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Establishing a Sustainable Occupational Therapy Student-Led Pro Bono Clinic at the University of Saint Augustine in Austin, Texas

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A Capstone Presented in Partial Fulfillment
of the Requirement for the Degree of
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Establishing a Sustainable Occupational Therapy Student-Led Pro Bono Clinic at the University of Saint Augustine in Austin, Texas

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ESTABLISHING A SUSTAINABLE STUDENT-LED PRO BONO CLINIC

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Chapter 1: Introduction to the Capstone

The overall focus of this capstone project was to establish an occupational therapy (OT) pro bono clinic for the University of Saint Augustine for Health Sciences (USAHS). The establishment of the pro bono clinic helps address the impact of social determinants on health and quality of life (QOL) within under-resourced and underserved communities. Therefore, this project sought to establish a sustainable pro bono clinic to provide students with the opportunity to advance their clinical skills and graduate as leaders with insights on health disparities. As well as addressing the rehabilitation needs of the under-resourced and underserved community in Austin, Texas. This chapter will further discuss the background, problem statement, purpose statement, rationale, significance, objective, outcomes, assumptions, delimitations, and limitations. Chapter 2 will review the literature related to under-resourced and underserved communities due to the gaps within the United States healthcare system, theory application to the pro bono clinic, simulated versus authentic fieldwork experience, and the overall impact of the pro bono clinic on universities. Chapter 3 will describe the project methodology such as the participants, setting, process, schedule/timeline, and conceptual model. Chapter 4 will describe the project capstone products. Chapter 5 will describe the significance, strengths, limitations, and implications for OT education, practice, and research. This paper will conclude with figures and appendices.

Background

Low socioeconomic status (SES) communities across the United States experience significant health disparities. SES refers to a measurement of an individual's economic and social position in comparison to others, based on income, occupation, and education (Hirsch et al., 2016). Particularly low SES correlates with people with low educational achievement, low household income, poverty, and poor health (Walker & Hepp, 2016). Health disparities are

defined as differentiation and/or gaps within the quality of health and healthcare across ethnic, racial, and socio-economic groups (Riley, 2012). For example, adequate healthcare is essential to maintain the health and quality of life of all individuals. However, when healthcare is rationed or is only accessible to those who can afford healthcare it limits access. Health disparities' effects on low SES communities result in a lack of infrastructure and resources such as parks, health services, recreational centers, sidewalks, and trails to support the well-being of their community (Hirsch et al., 2016). According to studies, it has been validated that there is differential access to medical care, treatment modalities, and dissimilar outcomes among several racial and ethnic groups (Riley, 2012). The lack of resources and health services within these communities relates to health disparities.

Low SES communities may be either under-resourced, under-served, or both.

Underserved communities include underinsured and/or uninsured individuals with disabilities and/or chronic conditions. These individuals do not meet the "medically necessity" clause and have exhausted their healthcare benefits and no longer qualify for rehabilitation services. The medical necessity clause is described as no payment made towards any expenses for medical procedures or services that are not considered reasonable and necessary for the diagnosis or treatment of an injury, illness, or to improve the functioning of a distorted body part (Social Security Administration, 2022). The Institute of Medicine completed an analysis of the studies in regard to chronic conditions and revealed major differences and discrimination relating to populations with equal access to healthcare (Riley, 2012). Under-resourced communities are populated suburban and urban areas (Wial, 2020). Under-resourced communities have a lack of leadership, physical assets, money, institutions, political will, community cohesion, and services (Burke, 2016). A major challenge for under-resourced and underserved communities is structural discrimination that leads to health inequities. Structural discrimination pertains to the differential

location of social groups and institutional policies that can limit the opportunities, resources, and well-being of individuals and communities strictly based on race/ethnicity, disability status, and health conditions (Perez-Stable, 2021). For instance, a study examined the effects of structural discrimination on people of color and found remarkable associations between mental health symptoms, substance use, cardiovascular health, and overall physical health (Perez-Stable, 2021). These challenges related to structural discrimination can potentially affect underresourced and underserved communities in Austin, Texas.

Health Inequities in Austin Community

The city of Austin undergoes health inequities that influence health and quality of life amongst under-resourced and underserved communities. Health inequity is described as avoidable differences in health status between diverse groups of people (Leonard, 2021). Austin has an above-average economic growth in Texas and lower than the average unemployment rate (Austin/Travis Community Health Plan, 2017). However, there exists an inequity in social determinants that impact health and quality of life (QOL) for 16 % of its population (Austin/Travis Community Health Plan, 2017). Social determinants are the environmental conditions where people live, work, play, worship, and are born that impacts health, functioning, and QOL (Healthy People 2030, 2021). The social determinants of communities can have a major influence on people's well-being and QOL (Healthy People 2030, 2021). The community health assessment (2017) for Austin, Texas has identified the following five domains of social determinants that impact the QOL for Austin residents: the neighborhood and built environment, health and healthcare, social and community context, education, and economic stability (Austin/Travis Community Health Plan, 2017). The university addressing health inequities within the Austin community can positively impact the community QOL, wellness, and occupational engagement.

Opportunity for the University to Address Health Inequities

Allied health universities have the potential to improve health outcomes among underresourced and underserved communities with the help of student clinician pro bono clinics. The
term pro bono relates to a simple old-age Latin concept that means goods or services are received
at a small fee or free of charge to individuals who cannot afford the services (Hewson and Friel,
2004). Such a move would help under-resourced and underserved communities with muchneeded rehabilitation services and at the same time expose students to the ramifications of
inequities in social determinants while sharpening their clinical skills. Such a venture would
require collaboration with community partners to promote the viability of the clinic and would
provide much-needed visibility for the field of OT in Austin's community. This opportunity
would allow OT students to gain hands-on clinical experience to improve their readiness for
entry-level practice.

Clinical Experience to Entry-Level Practice

Clinical experience is crucial in the OT curriculum to prepare students to transition into clinical practice. Students' clinical experience involves Level I and Level II fieldwork experience. Level I experience usually consists of simulated learning experiences with live actors, case studies, role play with students/faculty, human patient simulators, and often experiential learning (DiZazzo-Miller et al., 2021). Experiential learning is a hands-on teaching approach that aids in enhancing students' clinical skills in communication, critical thinking, treatment planning, and problem-solving (Palombaro et al., 2011). Unlike other Level I fieldwork experiences, experiential learning involves real individuals with authentic clinical needs, which is the most ideal learning experience. Once students complete Level I fieldwork experience, students advance to Level II fieldwork experience (ACOTE, 2018). Level II fieldwork experiences are designed to provide students with the potential to apply the knowledge

and skills learned from prior curriculum courses into current OT practice settings to transition them into competent entry-level practitioners. Competency is suitable knowledge, skills, abilities, and attitudes related to practice as an entry-level occupational therapist (Crites et al., 2018). Students' clinical experience assists in developing well-round therapists and clinical competence.

The students clinical experience aid in preparation for entry-level practice. Entry-level practice refers to entering the OT profession as a beginner with less than 1 year of experience within the field (Crites et al., 2018). According to a nationwide study, students are reporting feeling unprepared for entry-level practice with the current clinical experiences involving simulation, role playing, and case studies (Taylor et al., 2011). Current teaching practices are lacking real-life scenarios and authentic experience resulting in challenges in areas such as clinical reasoning, problem-solving, communicating, understanding the overall clinical objective, and applying knowledge and concepts to meet the client's needs (James & Musselman, 2005). To better prepare students for fieldwork experience and entry-level practice, universities should consider providing OT students with more hands-on experience such as a pro bono clinic.

Scope of OT in Pro bono Clinics

The OT code of ethics is a tool to guide OT practitioners into ethical practice. OT code of ethics sets a public expectation for the profession to adhere to a set of core values and a standard of conduct (American Occupational Therapy Association (AOTA, 2020). The OT core values consist of altruism, freedom, justice, dignity, truth, and prudence. OT standard of conduct involves beneficence, non-maleficence, autonomy, justice, veracity, and fidelity (AOTA), 2020). Among the core values, the justice principle relates to providing equitable, fair, and appropriate treatment for all individuals (AOTA, 2015). It implies that OT should support a society that provides all individuals with an equitable opportunity to participate in meaningful occupations

(American Academy of Family Physicians (AAFP), 2021). OT code of ethics recommends addressing health disparities to ensure fair delivery and equity to OT services.

Establishing a sustainable pro bono clinic serves a multifaceted purpose. The pro bono clinic ensures the delivery of health services for people with inadequate resources to address occupational injustice and health disparities, provides opportunities for allied health students to understand issues of occupational injustice and health disparities inherent in societies, and provides opportunities to sharpen their clinical skills of future healthcare professionals (Palombaro et al., 2011). Occupational injustice is the denial or exclusion of universal access to opportunities and/or resources to participate in meaningful occupations (Townsend & Wilcock, 2004). Occupational injustice has four types of injustice, but this project focuses specifically on occupational deprivation. Occupational deprivation is prolonged restriction from the participation of necessity or meaningful occupations due to factors outside of the individual control (Townsend & Wilcock, 2004). This can affect the QOL and health among people with disabilities, people with chronic conditions, people hospitalized for prolonged periods, and people experiencing health inequities such as under-resourced and underserved communities (Abson, 2021). Besides addressing occupational justice, the pro bono clinic helps embody the core values of OT that are essential for the delivery of healthcare. Establishing a sustainable OT pro bono clinic that seeks to address health inequity sets the foundation to promote adherence to the code early on in their career.

Statement of the Problem

The problem was two-fold. First, people who live in under-resourced and underserved communities lack adequate access to quality care to manage health and QOL. Second, students lack sufficient and authentic experiences to engage with the client/clients, sharpen their clinical reasoning, and become confident future healthcare providers.

Purpose Statement

The purpose of this capstone was two-fold. First, to establish a sustainable OT pro bono clinic within the USAHS to increase access to quality care, which will improve health and QOL for people who live in under-resourced and underserved communities within Austin, Texas.

Second, to provide the students with the opportunity to develop outside of the traditional clinical rotation with the chance to further develop as clinicians to engage with the client/clients, sharpen clinical reasoning skills, and become more confident in their abilities.

The Rationale for the Capstone Project

Besides meeting the healthcare needs of an under-resourced and underserved community, this pro bono clinic has several distinct features that differentiate this program from other supports available such as:

- Promote Student Awareness- Individuals within under-resourced and underserved communities tend to have health-related QOL concerns (Smith et al., 2019). The concerns consist of poor physical health, decreased physical activity, sleep, leisure, and psycho-emotional components that contribute to limitations within meaningful occupations (Smith et al., 2019). These issues are not addressed due to a lack of access to healthcare. Pro bono clinics open the opportunity for universities to fill the healthcare gap and play an integral part in involving students in addressing occupational injustice and deprivation (Goupil & Kinsinger, 2020). The clinic offers students the opportunity to gain knowledge on health disparities and occupational justice within under-resourced and underserved communities while also improving their clinical skills.
- Provide In-Person Services- The pro bono clinic occurs in person on the USAHS Austin campus. This provided students with an authentic experience, provide a unique educational component, and sharpen the students' clinical skills (Pyramid Healthcare,

- 2020). The benefits of in-person services consist of building therapeutic relationships, eliminating distractions, and allowing clients the opportunity to receive quality care (Pyramid Healthcare, 2020). Overall, a pro bono clinic providing in-person services can potentially benefit the university, client, faculty, and students, term after term.
- Apply Theory- The Declaration of Human Rights was created by the United Nations general assembly in 1948. Human rights declared basic rights to life, equality, health and well-being, education, security, dignity, freedom from discrimination, participation in cultural life, and civil and political rights (Crawford et al., 2017). The human rights-based approach (HRBA) framework originated from the declaration of human rights to pinpoint the importance of equality among humans. They promote well-being, dignity, and sufficient standard of life as OT aspire to encourage through supporting engagement in occupations (Crawford et al., 2017). HRBA framework is used to address distributive justice for those in need of healthcare services to enhance their occupational engagement.
- Collaborate Amongst Community Partners- The pro bono clinic creates educational networks and community partners for the university in under-resourced and underserved communities to provide quality service. This clinic creates a channel of recurring referrals, provides bridges to local government, businesses, and universities, develops community partnerships, raises the university profile, and promotes the role of OT (Hamilton et al., 2015). Partnerships between the university and the community will enhance learning opportunities by offering students access to experiences, resources, and environments outside of the classroom (Mills, 2020). This will contribute to improving student clinical experience now and in the future.
- Enhance Student Learning- The pro bono clinic enhances student learning by providing authentic fieldwork experience. The hands-on experience allowed students to practice

and sharpen their clinical skills, increase student readiness for entry-level practice, and increase student comprehension of the issues relating to occupational injustice and health disparities (Palombaro et al., 2011). Prior to this project, the current educational practice at USAHS-Austin lacked real-life scenarios and authentic experiences that can be improved with the development of a pro bono clinic.

