer

Appendix F: PowerPoint Slides

Evaluating Literacy-Sensitive Client-Education Materials for the SMMART Clinic

McKenzie Brink, OTS; Kelsey Colvin, OTS; Kelsey Holmer, OTS; Rachel Kullas, OTS; Paige Loy, OTS; Alex Manos, OTS; Gretta Obeid, OTS; Kelly O'Connor, OTS; Allison Park, OTS; Faculty Advisor: Kimberley Persons, DHS, OTR/L, CLA

May 11, 2022

St. Catherine University

Learning Objectives

1. Discuss the role of occupational therapy in primary care
2. Identify barriers and facilitators to healthcare access for a Spanish-speaking population
3. Identify resources to assist in developing understandable and actionable client education materials

Introduction

- Occupational therapy in primary care
- Emerging area of practice
- Inadequate access to healthcare
- Provides care to conditions across the lifespan
- Interventions use education, prevention, health promotion, and adaptation strategies

St. Mary's Clinic

Mission Statement:

"In the tradition of the Sisters of St. Joseph of Carondelet, St. Mary's Health Clinics (SMHC) will carry out the healing ministry of Christ by providing necessary and accessible health services to the medically uninsured and underserved."

Vision Statement:

"Affordable, accessible, quality healthcare is available to all individuals."

(St. Mary's Health Clinic, 2020)

Purpose

- The purpose of our study is to develop and evaluate client education materials for the SMMART Clinic to use that are understandable and actionable

Review of the Literature

- OT in Primary Care
  - Holistic Care
    - The holistic role of occupational therapy practitioners complements the medical model (Muir, 2012)
  - Common Diagnoses
    - "Diabetes, hypertension, abdominal pain, thyroid issues, respiratory issues, general illness, mental/behavioral issues, neck and back pain… lower extremity pain, reproductive system, upper extremity pain…" (Trembath et al., 2019, p. 7-8).
  - General OT Interventions for Diagnoses Listed (Bolt et al., 2019; Role of occupational therapy in primary care, 2020; Trembath et al., 2019).

Review of the Literature

- Interdisciplinary (D'Amour et al., 2005)
  - Effective collaboration between team members is necessary (Saint-Pierre et al., 2018)
  - Physicians, nurses, midwives, dentists, physiotherapists, social workers, psychiatrists, dieticians, pharmacists, administrative staff, managers (WHO, 2008)
  - Providers often lack education on OT role (AOTA, 2013; Donnelly et al., 2013; Hassan et al., 2021).
- Preventative Care - (Minnesota Department of Commerce, n.d.)
  - Patient education (Asay et al., 2016).
  - Diet lifestyle routines, social support, fall prevention, exercise (Hart & Parsons, 2020)

Review of the Literature

- Barriers for the Spanish-speaking population
  - Difficulties with speaking and comprehending English (Mirza & Harrison, 2018).
  - Decreased healthcare access (Pearson et al., 2008; Cheng et al., 2007).
- Best Practices
  - Education materials
    - Understandable language
    - Sensitive to literacy levels
    - Culturally sensitive
  - Increase client understanding and health management abilities (Rosal et al., 2011; Guntzviller et al., 2017)

Review of the Literature

- Chronic Disease Management
  - Sleep - not addressed enough in primary care (Grander & Malhorta, 2015; Ononye et al., 2019; Perry et al., 2013; Senthilvel et al., 2011; & Sorscher, 2008).
  - Pain
    - 1 in 4 individuals experience chronic pain (AOTA, 2021; Role of Occupational Therapy in Primary Care, 2020).
    - Disparities with pain treatment are higher with the Latino population (Pagán-Ortiz & Cortés, 2021).
  - Work
    - Labor-intensive jobs such as painting, construction, and hauling can increase work-related injuries (Burgel et al., 2015; Fernandez-Esquer et al., 2020).
  - Diabetes
    - Adapt routines, diabetes management (Pyatek et al., 2018; Smallfield, 2021; Trembath et al., 2019)

Needs Assessment: Stakeholders

- **Faculty Volunteers/ Clinic Staff**
  - Darla Coss, OTD, OTR/L, CHT
  - John Fleming, PhD, OTR/L
  - Amy Kelly, MD, MPH
  - Ambria Crusan, Phd, LD, RD
  - Dave Chapman, PT, PhD
  - Carol Harrington, RN, Head nurse

