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OPEN-ACCESS CONTINUING EDUCATION OCCUPATIONAL THERAPY RESOURCES FOR RURAL COMMUNITIES

by

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A Scholarly Project

Submitted to the Occupational Therapy Department

of the

University of North Dakota

In partial fulfillment of the requirements

for the degree of

Master's of Occupational Therapy

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This Scholarly Project Paper, submitted by Amber L. Daly and Emily E. Germolus in partial fulfillment of the requirement for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Faculty Advisor

4/19/2017

Date

PERMISSION

Title: Open-Access Continuing Education Occupational Therapy Resources for Rural Communities

Department: Occupational Therapy

Degree: Master's of Occupational Therapy

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Signature Amber L Daly Date 04/15/17

Signature Emily Ceremuga Date 4/15/17

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ABSTRACT

Occupational therapists working in rural areas face a number of barriers when trying to access continuing education courses, which are required to maintain licensure. Some of the largest barriers these practitioners face include: time, cost of the courses, and ease of access. Continuing education often requires travelling, time out of one's day, and a fee ranging from $25-$300 (North Dakota Occupational Therapy Association [NDOTA], 2016; Continuing education, 2013). The purpose of this scholarly project is to address continuing education requirement-related needs and education access for occupational therapists working in rural areas. Following the completion of a comprehensive literature review and identification of a topic area for the continuing education course, materials and resources were gathered for the content of a presentation. Following approval of a final outline for an educational course, the online product was created utilizing Adobe Presenter.

An open-access, online continuing education course was developed and centered around a currently trending population in the U.S., adolescents experiencing addiction to opioids. A PowerPoint was created to present an overview of opioids, the person factors of a client, the various environments often impacted by addiction, and the occupations that are most commonly altered as a result of opioid addiction. In addition, numerous assessments, interventions, and resources for parents and clients were presented. The information presented for this course is centered around the occupational therapy theory of Person-Environment-Occupation. This model focuses on the individual factors of person, environment, and occupation, as well as, the interactions between each of them (Cole & Tufano, 2008; Turpin & Iwama, 2013). A case study was incorporated throughout the PowerPoint to allow the opportunity for therapists the apply the knowledge gained during the course. The final recording of the course as well as a concluding

quiz, will be housed on the University of North Dakota's Occupational Therapy Program website and free for the public to access for continuing education credit.

We anticipate that the online education session entitled "Occupational Therapy's Role in Opioid Addiction" will provide valuable information for occupational therapists, specifically in rural areas. In addition to providing a no-cost and easily accessible continuing education opportunity, we anticipate that occupational therapists will find the ability to access this continuing education useful for their practice knowledge and contributing to continuing hours needed for state licensure.

Rural occupational therapists face the barriers of access and cost when trying to obtain continuing education credits. The number of teens abusing opioids is also rising, both in the state of North Dakota and across the nation. To address these problems, we created an open-access, online continuing education course to aid in education of therapists working with these individuals. This course is unique as there are little to no continuing education courses available regarding this population.

CHAPTER I

INTRODUCTION

Occupational therapists work in a variety of settings and geographical areas, each with their own unique challenges and barriers. For example, occupational therapists working in rural areas face different barriers than those working in an urban setting. One of the challenges rural practitioners face is accessing the continuing education required to maintain licensure. The criteria for North Dakota licensure includes completing 10 hours of approved continuing education opportunities each year (ND State Board of Occupational Therapy Practice, n.d.). Time, both in terms of travel and time away from work, cost of the courses, ranging anywhere between $25-$300, and ease of access are all factors for practicing occupational therapists in rural settings seeking continuing education (Continuing education, 2013; North Dakota Occupational Therapy Association [NDOTA], 2016). Rural occupational therapists are more likely to be the sole practitioner in their area; it may be difficult for the individual to leave for an extended period of time to obtain continuing education credits. For this scholarly project, a variety of trending topics in occupational therapy were explored in order to determine a useful and timely topic for the continuing education course for rural occupational therapists. Some of the topics we explored included health care reform, care coordination, and drug addiction. Ultimately, we chose to address drug addiction, particularly opioid use in adolescents, as the topic for the continuing education materials created for the product.

In order to develop this continuing education course, the authors utilized the occupational therapy model of Person-Environment-Occupation (PEO). PEO was utilized to guide the creation of this product because of the emphasis on the person, environment and occupation, along with the transactions between the three (Cole & Tufano, 2008; Turpin & Iwama, 2013). The way that an individual's person, environment and occupation interact with one another determines how successful the individual is with his or her occupational performance (Cole & Tufano, 2008; Turpin & Iwama, 2013). To change the habits of an adolescent, all aspects of the individuals need to be addressed.

We created an open-access, online continuing education course for occupational therapists in a rural setting. The course topic is occupational therapy's role in addressing opioid addiction, particularly in adolescents. This product will allow rural therapists to obtain the continuing education credits that are required to maintain licensure without the barrier of cost and being absent from their practice.

Definitions

The following definitions have been provided to help the reader understand common occupational therapy terms and assist in a uniform understanding throughout this scholarly project.

Activities of Daily Living (ADLs): "Activities oriented toward taking care of one's own body" (American Occupational Therapy Association, 2014, p. S19).

Client-centered approach (also referred to as client-centered care): "Approach to service that incorporates respect for and partnership with clients as active participants in the therapy process" (American Occupational Therapy Association, 2014, p. S41).

Client Factors: "Specific capacities, characteristics or beliefs that reside within the

person and that influences performance in occupation" (American Occupational Therapy Association, 2014, p. S41).

Education: "Activities involved in learning and participating in the educational environment" (American Occupational Therapy Association, 2014, p. S42).

Instrumental Activities of Daily Living (IADLs): "activities that support daily life within the home and community and that often require more complex interactions than those of ADLs" (American Occupational Therapy Association, 2014, p. S43).

Leisure: "Non-obligatory activity that is motivating and engaged in during time that is not committed to obligatory occupations such as work, self-care or sleep" (American Occupational Therapy Association, 2014, p. S43).

Occupation: "Daily life activities in which people engage" (American Occupational Therapy Association, 2014, p. S43).

Rest and Sleep: "Activities related to obtaining restorative rest and sleep to support healthy, active engagement in other occupations" (American Occupational Therapy Association, 2014, p. S20).

Social Participation: "Interweaving of occupations to support desired engagement in community and family activities as well as those involving peers and friends" (American Occupational Therapy Association, 2014, p. S21)

Work: "Labor or exertion to make, construct, manufacture, form, fashion, or shape objects; to organize, plan or evaluate services or processes of living and governing; committed occupations that are performed with or without financial reward" (American Occupational Therapy Association, 2014, p. S46)

Summary

Chapter I, Introduction, consists of a brief introduction to the literature and an overview of the product that was developed, which consists of a continuing education course. Chapter II Literature Review, provides an in-depth overview of the literature introduced in Chapter I. The literature review in Chapter II focuses on the following areas: trending topics in occupational therapy, continuing education and teaching strategies. Chapter II additionally focuses on PEO, which is the occupational therapy model that guided the structure of this scholarly project. Chapter III, Methodology, provides an overview of the process we used in completion of the scholarly project. Chapter IV, Product, houses an overview of the product that was developed. The actual content for the product can be located in the appendices.

CHAPTER II

LITERATURE REVIEW

Introduction

Each and every individual in the United States interacts with the healthcare system in one way or another. For most, this interaction occurs when the individual is a patient, but for others it is because he or she has chosen a profession related to health. People trust those working in healthcare as a result of the educational background they have received. Healthcare is a field that changes quickly; progress is made and new discoveries are found every day. Because of this, healthcare workers must continue to build on the knowledge they received in academia. This literature review will shed light on the career of occupational therapy, how occupational therapy is practiced in rural areas, and how continuing education occurs in rural areas.

Occupational Therapy

Occupational therapy is a rehabilitative service established in the year of 1917 (Willard & Spackman, 2013). The Occupational Therapy Practice Framework (OTPF) defined occupational therapy as "the therapeutic use of everyday life activities (occupations) with individuals or groups for the purpose of enhancing or enabling participation in role, habits and routines in home, school, workplace, community and other settings" (American Occupational Therapy Association [AOTA], 2014, p. S1). Within the profession there is an emphasis on assisting

helping clients return to activities that are meaningful to them, whether that be horseback riding, brushing their teeth, or working in their garden. This client-centered therapy can work with people across the lifespan whose meaningful activities have been disrupted by mental, physical, or developmental illness. Occupational therapists work with people affected by a variety of diagnoses and, as a result, practitioners can adapt interventions as needed.

Theory

The use of theory is an integral part of occupational therapy. A theory is a tool that allows occupational therapists to "describe, explain, and predict behavior and/or the relationship between concepts or events" (Cole & Tufano, 2008, p. 55). In other words, theory is used to answer the 'why' questions. Occupational therapists continually are required to answer 'why' questions from clients, colleagues, and insurance companies. Theories are present in the founding knowledge of many professions; however, occupational therapists have developed theories specific to the profession of occupational therapy. These theories are often referred to as occupation-based models. Occupation-based models are tools used by occupational therapists to guide therapist decisions during treatment (Turpin & Iwama, 2011).

Person-environment-occupation model overview.

Within this scholarly project, we have used the Person-Environment-Occupation model, or PEO model, to guide our decision-making processes and structure the foundation of this project. To best understand this occupation-based model, one must first dissect the model into its three main components: person, environment, and occupation (Turpin & Iwama, 2011). Turpin and Iwama (2011) described the person component of the model as how an individual views himself or herself. That is, the person is a dynamic being that continually adapts to his or her environmental elements (Turpin & Iwama, 2011). In a broader sense, the

person is made up of neurobehavioral, physiological, cognitive, psychological, and spiritual factors (Cole & Tufano, 2008). Neurobehavioral factors include the body's sensory and motor systems, or how the body reacts to stimuli whereas physiological factors are a person's physical abilities or limitations. (Cole & Tufano, 2008). Cognitive factors refer to the brain's ability to function and learn or communicate (Cole & Tufano, 2008). Psychological factors are the variables that make up how a person views him or herself and includes personality traits or the way that the individual interprets events (Cole & Tufano, 2008). Lastly, a person's spiritual factor is centered around how a person finds meaning in his or her life (Cole & Tufano, 2008). Each of these factors is included in the model because these aspects are constantly changing and making a person dynamic by nature.

The next component of the PEO model is the environmental component. Environment is often referred to in the physical sense, but occupational therapists look at the environment of a client holistically. Developers of this model have asserted that there are five types of environments that influence a person: "cultural, socioeconomic, institutional, physical and social" (Turpin & Iwama, 2011, p. 102). The cultural environment is the environment that people use to define themselves. It is the "values, beliefs, customs, and behaviors that are passed from one generation to the next" (Cole & Tufano, 2008, p. 129). Turpin and Iwama (2011) described a person's socioeconomic environment as the ability a person has to access resources, whether this be a person's reality or perceived reality. A person's institutional environment is that of "organized systems, such as legislative bodies, health-care systems, and educational institutions" (Strong & Gruhl, 2010, p. 33). The physical environment can be thought of as what physically surrounds a person. This may include his or her home, car, workplace, etc. The last type of environment evaluated by this model is the social environment. Cole and Tufano (2008)

include social interactions in this environment; in addition, this could be perceived relationships or the opportunities in which the environment supports social conversation.

The final component of the PEO model is "occupation". Occupation is built on activities and tasks (Turpin & Iwama, 2011). Russian nesting dolls can be used as a visualization in understanding occupation. Activity is "the basic unit of a task" (Turpin & Iwama, 2011, p. 103). We can think of "activity" as the smallest units of a "task." Tasks, then, would be the "middle pieces" giving form to an occupation. The occupation itself can be visualized as the outside piece containing the smaller pieces inside. Another important aspect of occupation is that it is something that has meaning to the person performing it. This may include an internal desire to complete a task such as brushing one's teeth or cooking dinner for a family (Turpin & Iwama, 2011).

It is the way in which the person, the environment, and the occupation interact with one another that determines an individual's occupational performance. The better the interaction between the three components, the greater the occupational performance. Conversely, a poor interaction between the three components may lead to an impaired occupational performance. An occupational therapist, when using this model, views the interaction between the person, environment, and occupation as ongoing and continuous throughout the lifespan. In order to best apply it to treatment, the occupational therapist will take a snapshot or cross section of a person's performance to evaluate the occupational performance at that particular time in that person's life.

The PEO model will be used to evaluate the current occupational fit between occupational therapists, continuing education, and the different aspects of environment including rural areas and the environment of continuing education options. Using a model to guide this

scholarly project is important, as theories are an integral part of the profession of occupational therapy. When looking at the desired occupational fit of the three components within the framework of this scholarly project, we have been guided to create a product to maximize the fit between the person whom is the occupational therapist, the occupation of participating in continuing education, and the environment of a rural setting.

person.

Occupational therapists work in a variety of environments, including rural areas. When viewing occupational therapists in a rural area through the lens of the PEO model, one must appreciate the influence of the person and the environment. Available employment statistics are useful in understanding the context of these rural areas. In a study that addressed rehabilitation therapists between the years of 1980 and 2000, Wilson, Lewis and Murry (2009) presented data that showed that although the number of rehabilitation therapists is rising in rural areas, there are fewer occupational therapists than other professionals, such as speech therapists and physical therapists. The most current census shows that there are 420 occupational therapists employed in the state of the North Dakota (State Occupational Employment and Wage Estimates, 2016). When this number is compared to the population of the state, the number of occupational therapists working in the state of North Dakota seems minimal or less than what is reasonable to reach people in all parts of the state. As of July 1, 2015, the population of North Dakota was estimated to be 756,927 people (North Dakota QuickFacts from the US Census Bureau, n.d.). For 2010-2014, the same census also identified that 6.7% of the population in North Dakota are under the age of 65 years and living with a disability (North Dakota QuickFacts from the US Census Bureau, n.d.). In other words, approximately 50,715 people under the age 65 years of age are living with a disability, and there are only 420 occupation therapists dispersed

throughout the state to help them meet their needs. This number is only a fraction of the population with whom occupational therapists work with. Occupational therapists often work in school systems, nursing homes (where the population is over the age of 65 years), in hospitals and rehabilitation centers with those who have acute or chronic conditions, and in work settings. In each of these instances, those conditions most likely did not qualify the recipients of occupational therapy services for disability status. This leads to clients who may find it difficult or impossible to receive care. In some areas, clients wait excessive amounts of time to meet with a therapist, experience difficulties in maintaining communication between appointments, and need to travel long distances for therapy (Gardner, Bundy, & Dew, 2016). If more occupational therapists settle in rural areas with the proper continuing education, the barriers to clients receiving care may decrease significantly.

Occupational therapists throughout the world strive to continue their education after completing their initial training in academia. Completion of continuing education is intended to ensure that clients receive the best care through evidence-based practice and also required for occupational therapists in the United States to maintain their licenses within the states in which they practice. Unfortunately, accessibility to continuing education experiences is not equal among therapists. Pidgeon (2015) compared occupational therapist experiences in rural and indigenous areas in Canada, the United States, and in Australia and reported that accessibility was an issue as "travel is prohibitively expensive and online training options were described as limited" (p. 5). Daly, Adamson, Chang, and Bell (1997) found that rural practitioners felt behind when it came to the best practices of treating clients with various diagnoses.

The job responsibilities of an occupational therapist vary depending on the facility in which the therapist is working and the physical location that he or she is responsible for

serving. Subsequent information in this literature review provides a generalized summary of the job responsibilities a therapist working in rural North Dakota can expect to have. There is a unique quality to work that occupational therapists do when working in rural health. In a study conducted by Roots, Brown, Bainbridge, and Li (2014), one therapist compared her work to that of a therapist working in an urban setting by stating:

> I think in an urban setting my practice would be more focused on one area. Whereas in rural I think in general you are just doing. You just take whatever comes at your and you have a little bit of all of those areas and I don't think in urban settings you would get that variety of experience, and needing to know what to do in all these different situations. (p. 6)

Occupational therapists work with clients to address occupations, client factors, performance skills, performance, patterns, and contexts and barriers (AOTA, 2014). Typically, occupational therapists complete their academic studies and choose an area of focus in the areas of mental health, physical dysfunction, or pediatrics. The difference between this 'typical' path for an occupational therapist and the path of an occupational therapist working in a rural area is that there may be no area of specific focus for a rural practitioner. Occupational therapists in these rural settings must be prepared for a wider range of needs. A client experiencing a mental health issue may need help with the occupation of social participation, whereas a client who sustained a stroke or physical injury may need to more assistance in work rehabilitation or help getting around his or her home. These interventions would differ significantly and occupational therapists working in rural areas must be equipped to prepare evaluations and treatment for any client with any condition on any given day.

Occupational therapists in a rural setting experience challenges such as maintaining a large caseload, needing to travel many miles in order to cover a large geographical area, having a wide range of client population conditions, and having limited resources and support (Roots & Li, 2013). These barriers push occupational therapists to utilize a wider range of knowledge to accommodate the population, and pay more attention to management and time management skills (Roots & Li, 2013). In order to better their practice in rural areas, therapists must utilize their organizational skills, creativity, and flexibility (Roots & Li, 2013). These are skills common to most occupational therapists, but they may be even more necessary for therapists in rural settings. Another aspect of successful practice is using self-reflection to become more culturally aware. For occupational therapists working in a rural setting who have not originally lived in that setting or have had limited clinical experience in a rural setting, cultural awareness can be a key characteristic when building rapport with clients (Roots & Li, 2013). Allowing a client to speak about his or her culture and actively listening, considering the characteristics and culture of the family of the client, and involving the family in treatment can assist a therapist in being culturally sensitive (Pidgeon, 2015).

The aforementioned characteristics and job descriptions are not specific to a particular area to the world but are universal. In the United States, specifically rural North Dakota, it can be noted that occupational therapists must consider the community and the cultural aspects within the community when providing client-centered care to a client. Characteristics such as a large variety of clients and limited resources are also present in rural North Dakota. Similarly, in Canada, "residents of rural communities have identified access to, and the consistency and availability of, healthcare services as critical issues affecting their health" (Roots et al., 2014, p. 2). This can be translated to both countries struggling to have an even distribution of

occupational therapists among rural and urban areas. McKinstry and Cusick (2015) reported that, "usual rural workforce issues of low recruitment and poor retention are also evident" (p. 1) in Australia for rural areas in which occupational therapists addressing mental health needs are required.

It may be difficult getting new occupational therapists to move to rural areas. Roots et al. (2014) wrote that this may be due to the broadness of the scope of practice found in rural areas; broadness that may be difficult for new therapists to understand. Other barriers that have been identified include feelings of isolation, family commitments, high and diverse workload, education and career risks, and the lack of opportunities to specialize (Roberts et al., 2012). Notably, this scholarly project will be focusing on the occupational therapists already living and practicing in rural areas.

McAuliffe and Barnett (2009) found that approximately one third of therapists working in a rural setting in Australia were new graduates. Some occupational therapists that have been motivated to become rural therapists for the opportunity to have more responsibility and work in a broader scope of practice (Devine, 2006). Theoretically, practicing with a broader scope of practice ensures that these therapists will maintain the knowledge that they received during their academic years. This generalized focus of practice is something rare in the profession of occupational therapy as many therapists graduate from a certified program and continue education in a more specialized area of practice such as sensory integration, hand therapy, etc. Such specialization may not be possible for therapists working in rural areas given the broad scope of practice and diversity in the clients they serve.