The Significance of the Capstone Project

This project is expected to yield several important outcomes. In the short term, this scholarly project enhances students' role competence and knowledge on occupational justice, improve client's occupational performance and engagement within preferred occupations, and deepens the community partners understanding of OT roles. In the medium term, students will integrate the HRBA framework into practice, develop trusting, positive, and collaborative relationships with faculty, and enhance their confidence in building rapport with clients. Clients will benefit from engaging in the pro bono clinic and the university will develop community partnerships within under-resourced and underserved communities. In the long term, students will become active engagers as community dwellers, the university pro bono clinic will be sustainable to address healthcare gaps, and the pro bono clinic will offer students a capstone and fieldwork experience. See Figure 1 Logic Model for a visual representation of the capstone inputs, outputs, and projected outcomes.

A student-led faculty-directed pro bono clinic run by an allied health school has the potential to benefit community partnerships within under-resourced and underserved communities. While it serves a different purpose for each of the vested stakeholders, it provides a platform for interaction, growth, and understanding between partners in academia, and the community to collaborate, learn and develop. Furthermore, this

partnership fosters a safe environment for students to sharpen their clinical skills and provide quality service.

Project Objectives

This project set out the following learning objectives:

- Examine the literature to understand the impact of health inequities and disparities that affect the under-resourced and underserved populations
- Examine the literature to understand the benefits of students participating in pro bono clinics
- Examine literature to learn about policies and procedures that pertain to running pro bono clinics, particularly from the perspective of a university
- Examine literature and identify an appropriate theory or framework that will guide the establishment and running of a university student-led faculty-directed pro bono clinic
- Design a web-based for OT pro bono clinic to establish a sustainable OT pro bono clinic
- Implement the student-led faculty-directed pro bono clinic into USAHS Austin Campus
- Evaluate the strengths, weaknesses, opportunities, and threats (SWOT) of the probono clinic
- Formulate a presentation proposal about the pro bono clinic development at a national conference

Outcome objective:

• Implementation of a student-led pro bono clinic within the USAHS to enhance health and QOL in under-resourced and underserved communities in Austin, Texas, and grant

students the chance to develop outside of a traditional clinical rotation with preclinical experience.

Assumptions

The following assumptions were identified at the outset of this project:

- The pro bono clinic will be implemented into the OT program and continuously sponsored by USAHS with the supervision of faculty and operation by students.
- A minimal amount of equipment, supplies, and space will be necessary to run the probono clinic.
- USAHS will provide the space to hold a pro bono clinic on the campus.
- The pro bono clinic will receive referrals from low-income community health centers and community participants will be willing to join the program.
- Students will obey the schedule and attend the therapeutic sessions consistently.
- Students and faculty will want to participate in this program.

Limitations

Limitations are factors that cannot be controlled but may impact the project (process and/or product). This project includes several potential limitations, which were identified at the outset of this project:

Client Commitment- This project depends on client commitment. Client commitment is
a limitation due to participation being dependent on the willingness of the clients.

Negative impacts of the clients' not participating can limit student learning opportunities,
affect client receiving quality care, and risk pro bono clinic sustainability. Positive
impacts include increasing client engagement in occupations and enhancing students'
preclinical skills.

- Student Commitment- This project relies on student commitment. There is student commitment within the terms as well as between the terms for student leadership. Lack of student commitment can be a potential limitation affecting the delivery of quality care and smooth running of the clinic. If a student is not committed, interested, or motivated to participate in the pro bono clinic this can negatively reflect how they deliver quality service and develop therapeutic relationships. Student commitment can positively affect the clinic by creating a positive learning atmosphere, increasing engagement in evidence-based practice, and influencing clients' achievement.
- Time- This project is limited to a 14-week time frame. There is a time constraint limitation with developing a consistent schedule that meets the needs of students, clients, and faculty participating in the pro bono clinic. The limited time of availability can have a negative impact on the participants and clinic such as the clinic being available only on one day and in a specific timeframe. It can positively affect the clinic with a consistent schedule and reduce overload on faculty and students.
- **Supervision-** This project requires high-quality supervision. There will be a requirement that students in groups are supervised by at least one faculty member when providing services to the clients. There is a risk that can impact faculty and clients due to feeling overwhelmed by the high-student-to-supervision ratio. However, this can have a positive influence by allowing faculty to deliver feedback throughout the session and monitor students delivering evidence-based practice.
- Partnership Cooperation- This project requires partnership cooperation. The
 willingness of an underserved and under-resourced community health center to
 collaborate with the school and refer their clients to the pro bono clinic is a limitation. If
 the community health center decides not to collaborate, this can lead to a negative impact

on the clinic, which could result in not receiving referrals for new participants. This can lead to difficulty in bringing awareness to the program and losing potential participants. A positive outlook on partners cooperating is developing community partnerships, bringing awareness to the role of OT, and receiving recurring participants.

- University Commitment- This project relies on university commitment. The university's commitment to establishing a sustainable program in the allied health school could be a limitation. Without the commitment of the university, the program cannot proceed. Furthermore, students will not receive the opportunity to develop hands-on preclinical experience and under-resourced and underserved communities will not receive quality care. If the university commits to the clinic, it can be beneficial for the community by receiving quality care, for the students by sharpening their preclinical skills, and for the university by developing community partnerships.
- Equipment- This project depends on the availability of equipment and resources.

 Equipment can pose a potential limitation due to students having limited access to equipment and resources to utilize in treatment sessions. However, this can have a positive influence on students by promoting creativity and flexibility to provide quality service, even when resources are limited.

Delimitations

Delimitations are factors that can be controlled and may represent choices made related to the project that might impact the process and/or product. This project includes several potential delimitations, which were identified at the outset of this project:

Population- This project is limited to the adult population within under-resourced and
underserved communities to improve health and quality of care in areas that face
challenges with health disparities. Unfortunately, this can reflect positively and/or

negatively on the clinic depending on the client's level of engagement and participation.

One way to prevent a negative outlook is to meet with the clients before the pro bono clinic to explain the importance of OT and how participation can improve the overall quality of life within their preferred occupations

• Location- This project is limited to the USAHS Austin campus. This can positively and/or negatively affect the capstone project due to transportation. If the client does not have a registered vehicle, reliable vehicle, or the funds to cover public transportation, this can pose a potential threat because they can potentially not participate in the OT pro bono clinic. One way to prevent this negative impact is by exploring ways to raise money to cover public transportation funds.

Conclusion

In conclusion, there is occupational justice needed within under-resourced and underserved communities that correspond with the OT profession. One way to address the underlying issue is to implement a pro bono clinic within allied health schools to benefit the communities as well as students' educational experience. The goal of establishing a sustainable pro bono clinic was to improve health and QOL in the communities and offer students the opportunity to develop clinical competence through preclinical experience.

Chapter 2: Literature Review

Health is defined as a state of physical, mental, and social well-being (AOTA, 2020). Quality of Life (QOL) is one's own dynamic assessment of ideas such as life satisfaction, hope, self-concept, health and functioning, and socioeconomic factors (AOTA, 2020). There is a need for OT to provide valuable services to the under-resourced and underserved communities to address the historical inequity that impinges health and QOL. This project involved steps to establish a sustainable OT pro bono clinic at the USAHS Austin campus. The intent of the pro bono clinic was twofold. First, to provide students with the opportunity to advance their clinical skills and graduate as leaders with insights on causes of health disparities and the skills to address them. Second, to address the gap in services experienced by under-resourced and underserved communities. The purpose of this chapter is to describe the US healthcare system and define vulnerable communities such as the under-resourced and underserved. This chapter explore the literature relevant to issues related to under-resourced and underserved communities due to the gaps within the United States (U.S.) healthcare system, theory application to the pro bono clinic, simulated versus authentic fieldwork experience, and the overall impact of the pro bono clinic on universities. The chapter concluded with a discussion of the application of theory and implications for OT education.

The U.S. Healthcare System

The U.S. does not have a uniform healthcare system or universal healthcare coverage. A uniform healthcare system is described as a single payer system, in which a single government collects and pays out all healthcare costs (Department for Professional Employees, 2016). Universal healthcare coverage simply means all individuals have accessibility to healthcare without financial hardship (World Health Organization, 2021). The U.S. healthcare system is not uniform because there is no singer payer system and insurance can be received through multiple

sources (Department for Professional Employees, 2016). Without uniform healthcare, there exist health inequities and gaps in healthcare services.

Health inequity leads to individuals receiving unfair disadvantages in health. Health inequity is systematic differences in the health status of diverse populations groups (Leonard, 2021). In other words, certain populations experience poor health and difficulties accessing healthcare due to the systems that influence their lives (Leonard, 2021). For example, African American babies are more than likely to experience low birth weight or mortality than Caucasian babies (Leonard, 2021). The lack of access to U.S. healthcare system for all individuals creates health inequities.

Healthcare access is the ability to obtain healthcare services and treatment. The current healthcare system is confined to mini-systems and requires various eligibility criteria, budgeting frameworks, and financial commitment (Butler, 2021). These mini systems consist of Medicaid, Medicare, tax advantage employer coverage, or state-level exchange plans (Butler, 2021). Federal income-related health coverage may be offered for exchange plans as in the Affordable Care Act, but the income must be between 100-400% (\$12,760-\$51,040) of the poverty rate (Butler, 2021). Overall, gaps in services involving the U.S. healthcare system consist of remarkable differences amongst population groups with medical resources, limited accessibility, limited language proficiency, health literacy, and employment (Butler, 2021). Only 89% of workers are employed at firms that offer healthcare insurance with small firms only offering half their employees' insurance (Butler, 2021). Layoffs during the pandemic resulted in 7.7 million workers and 6.9 million dependents losing health coverage (Butler, 2021). Over 78 million do not have adequate insurance, which makes up 24% of the U.S. population. This population includes under-resourced and underserved communities.

Under-Resourced Communities

Under-resourced communities are large, populated suburban and urban areas. Within these communities, there are high poverty rates (Wial, 2020). Under-resourced communities need education/health literacy, transportation access, resources such as parks, recreation centers, libraries, community programs, and access to healthcare services to reduce health disparities (Walker & Hepp, 2016). In the U.S., under-resourced communities comprise of more than 1,400 places in 450 cities that contain a population of at least 50,000 people (Wial, 2020). While the nation's overall poverty rate is 13%, under-resourced communities have a poverty rate of 29 % (Eberhardt et al., 2020, p. 7). Poverty rate is obtained by comparing a person or family income to a fixed poverty threshold (Institute for Research on Poverty, 2016). These thresholds are set by the Census Bureau based on a person's family size, composition, and age of the owner (Institute for Research on Poverty, 2016). Under-resourced communities experience built, human-made, and social disparities, which impact health and OOL.

Built and Human-Made (Physical) Environment Impact on Health

The built environment consists of all human-made physical spaces where people live, recreate, and work, such as buildings, roads, and public spaces. These physical spaces can affect community engagement (Walker & Hepp, 2016). For instance, the buildings and spaces built can affect community engagement by limiting access to social interactions and physical activity. On the other hand, these physical environments can pose a threat to the health and livelihood of communities. In under-resourced communities, the built and human-made environments are below standard compared to resourced communities. Research has shown that under-resourced communities lack access to resources like parks, recreation centers, education, healthcare, and structured community programs (Walker & Hepp, 2016; Xu, 2021). Additionally, many of these communities contain food deserts, or areas with low availability of healthy foods (Walker &

Hepp, 2016). The limited availability of resources in parks, and safe walking areas in these communities are correlated to poorer health outcomes. Walker and Hepp (2016) also reported an increased incidence of lead paint exposures, mold growth, air pollution, and water pollution. The Texas Department of State Health Services (DSHS) stated that in 2011, a little over 4,000 individuals tested with elevated lead levels in under-resourced communities. This has increased the risk of poor respiratory health such as asthma, mortality, and chronic diseases such as cardiovascular disease (Hayward et al., 2015). These factors of built and human-made environments all influence individuals' health outcomes.

Social Environment Impact on Health

The social environment refers to a person's society and all surroundings influenced by humans. Infrastructure relates to facilities, structures, and communication systems that contribute towards the function of U.S. such as roads, airports, water, and power supplies (Development Back of Southern Africa, 2022). Poor infrastructure in under-resourced communities can create barriers to social access in under-resourced communities. An example of poor infrastructure is deteriorated classrooms, leaking toilets, and broken furniture that is the result of lack of funding, repairs and maintenance, and provision of developmental resources in communities (Development Back of Southern Africa, 2022). Otero Peña et al. (2021) examined the social environment in parks within low-income communities to provide clarity on the influence of social environment on park use. The authors found high crime rates, a low rate of programmed activities, and a lack of pedestrian safety create barriers that affect social access.

All these factors contribute to a lack of community engagement, social access, and social isolation (Otero Peña et al., 2021). Yen and Syme (1999) examined the social environment related to groups to which people belong, the neighborhood where they live, the operation of their workplaces, and the systems created to organize their lives. The authors highly

recommended community programs to consider the social environment when addressing the built and human-made environments to understand the true needs of under-resourced communities. The social environment does not have an independent existence of one another and can pose a threat to the health and livelihood of these communities.

The social environment can have an impact on health outcomes. In under-resourced communities, the lack of access to resources and supportive social networks are key factors that impact health and QOL (Task Force on Community Preventive Services, 2005). Hayward et al. (2015) reported communities that lack adequate built environments that support the social environment are found to have a lack of trust, openness, and greater feelings of social isolation. Research showed that residents in a more cohesive and safer environment reported higher self-rated health compared to residents of other neighborhoods (Hayward et al., 2015). The built, human-made, and social environments all have considerable influence on an individual's health outcomes, which can impact under-resourced communities.