Needs Assessment: Stakeholders

- **Student Volunteers:**
  - Cassidy Miller, OTS, OT Representative on the SMMART Clinic Advisory Board
  - Sean Hawkinson, PT Representative on the SMMART Clinic Advisory Board and Spanish translator
  - Marlyn Martinez, PA student, Clinic Coordinator, and Spanish translator
  - Nutrition Students
  - Current and past St. Kates OT students

Needs Assessment: Key Assets

- Key Findings:
  - Care for underserved population
  - Interprofessional care
  - Bilingual services
  - OT and PT in the Clinic
  - Follow-ups
  - Dedicated volunteers
  - Resources that clients can take home with them

St. Mary's Health Clinics

https://www.stmaryshealthclinics.org/

Needs Assessment: Barriers Identified

- Key Findings
  - Limited funds
  - Minimal clinic resources
  - Small physical space
  - Transportation
  - Location of clinic
  - Increased length of time spent with each client/ appointment length

Needs Assessment: Barriers Identified

- Key Findings
  - Client education materials
    - Not easily accessible to volunteers
    - Lack of handouts in Spanish
    - Lack of mental health materials
  - Lack of PTO for clients
  - Childcare
  - Interprofessional team awareness of OT role
  - Sustainability of faculty, students, and volunteers

Description of Project Activities

- Develop literacy-sensitive and client-centered handouts for the SMMART Clinic
- Evidenced-based practice
- Readability assessments (English Handouts)
  - Flesch-Kincaid, SMOG Index, & Gunning Fog Index
  - 8th grade reading level or below

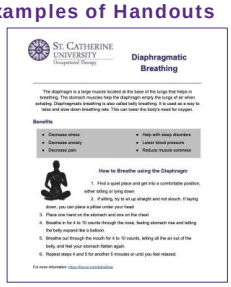
Topics
Occupational therapy
Ergonomics
Energy conservation
Diaphragmatic breathing
Mental health
Pain
Sleep
Diabetes Management

Description of Project Activities

- Health literacy: Maine Health's Guide to Creating and Evaluating Patient Materials((Maine Health, n.d.).
  - Categories: content, structure/organization, writing style, appeal/document design, and cultural sensitivity and appropriateness (Maine Health, n.d.).
- Peer review using the checklist
- Revisions

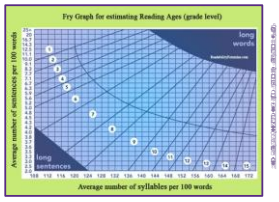
Examples of Handouts

Examples of Handouts



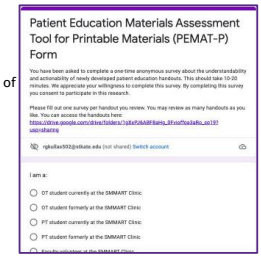
Description of Project Activities cont.

- Spanish Translation
- Fry Readability Graph
  - Readability checking tool currently validated in Spanish to predict U.S. grade levels (Tetteroo, 2016)
  - Modified version (Gilliam et al., 1980)
- 13/15 are at or below an 8th grade reading level

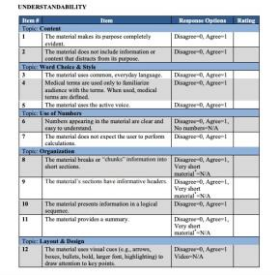


Assessment Processes and Data Gathering

- Distributed handouts to clinic volunteers
  - 2 weeks/ 1 clinic session to review
- Participants asked to complete evaluation of at least one handout via Google Form
  - **PEMAT-P**
    - measure of understandability and actionability of printed materials
  - Qualitative questions



PEMAT-P Items



UNDERSTANDABILITY

Item #	Item	Response Options	Rating
Topic: Content			
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2	The material does not include information or content that distracts from its purpose.	Disagree=0, Agree=1	
Topic: Word Choice & Style			
3	The material uses common, everyday language.	Disagree=0, Agree=1	
4	Medical terms are used only to familiarize audience with the terms. When used, medical terms are defined.	Disagree=0, Agree=1	
5	The material uses the active voice.	Disagree=0, Agree=1	
Topic: Use of Numbers			
6	Numbers appearing in the material are clear and easy to understand.	Disagree=0, Agree=1, No numbers=N/A	
7	The material does not expect the user to perform calculations.	Disagree=0, Agree=1	
Topic: Organization			
8	The material breaks up "chunks" information into short sections.	Disagree=0, Agree=1, Very short material[1]=N/A	
9	The material's sections have informative headers.	Disagree=0, Agree=1, Very short material[1]=N/A	
10	The material presents information in a logical sequence.	Disagree=0, Agree=1	
11	The material provides a summary.	Disagree=0, Agree=1, Very short material[1]=N/A	
Topic: Layout & Design			
12	The material uses visual cues (e.g., arrows, boxes, bullets, bold, larger font, highlighting) to draw attention to key points.	Disagree=0, Agree=1 Video=N/A	