Research has shown that occupational therapists move to rural areas and/or stay in rural areas for several reasons. These reasons include, but are not limited to, the therapist having

previously lived in a rural area, receiving training or completing clinical work in a rural setting, and receiving financial incentives for moving and/or working in a rural area (Roots & Li, 2013). Some universities also have rural fieldwork placements for their students to increase interest in becoming a rural therapist, which has been found to have a "positive influence on students' perceptions of rural practice" (McAuliffe & Barnett, 2009, p. 2). When a therapist has previously lived in a rural area, he or she may be comfortable in a town further away from a large city. Likewise, if a therapist gained experience working in a facility of a rural area, he or she would have been provided the opportunity to gain confidence in his or her ability to use a broad range of knowledge. Financial incentives may come in the form of payment of a portion of the therapist's student loans or providing money towards moving expenses (McAuliffe & Barnett, 2009). Some advantages of rural practice that were identified included living a relaxing lifestyle, access to a diverse caseload, and the opportunity to gain practical experience to expand knowledge and skills (McAuliffe & Barnett, 2009; Roots et al., 2013). Many rural facilities use an interdisciplinary approach to address the diverse healthcare needs of a rural community. This approach also attracted therapists to a rural community (McAuliffe & Barnett, 2009).

In regards to therapists currently working in rural areas, some researchers have studied the personality characteristics that may be congruent among occupational therapists in these areas. Identifying these characteristics is important when designing continuing education opportunities. Characteristics of occupational therapists in rural settings include "knowing individuals, the community and the context of practice [leading] to enacting practice through active participation in the community, building relationships and partnerships with individuals and the community at large" (Roots et al., 2014, p. 9). Additional characteristics identified by Roberts et al. (2012) included self-efficacy, self-reliance and self-resilience. Self-efficacy is an

individual's ability to believe in one's abilities and have the confidence to take action (Reits, 2014). Self-reliance is defined by Webster's dictionary (n.d.) as a person's ability to trust his or her thoughts and actions. Webster's dictionary defines self-resilience as reliance on one's own efforts and abilities (n.d.). In other words, this is a person's ability to believe in himself or herself with confidence.

Another responsibility of healthcare professionals, including occupational therapists, is to continue their education while in the workforce. This type of education is referred to as continuing education or continuing competency. Continuing competency is defined by American Occupational Therapy Association [AOTA] as "a process involving the examination of current competence and the development of capacity for the future" (AOTA, 2015, p. 1). Current competence can be achieved through the reading of new and upcoming research publications, going to seminars/workshops, presenting research findings to others, etc. Occupational therapists that are a part of AOTA are provided with five standards for maintaining competency after schooling: knowledge, critical reasoning, interpersonal skills, performance skills, and ethical practice (AOTA, 2015). The state of North Dakota also has guidelines to follow regarding continuing education. The criteria for North Dakota include completing 10 hours of approved continuing education opportunities each year (ND State Board of Occupational Therapy Practice, n.d.). These hours can be achieved by attending board approved events, presenting at in-services, completing formal academic coursework, authoring a professional publication, self-study courses, fieldwork supervision, professional leadership, and/or employer education programs (ND State Board of Occupational Therapy Practice, n.d.). Continuing education is critical to maintaining a profession that is evidence-based and client-centered.

To fully understand a more complete and holistic view of the person and the occupation, the interaction between these two aspects of the PEO should be addressed. By using a PEO model lens, the educational needs of rural practitioners can be evaluated. Roots et al. (2014) wrote that rural practitioners "despite being [] generalist[s], they felt they needed advanced skills in areas such as assessment and differential diagnosis" (p. 6). Assessments are tools used by practitioners in all areas of practice to evaluate a client's skills, interests, abilities, etc. Continuing education opportunities should then be addressing these topics when targeting practitioners in rural areas.

environment.

Often times 'rural' is thought of as something that should always be compared to 'urban'. However, the common understanding of the word 'rural' is a broad definition of more specific groupings of populations and definitions vary. During an interview, Brad Gibbens, Deputy Director at the Center for Rural Health at the University of North Dakota, explained that there are different levels of rural: small and large (personal communication, September 30, 2016). Gibbens stated that a small rural area is populated by fewer than 2500 people, and a large rural area is populated by 2500-50,000 people (personal communication, September 30, 2016). Conversely, the U.S. Census Bureau identifies urban as any city or town population of at least 2500 (2010 Geographic Terms and Concepts, 2012; Defining Rural Population, 2015; Reynnells, 2016). Within the scope of this scholarly project, cities with a population less than 2500 will be considered rural areas while those with populations larger than 2500 will be considered urban.

environment-occupation transaction.

Throughout the world, occupational therapists practicing in rural areas experience similar challenges and barriers. Some of these challenges include: responsibility and time constraints of being the sole therapist for multiple communities, limited access to peers or other service providers for professional support, and role confusion or performing duties outside their scope of practice (Devine, 2006). Other documented barriers include limited access to technology and equipment, difficulty accessing continuing education courses, and inability to see clients on a regular schedule due to large caseloads (Devine, 2006). Additional barriers seen in rural service are how early discharge influences the resources of the community and inappropriate referrals from lack of knowledge of what occupational therapists can offer (Daly et al., 1997). Retention rates of therapists in rural areas are also a problem. In extreme remote areas of Canada and United States, therapists have been found to maintain employment (i.e. stay in these areas) for 1-3 years (Pidgeon, 2015). Some other barriers that have been identified are limited social opportunities, distance from friends or family, and lack of privacy when trying to separate work and private life (McAuliffe & Barnett, 2009).

Though numerous similarities have been reported with regards to rural practice, occupational therapy differs from one rural area of the world, both as compared to other rural areas and when compared to more urban areas. One challenge for rural therapists is connecting to the culture they are in and how the predominant culture views medicine. Therapists in indigenous regions reported that they had to learn the difference between best practice and culturally sensitive practice (Pidgeon, 2015). It is common for occupational therapists to adapt to the cultural needs of a client, but adapting to and immersing oneself within another culture to practice occupational therapy can be challenging. One way to help ensure increased cultural

competency among practicing occupational therapists is for cultural awareness to be considered by those designing continuing educational opportunities for these therapists.

occupation.

Finding occupation-based treatment was also seen as a challenge for therapists in rural areas. An example of this is that exercise involving hunting or fishing was not considered important to some, but to others it was a meaningful occupation (Pidgeon, 2015). In other remote areas, therapists experienced a "general distrust of white health providers" (Pidgeon, 2015, p. 3). Some of the strategies that were used to overcome this distrust were learning about the culture or offering to drive their clients to the store. This leads back to the previous notion of how occupational therapists working in rural areas could benefit from additional educational experiences on the topic of cultural awareness and cultural competency. The form of occupational therapy can vary across the different practice areas within the profession. Occupational therapy also differs depending on the location of the world where it is taking place. For example, if a client lives in a highly populated city, it is expected that it will be easy to receive therapy face-to-face with an occupational therapist. This is unfortunately not always an option for those living in rural areas who need occupational therapy services. In Australia, Gardner et al. (2016) performed a study looking at the use of Information and Communication Technology (ICT). This study has findings showing that clients in rural areas are in favor of using ICT in order to receive therapy without having to travel long distances (Gardner et al., 2016). Use of distance technology to deliver education is not a new concept and online educational workshops are currently available for occupational therapists.

Continuing Education

AOTA has an online store in which therapists who are members of the organization and those that are not may purchase continuing education. Examples of different styles of continuing education available via this online store include short online courses, recorded lectures, and reading based educational materials followed by a knowledge exam (AOTA, 2011). Just as the style of teaching changes among continuing education opportunities, the prices also change. On the AOTA online store alone, the prices range from free to around $100 for AOTA members while non-members can expect to pay up to $30-$40 more per opportunity (AOTA, 2011). These opportunities may account for only .5 or 1.0 contact hours of continuing education when the state of North Dakota requires a minimum of 10 contact hours per year (AOTA, 2011; ND State Board of Occupational Therapy Practice, n.d.). When looking for educational opportunities that assist an occupational therapist in acquiring a larger number of contact hours for one module, the cost for AOTA members rises to over $200 and for non-members over $300 (Continuing Education, 2013).

In addition to a national organization providing continuing education opportunities, state organizations typically provide opportunities as well though those educational sessions are rarely available in an online environment. The North Dakota Occupational Therapy Association (NDOTA) holds an annual conference with guest speakers from different areas of practice. The 2016 state conference was held in Fargo, ND and had a registration fee of $225 for registered occupational therapists to attend (2016 Annual Conference & Membership Meeting, 2016). If an attendee is a non-NDOTA member there is an additional cost for each lecture of $25-$225 (NDOTA 2016 annual conference 2016). This conference provides continuing education for therapists who physically attend the event.

location of continuing education.

The American Journal of Occupational Therapy (AJOT) is published by AOTA; this peer-reviewed journal provides a list of continuing education opportunities in each publication. Types of continuing education are divided into specific physical locations of the educational opportunity, self-paced courses, online courses, and opportunities delivered via CD-ROMs (Continuing Education, 2013; Continuing Education, 2010). A therapist can complete the majority of these types of education on his or her own time. However, the specific locations listed for a more hands-on learning experience include the cities of San Antonio, TX and Boston, MA (Continuing Education, 2010). This is a good representation of how continuing education opportunities are provided in large urban areas. Travel to these cities for the multiple days of a workshop can be difficult for therapists. An occupational therapist from North Dakota would need to pay the fee to attend, purchase a plane ticket (or determine the cost of gas), purchase a hotel stay, and take up to five days away from work. Occupational therapists in rural areas may not be able to afford to take that much time off of work as they may be the only occupational therapist in the area, leaving clients without consistent care.

Presently in North Dakota the larger hospitals are often referred to as 'the big 6'. These hospitals are located in Grand Forks, Fargo, Bismarck, and Minot (North Dakota Critical Access Hospitals & Referral Centers, 2015). As stated previously, the NDOTA annual conference was last held in Fargo, ND (2016 Annual Conference & Membership Meeting, 2016). Fargo is located on the far east border of the state; occupational therapists traveling from Minot or further west must travel between four and six hours according to Google.maps. Hosting continuing education opportunities in larger cities may be common due to the greater amount of resources; however, this can be incredibly inconvenient or seemingly impossible for occupational therapists working in rural areas.

Trending Topics

The next sections will focus on the major issues impacting rural areas and the individuals who live in these areas. These issues impact a wide diversity of populations and bring a variety of issues to health care in the regions. These topics set the stage for the final product that we will create as a continuing education course for occupational therapists practicing in rural areas.

Healthcare reform.

In discussion, Brad Gibbens, Deputy Director for the Center for Rural Health on the University of North Dakota campus, identified that health care within the state of North Dakota is changing (personal communication, September 30, 2016). This change is starting with the larger hospitals prior to impacting the smaller, rural hospitals in the state in which the focus will be on the value of care provided instead of the volume or amount of care provided (B. Gibbens, personal communication, September 30, 2016). Gibbens reported that these changes are in "an effort to restructure the U.S. healthcare system to provide better care, produce better health, and to lower costs" (personal communication, April 7, 2017). The Accountable Care Organization (ACO) is a new care delivery and reimbursement model being tested in five of North Dakota's rural hospitals (B. Gibbens, personal communication, April 7, 2017). Implications of these changes could include patients feeling more satisfied with their care and fewer return visits for follow-up care.

Care coordination.

Residents in rural area have less access to a variety of medical care options than those in urban areas. Individuals who live in rural areas have to travel a greater distance to receive care, which often leads to fewer follow-up visits. Three of the biggest issues surrounding rural care include: timely care, equitable care and patient-centered care (Zangerie, 2016). Care

coordination was a method to improve this by "help[ing] providers be better providers", mentioned by B. Gibbens (personal communication, September 30, 2016). With fewer follow-up visits, residents in rural areas may have a poorer quality of life than those in urban areas.

AgrAbility.

AgrAbility is a discretionary grant program that was formed by the United States Department of Agriculture National Institute of Food and Agriculture with a focus on assisting agricultural workers with disabilities to re-enter the workplace (Wilhite & Jaco, 2014). While there is a need for rural occupational therapy practitioners, there is limited evidence of coursework and continuing education designed to teach students the unique temporal, physical, and sociocultural environmental considerations for those who work in agricultural communities (Smallfield & Anderson, 2008). Examples of education provided to various health care professionals include: use of technology to assist with patient care, reimbursement in rural settings, interdisciplinary health care approach, and extended education on home health care practice. The occupation of farming is consistently rated as one of the most dangerous occupations in America (Smallfield & Anderson, 2008). Since statistics show that farming is such a dangerous occupation, those working in the rural areas need special training or continuing education to help provide the best quality of care to their patients who may be affected by farm accidents

Lesbian, gay, bisexual, transgender, questioning community.

Health data for people who are in the populations considered to be sexual minorities is limited due to omission of sexual orientation questions from a majority of health surveillance programs (Farmer, Blosnich, Jabson, & Matthews, 2015). A 2008 study revealed "depression and anxiety were 1.5 times higher among gay men than among their heterosexual counterparts"

(Lyons, Hosking & Rozbroj, 2014, p. 89). A 2011 report from the Institute of Medicine indicated that lesbian, gay and bisexual (LGB) persons living in rural areas "may feel less comfortable disclosing their sexual orientation, have fewer supports from families and friends and lack access to an LGB community" (Farmer et al., 2015, p. 322) when compared with those living in urban areas. One reason for sexual identity concealment in some rural areas may be negative attitudes from traditional cultures (Lyons et al., 2014). Results from studies investigating the relationship between LGB health and rural residence have yielded mixed results. A study conducted by Famer, Blosnich, Jabson and Matthews (2016) found that LGB individuals living in rural areas are at a higher risk of depression, increased substance abuse, and lower self-esteem. Farmer et al. (2016) also found that LGB persons in a rural area are more likely to have a greater sense of belonging than those living in urban areas. Reasons for these varying results are unclear (2015).

Drug issues.

Opioid addiction is currently one of the fastest growing public health epidemics. Opioids are drugs, both prescription and illegal, which minimize the body's perception of pain (Substance Abuse and Mental Health Services Administration [SAMHSA], 2017). Opioids also trigger reward centers in the brain, causing a euphoria or "high", underlining the issues for addiction or misuse (SAMHSA, 2017). "It is estimated that 46 Americans die every day from prescription opioid overdoses" (Palombi et al., 2016, p. 1). Use of recreational drugs among adolescents ages 12-17 has increased more than 200% in the past decades (Pulver, Davison & Pickett, 2015). "Population density and remoteness appear to affect the preferred substance of abuse among rural youth" (Pulver et al., 2015, p. 217). As opioids become more difficult to access, many have turned to heroin instead. Studies have shown that 80% of heroin users started

with prescription opioids. Additionally, it has been estimated that over half a million Americans abuse heroin. (Palombi et al., 2016). Overall, the most common source for adolescents obtaining prescription opioids is from friends or family, with 67% using this method (Monnart & Rigg, 2015). In rural areas, adolescents are more likely to obtain opioids from physicians or drug dealers and less likely than urban adolescents to obtain the drugs from friends or family (Monnart & Rigg, 2015). Obtaining opioid prescriptions from rural health care providers is consistent with other studies that show "rural physicians prescribe opioids more liberally than their urban counterparts" (Monnart & Rigg, 2015, p. 214). For every death from opioid abuse there are 32 emergency department visits and ten treatment admissions (Monnart & Rigg, 2015).

Reasons for opioid abuse include: poor mental health, peer norms, low family income, weak bonds to school, and lack of recreational activities (Monnart & Rigg, 2015). Some of the reasons individuals will switch to abusing heroin include: availability, difference in price as compared to prescription opioids, and difficulties with tamper-proof formulation of the prescription drugs. For rural adolescents, opioid abuse has additional complications due to inadequate treatment facilities, which are already overwhelmed (Monnart & Rigg, 2015). Communities may be able to reduce opioid abuse by educating teens and adults on how to properly safeguard these medications. Factors that have been shown to reduce the risk of adolescents abusing opioids include: time with family, time with friends, and extracurricular activities (Pulver et al., 2015) although spending time unsupervised with friends can be problematic. "Youth who spent five or more evenings out with friends each week were more likely to drink alcohol each month and smoke daily" (Pulver et al., 2015, p. 218). If teenagers are spending five or more nights out with their friends, this could also potentially increase the risk of opioid abuse. Involvement in extracurricular activities has also been linked with many

positive outcomes, such as increased self-worth (Pulver et al., 2015). Rural communities with fewer opportunities for participation display higher risks for problematic activities such as drinking and substance abuse (Pulver et al., 2015). Evidence for rural-urban disparities in the treatment of drug and alcohol use is less clear than disparities in treatments for other health problems such as obesity (Davis et al., 2016). Due to the rising numbers of teens abusing drugs in rural areas and the lack of treatment facilities in these areas, occupational therapists in these settings need resources to build a valuable practice in which they can provide care for their clients and client's families with these concerns in mind. Occupational therapists may also be able to reduce the number of teens abusing drugs with educational classes and materials to help teenagers discover alternative recreational activities.

Teaching Strategies

When implementing effective teaching strategies, one must first evaluate the audience of the learning materials. The intended audience of this scholarly project is occupational therapists working in rural areas. This audience would be considered an audience of adult learners and, therefore, andragogy should be applied to teaching strategies. Andragogy is the "theory of adult learning" (Bastable & Dart, 2011, p. 173). According to andragogy, adults prefer self-directed teaching, the content of the learning experience must be relevant to their lives, and the learning is usually problem-centered (Bastable & Dart, 2011). Andragogical methods of teaching include lectures, demonstration, and self-instruction (Fitzgerald, 2011). Fitzgerald (2011) wrote that the advantage of lectures is that they are "cost effective [and] target large groups", demonstrations are good for the audience to "preview [the] exact skill/behavior", and self-instruction assists the learning to be "self-paced, cost effective, [and] consistent" (p. 445). These aspects of adult learning are important to consider when creating an educational module for adult learners (i.e.

occupational therapists working in rural areas). More specifically, occupational therapists working in rural areas will be self-directing their continuing education, and it is likely they will be drawn to the education provided by this scholarly project as the topics of the educational modules are chosen based on the need found in the literature.

Adult learning characteristics.

Specific learning characteristics to address with adult learners include intrinsic motivation, critical analysis, the "desire to modify unsatisfactory aspects of life" (p. 56), and an emphasis on what the individual is doing and how it pertains to or will benefit society (Bastable & Dart, 2011). Creating an educational module that allows a learner to implement or use these learning characteristics will positively enhance the occupational therapist's learning experience.

Technology in education.

In today's age, technology has become more prominent and has provided learners with an increased accessibility to resources. Technology is present in the classrooms of learners of all ages and is used frequently in the workplace. Because technology has become so popular and common among consumers, it is easy for academia to incorporate it into the learning process for students. One increasingly common teaching strategy used in academia is online learning. At an urban research-intensive university, an educator created an 8-week program on the topic of mindfulness (Reid, 2013). The online curriculum included previously "recorded meditations, informational readings, and informal practice exercises" (Reid, 2013, p. 44). Reid (2013) found that the majority of the participants in the study responded positively to the courses and planned to continue their education on mindfulness. This is just one study that shows the benefits of providing education via the Internet. On the other hand, Lew and Nordquist (2014) found that students who utilized the online materials between the pre-and post-test measures had no

significant difference in scoring compared to those who did not use online materials. Just as instructors must adapt the teaching strategies used in a classroom to the needs of the students, online courses must also cater to the learning needs of the students. Using a variety of teaching strategies throughout a course is an example of how online courses can adapt to the needs of a large number of students (Doyle & Jacobs, 2013).