Gaps in the U.S. Healthcare System Impact on Under-Resourced Communities

In general, lack of access to healthcare is detrimental to the well-being of individuals and communities. Healthcare limitations due to cost and coverage within these communities, individuals are less likely to receive diagnostic tests and medications for chronic diseases (Arpey et al., 2017). Under-resourced communities often lack access to clinics due to facilities being understaffed, clinics being located far from the communities, and the cost of health insurance. Arpey et al. (2017) found a positive correlation between SES and health outcomes. Under-resourced communities have negative effects on health-related outcomes including, but not limited to, low birth weight, depression, psychological distress, poor life satisfaction, and health behaviors such as substance use, mortality, morbidity, and chronic conditions (Wen et al., 2005). These health outcomes can impact an individual's QOL, health and wellness, and occupational

engagement, which can impede their overall occupational performance. Individuals in underresourced communities are more than likely to have a lower life expectancy and endure more chronic conditions in comparison to others of higher SES (Arpey et al., 2017). Health outcomes can impact an individual's overall QOL in under-resourced and underserved communities.

Underserved Communities

Underserved communities faced barriers with accessing adequate health coverage and basic health services within their communities. Underserved communities consist of individuals with high-risk chronic conditions that receive fewer healthcare services, face barriers with accessing basic healthcare services, exhausted their benefits for rehabilitative services, and encounter a shortage of providers (Centers for Medicare & Medicaid Services (CMS), 2021). To control healthcare costs, health reform (act to improve private and public health insurance systems) has limited health insurance to only those that meet the "medically necessity" clause by the physician (Mariner, 1994, p.1515). Medical necessity is defined as healthcare services or equipment a healthcare physician, exercising clinical judgment, provides or recommends for a client to prevent, diagnose, or treat an illness, injury, or symptoms (Social Security Administration, 2022). This clause limits benefits of healthcare services that are not deemed medically necessity by healthcare providers (Mariner, 1994). Such a clause has far reached implications for those with elevated needs of care, such as individuals with disabilities and chronic conditions (Krahn et al., 2015). Underserved communities frequently maximize their benefits for rehabilitative services due to the "medically necessity" clause. These populations have a higher incidence of morbidity, mortality, and increased dependence on the healthcare system.

Gaps in the U.S. Healthcare System Impact on Underserved Communities

Underserved communities encounter challenges with receiving quality services that are impacted by the gaps in the U.S. healthcare system. According to literature, chronic conditions are reported to be the number one killer globally (Cockerham, 2008). The costs for management of chronic conditions are reported to be approximately 17 times more than clients who are not considered high users of healthcare and account for 21% of total annual healthcare expenditure (Bresnick, 2015). Individuals with chronic conditions need an abundance of services ranging from preventative care to acute and chronic care (Bresnick, 2015). Individuals that have exhausted their benefits often do not qualify for allied healthcare services for chronic care management and preventative care. Research suggests allied health services for people with chronic conditions are responsible for better health outcomes with reduced hospitalizations (Barr et al., 2019). The gaps in services individuals experience, particularly with a lack of allied health services, put individuals at risk for morbidity and consequently limit occupational engagement and decreased QOL.

Distributive Justice Within OT Profession

Occupational and distributive justice is embedded into the OT profession to provide equal services. Occupational justice is defined by the fulfillment of the right for all individuals to engage in the occupations they need, categorize as meaningful, and positively contribute to the individual and community well-being (Hocking et al., 2019). For instance, establishing a pro bono clinic to provide access to quality care in under-resourced and underserved communities is an example of occupational justice. Whereas limited accessibility to healthcare in the U.S. within these communities is an example of occupational injustice.

The OT profession aims to provide distributive and occupational justice to improve individuals' occupational engagement in preferred occupations. A basic assumption of OT is that engagement in occupations is therapeutic and beneficial to health and well-being (Hocking et al.,

2019). Therefore, constraints on meaningful engagement in occupations are viewed as limiting health and well-being. As an example, when COVID-19 restricted access to outside activities such as shopping center, gym, and therapy, individuals may experience depression. Distributive justice is a core value of all service providers ensuring equality in the delivery of services, irrespective of religion, race, SES, or gender to address the right to engage in occupations and the right to health (Hocking et al., 2019). Public programs that provide social security or medical care to all individuals, retired, unemployed, or disabled, is an example of distributive justice. To promote health and well-being within all populations occupational therapists need to address occupational and distributive justice.

The United Nations ratified the Declaration of Human Rights. The Declaration of human rights included the right to occupation and health as inalienable rights (United Nations, 1948). The World Federation of Occupational Therapists (WFOT) endorsed the 1948 Universal Declaration of Human Rights. WFOT (2019) stated that occupational therapists should strive for occupational justice for all and recognize the differences in practices due to social, cultural, political, and geographical embedded contexts. People from under-resourced and underserved communities experience occupational and distributive injustice due to limited access to meaningful occupations and gaps in healthcare services (Hocking et al., 2019). This further justifies the need for OT involvement in addressing the needs of the under-resourced and underserved communities.

Human Rights-Based Approach Framework (HRBA)

The HRBA framework provides occupational and distributive justice to all people. As stated by Scottish Human Rights Commission, the framework is driven by the foundation of the Universal Declaration of Human Rights (2020). HRBA is focused on services centered around four elements that include availability, accessibility, acceptability, and quality (World Health

Organization (WHO), 2017). Availability refers to fulfilling the need for sufficient functioning medical care facilities, public health, goods and services, and health programs (WHO, 2017). Accessibility requires that medical facilities and goods and services be accessible to all individuals physically and financially (WHO, 2017). Acceptability involves respecting healthcare ethics, being culturally appropriate and sensitive to gender (WHO, 2017). Quality is evidence-based care (scientific and medically appropriate) (WHO, 2017). With the HRBA framework, the focus is on outcomes and processes, with an adherence to standards and principles of participation, equality and non-discrimination, and accountability (WHO, 2017). Human rights and occupational justice are the focal points of policies and practice in this framework.

With under-resourced and underserved communities, their right to health services and consequently their right to engage in occupations is impacted. Hammell (2008) portrays human rights as a lever for equally promoting occupational engagement among all individuals. For individuals to optimize their occupational engagement, they need health and wellness.

Neglecting commitment to human rights for those that need healthcare services creates ground for occupational injustice. For example, if the health reform committee neglects obligations to address the increasing cost of national healthcare this would create ground for occupational injustice. Actions such as changing policy, developing programs, advocating for under-resourced and underserved communities can promote our human rights agenda (Hammell, 2008). The HBRA framework provides occupational therapists with a way of organizing the delivery of healthcare services to these communities.

Human Rights-Based Approach Framework in OT

The HRBA framework aligns with the OT profession's core values of occupational justice. HRBA framework and OT complement each other to achieve improvement within health

outcomes. This approach can guide the outcomes occupational therapists seek to accomplish and the processes occupational therapists can use to meet the outcomes. Human rights can aid in the process of advocating for OT with policy and social change within under-resourced and underserved communities. Crawford et al. (2017) completed a thematic analysis to identify occupational therapists' values on human rights in monthly group discussions over a period. The study found occupational therapists tend to relate human rights issues occurring elsewhere within the world versus in their practice. They also reported that occupational therapists can be uninformed of human rights and view them as irrelevant to the OT profession. Galvin et at., (2011) and Hammell (2015), recommend OT practice and research to center their focus more on human rights to bring an occupational perspective to societal problems through engagement with human rights. Incorporating the HBRA as an educational component in students' curricula may be valuable to further our core values of human dignity, equality, and participation.

Potential of Universities Addressing Healthcare Gaps

Inaccessible, inadequate, and/or poor medical care increases overall healthcare costs. This has vast implications for the overall quality of care experienced by all individuals (Riley, 2012). A vast majority of individuals in the U.S. who experience gaps in healthcare services fail to receive distributive justice in modern society (Goupil & Kinsinger, 2020). To address these gaps in services, using community resources such as student-led faculty-directed pro bono clinics will help mitigate the impact of gaps in healthcare services on the under-resourced and the underserved communities. Goupil and Kinsinger (2020) identified four principal areas of concern that would require attention including socioeconomic factors, healthcare rationing, client healthcare accessibility, and client advocacy. They recommend the use of pro bono clinics to specifically address concerns relating to healthcare accessibility and socioeconomic factors

(Goupil & Kinsinger, 2020). Universities can positively influence underserved and underresourced communities and provide a solution to healthcare barriers.

The involvement of universities that have allied health programs in running pro bono clinics can equally benefit the communities and their students. Humanitarian efforts to address the health needs of the community can strengthen bonds and collaboration between the community and universities (Goupil & Kinsinger, 2020). Pro bono clinics can expose students to the health needs of the under-resourced and underserved community and help students continue work in this area post-graduation (Riley, 2012). Pro bono clinics can create a range of opportunities by allowing students to acquire their professional identity, facilitate core values within their profession, provide quality service, and improve students' confidence with service to different ethnic groups, chronic conditions, and developmental disabilities (Goupil & Kinsinger, 2020). Overall, pro bono services can fill the healthcare gap and successfully be applied to health professions.

Pro Bono Clinic

Pro bono clinics are implemented in organizations, corporations, and universities to provide communities with quality care and students hands-on experience. Goupil and Kinsinger (2020) define pro bono care as work provided voluntarily and without any fees by a professional such as a doctor or lawyer. Like pro bono, charitable care may be provided for a reduced fee or free for low-income clients (Goupil & Kinsinger, 2020). To obey the professional code of ethics some organizations, private practitioners, and corporations choose to integrate charity work as part of their professional activities (Goupil & Kinsinger, 2020). The implementation of healthcare pro bono services can fill the healthcare gaps within under-resourced and underserved communities (Goupil and Kinsinger, 2020). Traditionally, the legal profession and health professionals such as physical therapists, physicians, dental care, and chiropractors have engaged

in pro bono services in these communities (Goupil & Kinsinger, 2020). University collaboration within pro bono clinics can overall benefit the communities, the students, and the universities.

Universities involvement can set the foundation for students participating in charity or pro bono services. Universities involvement can play an active role in building confidence and developing positive attitudes and behaviors regarding pro bono and charity participation to help build sustainable models (Haldeman et al., 2015). Cruess et al. (2000), elaborate on how the foundation ethics of healthcare are equal with the intention of pro bono and charity services.

There are more than 1,200 free and charitable clinics within the U.S. according to the National Association of Free and Charitable Clinics (Goupil & Kinsinger, 2020). Moreover, annually the clinics have approximately 4,000 clients visits and almost 800 new clients with rising demand for services (Goupil & Kinsinger, 2020). Pro bono and charity services appear to be achievable and sustainable (Haldeman et al., 2015). Students were willing to participate and engage within under-resourced and underserved communities for the greater good (Goupil & Kinsinger, 2020). Both charity and pro bono services can lay the foundation for clinical experiences

Clinical Experience

Clinical experiences are an overview of fieldwork experiences that involve students gaining clinical exposure and actively engaging with clients (AOTA, 2009). Fieldwork (FW) experience provides future practitioners competence in using evidence-based practice and developing a professional identity as an OT practitioner (AOTA, 2009). Competency is obtaining suitable skills and abilities to practice as an entry-level occupational therapist (Crites et al., 2018). In addition to enhancing clinical skills and clinical reasoning, FW experience contributes to students advancing their leadership, advocacy, and managerial skills in various practice settings (AOTA, 2009). FW experience Levels I and II are designed to prepare students for entry-level practice within the OT profession.

Level I and Level II Fieldwork

FW experience is a vital bridge between academic education and OT practice.

Accreditation Council for OT Education (ACOTE, 2007), Level I FW experience occurs within academic coursework simultaneously and plans to enrich students through direct participation such as simulations, case studies, and role-play. Level I FW the main objective is to introduce students to FW experience, ply knowledge to practice, and create a general comfort level with an understanding of client needs (Glapion, 2021). After completing Level I, students transition into Level II FW experience, which is constructed to develop competent and entry-level practitioners (ACOTE, 2007). Level II involves an in-depth 12-week experience with delivering OT services to clients, applying purposeful and meaningful occupations, administrating and managing OT services (Glapion, 2021). FW experience can consist of simulation and pro bono clinic experiences.

Simulated Experience

The simulation experience is a step in the right direction to help students develop competence as future OT practitioners. Simulation is a tool that is part of a student's education. Simulation involves computerized human models (replication of human responses), written case studies, video recorded case studies, live actors role-playing medical scenarios, human patient simulator (HPS) and/or virtual immersive-reality simulation (DiZazzo-Miller et al., 2021; Bethea, 2014). HPS involves a mannequin providing real-time pharmacological and physiological reactions to many health conditions and interventions (Bethea, 2014). Virtual immersive-reality simulation is an advanced computerized technology that projects the person into computerized surroundings or setting (Bethea, 2014). Simulation experience contributes to students' growth in becoming component OT practitioners.

Simulation fulfills a need in clinical experience that affects students, FW instructors, and clinical education. Expanding workforce demands, student supervision guidelines, reimbursement guidelines that monitor productivity, and competition for clinical site placements have contributed to the increased use of simulation in clinical education (Bethea, 2014). Currently, live actors playing medical scenarios are commonly used in educational settings to help students have close real-life experiences to foster their clinical reasoning. These simulated experiences have their strengths and limitations.