ACTIONABILITY

Item #	Item	Response Options	Rating
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23	The material provides a tangible tool (e.g., menu planners, checklists) whenever it could help the user take action.	Disagree=0, Agree=1	
24	The material provides simple instructions or examples of how to perform calculations.	Disagree=0, Agree=1, No calculations=NA	
25	The material explains how to use the charts, graphs, tables, or diagrams to take actions.	Disagree=0, Agree=1, No charts, graphs, tables, or diagrams=N/A	
26	The material uses visual aids whenever they could make it easier to act on the instructions.	Disagree=0, Agree=1	

(Shoemaker et al., 2014)

Qualitative Questions

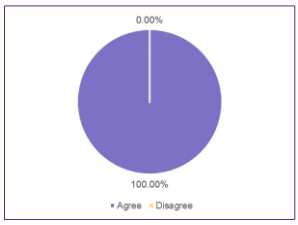
- How might you use this handout in the clinic?
- What are the strengths of this handout?
- What would you change/add to this handout?
- Any additional comments

Results

Table 1: Participants

[redacted]	[redacted]
OT Student (currently at SMMART Clinic)	62.5% (n=10)
OT Student (formerly at SMMART Clinic)	12.5% (n=2)
PT Student (currently at SMMART Clinic)	0% (n=0)
PT Student (formerly at SMMART Clinic)	0% (n=0)
Faculty Volunteer	25.0% (n=4)

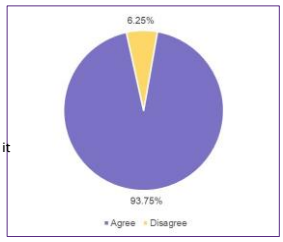
Results - PEMAT-P Analysis



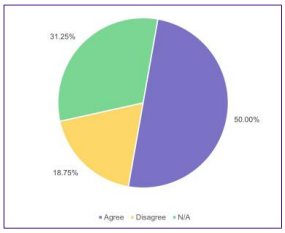
- The material:
  - has easy to follow steps
  - uses common language
  - only uses medical terms when necessary
  - does not include distracting information
  - uses active voice
  - does not require calculations
  - uses logical sequence, visual cues, and clear action items
  - directly addresses the user

Results - PEMAT-P Analysis

- The material:
  - makes its purpose completely evident
  - uses visual aids whenever they could make content more easily understood
  - provides a tangible tool whenever it could help the user take action
  - uses visual aids whenever they could make it easier to act on the instructions



Results - PEMAT-P Analysis



- The material:
  - provides a summary

Results - Qualitative Data #1

How might you use this handout in the clinic?

- Pain Management
- Mental Health
- Fatigue and sleep
- Diabetes Management

Participant Responses

- "It would be a great supplement to give to a patient…for stress relief, anxiety, or chronic pain"
- "For anyone experiencing stress that may be impacting function."

Results - Qualitative Data #2

What are the strengths of this handout?

- Layout
- Language
- Accessibility

Participant Responses

- "easy to read and follow"
- "visually pleasing"
- "not too busy."
- "clear instructions"

Results - Qualitative Data #3

What would you change or add to this handout?

- No change
- Add more images or figures
- Formatting changes
- Accessibility

Participant Responses

- "add a picture or figure to make it fun!"
- "It's getting a little long."
- "not sure if the link is helpful"
- "add a QR code that would link to a video"

Limitations

- Length of time
- Lack of client feedback
- Translation
- Number of respondents
- No interdisciplinary feedback
- Readability scores
- Combined review of multiple handouts

Recommendations for Further Research

- Interview clients for broader needs assessment
- Administer materials to clients
- Interdisciplinary approach
- Increase duration of data collection

Takeaways

- Advocating for OT in primary care
- Lack of understanding of OT role
- Language barriers and social determinants of health
- Culturally tailored and literacy-sensitive services/materials
- Assessing the quality of educational materials and developing new ones
- Importance of client-centered care and developing a needs assessment

Questions?

View Handouts Here:

References

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