Online learning can also be designed as asynchronous learning (as opposed to synchronous learning). Asynchronous learning is "education, instruction, and learning that do not occur in the same place or at the same time" (Asynchronous learning definition, 2013). Another way to think about this style of learning is to think about how an individual learns from a documentary video. The video is created at a point in time, dispersed via CD-ROM or the Internet, and the learner watches the previously created video. Lew and Nordquist (2016) evaluated learner preferences towards the inclusion of asynchronous teaching and learning strategies. The results of the study suggested that more than half of the sample preferred having an asynchronous aspect to the learning experience (Lew & Nordquist, 2016). Sopczyk, Doyle, and Jacobs (2011) wrote about the trend of mobile learning. Mobile learning is simply using portable devices such as smartphones or laptops to access learning materials at any time (Sopczyk et al., 2011). It is quite common for occupational therapists to have a work computer in which the Internet can be used and learning materials can be accessed making mobile learning a strongly viable possibility for therapists in rural communities.

Campus opportunities.

The Center for Instructional and Learning Technologies (CILT) and the University of North Dakota offer the following services to campus: *Blackboard Learn*, *Qualtrics*, Adobe Connect, *Tegrity*, assistance in setting up smart technology in classrooms, instructional design

consulting, and workshops to learn how to optimize *Blackboard Learn* technologies for teaching (The University of North Dakota, 2016). *Blackboard Learn* is the main online module utilized at the University of North Dakota. *Blackboard Learn* allows for not only students and professors to connect outside the classroom, but allows organizations, groups, departments, etc. to connect online. A few of the many features offered by *Blackboard Learn* include: discussion boards, online assignment submission, and opportunities to house online lectures.

Open-Access

Continuing education opportunities for occupational therapists can be costly. It can also be time consuming if travel is needed. As previously stated, the time needed may not be available to rural practitioners for a variety of reasons. Rural practitioners find that taking time to study, leave, and access educational facilities are barriers to accessing continuing education opportunities (Daly et al., 1997). Open-access education would allow occupational therapists in rural areas to receive the same level of continuing education without the need and financial obligation of travel. Open-access can be defined as literature or an educational module presented by an institution that "does not charge readers or their institutions for access" (Directory of Open Access Journals, 2016, para. 4). It is our intention that the educational session that is the focal point of this scholarly project will be available to therapists in an open-access venue (i.e. free of charge), which is becoming more common globally.

Open-access journals are an up-and-coming trend currently being used by several university presses including the Cambridge University Press, Oxford University Press, and Stockholm University Press (Open Access Scholarly Publishers Association [OASPA], 2016). Additionally, the OASPA has 26 scholarly publishers from around the world that share the mission to provide education for "members and the scholarly communities they serve"

(Members - OASPA, 2016, para. 2). The concept of equity that is the cornerstone of open-access is consistent with the values embraced by the occupational therapy profession.

Within the Occupational Therapy Practice Framework, the term "occupational justice" is used to define the "access to and participation in the full range of meaningful and enriching occupations afforded to others" (AOTA, 2014, p. S35). For occupational therapists, continuing education is a requirement and commitment in order to continue serving clients with the most evidence-based interventions possible. Providing continuing education opportunities in an open-access method assists therapists in meeting the requirements of and commitments made to continuing education. More open-access educational materials are needed in the profession of occupational therapy so as not to limit therapists to what they can or cannot afford (whether in regards to finances or time).

Problem Statement

There is a limited number of occupational therapists travelling to and working in rural areas. New graduates may not have the desire to work in rural areas immediately after graduating because the scope of practice is so large and current educational programs may not be preparing students for this type of setting (Roots et al., 2014). As a result of more therapists settling down in urban areas, hands-on continuing education opportunities have a tendency to be located in large cities around the country that require travelling further (Roots et al., 2014). These opportunities can cost anywhere from $25-$300 for online continuing education (Continuing education, 2013; NDOTA 2016 Annual Conference, 2016). Hands-on opportunities can cost even more. Adding the cost of travel and time off from work contributes to high costs of continuing education. Transportation opportunities also limit occupational therapists working in rural areas and their ability to attend continuing education opportunities. It is imperative that

rural areas continue to employ occupational therapists and that those therapists have up-to-date education. It has recently been published that "occupational therapy is the only spending category where additional spending has a statistically significant association with lower readmission rates" (Rogers, Bai, Lavin, & Anderson, 2016, p. 1). This finding supports the need for more open-access continuing education opportunities, especially for occupational therapists working in rural areas. Without continuing education, therapists will not be able to better their practice to ensure that the profession of occupational therapy continues to decrease readmission rates and better serve clients.

Summary

As noted throughout the literature review in Chapter II, there is a national and international shortage of occupational therapists practicing in rural areas. There are a variety of issues and reasons why occupational therapists choose not to practice in these areas. One of these reasons is lack of access to continuing education, which is required both for maintaining licensure and also to ensure best practice delivery. Current issues impacting these rural communities include escalating issues with drugs and alcohol abuse. By creating educational modules addressing these issues and providing them in an open-access venue, we hope to provide the education necessary in these areas to assist rural occupational therapists in providing the best care. The process used to develop this scholarly project can be viewed in Chapter III, Methodology.

CHAPTER III

METHODOLOGY

Chapter III Methodology is the compilation of the steps taken to conceptualize and develop this scholarly project. The methodology contains the creativity of thought resulting in the idea, the course taken to complete the literature review, the summaries of interviews completed in developing the final product, and the integration of the Person-Environment-Occupation model that guided the creation of *Open-Access Continuing Education Occupational Therapy Resources for Rural Communities*.

This scholarly project developed from our shared interest in the continuing education of occupational therapists, specifically of those working in rural areas. Our interest began with curiosity in a new occupational therapy program starting in Ghana. Without the opportunity to conduct a needs assessment, we brought this interest closer to home and started thinking about therapists working in rural areas in North Dakota. Through interviews and the exploration of literature, *Occupational Therapy's Role in Opioid Addiction* was developed by the authors with the intention of promoting open-access continuing education opportunities for the betterment of the profession.

In conducting the literature review, many journals, databases, and individual interviews were utilized in order to gain a greater understanding of the current process and topics related to continuing education. The following resources were searched: PubMed, OTSearch, *Journal for Rural Health*, The Center for Rural Health website, the North Dakota Occupational Therapy Association (NDOTA) website, *Using occupational therapy models in practice: A field guide*,

Applied theories in occupational therapy: A practical approach, *Health Professional as Educator: Principles of Teaching and Learning*, *Willard & Spackman's Occupational Therapy, American Journal of Occupational Therapy (AJOT)*, American Occupational Therapy Association website, and Google Scholar. These resources were accessed through the University of North Dakota's Harley E. French Library as well as personal subscriptions to the AJOT and occupational therapy textbooks.

When accessing the resources listed above, the following search terms were used to gather information on person, environment, and occupation factors related to occupational therapists accessing continuing education when in rural areas: *rural and occupational therapy, occupational therapy, continuing education, occupational therapy and contexts and barriers, job responsibility and rural health and occupational therapy, responsibility* and *rural health and occupational therapy*.

In addition to databases, key personnel on the University of North Dakota campus were contacted for the purposes of gathering additional information regarding the intentions of this scholarly project. During the completion of the literature review, Brad Gibbens, Deputy Director for the Center for Rural Health on the University of North Dakota campus, was contacted and provided information on trending topics related to North Dakota on September 30, 2016 in a face-to-face interview.

When all necessary resources had been gathered for the literature review, we conducted additional research on opioid use influencing the youth of North Dakota. This topic was identified as a trending topic in the rural areas of North Dakota as well as the United States as a whole. The following resources were searched to find information on opioid use in adolescents and develop the content for the product of this scholarly project: PubMed, OTSearch, *Journal for*

Rural Health, The Center for Rural Health website, NDOTA website, *American Journal of Occupational Therapy (AJOT)* and *Willard & Spackman's Occupational Therapy*. These resources were accessed through the University of North Dakota's Harley E. French Library as well as personal subscriptions to AJOT, OT Practice, and occupational therapy textbooks. When accessing the resources listed previously, the following search terms were used to gather information on opioid use in adolescents in rural areas: *opioid abuse and rural and adolescents, occupational therapy and substance abuse, opioid abuse and adolescents, adolescents and substance abuse, assessments and substance abuse disorders,* and *occupational therapy and opioid use*.

There were also several individuals that we contacted for information or resources to guide in the creation of the final product. These individuals included: two professors from the University of North Dakota Occupational Therapy Program, an employee from the Grand Forks Public Health Department and an occupational therapist at the North Dakota State Hospital in Jamestown, ND. These people provided articles that were integral for providing information and resource guidance for completion of the product.

Part of our initial literature review included looking at the trending topics in rural health. From these trending topics, we identified opioid abuse as the topic with the most need. After identifying opioid abuse in adolescents as the topic for our product, we gathered more research on this topic. The product was developed into the following sections: Overview of opioids, overview of the Person-Environment-Occupation model, overview of assessment to use with this population, broad interventions, and finally, specific interventions.

The research gathered for the product was organized into a PowerPoint presentation. Several individuals were involved in our decision on how the final presentation would be constructed and which software was available at the lowest cost.

Nasser Hammani, Assistant Professor/CIO for the University of North Dakota School of Medicine and Health Sciences, participated in a phone interview on November 9, 2016 to learn about potential options for housing a continuing education module. He stated that the University of North Dakota uses an online system called *Blackboard Learn* (personal communication). Via the *BlackBoard Learn* site, a community page could be made for anyone could access (personal communication, N. Hammami, November 9, 2016). We determined that we would be able to use this system and make it open-access for occupational therapists. Additionally, MediaSite was also noted as a method to record lectures or demonstrations in the lab at the University of North Dakota, although a limitation to the MediaSite software is that any lectures or demonstrations recorded cannot be edited (N. Hammami, personal communication, November 9, 2016). Advantages described by N. Hammami include creating recordings from multiple angles in the lab. We also learned that we could receive training on how to properly and effectively use the software (personal communication, November 9, 2016).

The Center for Instructional and Learning Technologies (CILT) was also contacted to learn of potential software available for the authors to use when creating an online PowerPoint presentation. The Systems Applications Administrator/Instructional Technologist, and his student, proposed that Adobe Captivate would be able to fulfill the needs of the presentation (personal communication, December 8, 2016). Unfortunately, in order to keep this project open-access for the authors and future learners, Adobe Captivate was not the best match for this scholarly project.

After it was determined that Adobe Captivate was not the best option for the completion of the product of this scholarly project, we determined that Adobe Presenter was the best option due to the fact that we had open-access from the University of North Dakota as part of the technology options that are offered free of charge for students. It was discovered through preliminary exploration of the software that Adobe Presenter is not compatible with Apple software. Since the authors of this project both owned Apple computers, a laptop that was compatible with the software was borrowed from the University of North Dakota Department of Occupational Therapy. After Adobe Presenter was downloaded onto the laptop we spent several hours learning how to use the software. Several practice slides were also completed to gain comfortability with the software and presentation of the material. Once the final PowerPoint materials were approved by the advisor of this scholarly project, we recorded the continuing education course utilizing Adobe Presenter. The authors additionally used an external headset microphone to improve sound quality of the recording. Slides were re-recorded as necessary until the authors obtained a high-quality final product.

The Person-Environment-Occupation model was applied to guide an all-encompassing search of literature for the literature review as well as the final product. Key principles from this model were used as a guide. Elements of the person, the environment, and the occupation (Cole & Tufano, 2008; Turpin & Iwama, 2013) of a therapist working in a rural area were collected and evaluated for the literature review. These same elements were gathered and analyzed for the PowerPoint presentation of the relationship between occupational therapy and teens experiencing addiction to opioids. By using this model, we were able to ensure that a holistic approach was taken when creating an open-access continuing education opportunity as well as effective

consideration and building of interventions that are based on foundations of occupational therapy.

The final product, *Occupational Therapy's Role in Opioid Addiction*, will be housed on the University of North Dakota's Occupational Therapy webpage. This was approved by the head of the department, Dr. Janet Jedlicka. The link will direct the learner to a community *BlackBoard Learn* page allowing the writers to present and house the product with open-access for the learners.

Chapter III, Methodology, provided a detailed outline of the steps taken to complete this scholarly project. It included an explanation of the inspiration for the scholarly project, the resources utilized to gather information, and the how the occupational therapy model, Person-Environment-Occupation, was used to guide our decision-making process throughout the project. Chapter IV, the Product, consists of a description of the final presentation, *Occupational Therapy's Role in Opioid Addiction*.

CHAPTER IV

PRODUCT

Chapter IV consists of a brief summary of the product created for the scholarly project. The materials created for the continuing education course, *Occupational Therapy's Role in Opioid Addiction,* can be found in the appendix of this scholarly project.

The purpose of this project was to explore continuing education options for rural occupational therapists and create an open-access, online continuing education course for occupational therapists in these settings. The context of the product focuses around opioid addiction, particularly in adolescents, and the role occupational therapy plays in the treatment of these adolescents. The presentation, *Occupational Therapy's Role in Opioid Addiction,* was created to provide open-access continuing education credits to occupational therapists practicing in rural areas. The topic for the course was carefully chosen after a thorough review of the literature. Literature showed that substance abuse, specifically opioids, is on the rise, particularly in adolescents across the United States. Through our review, it was found that occupational therapists practicing in rural areas face a variety of challenges when pursuing the continuing education required to maintain licensure as an occupational therapist.

The content for the continuing education course was developed with the intention of educating occupational therapists on the following areas: background information on opioids, introduction to the theoretical model used to guide the product, assessments, broad interventions, and specific interventions. A case study was additionally incorporated for therapists to apply the knowledge they have learned into real-life situations that may be seen in practice. The product

also contains a quiz to test the knowledge of those accessing the course; the individual must pass the quiz to receive the continuing education credit. All content for the continuing education course was structured utilizing occupational therapy theoretical models and available evidence. Once content for the course was organized into PowerPoint slides, we recorded the continuing education course, which will be available online with open-access through the University of North Dakota Department of Occupational Therapy webpage.

The model that was utilized to guide the development of the product was the Person-Environment-Occupation (PEO) model. PEO was used in the process of this scholarly project due to the heavy emphasis on person, environment, occupation, and the interactions identified between them (Cole & Tufano, 2008; Turpin & Iwama, 2013). Determining the occupational fit of a person is done by evaluating a person's success in his or her transactions between the person, environment, and occupation (Cole & Tufano, 2008; Turpin & Iwama, 2013). To change the habits of an adolescent, all aspects of the individual needs to be addressed.

The continuing education course and supporting chapters of the scholarly project were developed in partial fulfillment of the requirements for the Masters of Occupational Therapy degree at the University of North Dakota. References for the entire scholarly project can be located after Chapter V in the references section. Chapter IV consisted of a review of the product that was created for the scholarly project along with the process of creating this product. Chapter V will consist of an overall summary of the entire project.

CHAPTER V

SUMMARY

Chapter V, Summary, is a review of the purpose of this scholarly project, an overview of the continuing education materials created, limitations of the education materials, and recommendations for further development of this product. The purpose of this scholarly project was to identify continuing education needs for occupational therapists working in rural settings. After completing a comprehensive review of the literature, we identified the need for an open-access, online continuing education course for rural occupational therapists on opioid use among adolescents.

The continuing education materials were developed after a comprehensive literature review of trending topics in occupational therapy. Through this literature review we identified opioid addiction in adolescents as a prominent topic area which became the focus of the product.

Open-Access Continuing Education Occupational Therapy Resources for Rural Communities and *Occupational Therapy's Role in Opioid Addiction* were developed with the intention of increasing awareness of a lack of continuing education opportunities and providing educational resources for occupational therapists working in rural areas. The product created is intended to be an example of an open-access, evidence-based educational module for therapists to utilize. Opioid use, the topic of the product, is a trending topic meant to provide relevant information to therapists interacting with this rising population of clients.

This product is unique as there are few open-access continuing education opportunities for occupational therapists. In addition, the topic of the product is relevant to therapists across

the nation, and is especially pertinent to therapists in the rural areas of North Dakota. The product encompasses of all aspects of treatment including evaluation, assessments, and interventions. In addition, the Person-Environment-Occupation model was used to guide the product in order to evaluate all aspects of a person experiencing substance abuse.

We envision this scholarly project being utilized by those occupational therapists practicing in rural areas who are having difficulty accessing continuing education opportunities. With the materials being online and offered with open-access, we hope that therapists can use these materials in the comfort of their homes or offices. We further envision editing and updating these educational materials as we receive feedback on the content and the topic evolves. In addition, we envision creating additional educational modules of varying pertinent topics in the future.

A limitation to this scholarly project is that the final product has not yet been utilized by learners, so we have not received feedback from therapists who have completed the educational module. Another limitation of this scholarly project is due to the severity and fast-changing nature of information on the topic. Professional information on best practices and treatment may change quickly, demanding changes and updates to the content of the continuing education materials. It is recommended that occupational therapists continue to stay up to date on evidence-based interventions for drug addictions that may be developed in the future. At the time of this scholarly project, adolescents abusing opioids was a newer trend in the literature. We anticipate that therapists will continue to create new protocols for treating this population in the future. Another recommendation is that occupational therapists continue to create free continuing education courses for the continued growth of the profession. A final

limitation to this scholarly project is that adult learning principles to were applied but not specified directly during not used in the development of the product.

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Appendices

Appendix A

Presentation

OCCUPATIONAL THERAPY'S ROLE IN OPIOID ADDICTION

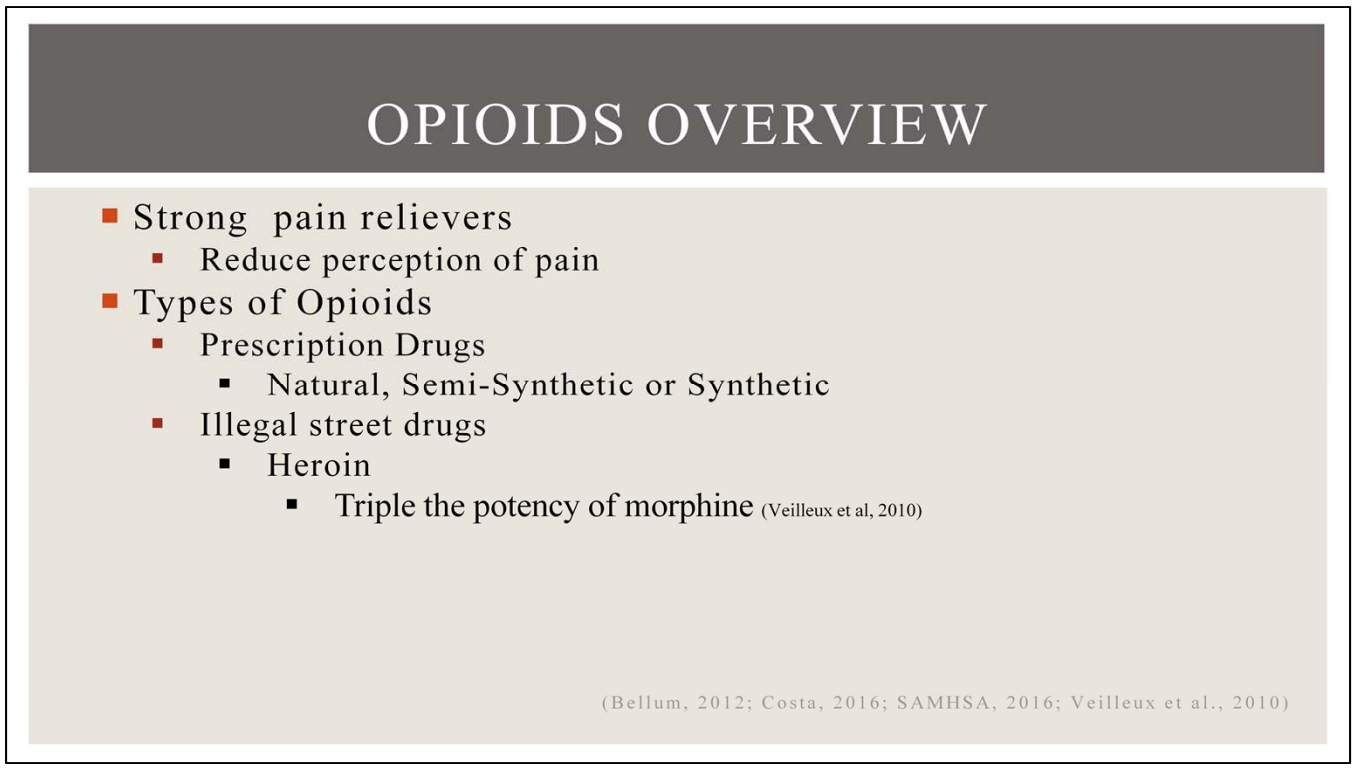
By Amber Daly, MOTS, Emily Germolus, MOTS & Anne Haskins, PhD, OTR/L

OBJECTIVES

At the end of this session the attendees will:

1) Be able to identify the various types of opioids.
2) Recognize the signs and symptoms of opioid addiction.
3) Have increased awareness of resources available to clients, parents, and providers.
4) Have increased comprehension of the impact opioid addiction has on adolescents and their occupations.
5) Apply evaluation and intervention options to a case study.
6) Identify useful assessments to guide practice.