Strengths and Limitations of Simulated Experience

Institutions should consider the strengths and limitations of simulated experience on the students when integrating into the curriculum. The strengths of simulated experience consist of allowing students to complete high-risk interventions in a safe environment (Mattila et al., 2020). The time frame and setting are predictable and organized. The simulations can be tailored to suit beginners, intermediates, and experts. They allow learners to learn from their mistakes without profound consequences (Mattila et al., 2020). Faculty can use various educational theories such as adult learning, social cognitive, and experiential learning to engage the students in active learning (Academy of Professional Development, 2017). Experiential learning is an engaging learning process where students learn by doing and reflecting on the experience (Kolb, 1984). Simulated experience allowed for a controlled environment setting for students to execute skills without the risk of harming real clients (Bethea, 2014). Students can develop decision-making, communication, clinical reasoning, and critical thinking skills within a safe environment.

The limitations of a simulated experience include a lack of authenticity of real-life situations. The time and costs involved in training simulated actors and creating scenarios is enormous and usually limited time is spent on students' personal reflection. The potential for students to receive rich experiences and feedback is limited and is only as effective as the

training provided on simulations involving computerized human models, HPS, and/or virtual immersive-reality simulation. Due to the nature of simulated experiences, there is pressure on students to act, which increases their feelings of discomfort and their reluctance to engage in these experiences. It has also been reported that students learn how to play the simulation game (an act of pretending to treat clients) versus how to treat real clients (Academy of Professional Development, 2017). Furthermore, with the use of technology these experiences can be fraught with ongoing technical issues, being expensive, requiring regular updates/maintenance, and necessitating faculty training. Academy of Professional Development (2017) explains the simulation experience as one of pretending, and one where students are never really exposed to the actual repercussions that are possible when working with real clients. In these experiences, students are not exposed to adequate results that could happen due to underperformance or a lack of active engagement.

Benefits of Simulated Experience to Students

Simulated experience has improved select skills for students. Students report that simulation does enhance critical thinking and/or clinical reasoning skills and improve their confidence with interprofessional collaboration, verbal communication, and role delineation (Andrzejewski et al., 2020). Role delineation describes a person's responsibilities and functions as a healthcare worker in a specific role (Shapiro & Brown, 1981). While studies reported improvement in student confidence and integration of theory, these studies also reported students finding role-play an undesirable option because of the lack of authenticity (Andrzejewski et al., 2020; Van Vuuren, 2016). Students' results within the Andrzejewski et al. (2020) study suggested that simulations may not have a strong influence on the development of clinical reasoning or critical thinking skills needed for Level II FW. Students' outlook on simulated experience suggests that simulations can help students in select areas, however, lack authenticity.

University-Run Pro Bono Clinic

Universities running pro bono clinics is an action step towards improving students' readiness for clinical practice and providing a valued service to surrounding under-resourced and underserved communities. Many benefits arise from universities running a pro bono clinic including creating community partnership and engagement, promoting the role of OT, increasing students clinical experience, and enhancing public health within under-resourced and underserved communities (Hamilton et al., 2015). Pro bono clinics can be used as an alternative authentic FW experience to support students' transitioning classroom knowledge into clinical skills through experiential learning (Dhans et al., 2015; Phillips, 2017). An authentic experience is unscripted, unique, and real-time, and once reflected upon serves as a learning tool with handson training for students (Buel, 2020). Hands-on training is a type of teaching method used to let people actively apply their knowledge to real-world situations (Buel, 2020). Providing authentic experience with hands-on training boosts engagement and retention, connects theory to practice, enhances critical thinking, and encourages student success and empowerment (Buel, 2020). Universities not only enrich students' preparedness but make a commitment to enhancing the public health of under-resourced and underserved communities by providing OT services. Universities running pro bono clinics can impact the clients, the students, and the faculty.

Strengths and Limitations of Pro Bono Clinic Authentic Experience

There are strengths and limitations with implementing pro bono clinics as an alternative authentic experience. The strengths of the authentic FW experience consist of providing students with real hands-on experience to practice and hone skills learned within the academic program, allowing faculty to explicitly guide students through clinical practice, and ensuring access to occupational justice within under-resourced and underserved communities (Nielsen et al., 2017; Palombaro et al., 2011). The limitations of an authentic FW experience involve sustaining the

pro bono clinic, supervising and staffing the clinic, managing time, negotiating space, navigating academic schedules, addressing transportation issues, dealing with cancellations, and maintaining funds to operate the clinic (Hewson & Friel, 2004; Nielsen et al., 2017; Palombaro et al., 2011). Inability to consistently operate the clinic could potentially harm the relationship between the pro bono clinics and the community partners.

Benefits of Pro bono Clinic for Faculty

Pro bono clinics can potentially support faculty and student interpersonal relationships by improving communication between students and faculty, developing trusting relationships, and providing faculty with the opportunity to partake in clinical practice. In one study, the biggest challenge the faculty initially faced was the lack of trust and communication with students (Palombaro et al., 2011). As time passed, faculty started handing over more responsibility to students and discover them to be highly capable of directing and leading the initiative (Palombaro et al., 2011). In the pro bono clinical environment, faculty felt more relaxed and open to conversant with students about values and beliefs in relation to OT. In a study, 70% of students agreed that their ability to communicate effectively with faculty members increased within the pro bono experience (Hewson & Friel, 2004). The most enjoyable and rewarding parts for faculty were watching students grow and develop over courses (Hewson & Friel, 2004). Another valuable component of faculty is the ability to identify early problem areas such as intervention planning seen in students. Addressing the problem areas with feedback benefits the faculty and students by allowing early remediation.

Benefits of Pro bono Clinic for Students

Pro bono clinics can serve as a benefit to students by providing a real authentic FW experience to sharpen their clinical skills. The benefits of students participating in the pro bono clinic include refining their clinical skills within client-care, communication, documentation,

decision making, clinical competence, clinical reasoning, conflict resolution, therapeutic relationships, and professional behaviors (Gilles et al., 2019; Hewson & Friel, 2004; McQuillan et al., 2017; Nielsen et al., 2017; Palombaro et al., 2011; Rogers et al., 2017). All the skills mentioned above aid in the process of students developing a professional identity in OT practice (Palombaro et al., 2011). Students positively noted the opportunity to work directly with faculty and exposure to clients from under-resourced communities aid in developing a sense of purpose (McQuillan et al., 2017). Furthermore, students disclose a remarkable improvement with understanding client progression, altering a client plan of care, and developing hands-on clinical skills. (Black et al., 2017). Hands-on clinical skills consist of manual techniques, therapeutic exercises, client and family teaching, completing evaluations, and documentation (Black et al., 2013). Palombaro et al. (2011) study examined how students were grateful for hands-on learning and a chance to process their learning experience. Pro bono clinics offer an ideal educational component to accelerate student learning while simultaneously improving client care.

Benefits of Pro Bono Clinic for Clients

Pro bono clinics benefits for clients are essential to ensure the client is receiving quality care that improves their overall QOL, health, occupational performance and engagement. Clients' viewpoints of the pro bono clinic include achieving better health and wellness, reducing financial burdens, receiving optimal care, making functional progress, and enhancing intrinsic factors (such as strength, balance, nutrition, self-efficacy, and motivation) (Hewson & Friel, 2004; Goupil & Kinsinger, 2020). In a study, clients positively reported better access to preventative care, fewer workday absences, and fewer concerns over financial burdens (Goupil & Kinsinger, 2020). Since participating in a pro bono clinic, 94.7% of clients confirmed improvements in health and wellness (Goupil & Kinsinger, 2020). Clients' interactions with students provided a motivation factor for participation, with clients finding enjoyment in helping

the students learn (Hewson & Friel, 2004). Stickler et al., (2016) study mentioned 97% of clients who attended a pro bono clinic revealed satisfaction with care and 77% express greater satisfaction with a pro bono clinic in comparison with prior care. Overall, pro bono clinics can positively influence the clients.

Discussion

This literature review supports the use of pro bono clinics by allied health universities to address health inequities in communities and to enhance student preclinical experience and clinical reasoning. These experiences will also provide students with insight on health disparities and increase their comfort level in addressing health disparities as future practitioners (Riley, 2012). Furthermore, future healthcare practitioners need mentored hands-on clinical skills experience to transition into clinical practice. The gaps in healthcare services come at a great cost to under-resourced and underserved communities and the nation. Pro bono clinics fundamentally benefit underserved and under-resourced communities as well as the universities.

Implications for OT Education

This literature review highlights several suggestions for OT education:

Apply the HRBA framework

The literature review supports the HRBA framework. The framework highlights the need for human rights to be at the forefront of OT for underserved and under-resourced communities. This framework aligns with the core values of OT that empower practitioners to address occupational and distributive justice: altruism, equality, freedom, justice, dignity, truth, and prudence. These core values emphasize the need for pro bono clinics in the OT profession, as the protection of the right to engage in occupations aligns with the protection of human rights. The HRBA framework can promote student learning because it furthers their core values of human dignity, equality, justice, and participation. ACOTE requires an educational curriculum to

incorporate health equality and equity, sociocultural, socioeconomic, diversity factors, and social determinants of health (2018). HRBA framework can be beneficial to OT students' education by furthering their knowledge on human rights and to underserved and under-resourced communities by providing access to quality care.

Incorporate Adult Learning

Adult learning involves adults pursuing education. Transformative learning is a theory of learning and specifically focuses on adult education and learning (Western Governors University, 2020). Adult learning and education involve critical reflection on things in the past, we believed and thought as children, to shift our worldview of what we should understand and believe as we obtain new information (Western Governors University, 2020). Transformative learning approach simply means altering students thinking based on new information and experiences to gain a new perspective (Crawford et al., 2017). For example, students learn about cultures by meeting adults in-person from various cultural backgrounds. This approach aims to promote a fundamental change in the students' perspective from an individualistic approach to considering the population issues and thinking beyond the standard clinical considerations to include rights and justice (Crawford et al., 2017). Transformative learning approach can be fundamental for OT education to challenge students' perspectives.

Raise Awareness of the Unmet Health Needs of Under-Resourced and Underserved Communities

Under-resourced and underserved communities face occupational injustice and deprivation due to the unmet health needs within their community. These communities experience challenges with health inequities that result in poor health, well-being, and life satisfaction (Walker & Hepp, 2016). Under-resourced and underserved communities need access to resources such as parks, recreation centers, public health, community programs, and

healthcare services to reduce health disparities. Raising awareness within these communities will create a tool for advocacy, convince policy changes, and encourage people to participate in the change. Within the OT profession, there are roles and responsibilities with evolving knowledge to support participation, improve engagement in all occupations for people, and raise awareness of potential issues with occupational injustice. This calls for businesses, organizations, institutions, and public health bodies to align their policy to fulfill the health needs of individuals in under-resourced and underserved communities.

Provide Authentic Learning Experiences

Universities providing students an authentic learning experience can hone students' clinical skills overall. Educational curriculums should consider the option of providing an authentic learning experience such as probono clinics. Students valued and appreciated hands-on learning experiences within the curriculum (Hewson & Friel, 2004). Students mostly favored the opportunity to see the process from beginning to end, improving communication skills, clinical reasoning, intervention planning, and developing therapeutic relationships (Hewson & Friel, 2004; Palombaro et al., 2011). Providing an authentic learning experience helps transition students into well-rounded practitioners. Furthermore, it provides universities with the opportunity to fulfill the health needs of the under-resourced and underserved communities.

Develop Partnerships with Community Partners

Universities developing community partnerships with community partners in underresourced and underserved communities create the opportunity for educational networks, raise the awareness of the role of OT, increase visibility, and expand reach into the communities (Forbes, 2021; Hamilton et al., 2015). Community partnerships also help expand connections by sharing expertise, resources, and insight (Forbes, 2021). Universities partnering with community partners will form a channel of referrals, develop a platform for local businesses and institutions to collaborate, and raise universities profile (Hamilton et al., 2015). Partnerships among universities and communities will enhance learning opportunities for the students by providing access to experiences, expertise, resources, and environments outside of the traditional setting.

Conclusion

This literature review covered issues related to U.S. healthcare system in under-resourced and underserved communities, theory application, strengths and limitations of simulated and authentic clinical experience, and the overall benefit of the pro bono clinics for students, faculty, clients, and universities. The main objective of this literature review was to provide evidence to help support the need for a pro bono clinic within the USAHS Austin campus. This capstone project gives students the opportunity to gain preclinical experience with an authentic FW experience while simultaneously fulling a need within under-resourced and underserved communities. Pro bono clinics can impact students, faculty, universities, and communities in a positive aspect.

Chapter 3: Methodology

In under-resourced and underserved communities, there is a lack of access to valuable services resulting in inequity that impinges on the health and QOL of community dwellers. The purpose of this capstone project was twofold. First, the project provided students with the chance to strengthen their clinical skills and graduate as leaders with insights on the causes of health disparities and the skills to approach them. Second, the project developed a framework and systems for the pro bono clinic to benefit the clients and the students of USAHS to address gaps in services experienced by under-resourced and underserved communities. This chapter will describe the project as in the participants, setting, process, schedule/timeline, and conceptual model.