Background Information



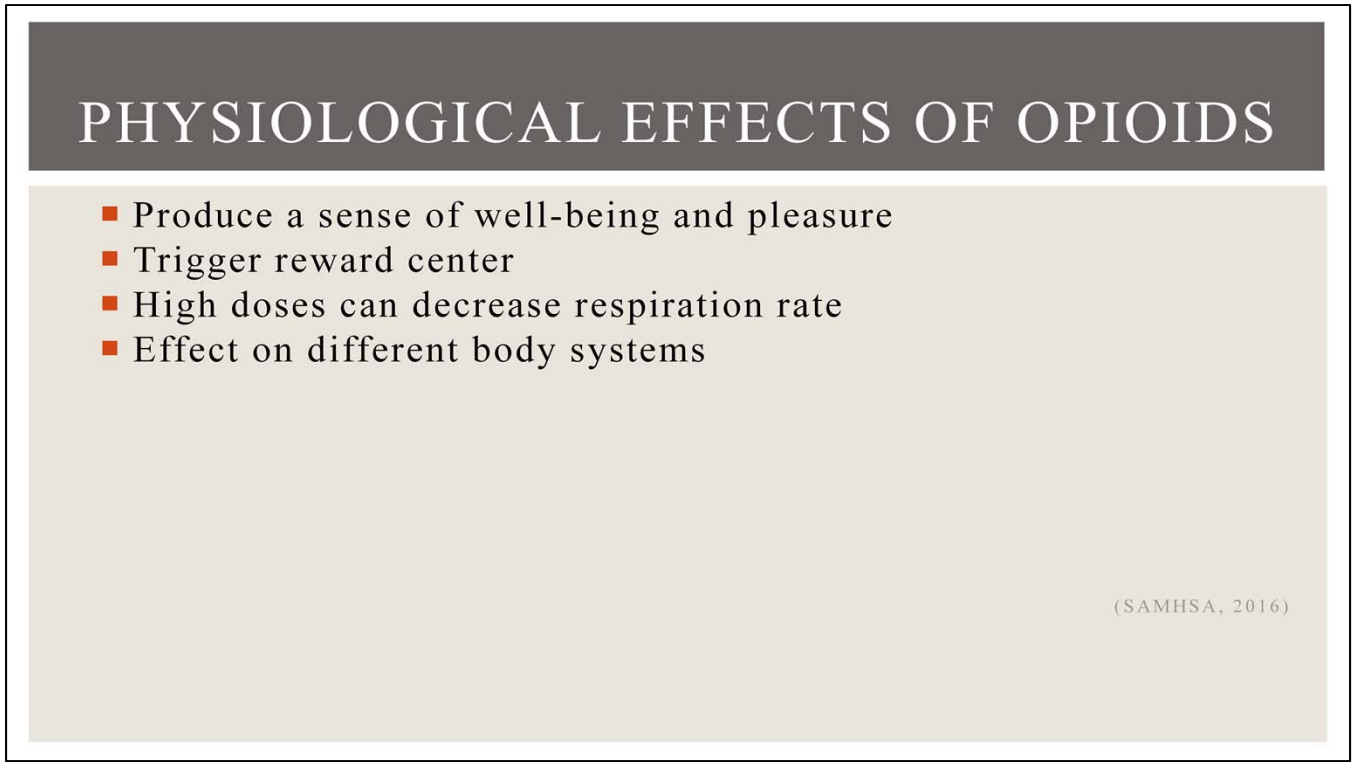
- Opioids are defined as strong pain relievers that minimize the body's perception of pain. In some patients opioids can also worsen the pain or cause hyperalgesia.
- Opioids are classified into two groups: prescription drugs and illegal street drugs.

Prescription opioids are classified as either Synthetic,Natural or Semi-Synthetic

- Natural or true opioids are derived from the opioid poppy seed plant , the opioid poppy seed plant contains a natural pain reliever substance known as alkaloids (examples of true opioids include: morphine and codeine).
- Semi-synthetic opioids are chemically manufactured in a lab with similar components to natural opioid drugs (examples of the drug include Oxycontin and Heroin)
- Fully synthetic opioids only contain man-made components. Examples include methadone and fentanyl

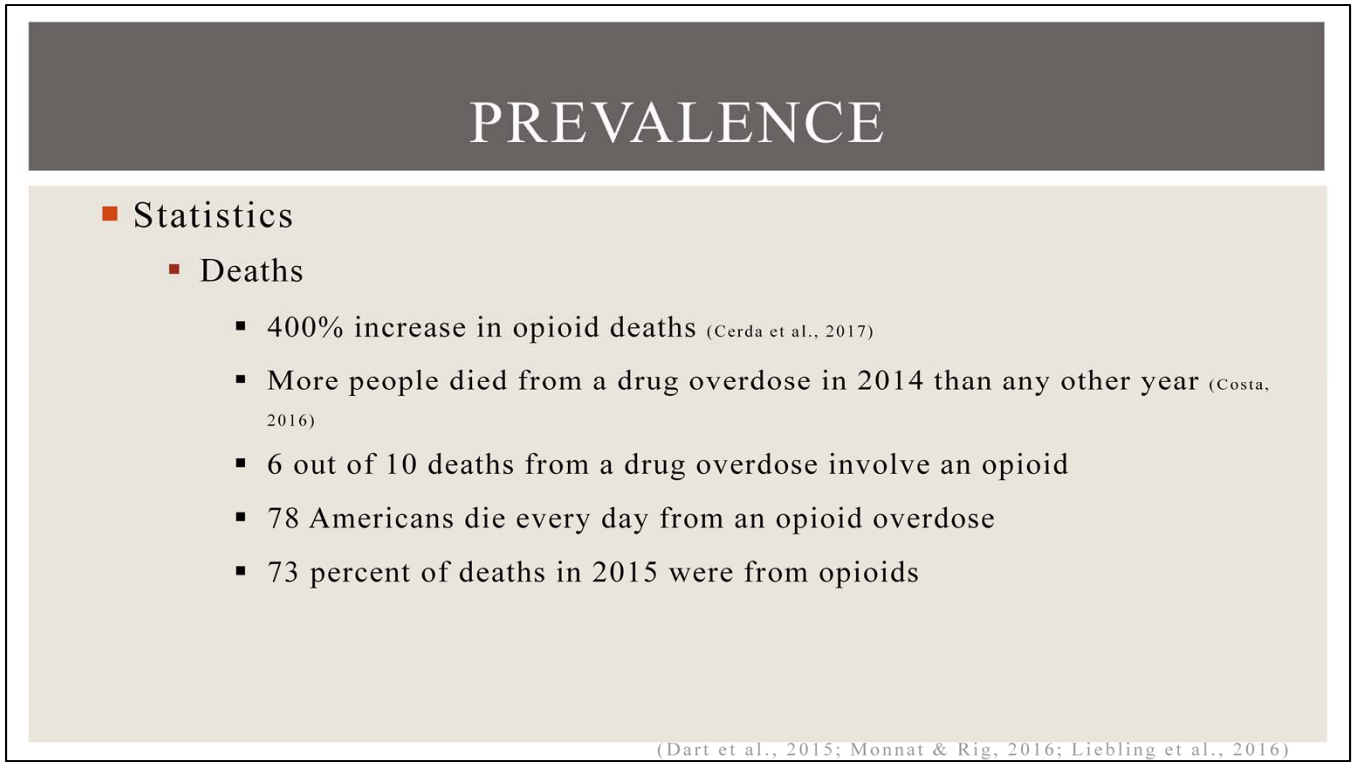
Due to the increase in the abuse of the prescription opioids, prescription opioids will be the main focus for this session.

(Bellum, 2012; Costa, 2016; SAMHSA, 2016; Veilleux et al., 2010)



- Opioids activate the reward regions in the brain which cause a euphoria or high. The activation of the reward system and the euphoria are the underlying concern for misuse and addiction. They additionally produce a sense of well-being and pleasure.
- Opioids can also stimulate the opioid reward center in the brain which in turn can trigger those areas responsible for regulating mood, blood pressure and breathing. High doses of opioids can decrease respiration rates.

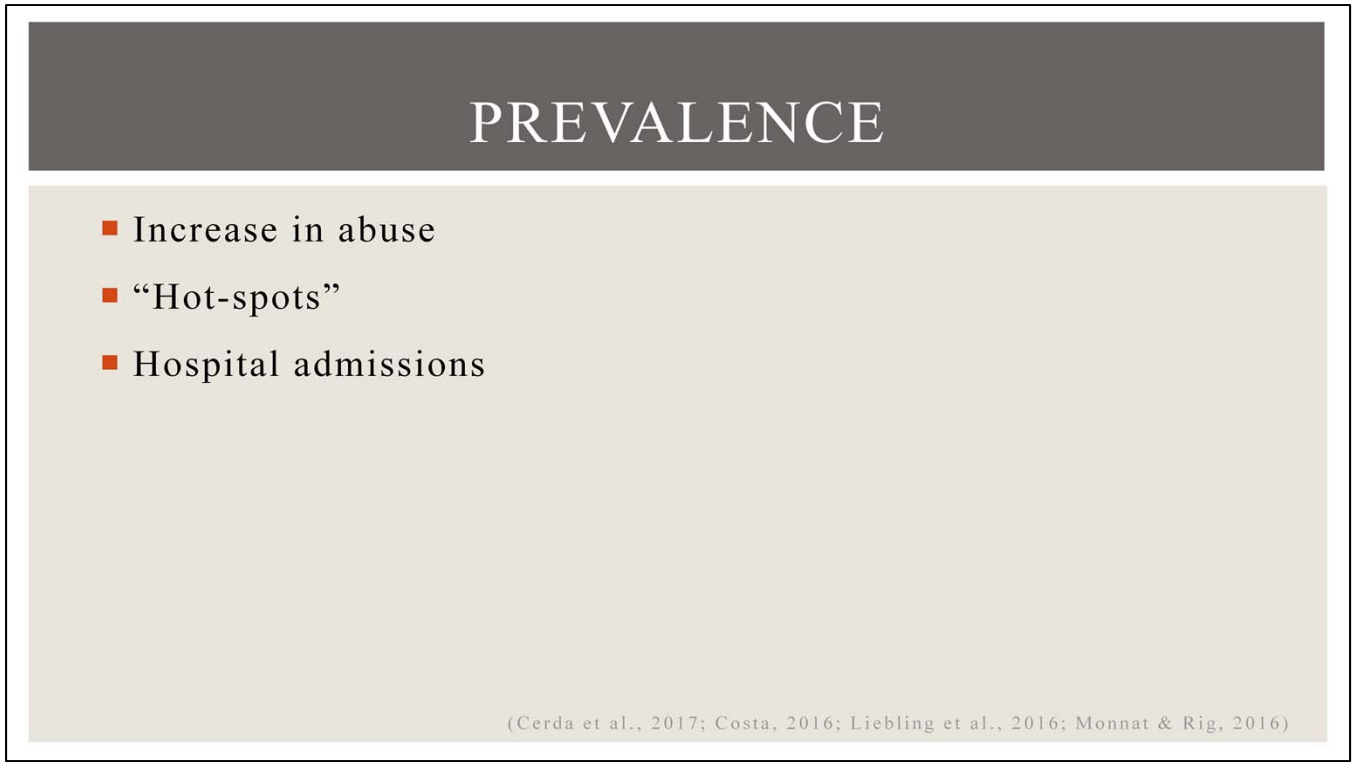
(SAMHSA, 2016)



During the next two slides we will review the statistics and prevalence of opioid abuse in the United States.

- In the United States, prescription opioid (PO) poisoning deaths have increased more than 400% between 1999 and 2014 (Cerda et al., 2017).
- Drug-related deaths are now the leading cause of death in the United States, surpassing traffic accidents (Dart et al., 2015).
- Opioid overdose has become an epidemic in the United States, overtaking motor vehicle crash mortality in 2009 (Liebling et al., 2016).
- 73 percent of deaths in 2015 were from opioids, this is a significant jump from 57 percent in 2010. (Center of Disease Control and Prevention, 2015) .
- Opioid overuse-related hospital stays continue to grow at a rate of 5% per year (Cerda et al., 2017).
- For every opioid-related death, there are 10 treatment admissions and 32 emergency department (ED) visits (Monnat & Rig, 2016).

(Dart et al., 2015; Monnat & Rig, 2016; Liebling et al., 2016)



Statistics for an increase in abuse

- The prevalence of nonmedical prescription opioid use is particularly high among young adults; the percentage of users was highest among 18- to 25-year-olds, and reached 2.8% in 2014 (Liebling et al., 2016).
- Health care providers wrote prescriptions for a quarter of a billion opioids in 2013, which is enough for every American to have their own bottle of pills (Costa, 2016).

Statistics for "Hot-spots" or areas with higher concentrations of opioid abuse

- Rates of prescription opioid poisoning are concentrated in 'hot-spots', usually in rural areas, as well as in small towns and suburban areas (Cerda et al., 2017).
- The ways in which such hot-spots develop and spread across space over time, as well as the factors that explain why prescription opioid poisoning increases in rural and suburban areas, are not well understood (Cerda et al., 2017).

Statistics for hospital admissions regarding opioid use

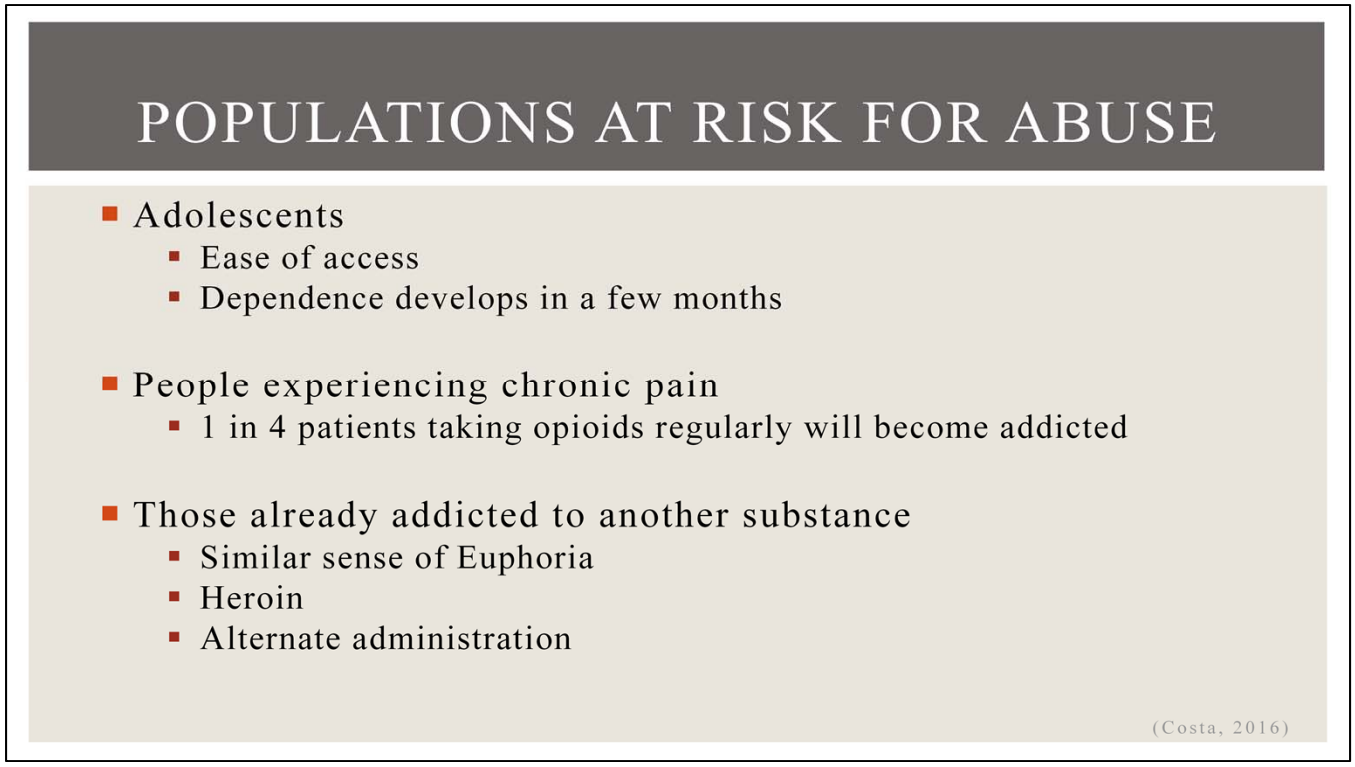
- Opioid overuse-related hospital stays continue to grow at a rate of 5% per year (Cerda et al., 2017).
- For every opioid-related death, there are 10 treatment admissions and 32 emergency department (ED) visits (Monnat & Rig, 2016).

(Cerda et al., 2017; Costa, 2016; Liebling et al., 2016; Monnat & Rig, 2016).

Risks for Abuse

- Communities with more economic stressors such as unemployment, low median income and poverty may be particularly vulnerable to prescription opioid abuse, among other reasons, as a way for people to manage chronic stress and resulting anxious and mood disorders (Cerda et al., 2017)
- Other socioeconomic factors include: low family income, poor mental health, difficulty receiving mental health treatment, illicit drug use, delinquency, residentially instability, peer norms, parental factors, and weaker bonds to school. All of these were positively associated with adolescent prescription opioid misuse. (Monnat & Rigg, 2016)
- Research has also found distinctive features of rural areas that increase the likelihood of substance abuse, including higher poverty rates, peer norms,lack of recreational activities, family and community denial about substance abuse, and an emphasis on self-reliance that leads to lack of treatment services and prevention efforts. (Monnat & Rigg, 2016)

(Cerda et al., 2017; Monnat & Rigg, 2016)



Adolescents

- According to Costa (2016), 3 percent of adolescents in the age range of 12-17 years report the nonmedical use of prescription medications.
- Ease of access: 50% of high school seniors surveyed reported they obtained drugs from family members or these drugs were purchased by a friend or family member. Teens also reported that they could easily access medication cabinets, kitchen cupboards and other places around the house.
- Dependency: Full blown dependence can develop in a few short months, which is less time than it would take for adults.

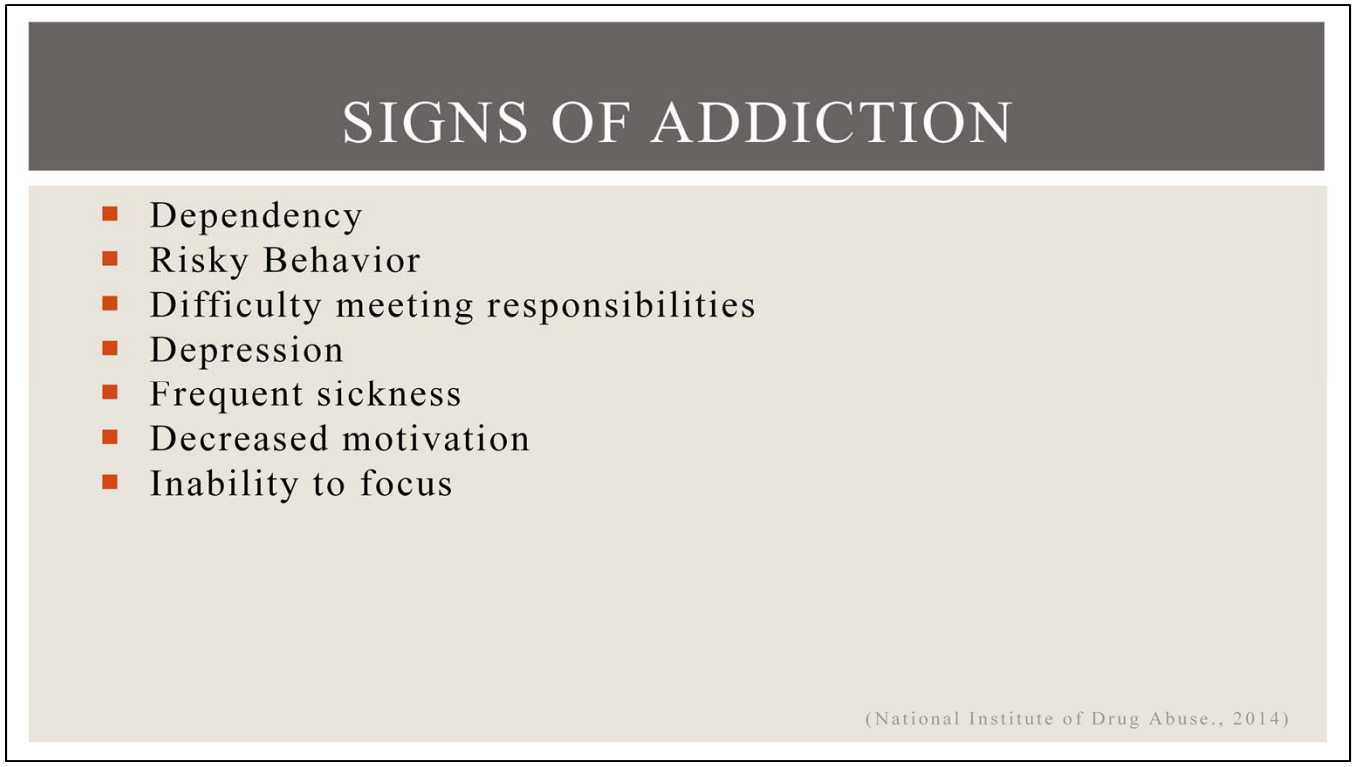
People Experiencing Chronic Pain

- 1 in 4 people taking prescription opioids regularly will become addicted.

Those already addicted to another substance

- Those addicted to illegal drugs may turn to opioids or heroin because of ease of access.
    - Opioids also result in a similar euphoria to other drugs.
- Those abusing prescription opioids may switch to heroin when they can no longer obtain a prescription or due to the low street price of opioids.
- Those with substance use disorders may take opioids via alternative administration (crushing, snorting, injecting) to heighten the effects of the drugs.
    - Greater risk for respiratory distress or death.

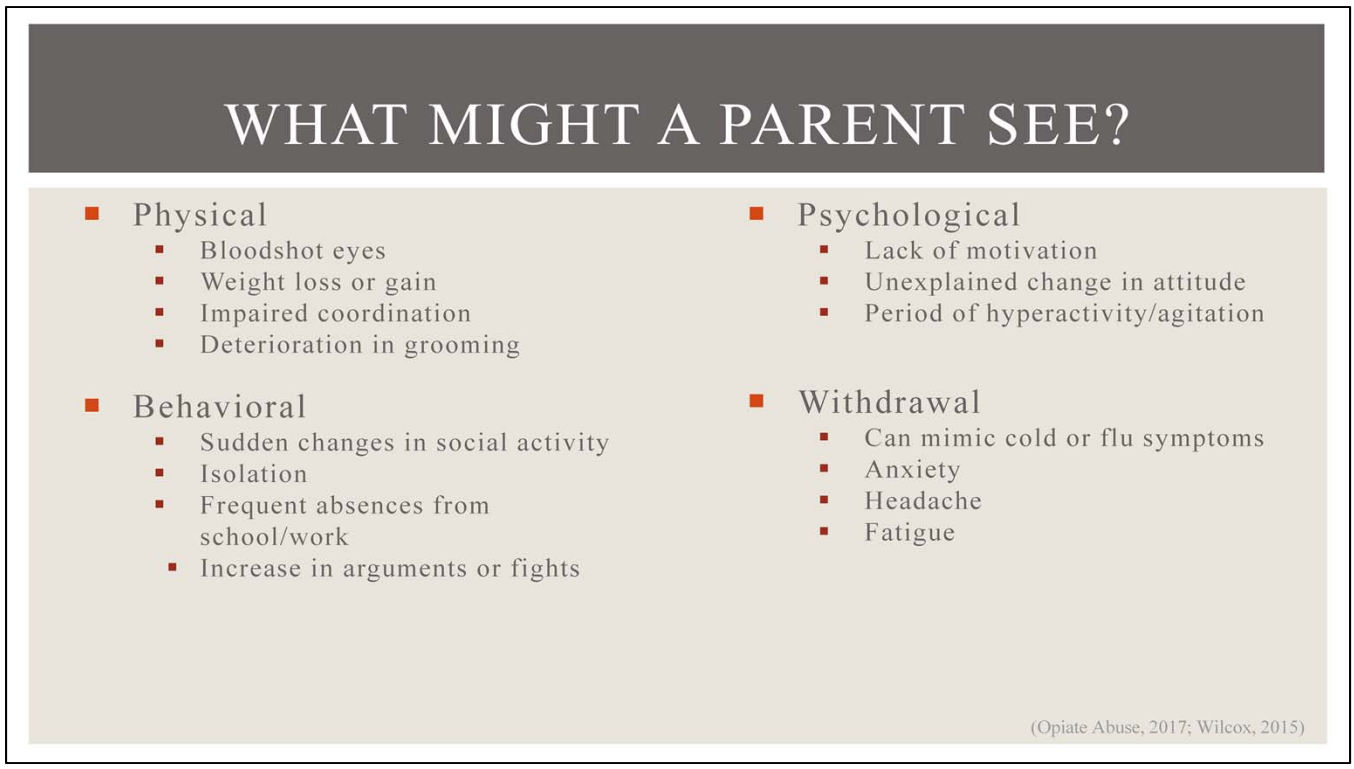
(Costa, 2016)



These are some of the signs of addiction from the Partnership for Drug- Free Kids, and is not exhaustive list. The full list can be found in the resources for parents or at drugfree.org.

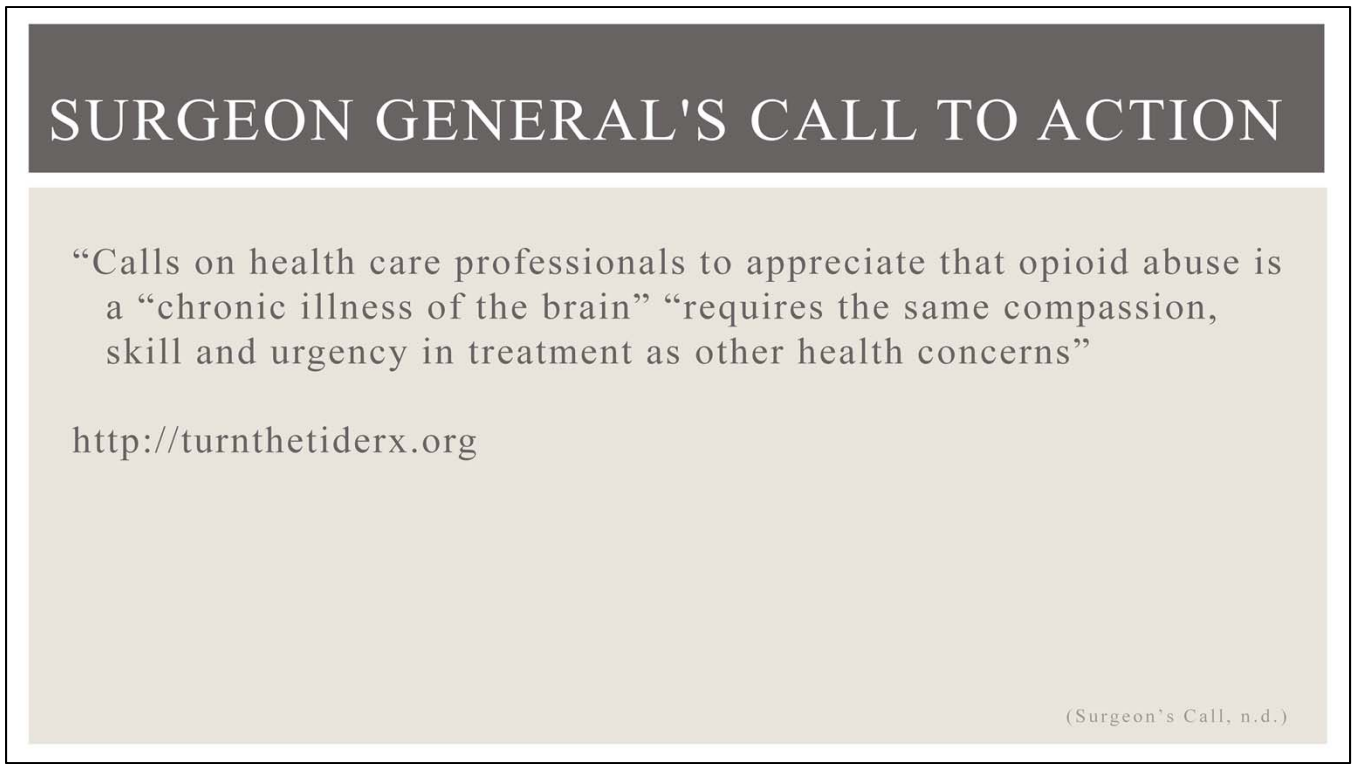
- Dependency- the body's physical need for a drug or substance.
- Risky Behavior- Behaviors that put the individual at a higher risk for illness, injury.
- Difficulty meeting responsibilities- Is not able to meet the same school or work responsibilities as before the addiction.
- Depression- Experiences symptoms of depression such as: fatigue, mood changes or social isolation.
- Frequent sickness- Complains of frequent cold or flu symptoms, may also miss school or work due to illness.
- Decreased Motivation- Does not participate in the same activities as before or does not complete the same tasks as before.
- Inability to focus- demonstrates difficulty focusing on the necessary tasks for school, work, etc.

(National Institute of Drug Abuse, 2014)



Various behaviors that a parent should be watching for but not an exhaustive list.

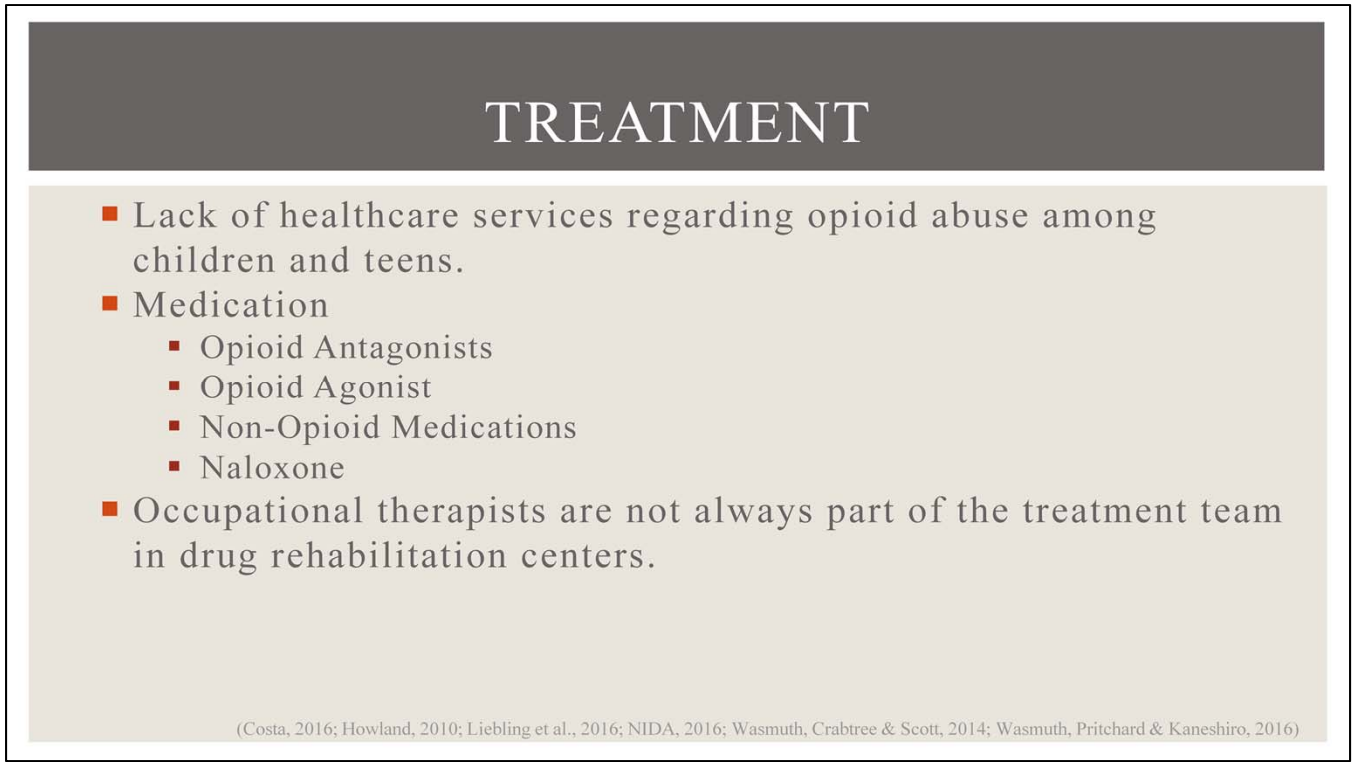
(Opiate Abuse, 2017; Wilcox, 2015)



The surgeon general's call to action to action regarding the call to end the opioid crisis is as follows "calls on health care professionals to appreciate that opioid abuse is a chronic illness of the brain and requires the same compassion, skill and urgency in treatment as other health concerns.

- Click on the the hyperlink and show the highlights and resources available
- Resources for both clinicians and patients
    - Treatment options
    - Managing pain
    - Information on Opioids
    - Guidelines for prescribing opioids

(Surgeon's Call, n.d.)



Currently, studies are showing that occupational therapists tend to not screen for substance abuse disorders, and, in fact, therapists are reporting feeling unprepared to work with individuals experiencing substance abuse (Wasmuth, Pritchard & Kaneshiro, 2016). Thompson (2007) in Wasmuth, Pritchard, and Kaneshiro (2016) wrote occupational therapists have "the skills necessary to address deficits in occupational performance [and] promote development of healthy performance patterns and environmental contexts that support abstinence or the reduction of alcohol and drug use" (p. 65). Liebling et al. (2016) reported that only one in ten people with substance abuse receive treatment within the U.S. In the same article, barriers a client experiences during treatment were discussed, and it was found that client's lack a readiness to stop using, have fear of loved ones discovering the addiction, that they believe they can handle the problem on their own, and they have an overall lack of knowledge of where services are available in their community (Liebling et al., 2016).

Opioid Antagonists- Block opioid receptors in the brain, rendering opioid ingestion ineffective. Two example of Antagonists are Naloxone and Naltrexone.

- Naloxone- administered via injection and has a duration period of less than 30 min

    - Naloxone- Used in emergency situation in response to an overdose. Can restore respiration in an individual who has stopped breathing due to an overdose. Can be used by emergency medical personnel, bystanders and first responders.

    - Comes in injectable, auto injectable and nasal spray form (NIDA, 2016)

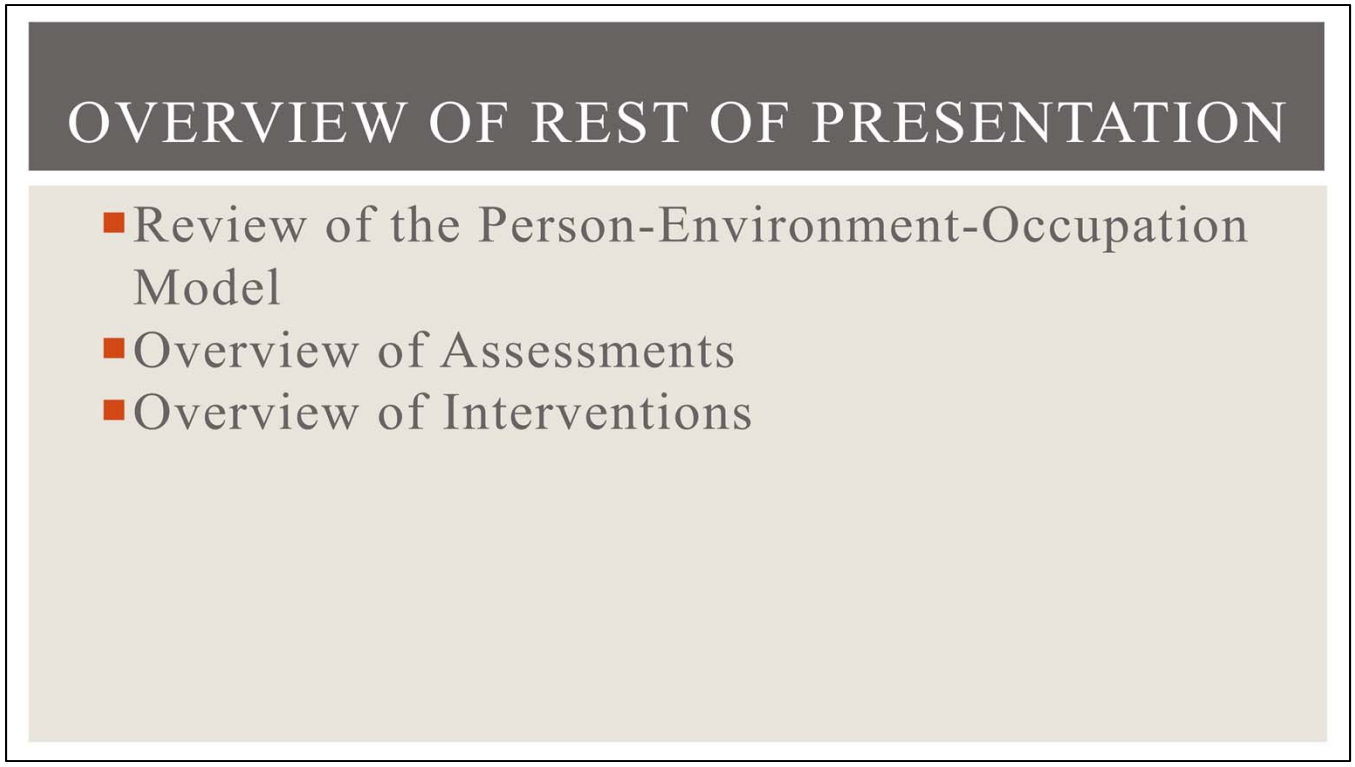
- Naltrexone- administered orally and has a longer duration period. This drug blocks the receptors the opioid target and, therefore, the individual would not experience the same 'high'(Costa, 2016). Used for rapid detoxification from opioids, reduces the body's craving for the drug, and clients may experience side effects including anxiety and nausea (Costa, 2016).