Participants, Setting, and Process

Participants

Participants are people who took part in or are involved in the capstone project. The participants of this project consisted of OT students, faculty team, pro bono clinic manager, and clients. The students were from the 3rd Term and 4th Term of the OT program at USAHS Austin campus. The faculty team were instructors from Clinical Applications in Geriatrics. The faculty team oversaw the pro bono clinic. The clients were individuals between the ages of 18 to 70 who benefitted from OT services. Clients seeking OT services at the USAHS Austin pro bono clinic presented with but are not limited to neurological conditions such as spinal cord injuries, cerebrovascular accidents, and Parkinson's, chronic conditions, anxiety, and depression.

Setting

The pro bono clinic was located on the USAHS, Austin campus. The Centers for Innovative Clinical Practice (CICP) was set up for the pro bono clinic space at the start of the clinic. The treatment rooms were set up with treatment tables, chairs, assessments tools, and

equipment (such as yoga balls, Theraband's, and games for treatment sessions). Room dividers were available to provide privacy to the client in the therapeutic session.

Process

This project consisted of 5 phases: Development Phase, Implementation Phase, Evaluation Phase, Revision Phase, and Dissemination Phase. Sustainability was applied throughout the phases of this project by building a website, creating organization systems, establishing student leadership opportunities, and refining referral processes. Each phase consisted of a learning objective, learning activity, and expected timeline completion within the 16-week experience. With the completion of each phase, there was a deliverable known as the learning outcome. Refer to Appendix A Project Schedule to view the 5 phases.

Development Phase

The Development Phase took place between weeks 1-6 of the 16-week experience. The Development Phase overlapped with the Implementation Phase. This phase consisted of finalizing the mission and vision statement, completing client's paperwork, marketing, establishing orientation modules, training the students, establishing student officers, refining the referral process, initiating grant proposal, establishing a schedule, and designing a preliminary website. For students to participate, they must have completed orientation and training videos for the pro bono clinic and ClinicNote Electronic Medical Record (EMR). Orientation and training modules were available on the OneNote for student completion. For new clients to participate, they were required to complete all client paperwork that was located on ClinicNote EMR. This included a pro bono clinic eligibility form (PBCE), intake form, video/photo release form (optional), a referral from a licensed physician, inform consent and release agreement, and exchange of records. See Appendix B-F for more details on the required paperwork. The deliverable of the Development Phase was the website for the OT pro bono clinic. On the pro

bono clinic website, documentation forms were available for neurological evaluations and general conditions evaluation, treatment note, and discharge summary. Refer to Appendix G-H to view the sample documentation forms. Refer to Appendix A Project Schedule for more details on the Development Phase.

Implementation Phase

The Implementation Phase took place between weeks 6-13 of the 16-week experience. The Implementation Phase overlapped with the Evaluation Phase. This phase included implementing student training, running the student-led faculty-directed pro bono clinic for, organizing student body, seeking student feedback, reflecting on the clinic strengths and weaknesses (in a reflective journal), and publishing the website. A reflection on the pro bono clinic was recorded every week to keep track of improvements and suggestions. See Appendix I for the reflective journal template. The deliverable of the Implementation Phase was a written summary of reflections. Refer to Appendix A Project Schedule for more details on the Implementation Phase.

Evaluation Phase

The Evaluation Phase was week 13 of the 16-week experience. The Evaluation Phase assessed the effectiveness of the pro bono clinic. This phase included gathering feedback from the pro bono clinic manager, students, clients, and faculty team in informal focus groups and setting up a meeting with the faculty team to discuss the sustainability of the pro bono clinic. See Appendix J for focus group questions. Along with the reflective journal data, the data gathered from the focus groups was compiled and analyzed. The deliverable of the Evaluation Phase was a presentation on strengths, weaknesses, opportunities, and threats (SWOT) analysis to the capstone team. Refer to Appendix K for an overview of a SWOT analysis. Refer to Appendix A Project Schedule for more details on the Evaluation Phase.

Revision Phase

The Revision Phase took place week 14 of the 16-week experience. This phase involved revising the pro bono clinic website based on feedback received via focus groups by students, clients, and faculty team. The deliverable of the Revision Phase was a revised website for the OT faculty, clients, and students. Refer to Appendix A Project Schedule for more details on the Revision Phase.

Dissemination Phase

The Dissemination Phase took place week 15-16 of the 16-week experience. This phase involved creating a presentation proposal for a national pro bono clinic conference. The deliverable of the Dissemination Phase was creating a presentation proposal for the national pro bono clinic conference. Refer to Appendix A Project Schedule for more details on the Dissemination Phase.

Conceptual Model

The conceptual model was used to describe the objectives of the capstone project. The model listed the problem (under-resourced and underserved communities), provided a solution (pro bono clinic), created sustainability (created a website and organize of student body), and projected outcomes on the students, under-resourced community, and clients. Also, the model considers the external issues and institutional and external support that affected the pro bono clinic and website development as listed in Figure 2.

Conclusion

In conclusion, the project aimed to provide quality service to people who are within under-resourced and underserved communities. This chapter describes the project as in the participants, setting, process, schedule/timeline, and conceptual model. In this chapter, there is a clear understanding of the framework of the project with establishing a sustainable pro bono

clinic to help fill healthcare gaps and improve the clinical experience for students by providing an authentic experience. To ensure sustainability of the pro bono clinic an organize student body and website was created.

Chapter 4: Capstone Product

Under-resourced and underserved communities lack access to quality care that affects their health and QOL. Students lack authentic clinical experiences to engage in clinical care. The goal of this capstone project was two-fold. To establish a sustainable USAHS OT pro bono clinic in Austin, Tx to expand access to OT services to individuals in under-resourced and underserved communities. To provide USAHS OT students an opportunity to develop clinical and managerial skills with faculty direction. This capstone project yielded three products: a website for the OT pro bono clinic, an analysis presentation, and a presentation proposal for a pro bono clinic national conference. This chapter will describe the capstone products.

Project Summary

During the 16-week capstone experience, the OTD (Occupational Therapy Doctorate) scholar completed the experiential component at USAHS Austin Campus. For the capstone experience, the scholar set out to complete the following program objectives that aligned with the capstone products:

- Examine the literature to understand the impact of health inequities and disparities that affect the under-resourced and underserved populations
- Examine the literature to understand the benefits of students participating in pro bono clinics
- Examine literature to learn about policies and procedures that pertain to running pro bono clinics, particularly from the perspective of a university
- Examine literature and identify an appropriate theory or framework that will guide the establishment and running of a university student-led faculty-directed pro bono clinic

- Design a web-based for OT pro bono clinic to establish a sustainable OT pro bono clinic
- Implement the student-led faculty-directed pro bono clinic into USAHS Austin Campus
- Evaluate the strengths, weaknesses, opportunities, and threats (SWOT) of the pro bono clinic
- Formulate a presentation proposal about the pro bono clinic development at a national conference

OT Pro Bono Clinic Website

The OT pro bono clinic website was created to provide orientation, clarification on expectations, and service offered to new students and clients. It serves to increase the awareness of the OT presence within the USAHS Pro Bono Clinic. The website was grounded by the HRBA framework to put the focal point on services centered around four elements: availability, accessibility, acceptability, and quality. The website was established to provide a gateway for information, orientation, and accessibility for clinic services for all potential participants. The website can be reviewed at https://daijachumley.wixsite.com/ot-pro-bono-clinic. Refer to Appendix L to view screenshots of the website.

SWOT Analysis Presentation

A SWOT analysis was completed and presented to the faculty team. The SWOT analysis interpreted the strengths, weaknesses, opportunities, and threats of the OT pro bono clinic to increase sustainability. Information was gathered from weekly reflective journals on the clinic and informal discussions with students, clients, faculty team, and the manager. Refer to Appendix K for an overview of a SWOT analysis. Refer to Appendix M to view SWOT analysis slide deck with speaker notes.

Pro Bono Clinic National Conference Proposal

The presentation proposal was created to submit to a pro bono clinic national conference. The presentation proposal purpose is to establish a student-led faculty-directed OT pro bono clinic in allied health universities to provide under-resourced and underserved communities access to quality care and OT students the opportunity to hone their clinical skills. The goal of the presentation was to inspire allied health universities to establish pro bono clinics to aid in fulfilling healthcare gaps. Refer to Appendix N for the presentation proposal.

Conclusion

In summary, this capstone project generated three products: a website for the OT pro bono clinic, a SWOT analysis presentation, and a presentation proposal for a pro bono clinic national conference. The website will be used by the students in Fall 2022 for orientation to Level 1 FW clinical experiences in Clinical Applications in Geriatrics. The SWOT analysis provides the faculty and the student managers with an assessment of the benefits of running the clinic and areas that need to be addressed in the future. With a presentation to a national audience, the OTD scholar hopes the capstone products will be a prototype for future pro bono clinics within allied health universities to provide students an alternative clinical experience, and to provide under-resourced and underserved communities the opportunity to access quality care.

Chapter 5: Discussion

The mission of this project was to establish a sustainable OT pro bono clinic within the USAHS to increase access to quality care for under-resourced and underserved communities in Austin, Texas and to provide OT students an authentic clinical experience to further develop as clinicians. As a result of this capstone project, the USAHS OT pro bono clinic has been formalized and operational since May 2022. The clinic in the past semester (Summer) has provided care for underserved community dwellers and offered OT students numerous opportunities to engage in healthcare delivery services and related issues. This chapter discusses the significance of the project, strengths, limitations, and implications for practice and research.

Significance of This Project

This capstone project has played a vital role in establishing an OT Pro Bono clinic that meets the needs of the local underserved Austin community in need of OT rehabilitation services and the USAHS OT program. Weekly clinic attendance to engage in clinical practice provides USAHS OT students an opportunity to hone clinical skills and interprofessional skills to transition into clinical practice. The clinic serves as a good venue for students to develop confidence in delivering care, communicating with the healthcare community and community stakeholders, and developing collaborative and trusting relationships with faculty (Gilles et al., 2019). It has the potential to provide opportunities for OTD capstone students to explore the role and the benefits of OT services in community health and primary care and to provide OT student clinic officers opportunities to develop leadership skills in healthcare. Overall, it serves to educate students on the implications for health and QOL when individuals experience gaps in health services.

Faculty involvement in the clinic provided opportunities for students to provide clinical care and clients to receive quality care. Faculty engaged in running the clinic can avail

themselves of opportunities to engage in community health, student mentorship and training, and scholarship with this population (Gilles et al., 2019). This innovative multifaceted approach meets the needs of the community, students, and faculty and makes USAHS OT program a forerunner in addressing health disparities and educating students to be clinicians and leaders in community health.

The underpinnings of the Human-Rights Based Approach (HRBA) framework strengthened the resolve of this clinic to address the healthcare needs of the underserved. It ensured that distributive justice in healthcare within the Austin community was addressed, with a focus on restoring occupational justice and balance (Crawford et al., 2017). As an OT clinic, the primary focus was to enhance the QOL and occupational engagement within preferred occupations with this population.

Based on student and client self-reports this project has been successful. With systems in place for sustainability this student-led faculty-directed pro bono clinic can be used as a pro type by other OT and allied health programs to address gaps in healthcare to foster master clinicians of the future. While there are other prototypes for Pro Bono clinics in the medical and the PT (Physical Therapy) disciplines, the prototype for this clinic is uniquely designed to ensure it is student-led, faculty-directed and has systems in place to ensure student leadership and management opportunities address sustainability of the clinic.

Strengths of This Project

This project had several strengths that made it successful and sustainable for future generations of OT students. The strengths include the utilization of the HRBA framework as guidance, the availability of the USAHS Austin Campus Pro Bono department resources, the organizational systems established, the student leadership opportunities provided, and the

authentic clinical experience it provides. Additionally, these strengths were reviewed by the faculty team to ensure sustainability in future semesters.

HRBA Framework

HRBA framework established the foundation for this capstone project. The overarching HRBA framework helped center the services around four elements: availability, accessibility, accessibility, acceptability, and quality (WHO, 2017). These concepts were applied and used as guiding tools to ensure the successful running of the clinic and meeting the overarching mission and vision of the USAHS Pro Bono program. The OT Pro Bono clinic website is a hub for the clinic. While it is focused on student orientation and training, it is also designed to serve as a site for access for the under-resourced and underserved community members that need OT services. The clinic is accepting of all individuals in need of OT services to enhance occupational engagement and to maintain health and QOL. To ensure quality care, the state licensing guidelines and Health Insurance Portability and Accountability ACT (HIPPA) regulations for confidentiality, and use of evidence-based practices are observed. Supported by the World Health Organization to advance rights of all human beings, this is the first time the HRBA framework has been used to guide and run a pro bono clinic for an allied health discipline.

USAHS Pro Bono Austin Campus Department

The overarching mission and the vision of the USAHS Pro Bono department provided the pro bono clinic with the boundaries and some support to work under its auspices. The transitional clinic space CICP (Center for Innovative Clinical Practice) along with some equipment was made available for the initial running of the clinic. Students, clients, and faculty benefited from the designated space made available for clinic use. This space allowed for scheduling uninterrupted weekly 1-hour OT sessions. Furthermore, the USAHS Pro Bono department made

available ClinicNote an electronic medical record (EMR) for clinic documentation. The use of the Quick EMR helped the OT students improve their documentation skills in preparation for Level II FW.

Pro Bono Clinic Organizational Systems

With faculty and the Pro Bono administration input the OTD scholar established systems for the day-to-day running and sustainability of the clinic. The systems include a website with embedded orientation and training modules, leadership portfolios, and access site for community stakeholders. These systems have set the pro bono clinic in motion to meet the objectives and goals of sustainability of capstone project.

OT Pro Bono Clinic Website

The website, a deliverable for this capstone project serves as the focal point for the clinic. The website is used to house embedded modules for student orientation and clinical skill development and establishing recurring student leadership opportunities to ensure sustainability of the clinic. The website is also a point of access for clients and community stakeholders to learn about the pro bono clinic and the role of OT and access OT services.

Orientation

The orientation and training modules have been made available to ensure training for students engaging in Level I FW experience in the clinic. This includes orientation modules on the purpose of the clinic, the population served, an assessment folder, and videos of functional transfers, interventions, and handling on the OT pro bono clinic website. The website, orientation modules, videos, and the new equipment aid in the smooth running of the clinic and the sustainability of the clinic.

Leadership portfolios

The website includes a folder for leadership opportunities and job descriptions for OT student clinic officers. This was created to appoint and train future student clinic managers with various portfolios to ensure the long-term goals of running the clinic for future generations of Level I FW students. The systems set in place include recruiting, selecting, training, and mentoring future clinic leaders. Resources include a student officers training manual, a flyer to advertise positions, and a timeline for student training.

The organized student body involves student officers taking on administrative and managerial roles to recruit clients, schedule clients, and run the clinic. Currently, the clinic offers three officer positions including the student manager, assistant student clinic manager, and hospitality officer. These officers oversee duties to ensure clinic users (clients and students) needs are met, maintain communication with community partners, and fundraise to meet the day-to-day expenses of the clinic.

Clinical Experiences

The clinic provides USAHS OT students with hands-on experiences with clients from the community. Faculty involvement and direction provided throughout the clinical experience to ensure student learning and experiences, client safety, and quality care foster good practices. This structure provides students with critical guidance to sharpen their clinical reasoning skills and collaborate with faculty on selecting appropriate interventions to provide client-centered care (Gilles et al., 2019). Furthermore, such experiences help students develop communication skills, build client rapport, and engage in culturally responsive care (Gilles et al., 2019; Hewson & Friel, 2004). Students used the RIME (Reporter, Interpreter, Manager, and Educator) self-report prior to and at the end of their clinical experience to reflect on personal and professional experiences (Pangaro, 1999). Refer to Appendix O to view the RIME self-report. The student

responses in the self-report validated and reported progress with their clinical skills in the areas of reporting, interpreting, managing, and educating in healthcare delivery of OT services.

Authentic clinical experience is reported to be instrumental in enhancing students' confidence and competence in clinical care (Gilles et al., 2019). The student self-reports validate Giles et al. report.

USAHS Pro Bono Administrator and Faculty Mentor

The USAHS pro bono administrator and faculty mentor provided helpful insight and guidance throughout the project on leadership, professionalism, and management to ensure the success and smooth running of the project. The weekly meetings with the pro bono clinic administrator and mentor provided the OTD scholar opportunities to engage in meaningful discussions to meet the vision and mission of USAHS clinic. The support the OTD scholar received during her capstone experience allowed for her own personal and professional growth. in leadership, communication, and management. This experience has helped her be open to new perspectives, receptive to feedback, flexible, and resilient to challenges.

Limitations of this Project

This project had a few limitations that at times challenged the running of the clinic. The limitations included a lack of space and adequate equipment, a lack of funding to address issues such as client transportation, a limited referral source, and a lack of outreach to the underresourced communities. Discussing these limitations with the Pro Bono administration and faculty mentor allowed time to reflect on the experiences and make suggestions to improve the running of the clinic in the future.

Space and Equipment

The lack of space and access to equipment required patience, adaptations, and accommodation from clients, students, and faculty. Adequate space and equipment are vital to allow for quality care and improve clients' experience and interactions (Hewson & Friel, 2004). The lack of equipment and space affected the quality of care at times, required sessions to be compressed, and demanded modifications of evidence-based strategies. Additionally, limited space also created challenges for supervision and client confidentiality.

Funding

Lack of funding for day-to-day issues challenged the running of the clinic. Some of the challenges encountered included a client had to miss treatment sessions due to a lack transportation and students had to do with minimal small items for interventions. These issues limited valuable experiences for clients and students. Health disparities encountered by underserved communities due to lack of access to services and resources limit health and QOL and are correlated with increased morbidity and mortality (Butler, 2021; Wen et al., 2005). Therefore, it is important for USAHS Pro Bono department to ensure an adequate funding stream to allocate funding to address issues that are unique to this population.

Referral source

The OTD scholar reached out to local clinics and Federally Qualified Health Centers to market and recruit clients from under-resourced and underserved areas in Austin. Despite this effort to recruit, there was a lack of referrals. The inadequate referral sources lead to a larger student-to-client ratio (5:1) resulting in limited student opportunities to think, do, and reflect individually.

Outreach to Under-resourced Communities

Outreach to the under-resourced communities was not met due to the location of the USAHS pro bono clinic and the poor referral response from local clinics. This resulted in limited exposure to working with clients from under-resourced communities.

Implications for OT Education, Practice, and Research

Based on the significance, strengths, and limitations of this project, there are several suggestions for future OT education, practice, and research, which are as follows:

- Fieldwork and/or Capstone Experience- Pro bono clinics affiliated to an Allied Health program have the potential to provide a range of experiences to OT students in Level I, Level II, and capstone experiences. USAHS, by supporting this capstone project, helped demonstrate that universities can use pro bono clinics to meet student's educational needs and exposure to health disparities. Level I and Level II FW experiences could range from running the pro bono clinic with responsibilities in managing, navigating logistical operations, administering, and providing client care under the faculty's direction in the clinic (Gilles et al., 2019). Furthermore, this clinic can open opportunities for various OTD capstone scholarship projects to explore community health and needs that are often neglected.
- Teaching and Learning Outcomes- There have been growing concerns regarding students not being optimally prepared to enter entry-level clinical practice. This is due to a lack of students' readiness, qualifications, and preparation for a dynamic and complicated healthcare environment (Gilles et al., 2019; Jette et al., 2014). Clinical experiences in pro bono clinics educate students on the role allied health programs and therapists can play in mitigating the ill effects of health disparities (Doucet & Seale, 2012). Such experiences are also reported to help with student confidence and

competence in their first full—time clinical experience and in seeking opportunities to work with under-resourced and underserved communities in the future (Doucet & Seale, 2012; Goupil & Kinsinger, 2020; Porretta et al., 2017). This project validates these findings and recommends more systematic research in this area to identify outcome measures to support the use of clinics for student learning.

- Replication- The blueprint for this clinic can serve as a unique prototype for student-led faculty-directed pro bono clinics in other allied health programs. According to Gilles et al. (2019) early clinical and community engagement experiences are encouraged to promote active and meaningful learning. This blueprint creates opportunities for allied health programs to provide opportunities for leadership, readiness for clinical practice, sustainability, and enhanced understanding of the role of OT in community health and primary care. It also provides opportunities for community partnerships and engagement to address the ill effects that occur due to health disparities. Use of this blueprint by other OT and Allied Health programs will help with educating future generations of therapists.
- **Funding** A funding source is essential for a viable pro bono clinic. The funding could go towards providing transportation for clients in need, equipment, and miscellaneous items such as tokens of appreciation for clients participating in the clinic. Recommendations for a funding source are highly recommended to support the clinic's needs to ensure accessibility and availability of services and resources, and the viability of the clinic.
- Outreach and Referrals- Outreach and a steady source of referrals are essential to meet a pro bono clinic's mission and vision of addressing health disparities and student skills in this area. Connecting and communicating with community clinics, organizations, or doctor offices in under-resourced communities will create a referral source for the clinic.

Additionally, looking for opportunities to house pro bono clinics within or in easy reach of under-resourced communities can help accessibility for these communities.

Conclusion

This project laid the groundwork for the USAHS OT program to provide OT Level IFW students with a state-of-the-art experience as they transition to clinical practice. This project mutually benefited the students, the university, and the local underserved community at large. It demonstrated that academic institutions could address distributive justice using the HRBA framework to eliminate the burden caused by prevalent health disparities and educate students on ways to promote occupational balance and justice.

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Figure 1: Pro Bono Clinic Logic Model

Immediate (Short term):

- -Students will enhance role competence -Students will improve knowledge on occupational justice
- -Clients will improve occupational performance and engagement within preferred occupation
- Community partners will enhance their understanding on OT roles in addressing health outcomes.

INPUT:

Schedule
Policies/liability form
Facility (Clinic)
Equipment
Students
Referrals
Supervision (faculty)
Community partnership

Output-Activities

Train student leaders
Train and orient all students
Implement pro bono clinic
Maintain documentation system
Collect feedback and revise/prepare for
upcoming term

Output-Participation

Community Partners
Clients
Students
USA faculty
Pro-Bono Clinic Managers

6 Months (Medium term):

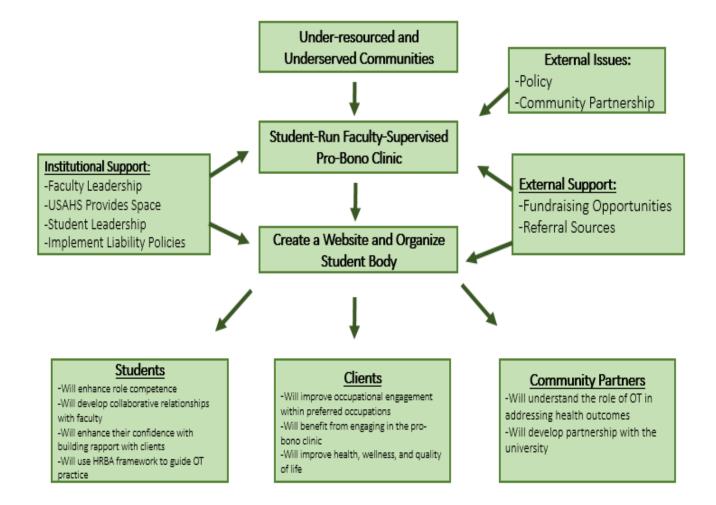
- -Students will integrate HRBA framework into practice -Students and faculty will develop trusting, positive, and collaborative relationships
- -Students will enhance their confident with building rapport with clients
- -Clients will benefit from engaging in pro-bono clinic -University will develop relationships with community
- -University will develop relationships with community partners in under-resourced and underserved communities and maintain a source of referrals

12 months (Long Term)

-Students will be active engagers as community dwellers

-University pro-bono clinic will be sustainable to address gaps within health care in Austin Community -Pro-bono clinic will offer students capstone experiences and fieldwork experiences

Figure 2: Conceptual Model



Appendix A

Phases	Learning objectives	Learning activities	Learning	Timeline
			outcomes	Completion
Development Phase	Design a web-based for OT pro bono clinic to establish a sustainable OT pro bono clinic. (Preliminary)		occupational therapy	Week 1- 6 of 16-week experience
Implementation Phase	Implement the student- led faculty-directed pro bono clinic into USAHS Austin Campus	 Run the pro bono clinic for 7 weeks Implement student training Seek student feedback on training material Reflect on pro bono clinic strengths, weaknesses, and action steps in a weekly reflective journal Organize the student body Publish website 	OTD reflections	Week 6-13 of the 16-week experience
Evaluation Phase	Evaluate the strengths, weaknesses, opportunities, and threats (SWOT)	Seek community partners' input via focus groups	strengths, weaknesses,	Week 13 of the 16-week experience

ESTABLISHING A SUSTAINABLE STUDENT-LED PRO BONO CLINIC

Revision Phase	Design a web-based for OT pro bono clinic to establish a sustainable OT pro bono clinic (Final product)	 clients, and faculty feedback via informal focus groups Analyze OTD student reflective notes (Appendix J) Compile the data from the informal focus group and reflective notes into a presentation Set up a meeting to discuss sustainability with team leaders and pro bono faculty members Revise the clinic website and other processes/procedures on feedback received by 	Clinic to capstone team Design website for the occupational therapy	Week 14 of the 16-week experience
	Formulate a presentation proposal about the pro bono clinic development at a national conference	clinic national conference	T	
				560 hours

Appendix B



Pro Bono Clinical Experience Eligibility

The University of St. Augustine provides Pro Bono Clinical services as part of our efforts to give back to the community.