Opioid Agonists- Drugs that bind to opioid receptors and exert similar effect of natural opiates

- Methadone and Levomethadyl acetate are full opioid agonists that bind to the opioid receptors and block them, which decreases the effect of any subsequent heroin use
    - Both of these drugs are considered to be highly addictive and must be administered in a clinical setting under controlled conditions.
    - Methadone must be administered daily, which Levomethadyl acetate is administered 3 times a week.
    - Tricks the brain to thinking a person is taking opioids, but the individual does not receive the same high (Howland, 2010)
    - Clients on methadone may be experiencing dizziness, nausea, and sedation (Howland, 2010)
- Buprenorphine- Considered to be a partial opioid agonist and does not mimic the euphoric effect of the other two in this category
    - Acts in the same way, and has similar side effects as methadone (Howland, 2010).
    - Reduced craving (Costa, 2016).

Unfortunately, if a teen does make the realization that he or she is in need of help, it is common that the teen will have to wait several months to get into a treatment program (Liebling, 2016). In addition, statistics have shown that over 50% of individuals that go through treatment for addiction-related disorders have a relapse within their first year, and/or are unsatisfied with the treatment program and discontinue services (Wasmuth, Crabtree & Scott, 2014).

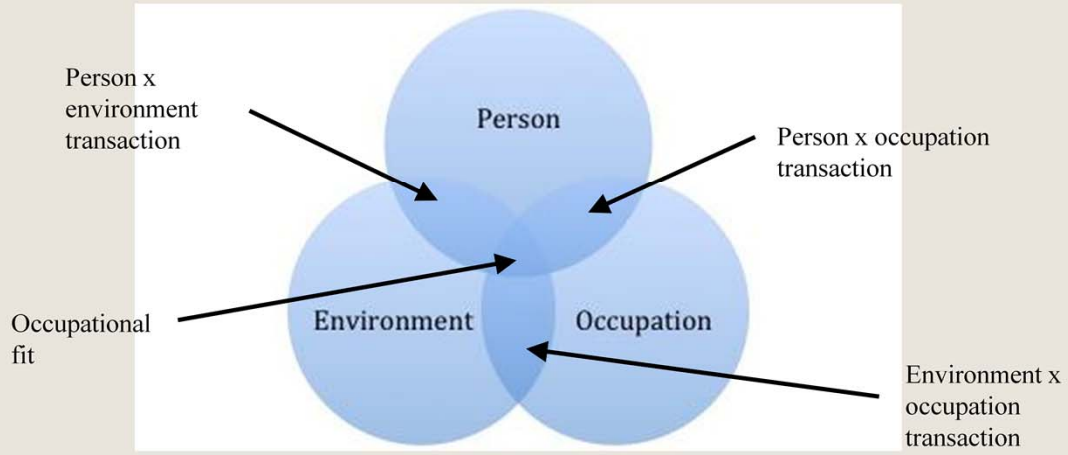
(Costa, 2016; Howland, 2010; Liebling et al., 2016; NIDA, 2016; Wasmuth, Crabtree & Scott, 2014; Wasmuth, Pritchard & Kaneshiro, 2016)



To give you an idea of what to expect for the rest of the session, here is an overview of the rest of the content. The next three sections contain information pertaining to the following: Review of Person-Environment-Occupation Model, Overview of possible assessment for this population, along with an overview of possible interventions for this population. At the end of each section, we will also pause to integrate the information into a case study.

Introduction to PEO

PERSON-ENVIRONMENT-OCCUPATION MODEL



(Turpin & Iwama, 2011)

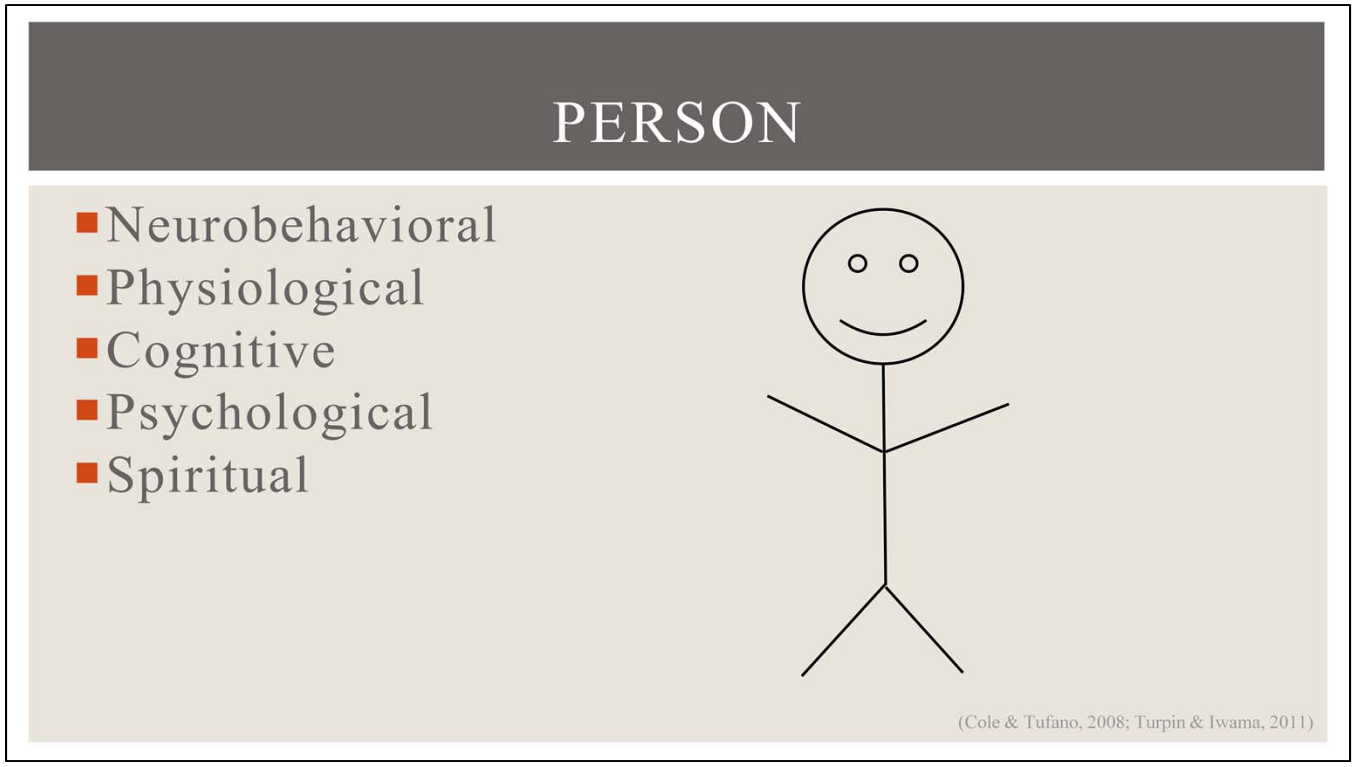
The Person-Environment-Occupation model, or PEO model, is a guide for therapists' decision making process for selecting and implementing interventions. To best understand this occupation-based model, one must first dissect the model into its three main components: person, environment, and occupation (Turpin & Iwama, 2011).

It is the way in which the person, the environment, and the occupation interact with one another that determines an individual's occupational performance. The better the interaction between the three components, the greater the occupational performance is, and visa versa. An occupational therapist, when using this model, views the interaction between the person, environment, and occupation as ongoing and continuous throughout the lifespan. In order to best apply it to treatment, the occupational therapist will take a snapshot or cross section of a person's performance to evaluate the occupational performance at that particular time in a person's life.

Another key aspect of the PEO model is the concept of transactions. This concept presents the idea that the every factor is interdependent and cannot be separated from one another. For example, a person cannot be separated from his or her environment and occupations, and an occupation cannot be separated from the environment.

Next, we will dig deeper into each factor of the PEO model.

(Turpin & Iwama, 2011)



Turpin and Iwama (2011) described the person component of the model as how one person would view himself or herself and continually adapts to his or her environment. In a broader sense, the person is made up of neurobehavioral, physiological, cognitive, psychological, and spiritual factors (Cole & Tufano, 2008).

- The neurobehavioral person includes one's sensory and motor systems (Cole & Tufano, 2008).
- The physiological person includes "endurance, flexibility, movement, and strength" (Cole & Tufano, 2008, p. 131).
- The cognitive person includes language, organizing, reasoning, thinking, memory, etc. (Cole & Tufano, 2008).
- The psychological person is the emotional person. This person factor impacts one's ability to be motivated, their interpretation of life events, their sense of self, and their personality (Cole & Tufano, 2008).
- The spiritual factor of a person is the part of a person searching for a "greater sense of personal understanding about the self and one's place in the world" (Cole & Tufano, 2008, p. 131).

(Cole & Tufano, 2008; Turpin & Iwama, 2011)

The next component of the PEO model is the environmental component. Environment is often referred to in the physical sense, but occupational therapists look at the environment of a client holistically. Developers of the PEO model have asserted that there are five types of environments that impact a person: "cultural, socioeconomic, institutional, physical and social" (Turpin & Iwama, 2011, p. 102).

- Cultural: the environment that people use to define themselves using their "values, beliefs, customs, and behaviors that are passed from one generation to the next" (Cole & Tufano, 2008, p. 129). This environment shapes how people see the world, and is where people learn or perceive what is expected of them. The cultural environment is affected by opioid use as the person's values and behaviors change to accommodate for the new addiction and time spent doing drugs.
- Socioeconomic: the ability a person has to access resources whether this be a person's reality or perceived reality (Turpin & Iwama, 2011). This also encompasses what people can and cannot do with the resources available to them. Addiction of opioids commonly leads to 'burned bridges' of resources making it difficult for individuals access their old resources, they must find new resources to meet their needs.
- Institutional: the "organized systems, such as legislative bodies, health-care systems, and educational institutions" (Strong & Gruhl, 2010, p. 33). The institutional environment is altered by opioid addiction as the individual may drop out of school or get into trouble with the law.
- Physical: the objects that physically surrounds a person whether that be the size and shape of a building, the objects within a building, or the lack of a building. An individual experiencing opioid addiction may see a change in his or her physical environment if he or she is required to find a new living environment or simply spending more time at a friend's home.
- Social: this includes social interaction (Cole & Tufano, 2008). The social environment of a person with addiction often changes greatly as new friendships are formed and others are dissolved. The type of language being used may also change depending on an individual's situation.

(Cole & Tufano, 2008; Strong & Rebeiro Gruhl, 2010; Turpin & Iwama, 2011)

An activity is "the basic unit of a task" (Turpin & Iwama, 2011, p. 103). Therefore, the middle pieces would be the tasks that, in turn, create an occupation. An important aspect of occupation is that it is something that has meaning to the person performing it. This may include an internal desire to complete a task such as brushing one's teeth or cooking dinner for a family (Turpin & Iwama, 2011).

The PEO model will be referred to throughout this presentation in order to break down the occupational fit between a person experiencing addiction to opioids, the various environments in an individual's life, and the impact addiction to opioids has on everyday occupations.

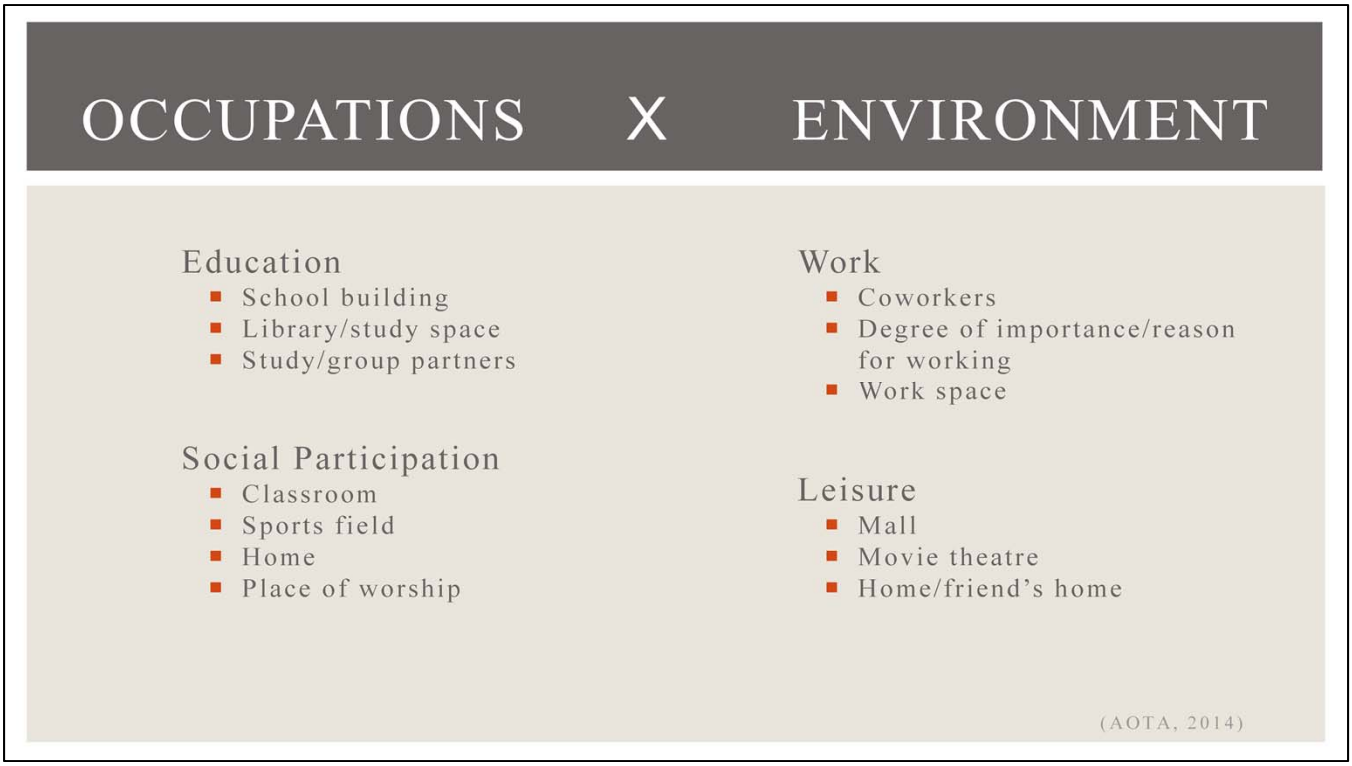
It is written in the Occupational Therapy Practice Framework (OTPF) that "occupations are central to a client's (person's, group's, or population's) identity and sense of competence and have particular meaning and value to that client" (AOTA, 2014, p. S5). The occupations listed on the slide were pulled from the OTPF; all are included with exception to the occupation of play (AOTA, 2014).

- Activities of Daily Living (ADLs): are those most basic occupations such as dressing, grooming, bathing/showering, and toileting. Addiction impacts ADLs as a client may not complete hygiene tasks as often as what is expected of him or her from society.
- Instrumental ADLs (IADLs): are occupations requiring higher thinking skills such as managing finances and medications, home management, and driving. A person's ability to drive while on opioids, or manage his or her finances may change as a result of the impact opioids have on the body.
- Rest and Sleep: Opioids, as drugs of any kind, affect an individual's ability to sleep as well as the amount of fatigue one may feel throughout the day as the drugs leave the body's system.
- Education and Work: Education encompasses formal and informal participation as well as interest exploration (AOTA, 2014). Work includes work interest and performance, pursuit of work; in addition to volunteer opportunity that is sought out and participated in (AOTA, 2014). Someone addicted to opioids may notice a change in his or her academic or work performance in addition to a drop in attendance.
- Leisure: occupations that are completed for enjoyment. Opioid addiction may cause a person to become more isolated and experience a change in leisure habits. Opioids often consume more time of one's day resulting in a person not having enough time to perform his or her previously enjoyed

leisure activities.

- Social participation: includes all interactions with other people. Teens addicted to opioids may share that they have new/different friends than the friends they grew up with or were close with prior to participating in drugs.

(AOTA, 2014; Turpin & Iwama, 2011)



Now, we will analyze the transactions described within the PEO model. We will start with the occupation and environment transaction. Education, work, social participation, and leisure were the four most common areas of occupation mentioned when researching the effect of opioid use on everyday activities. These four occupations have an array of environments that an occupational therapist is equipped to address. Although there is an infinite amount of combinations looking at occupations and environment, we want to give a few examples of the occupations research indicates are impacted the most.

Education:

- School building: The size of classrooms can determine the number of students in a class impacting the amount of attention a teen receives from instructors.
- Library/study space: Opioid addiction can change a teen's study habits. The teen may have had a usual study space that is no longer being used or contributes to the addiction. Perhaps the teen previously studied at home, but if the teen's addiction started at home (i.e. a family member provides the opioids) the environment encourages the occupation of taking opioids and hinders the occupation of education participation.
- Study/group partners: This social environment impacts education and opioid use similarly to that described for the library/study space.

Social participation:

- Classroom: Teens experience many opportunities to engage in social participation in the classroom.
- Sports field: This environment often leads to positive social participation. If the teen does not get along with his or her teammates, the environment may hinder social participation and encourage the teen to find friends and support elsewhere. This transaction could push a

teen to find peers that support opioid use as likely use as well.

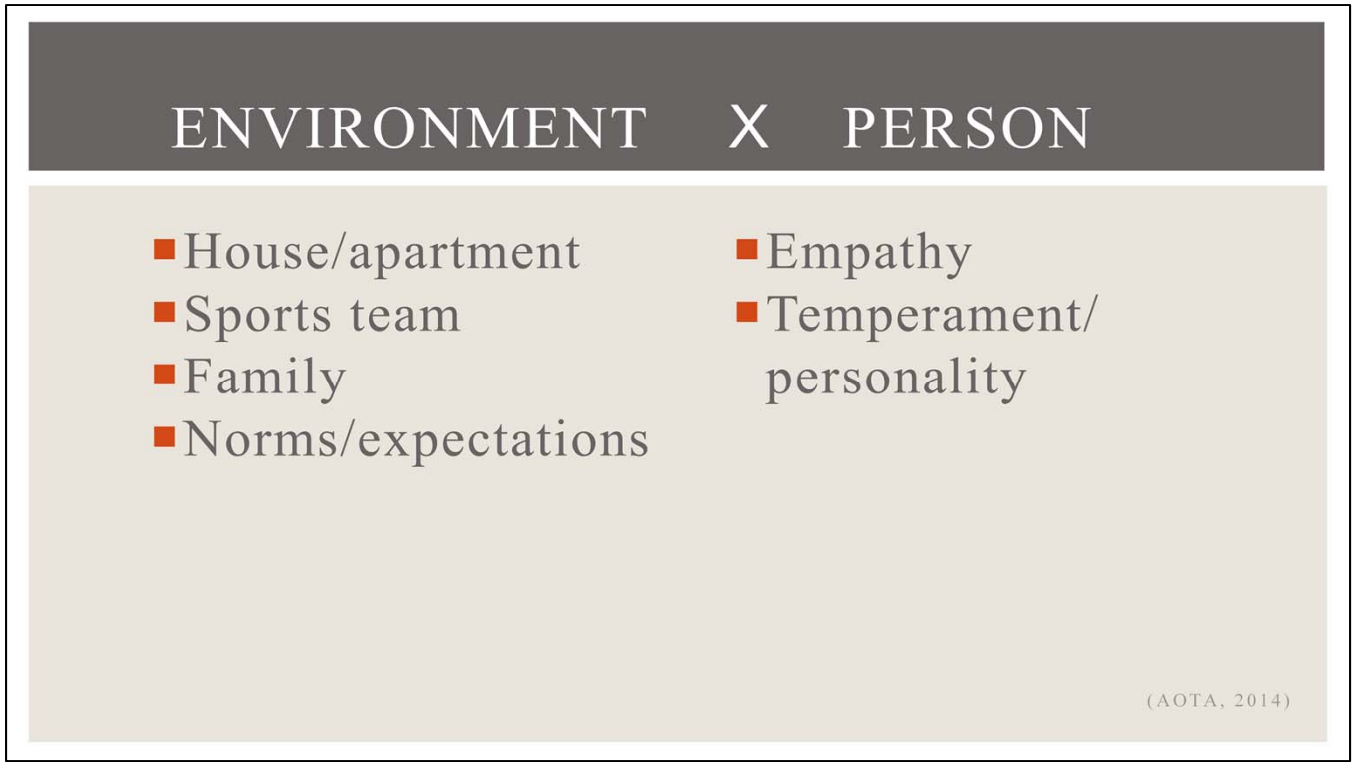
Work:

- An aspect of work defined in the OTPF is the amount of importance work is to a person (AOTA, 2014). The coworkers, in addition to the work space, impact a teen's work performance. Coworkers that participate in opioid use may lead to teens trialing opioids and becoming addicted. Opioid use can also play a factor on a person's work performance, if a person's work space includes machinery or is a factory setting, the occupation of opioid use, work, and the environment could be quite hazardous.

Leisure:

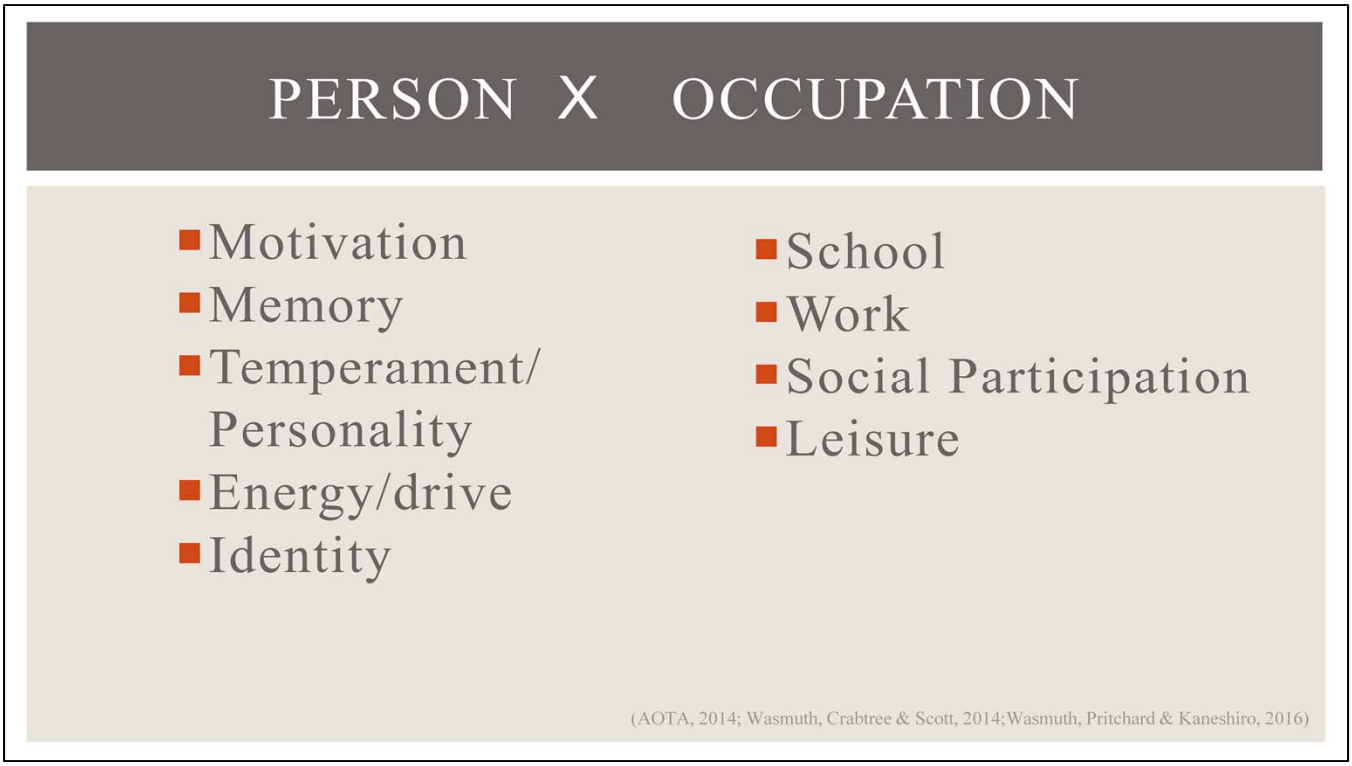
- Leisure is greatly impacted by the location and environment in which it takes place. Teens that spend their leisure time at a friend's house may be more prone to participating in opioids if their friend group participates and visa versa.

(AOTA, 2014)



The environment and person interact in a unique way in that environment often shapes the person factors. The social environment in which an individual grows up may impact whether or not a person is empathetic or apathetic. A couple of social environments listed on the slide are sports team and family. Norms and expectations created by society play a vital part on a person's temperament or behaviors.

(AOTA, 2014)



Wasmuth, Pritchard, and Kaneshiro (2016) wrote that social participation and leisure are the two areas of occupation most commonly addressed by skilled occupational therapists working with this population. Social participation includes engaging in conversation with family, friends, and people in the community (AOTA, 2014). Social participation is impacted by opioid use because positive relationships are disrupted, identities are morphed, and new relationships are perceived incorrectly. Wasmuth, Crabtree, and Scott (2014) wrote that social connections made as addictions are formed do not meet the interpersonal needs of the individual.

The center of anyone's life has ties to personal identity, values, and roles (Wasmuth, Crabtree & Scott, 2014). Wasmuth, Crabtree, and Scott (2014) wrote that individuals are "using their addictions to provide the essential human needs of meaning, temporal structure, and an identity for themselves" (p. 612).

Motivation is the influence driving individual's values, beliefs, and spirituality (AOTA, 2014). Commonly, people enter a profession or register for particular classes because they align with their beliefs and values. In other words, the profession or class is sought out, out of motivation for the subject and content.

Routine is the "established sequences of occupations of activities that provide a structure for daily life [and] can promote or damage heath" (AOTA, 2014, p. S8). Wasmuth, Crabtree, and Scott (2014) discussed in their article the idea that a single occupation influences the structure of one's day. Addiction, of any drug, but especially opioids, determines an individual's routine each day. Addiction takes away an individual's choice to when he or she will study, or go to class or work, or leave time available to complete needed tasks for education or work after hours (i.e. homework, filling out paperwork, etc.).

In addition, opioid addiction for many becomes a leisure activity taking the place of healthier and legal hobbies. When pondering the reason people experiencing addiction to opioids do not simply start new leisure activities, it is important to keep in mind that the addiction has become a way to overcome the feeling of being separated from others, whether real or not (Wasmuth, Crabtree & Scott, 2014). As occupational therapists we

can foster the growth of interpersonal skills within our clients (Wasmuth, Crabtree & Scott, 2014).

(AOTA, 2014; Wasmuth, Crabtree & Scott, 2014;Wasmuth, Pritchard & Kaneshiro, 2016)

APPLICATION ACTIVITY

The following slides provide a case study example created by the authors that will be applied to the topics of this presentation: the PEO model, assessments, broad interventions, and specific interventions. At the end of each topic questions will be provided in which you will be encouraged to pause the recording and take time to answer the questions. The slide following the questions will provide answers.

CASE STUDY QUESTIONS

- What have you identified as person factors impacting Julia based on the information presented in the case study?
- What have you identified as environmental factors impacting Julia based on information presented in the case study?
- What have you identified as occupation factors impacting Julia based on information presented in the case study ?
- How could the transaction between the identified factors promote or inhibit Julia's function in school, sports, with friends, and at home?

Please read through the questions on this slide. These questions will be asked again following the case study.

CASE STUDY

Julia is a 15 y.o. female from Arthur, ND admitted to Sanford Hospital after an overdose on Methadone. Julia has been abusing drugs for 3 years. In the last year she has been using only Methadone.

Occupational profile:

Prior to hospitalization, Julia was living with her parents and younger brother. Before Julia starting using drugs for the first time, she was actively participating in school and sports. Her grades were above average, and her GPA never fell below a 3.8. Julia sang in the choir and was the star of the volleyball team. In her free time Julia enjoyed playing with the family dog, scrapbooking, and going to the movies with her teammates. Julia was big into collecting coins, and had a collection of 500 rare coins that she found in various antique shops and that she inherited from her grandfather.

CASE STUDY CONTINUED

A year and a half ago, Julia started missing volleyball practices, and her mother was informed that Julia had started skipping classes. Julia no longer invited her teammates over to the house and her parents started hearing the names of different teens at school.

Before Julia and her parents knew it, Julia was on a $100/day addiction to Methadone. Julia was at a party with some friends, when an old teammate found her passed out in the bathroom.

Per initial interview, Julia reported that at first her friends gave her the drugs for free. It wasn't until she tried Methadone for the first time that she started using every day of the week. At the time Julia was found in the bathroom, she had sold over ¾ of her rare coin collection worth thousands of dollars. Julia's parents reported that Julia's grades went from nearly straight A's to barely passing the 10th grade. Julia stopped going out for the volleyball team and has hardly been home in the past 2 years. She hasn't worked on a scrapbook in 2 years, and hasn't taken Bart, the family dog, for a walk in an even greater amount of time.

CASE STUDY QUESTIONS

- What have you identified as person factors impacting Julia based on the information presented in the case study?
- What have you identified as environmental factors impacting Julia based on information presented in the case study?
- What have you identified as occupation factors impacting Julia based on information presented in the case study ?
- How could the transaction between the identified factors promote or inhibit Julia's function in school, sports, with friends, and at home?

Please pause the recording in order to respond to the questions on the slide.

CASE STUDY ANSWERS

- Person factors: cognitive, psychological, and spiritual
- Environment factors: cultural, physical, and social
- Occupation factors: leisure, education, and social participation
- Transactions

*These answers are subjective and what we identified as answers for each question is not an exhaustive response.

Person factors: Julia's cognitive factors such as reasoning, thinking, and memory were most likely impacted greatly by the use of opioids. When Julia became addicted to methadone and started using everyday, her reasoning for participating in opioid use versus completing school work became biased as a result of the addiction. In the same way, the psychological factor of motivation for school work changed as her body craved more methadone. It is more than likely that Julia's spiritual self was being questioned as she changed her mind about the things that were most important to her. Sports, leisure activities, and her previous friends became less important, and methadone became her priority.

Environment factors: Julia's physical and social environments played a large role in Julia's initial trial of opioid use and was prominent in the case study when it was discovered during the interview that Julia's teammates found her in the bathroom at a party. Her physical environment was a location with a lot of people, and opioids were present. Her social environment included the individuals she more than likely used drugs with and her past teammates that found her. Julia's cultural environment was the push for her to attend the party and participate in using drugs.

Occupation factors: Julia's previous leisure activities of scrapbooking and collecting coins were disrupted by the drug use as Julia stopped scrapbooking all together, and started selling her coin collection for money to use for opioids. As her grades dropped in school, it was apparent in the case study that Julia's education was being negatively impacted by the opioid use. Lastly, Julia experienced a change in her friend group when she no longer went on outings with her teammates and instead hung out with new friends that provided drugs to her.

Transactions: A few examples of transactions that can be pulled from the case study include the following:

- Julia's physical and social environment when participating in opioid use impacted her

cognitive and psychological person factors.

- Julia's change in social group (social environment) resulted in a change in her social participation as well as leisure activities.
- Julia's new motivation to participate in opioid use negatively impacted her participation in school.

Assessments

CASE STUDY QUESTIONS CONTINUED

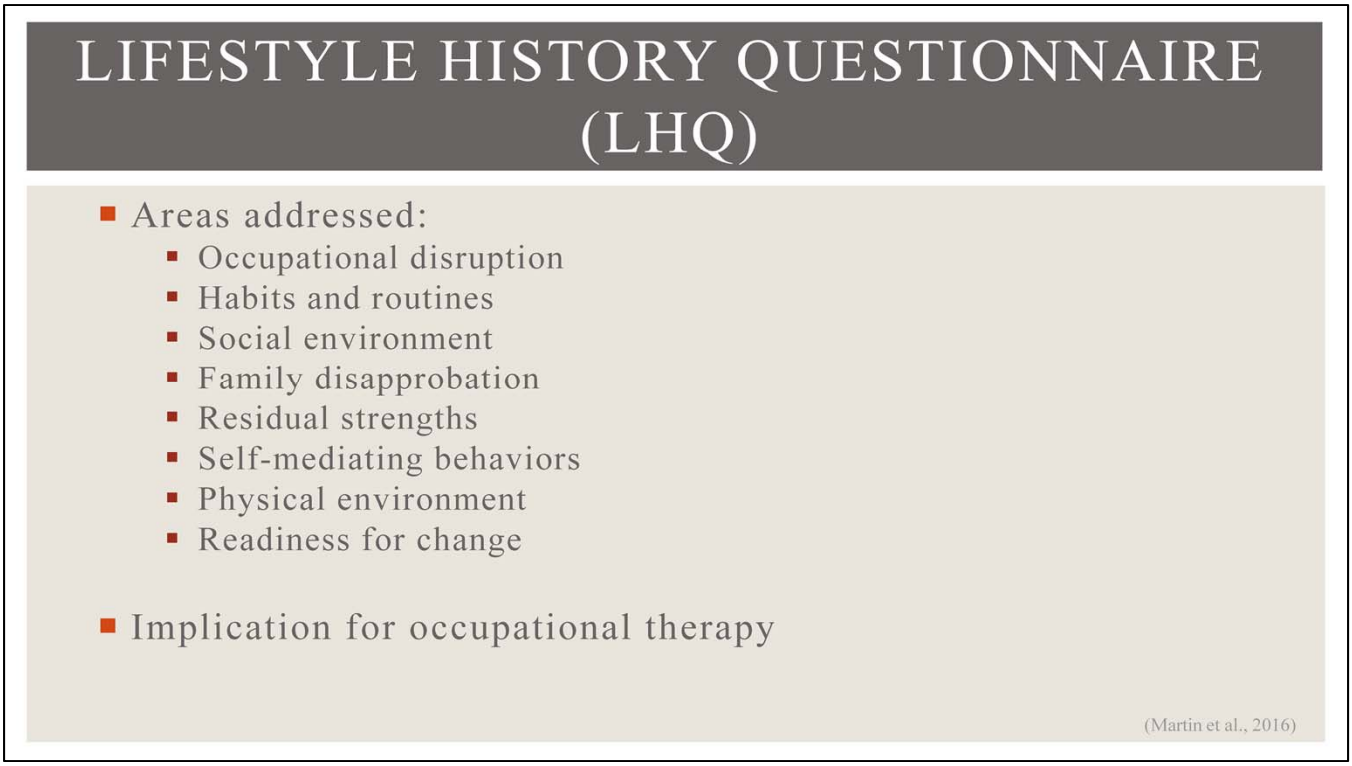
- After completing an occupational profile for Julia which assessments would you pull from the list discussed previously in order to gather more specific information to create a client centered plan of care? Why?
- Which assessments would be feasible for your facility to obtain and use?

Please read through the questions on this slide. These questions will be asked again following the case study.

OT EVALUATION

- Develop occupational profile
- Lifestyle History Questionnaire (LHQ)
- Develop full report and plan of care

Here is an example of what could be included in an occupational therapy evaluation of a teen client referred to occupational therapy for opioid addiction. First, an occupational profile should be developed through chart review and an interview with the client. The Lifestyle History Questionnaire (LHQ) is an assessment which includes all three factors of the PEO model. This assessment will be presented further on the following slide. Lastly, with the information provided through the occupational profile and LHQ, a plan of care can be developed.



Per Martin et al. (2016), the Lifestyle History Questionnaire:

- Addresses the emotional, cognitive, and behavioral aspects of a person, and the cultural, temporal, physical and social aspects of the environment.
- Is a rating system completed by clients that always them the opportunity to reflect on his or her experience within the past 12 mo.
    - Contains 70 items, each with a Likert scale 0-4 (never, rarely, once-in-awhile, frequently, and very often), of the following topics: occupational disruption, habits and routines, social environment, family disapprobation, residual strengths, self-medicating behaviors, physical environment, and readiness for change.
- Has the purpose to gain information on clients' lives so that treatment can be individualized to the clients.