Participation in a Pro Bono Clinical Experience is based on the eligibility requirements set forth below. *

By signing below, you are certifying that the information you are providing regarding eligibility including insurance status is true and complete to the best of your knowledge. It also acknowledges that you are responsible to inform the supervising therapist at your facility if there is any change in your eligibility status.

stati	JS.
Eligit	bility (please choose one):
	No health insurance
	Health insurance does not cover therapy services
	Health insurance coverage has been met and no longer covers therapy services
	Health insurance limitations impact the frequency of therapy services beneficial or necessary to address the condition being treated in therapy (example: needing a program that occurs multiple times a week or for longer sessions than available elsewhere, distance barriers)
	Health insurance limitations impact the type of therapy services beneficial or necessary to address the condition being treated in therapy (example: needing individual therapy but only eligible for group therapy, distance barriers)
	Medicare as health insurance but have met allowed visits
	Medicaid as health insurance and therapy not covered or met allowed visits
Client's Name_	Signature
Name of individ	dual filling out form if different from client
Relationship to	client
Date	

S'	NIVERSITY of T. AUGUSTINE for IEALTH SCIENCES				
University of St. Augustine for Health Sciences Pro-Bono Services Participant Intake Form					
Participant Information					
Date: Name: Date of Birth: Phone Number: Email:					
Gender: Female: Male:					
Are you able to attend sessions once per week for one hour? Yes: No: Are you able to get transportation to the USAHS campus? Yes: No: Do you need additional support for transportation to the USAHS campus? Yes: No:					
1	pointments are available 1:00-5:00 PM on Mondays Please indicate if you are available : 1:00pm Yes No 2:15pm Yes No 3:30pm Yes No Other:				
Reason for seeking Occupational Serv Post-Operative Continued Rehab: Frequent Falls: History of Brain Injury: Upper Body Injury: Upper Body Injury: Decreased Strength: Other (Please Specify):	ices? (Check all the apply) Chronic Condition: History of Stroke: Decreased Energy: Decreased Balance: Neurological Condition:				
Emergency Contact Information:					
Name:Phone Number:	Relationship to applicant:Email Address:				
Desired Area of Improvements: (please ☐ Bathing/Showering	e check all that apply):				

Appendix C

☐ Toileting and Toilet Hygiene
□ Dressing
☐ Eating and Swallowing
□ Feeding
☐ Functional Mobility
☐ Personal Hygiene and Grooming
☐ Sexual Activity
☐ Meal Preparation and Clean Up
☐ Safety and Emergency Maintenance
☐ Care of Pets and Animals
☐ Health Management
☐ Social and Emotional Health Promotion and Maintenance
□ Sensory
☐ Physical Activity
☐ Personal Care Device Management
□ Rest
☐ Sleep Preparation
☐ Sleep Participation
☐ Formal Education Participation
☐ Informal Personal Education Needs or Interests Exploration
☐ Informal Educational Participation
□ Play Exploration
☐ Play Participation
☐ Community Participation
☐ Family Participation
□ Friendships
☐ Peer Group Participation
What would you like to gain from participating in this experience?
Are you currently receiving therapy services from another entity? Yes No
Does the applicant require assistance with functional mobility? Yes:No: If so, please specify:
Cane:
Manual wheelchair:
Power wheelchair:
Front-wheeled walker:
Other:

Appendix D



University of St. Augustine for Health Sciences

Audio / Film / Video / Photo Release Agreement

I hereby consent to the use of my name, photograph, image, voice, or other likeness for publication purposes including, without limitation, in audio, film, video, print, or any other electronic means (materials) by the University of St. Augustine for Health Sciences (University) in University's sole discretion. University retains all rights to all materials and is entitled to unlimited and unrestricted use of said materials. University may assign its rights under this Agreement to any of its affiliated institutions at University's sole discretion.

I further agree that my name and/or photograph or other likeness may be used with visuals, copy or other such elements for publications, without restriction as to manner, frequency or duration of usage, if any. I further agree that all such materials produced hereunder may be edited by University in its sole discretion, and are and will remain the sole and exclusive property of University and that I do not have the right to review such materials prior to their use.

I represent that I am over the age required by law to enter into binding agreements and that I have no conflicting contractual obligations that would interfere with my granting the rights herein. I hereby release and discharge University from any and all liability arising out of my participation in or in connection with the University project covered by this Release Agreement.

This Release Agreement, and the consent given herein, is irrevocable and is given on the express understanding and condition that no reward or compensation is or shall be due to me for the giving of this consent.

Signature:	-			
Print Name:	-			
Addresss				
If subject is y alternative):	ounger than 18 years old	I, Parent or Legal Guar	rdian must also sign (or sign in	the
Signature of	Parent or Legal Guard	lian:		
Date				



Informed Consent and Release Agreement Pro Bono Clinic Activity

The University of St. Augustine for Health Sciences ("USAHS") provides health science services to adults and children through its pro bono clinics. All services are provided by USAHS students under the direct supervision/guidance of professionals who are licensed to practice in his or her field. Additionally, students may be assigned to watch evaluation/therapy sessions in the clinic or via a telehealth appointment. Evaluation and treatment sessions may be video recorded and viewed by the student and clinical educator as part of routine service delivery. By signing this Informed Consent and Release Agreement ("Agreement"), I consent to receive services in the USAHS pro bono clinic ("Activity"). I know it is important to read and fill out this form with care and ask a USAHS faculty member if I have any questions. If I have any questions regarding my Activity, I may contact:

University Contact Information:

Nicole Capell	737-202-3258	ncapell@usa.edu
Name	Phone	Email

Voluntary Participation:

The purpose of this Activity has been explained to me and I know that being a part of this Activity is voluntary and I can withdraw my participation at any time with no penalty.

Communication/Telehealth: I consent to receive information (such as appointment reminders, patient surveys, and other information relating to the Activity) via the communication channels for which I provided the contact information including via phone, text, and email. I also consent to participate in telehealth care for some or all of my evaluation and/or treatment. Details of my medical history, examinations, x-rays, and tests will be discussed with other health care professionals and students through the use of interactive video, audio and telecommunication technology. A physical examination may not take place. A non-medical technician may be present in the telehealth studio to aid in the video transmission. Please note, not all telecommunications are recorded and stored. Additionally, dissemination of any patient identifiable images or information for this telehealth interaction to any other parties or entities shall not occur without your consent.

Appendix E

Reasonable and appropriate efforts have been made to eliminate any risks associated with telehealth consultation, and all existing confidentiality protections under state and federal law apply to information disclosed during this telehealth consultation. You may withhold or withdraw your consent to the telehealth consultation at any time without affecting your right to future care or treatment.

Risks and Benefits:

<u>Health</u>: I understand that I will be examined and provided instruction by a student supervised by a faculty member and/or a licensed practitioner. I understand that if I have any concerns about my health or ability to participate, it is my responsibility to discuss my concerns with my physician before deciding to participate. I can ask any questions to University contact named above.

Financial: There are no financial risks or benefits by participating in this Activity.

Assumption of Risk and Release of Liability: In consideration for the right to participate in the Activity, I hereby, for myself, my heirs, executors, administrators, assigns, or personal representatives, knowingly and voluntarily enter into this Agreement and hereby waive any and all rights, claims or causes of action of any kind whatsoever arising out of my participating in the Activity, and do hereby release and forever discharge the University of St. Augustine for Health Sciences ("USAHS"), and its affiliated entities, officers, directors, employees, students and agents for any injuries, claims or loss that I may suffer as a result of my participation in the aforementioned Activity, including traveling to and from an event related to this Activity.

I agree to assume the risk that unexpected events may occur and result in harm, injury or illness to me or damage to my property while I am participating in or observing the Activity or while I am traveling to or from the Activity. Such risks include but are not limited to any risk inherent in this type of Activity such as exposure to sickness or disease, allergic reaction, accidents or personal injury. I agree to indemnify and not sue USAHS and its affiliated entities, officers, directors, employees, students and agents for any harm or damage associated with my participation, observation, or travel related to the Activity.

Confidentiality:

The Clinical Educator/s or student/s may ask for my personal and/or health information, but it is my choice to answer any question(s). Any information I do provide will be kept private (unless disclosure is required by law). My information can be used for treatment and teaching purposes only. My name and health information will not be used for public presentation, without my consent.

Clients/Patients of the Activity have the right to expect confidentiality during their participation in this Activity. Faculty, staff, and students of the Clinic will follow all privacy and security guidelines in accordance with the Health Portability and Accountability Act ("HIPAA").

Audio / Film / Video / Photo Authorization:

Parent/Guardian Signature:	Date:
Parent/Guardian Printed Name:	
(Print name of participant)	
AS IT APPLIES TO ME AND	FOR WHOM I AM SIGNING.
years of age) I, THE UNDERSIGNED, CERTIFY THAT I HAVE READ A	
MINOR PARTICIPANTS (Parent or guardian (18 or older	r) must sign for participants who are under 18
Witness:	Date:
Signature:	Date:
Scope of Release: By signing below, I am accepting understood, and agree to the above.	the terms of this Agreement. I have read
I further agree that my name and/or photograph or or other such elements for publications, without rest of usage, if any. I further agree that all such mate University in its sole discretion and are and will University and that I do not have the right to review:	triction as to manner, frequency, or duration rials produced hereunder may be edited by remain the sole and exclusive property of
■ BY CHECKING THIS BOX, I hereby consent to the us other likeness for publication purposes including, wit any other electronic means (materials) by the Unio (University) in University's sole discretion and wai University retains all rights to all materials and is enti- materials. University may assign its rights under this at University's sole discretion.	hout limitation, in audio, film, video, print, or versity of St. Augustine for Health Sciences iver any right to compensation, therefore tled to unlimited and unrestricted use of said
I authorize USAHS to photograph and /or video m therapy and/or being evaluated. Any such recordings purposes including review of the recording by faculty I authorize students to observe the Activity as part of	or photographs will be used for educationa , students, and appropriate staff. In addition

Child's Date of Birth (If applicable):

Appendix F



AUTHORIZATION TO OBTAIN AND RELEASE RECORDS

Chent Info	ormation:					
Name:		Day	time Phone:			
Address:			City:	State:	Zip:	
DOB:						
The follow that):	ing information ma	y be used and disclose	d (specifically identit	fy the records, if entir	re medical record is r	requesto
	rmation includes ec	ppies of my health reco	to RELE	ASE/OBTAIN (circ le one) the following	le one) my/my child person(s) at the add	's prote
Name of P	erson/Facility:					
Address:			City:	State:	Zip:	
Phone:		Fax:	Email:			
taken in re my intent t	liance on this autho to revoke this autho	e this authorization in v rization. I understand t rization to Nicole Cape athorization will expire	hat, in order to revok ell, Pro Bono and Tel	e this authorization, l	must send a written	notice
	On the following Upon the following	date: ng event:				
If no expir	ation date or event	is given, it is assumed t	hat the authorization	will expire one year	after it is signed.	
receive a co under feder and, theref	opy of this authoriz ral privacy law, the ore, may be subject	t or copy the protected ation form. I understan information may no lo to re-disclosure by the s to obtain, use or relea	d that to the extent a inger be protected by recipient. By signing	ny recipient of this in federal privacy law of g this form, I hereby:	formation is not a "c once it is disclosed to authorize the Univer-	overed the re
If subject i	s younger than 18 y	ears old, Parent or Leg	al Guardian must als	o sign (or sign in the	alternative):	
Signature	of Parent or Lega	l Guardian:		Date:		

Appendix G

Occupational Therapy Neurological Evaluation

Client's Name:	Gender:	Date:			
DOB:		Hand Dominance:			
Patient's Primary Language:		Age:			
Medical Diagnosis (ICD-10 Code): https://www.icd10data.com/ICD10CM/Codes					
Treatment Diagnosis (ICD-10 Code): http	ps://www.icd10data	a.com/ICD10CM/Codes			
Date of Onset:					
Reason for Referral:					
Previous Medical History:					
Precautions and contraindications:					
TIRIECTIVE (Occupational Profile)					

SUBJECTIVE (Occupational Profile)

History of current condition/ chief complaint:

Prior therapy for the same condition (dates)

Social support (family/caregiver/friends):

Living environment (apartment/house/stairs/elevator); equipment used in the home environment:

Roles (Retired/working/caregiver/volunteer); routines; interests:

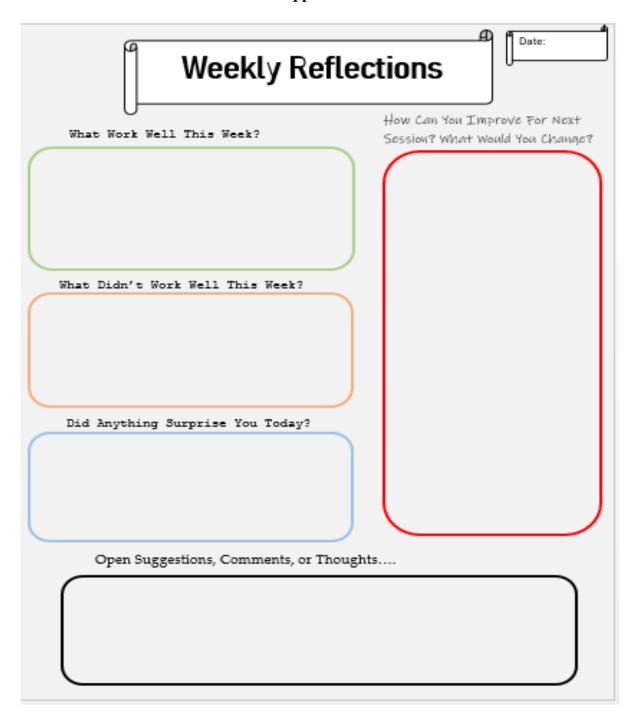
Prior level of function (ADLs and IADLs):

	What decreases pain?
Pain at worst: (0-10)Pain at best (0-10)	
Location:	
Pain:	
Comments:	
Follow Directions: one step two ste	p complex
Orientation: person place	time situation
Consciousness: alert lethargi	c fluctuating
Cognition:	
Client stated goals:	

Left ROM	Left manual	Joint/movement	Right ROM	Right manual
Active/passive	muscle		Active/passive	muscle testing
	testing			
		Shoulder flexion		
		Shoulder extension		
		Shoulder abduction		
		Horizontal abd		
		Horizontal add		
		Internal rotation		
		External rotation		
		Elbow: flexion		
		Elbow: extension		
		Forearm: supination		
		Forearm: pronation		
		Wrist: flexion		

Appendix H				
Subjective:				
Subjective: State releve or reports such as " Goal 1: skateboard and bruise	The client fell on			
Goal 1: skateboard and bruise □ N/A				
☐ Upgrade/Downgrade	Objective: Consist of measurable, quantifiable,			
☐ Continue	and observation data			
☐ Goal Met	Assessment:			
CPT Codes:	ASSESSMENT.			
[] 97535 Self-Care and Home Management [] 97532 Cognitive/Perceptual Training [] 97530 Therapeutic Activities [] 97110 Therapeutic Exercises [] 97112 Neuromuscular Re-education [] 97140 Manual Therapy [] Other	Assessment: Interpret, assess, and analyze the objective session			
Goal 2:	Objective:			
□ N/A				
☐ ╬┗ᠨ₀☐ᢒᡗ᠘᠓/Downgrade				
☐ Continue				
☐ Goal Met				
CPT Codes: [] 97535 Self-Care and Home Management [] 97532 Cognitive/Perceptual Training [] 97530 Therapeutic Activities [] 97110 Therapeutic Exercises [] 97112 Neuromuscular Re-education [] 97140 Manual Therapy [] Other	Assessment:			
<u>Goal 3:</u>	Objective:			
□ N/A				
☐ Upgrade/Downgrade	<u>CPT Codes:</u> Billing codes for			
☐ Continue	therapeutic session			
☐ Goal Met	Assessment:			
CPT Codes: [] 97535 Self-Care and Home Management [] 97532 Cognitive/Perceptual Training [] 97530 Therapeutic Activities [] 97110 Therapeutic Exercises [] 97112 Neuromuscular Re-education [] 97140 Manual Therapy [] Other				
Plan:	1			
	s the frequency,			
	ent plan for next , and any			
	endations.			

Appendix I



Appendix J

Focus Group Questions:

Student Questions:

- ullet Tell me about your comfort level with creating and/or modifying a POC (Plan of Care).
- Tell me how the website is helpful.
- Explain how confident you feel in treating clients after the pro bono clinical experience.
- Explain your key takeaways from the pro bono clinic.
- Tell me what you would improve or change in the clinical experience.
- Is there anything you would like to comment on?

Client Questions:

- Tell me if you feel like the OT students have adequate knowledge of your case and why?
- Explain how the students are meeting your needs.
- Tell me how the website is helpful.
- Explain your comfortability level while working alongside the OT students.
- Is there anything you would like to comment on or suggest?

Faculty Questions:

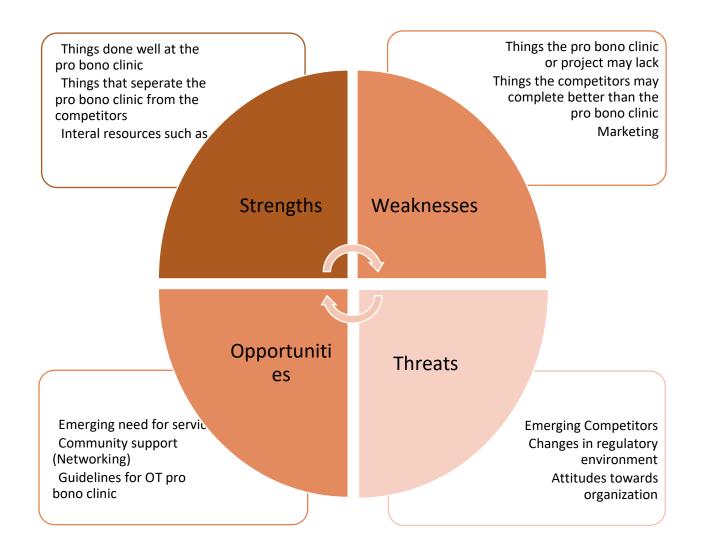
- Explain how the website aligns with the course and aids in preparation for students' clinical experience.
- Elaborate on how the organized student body is helpful with running the probono clinic.
- Elaborate on observations and comfortability changes with OT students delivering quality care throughout the experience.
- Is there anything you would like to comment on or suggest?

Pro bono Clinic Managers Questions:

- Tell me how you found the website helpful for the clinic overall.
- Explain how the new organizations and systems will be helpful and sustainable for the under-resourced and underserved communities and USAHS.
- Is there anything you would like to comment on or suggest?



Appendix K





Appendix L































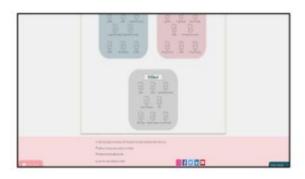














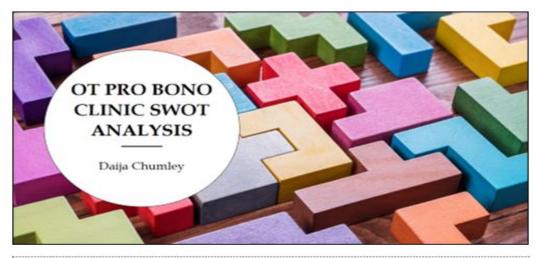




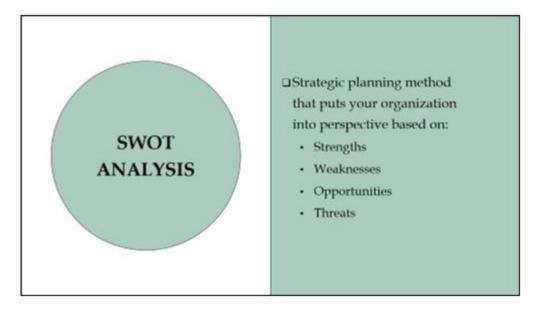




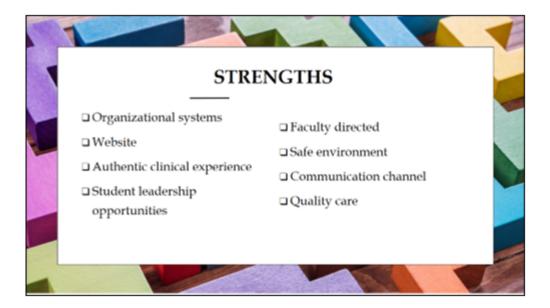
Appendix M





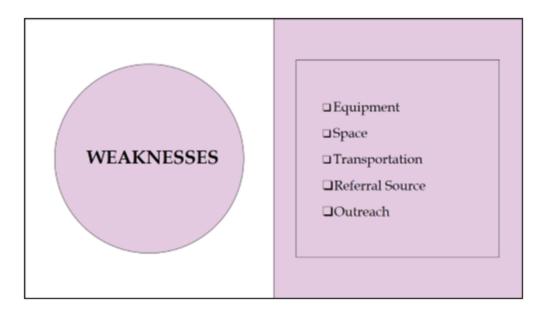


A SWOT analysis is a strategic planning method that puts your organization into perspective based on strengths, weaknesses, opportunities, and threats.



The strengths of the clinic includes:

- An organized student body (student officers) taking the lead to ensure smooth running of the clinic
- Website serving as students orientation for the clinic by providing informative information that aligns with the course, providing a resource for new clients, and explaining the role of OT to potential community partners
- Establishing systems such as student officers checking to ensure all participants sign documentation and organization with referral system
- Providing an authentic clinical experience- all students appreciated the
 opportunity to gain hands-on experience with functional transfers, building
 therapeutic relationships, refining documentation skills, developing interventions,
 gaining confidence and comfortability.
- Students leadership providing a student perspective to the faculty board and gaining managerial and administrative skills
- Faculty directed- creates a safe space and students found it valuable to bounce ideas off of faculty members
- Safe environment- created a space for clients and students to feel comfortable during treatment sessions
- Communication channel is an opportunity for clients and potential partners to communicate via email, chat, or phone
- Providing quality care- receive a lot of great feedback from clients about receiving great care in order to meet their needs and goals



The weaknesses of the clinic includes:

- · Lack of access to equipment affected providing quality care to clients
- Limited space to for treatment created supervision barriers and challenges with patient confidentiality
- Lack of system for transportation services created barriers with client receiving quality care and students experiential learning experience
- Referral Source Due to the lack of adequate referral sources the clinic had difficulty with recruiting clients to participate in the clinic
- Outreach lack of outreach and accessibility to the under-resourced population

OPPORTUNITIES Community support Networking Marketing Emerging need for services Emerging need for student leadership Gas reimbursement

Opportunities for the clinic:

- Creating community support through networking and marketing for the clinic
 - Marketing for the clinic by holding information tables at conferences, local community meetings, or nonprofit organizations to spread the word
 - This can create a referral sources
- Emerging need for therapy services in under-resourced and underserved communities in Austin community
- · Emerging need for student leadership amongst organizations
- Establishing a gas reimbursement system to client participating in clinic due to inflation
 - o This displays appreciation of the clients participating in the clinic

THREATS		
 -		
☐ Lack of access to t	ransportation	
□ Inflation of resour	rces	
☐ Attitude towards	organization	
□Changes in regula	ntory environment	

Potential threats for pro bono clinic:

- · Lack of access to transportation
- · Inflation of resources
- · Attitudes towards organization
- · Changes in regulatory environment
 - Changes in regulations that can affect participants participating in the clinic and marketing

Appendix N



2022 National Conference Presentation Proposal Application

Call for oral presentation proposals:

The Pro Bono Network is now accepting presentation proposals for the 2022 Hybrid Pro Bono Network Conference. We encourage presentations that represent students as the lead presenters and capture this year's theme:

Centering Client & Community

Possible topics include, but are not limited to:

2022 THEME TOPICS

Centering Client

Centering Community

Identifying & Implementing Anti-Racist Practices Considering & Addressing Population Health Progress in Community Partnerships

STANDING TOPICS

Start-Up Stories
Clinic Expansion Stories
Integrating Interprofessionalism
Assessing Outcomes
Pandemic Impacts

2022 Hybrid Pro Bono Network Conference

Saturday, March 5th 2022 In-Person at Widener University Virtually through the Whova App

Please use the attached template for proposal submissions.
Oral presentations are limited to 20 minutes
Presentations may be combined for panel presentations



2022 Conference Call for Proposals

Title of Presentation: Establishing a Sustainable Occupational Therapy Student-Led Pro Bono Clinic at the

University of Saint Augustine in Austin, Texas

Institution: University of Saint Augustine for Health Sciences Austin Campus Please indicate which professions are involved: Occupational Therapy

Student Authors: Daija Chumley

Student Email Addresses: Daijachumley7@gmail.com

Faculty Author (if applicable): Karen Aranha

Abstract (limit 300 words):

Under-resourced and underserved communities across the United States experience significant health disparities. These communities lack access to valuable services resulting in health inequities that impinge on their health, quality of life, and engagement in meaningful occupations. There is a need for occupational therapy to provide valuable services to the under-resourced and underserved community to address the historical inequity that impacts their overall quality of life. Universities have the potential to fulfill the gaps within these communities by establishing a pro bono clinic. The purpose of this capstone project is to establish a sustainable occupational therapy pro bono clinic at the University of Saint Augustine for Health Science Austin campus. The intent of the pro bono clinic is twofold. The first, is to provide students with the opportunity to advance their clinical skills and graduate as leaders with insights on the causes of health disparities and the skills to address them. Second, is to address the gap in services experienced by the under-resourced community, and the underserved such as those with disabilities and chronic conditions who do not meet the "reasonable and necessary clause" and those who have maximized their benefits and do not qualify for preventative and chronic rehabilitation services. The significance of this project will impact the university, students, faculty, and the community to yield several positive outcomes. The project plan is to establish an occupational therapy pro bono clinic by organizing the student body and developing a website to meet the needs of the students, clients, and community stakeholders.

Appendix O

Self-assessment of Professional Growth for Occupational Therapy Students

Aspect of Professional Growth	☐ Beginning ☐ End of Semester	Scoring: 1- Movice' beginner 2- Amsteur/refining skill 3-Master/feel confident to work with supervision
		4= Proficient, independent/ feel confident to work without supervision
		Comments:
Reporter (What is happening?)		
Interviewing		
Assessments		
Written reports		
Presentation		
Reliability & responsibility		
Respect for client's values		
Interpreter (Why is it happening?)		
Identifying problem list		
Determining Differential diagnosis/es		
Interpreting results of assessments		
Use of theoretical framework to guide evaluation and develop a plan of care		
Manager (What Next?)		
Precautions and contraindications		
Therapeutic plans:		
Basic interventions		
Advanced interventions		
Incorporates clients' values in plan		
System-based practice		
Educator (Where are knowledge gaps?)		
Reflective, self-directed		
Critical reading skills		
Practice-based learning & improvement		
Teaching skills		