Implications for occupational therapy:

- Of the 8 factors previously mentioned, occupational therapists are fully equipped with skills to address each area within his or her normal context, the assessment is not time consuming, and is designed specifically for clients entering treatment for substance abuse.
- Using the Person-Environment-Occupation model as a guide:
    - Person factors: habits and routines, residual strengths, self-mediating behaviors, and readiness for change
    - Environment factors: social environment, family disapprobation, and physical environment
    - Occupation factors: occupational disruption
- Including this assessment in an occupational therapy evaluation for a teen with opioid addiction, would allow you, as a therapist to address the client's situation holistically. As a result, the

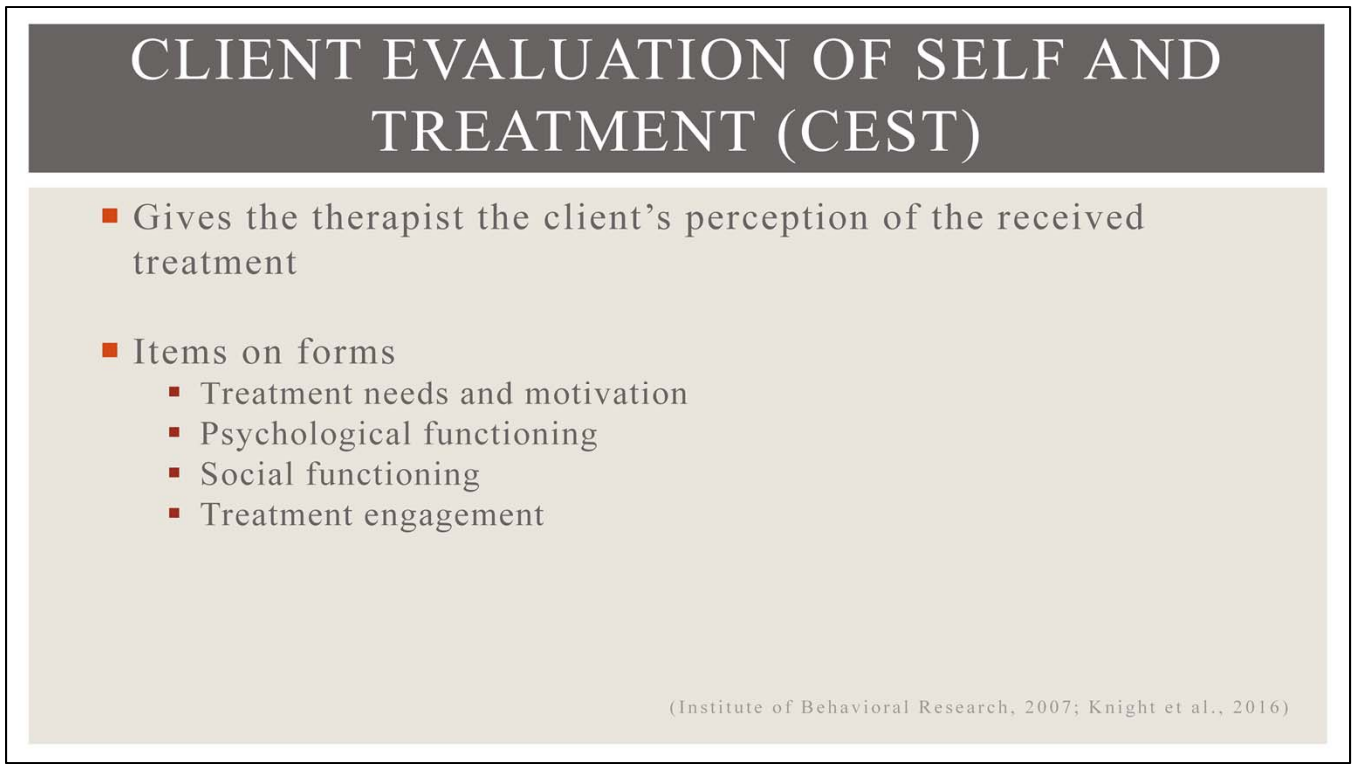
> assessment can lead to you determining where the problems and strengths lie. For example, there may not be family disapprobation, meaning disapproval, or issues with the physical environment, or perhaps the only area in which the client is struggling is with self-mediating behaviors. The Lifestyle History Questionnaire can assist in narrowing the focus of the problem and developing a plan of care appropriate for the individual.

(Martin et al., 2016)

OCCUPATIONAL THERAPY ASSESSMENTS

- Client Evaluation of Self and Treatment (CEST)
- Revised Symptom Checklist (SCL-90-R)
- Brief Symptom Inventory
- Beck Youth Inventory
- Lifestyle History Questionnaire (LHQ)
- Addiction Severity Index (ASI)
- Timeline Followback (TLFB)

These are additional occupational therapy assessments that we will cover in describe to provide a range of knowledge for the assessments available to you as practitioners.



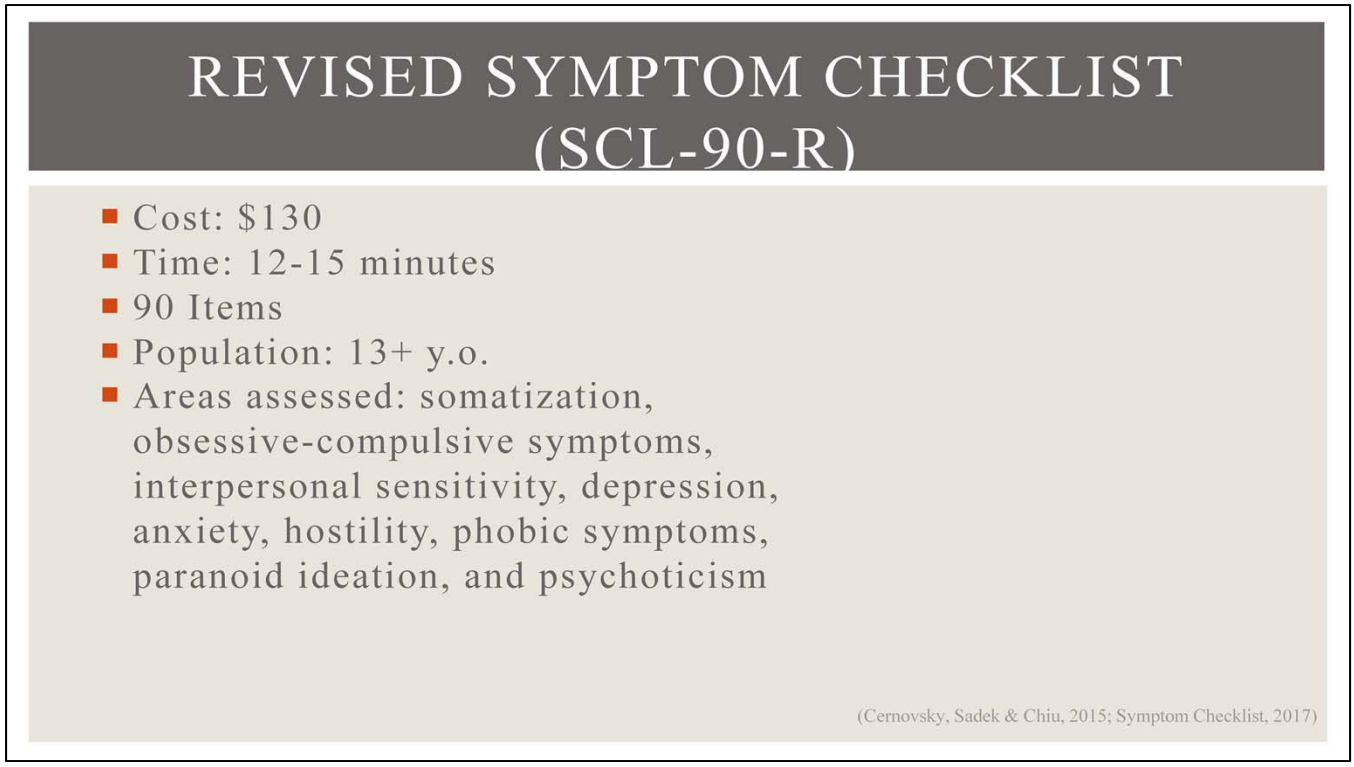
The Client Evaluation of Self and Treatment, CEST, has an adolescent version. This assessment measures the client's perception of his or her participation in treatment, satisfaction with the treatment he or she has received, the rapport he or she has with the counselors, and the peer support received in treatment (Knight et al., 2016). The CEST consists of four forms and a total of 141 scored items (Institute of Behavioral Research, 2007). To view or download the forms, please refer to the link at the bottom of the notes sections.

The topics of items for each form are:

- Treatment needs and motivation: Problem Recognition, Desire for Help, Treatment Readiness, Treatment Needs Index, and Pressures for Treatment Index
- Psychological Functioning: Depression, Anxiety, Self-Esteem, Decision Making, and Expectancy
- Social functioning: Hostility, Risk-Taking, Social Support, and Social Desirability
- Treatment engagement: Treatment Participation, Treatment Satisfaction, Counseling Rapport, and Peer Support

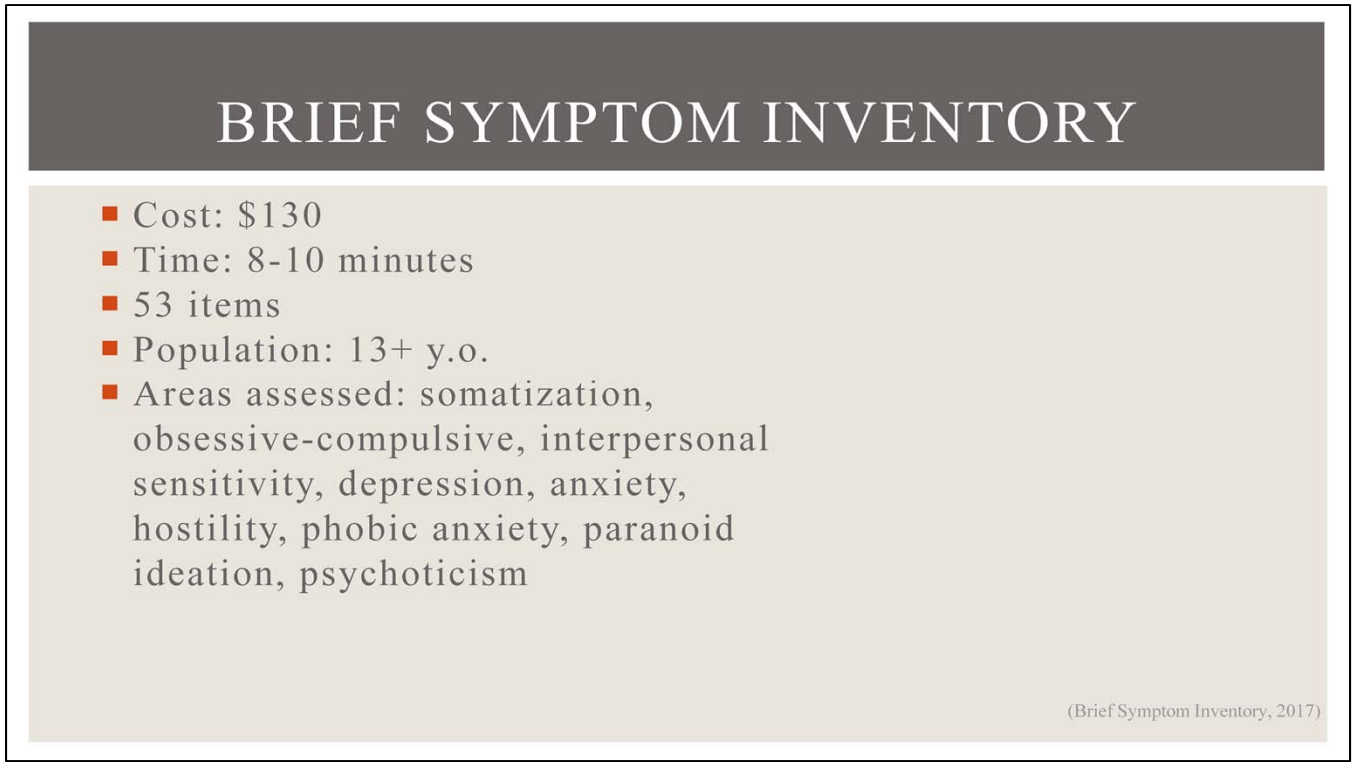
This assessment covers mostly person factors. This would be a good assessment to use part way through the client's plan of care or at the end if the client initially had the most difficulty with person factors. In addition, this assessment could be used at discharge to determine the validity of the treatment received. Did the client receive treatment that supports his or her decision to stop using opioids?

https://ibr.tcu.edu/forms/client-evaluation-of-self-and-treatment-cest/
(Institute of Behavioral Research, 2007; Knight et al., 2016)



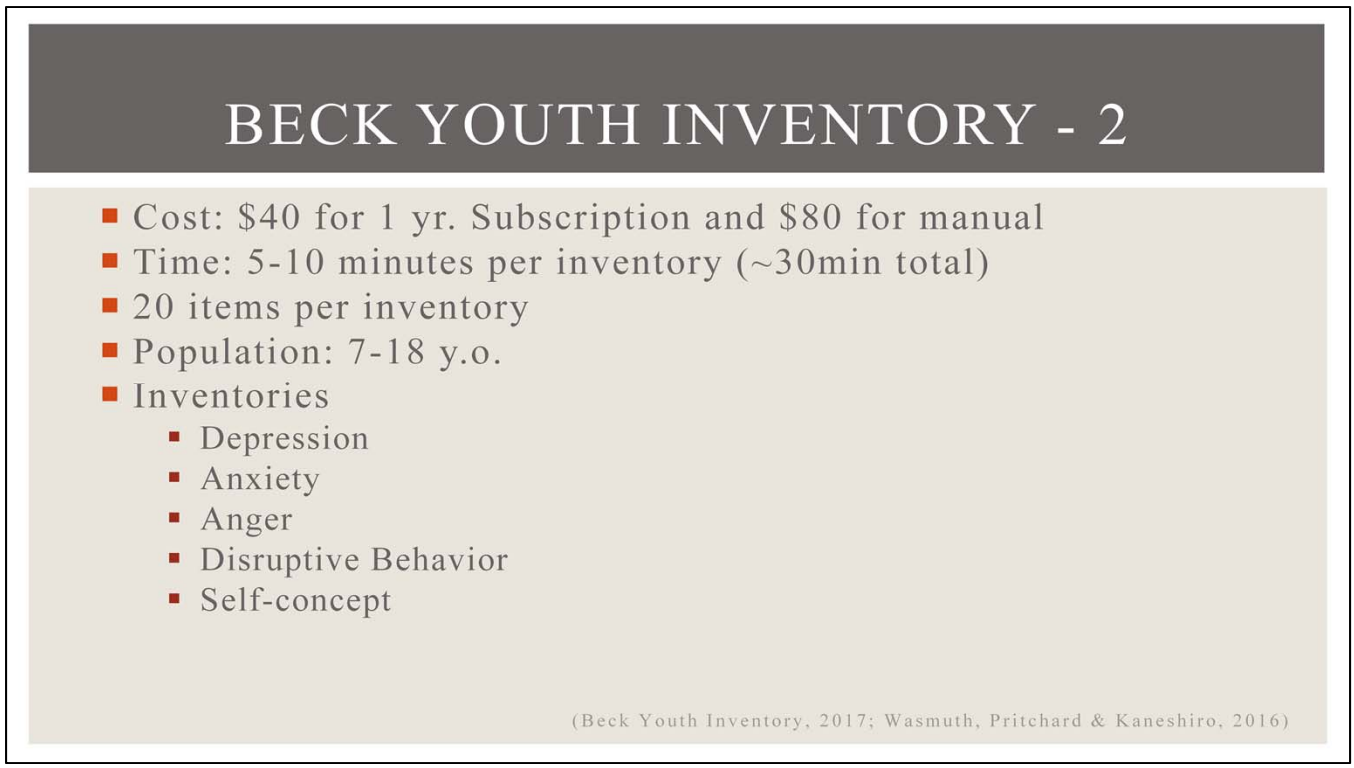
The Revised Symptom Checklist is a self-report checklist that assesses the following areas: "somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic symptoms, paranoid ideation, and psychoticism" (Cernovsky, Sadek & Chiu, 2015, p. 644). This assessment also addresses mostly person factors, but it also addresses symptoms that are related to opioid use. It would be appropriate to use this assessment as a follow-up to the initial evaluation if the client did not have many areas of concern involving environment.

(Cernovsky, Sadek & Chiu, 2015; Symptom Checklist, 2017)



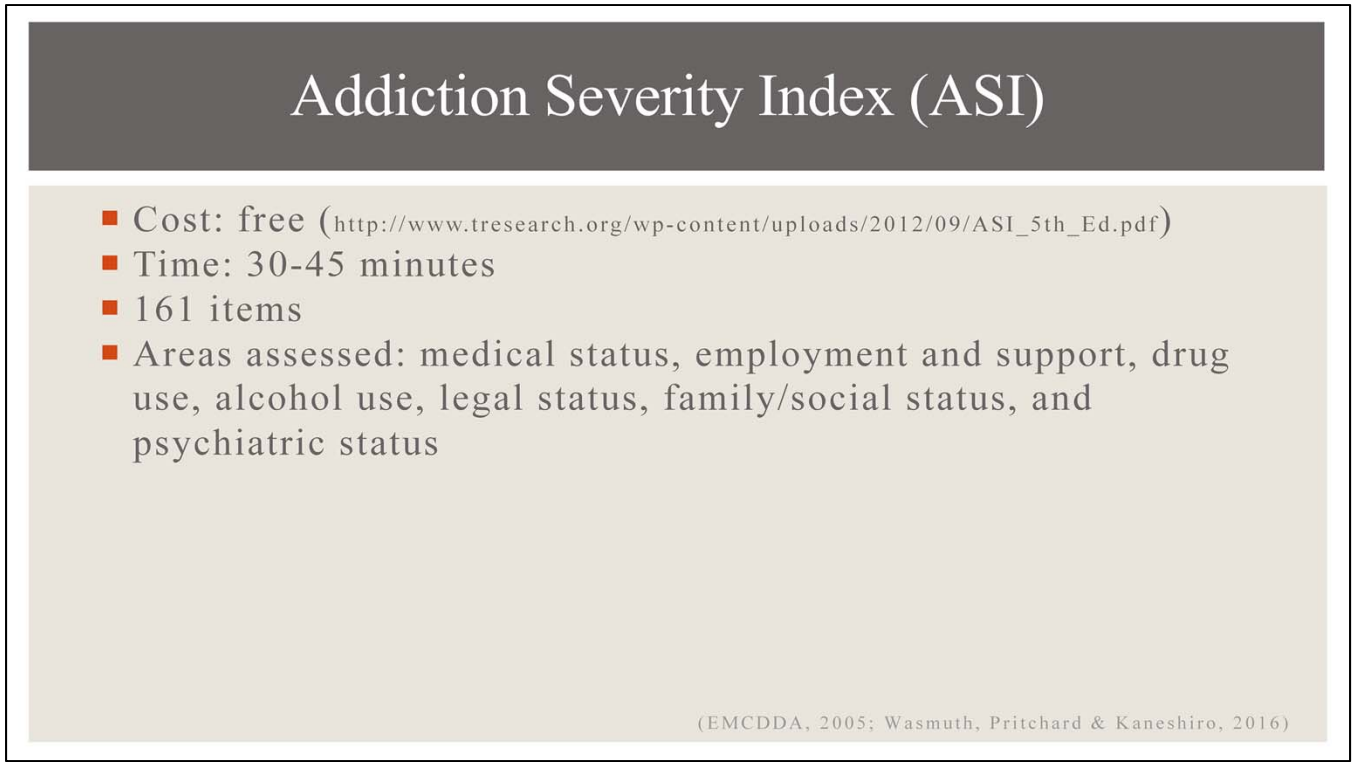
The Brief Symptom Inventory addresses symptoms commonly experienced in substance abuse, opioid addiction included. The areas assessed listed on the slide belong to the person factor of the Person-Environment-Occupation model. If the initial evaluation suggests that it is the person factor that possesses the most disruption from the addiction, this assessment would be a useful follow-up to the Lifestyle History Questionnaire. The assessment takes little time and is designed for teens and adults.

(Brief Symptom Inventory, 2017)



The Beck Youth Inventory - 2 is an adapted version of the Beck Depression Inventory that occupational therapists are commonly familiar with. This assessment is great for looking at a teens emotional and social impairments that he or she may be experiencing as a result of opioid addiction (Beck Youth Inventory, 2017). Because this assessment takes little time, it could be used in a pre-test post-test format to gather data on improvement in these areas prior to discharge (Beck Youth Inventory, 2017). It should be noted that the five inventories do not need to be completed together or all at one time (Beck Youth Inventory, 2017). In addition, the Beck Youth Inventory - 2 can assist therapists in designing treatment sessions to address the identified problem areas for the person factor of the client. Wasmuth, Pritchard, and Kaneshiro (2016) reported that the Beck Depression Inventory is one of the most commonly used assessments with clients experiencing substance abuse. The Beck Youth Inventory - 2 is a better fit for the teen population as it is simplified to fit the needs of teens also having difficulties with special needs and low reading abilities (Beck Youth Inventory, 2017).

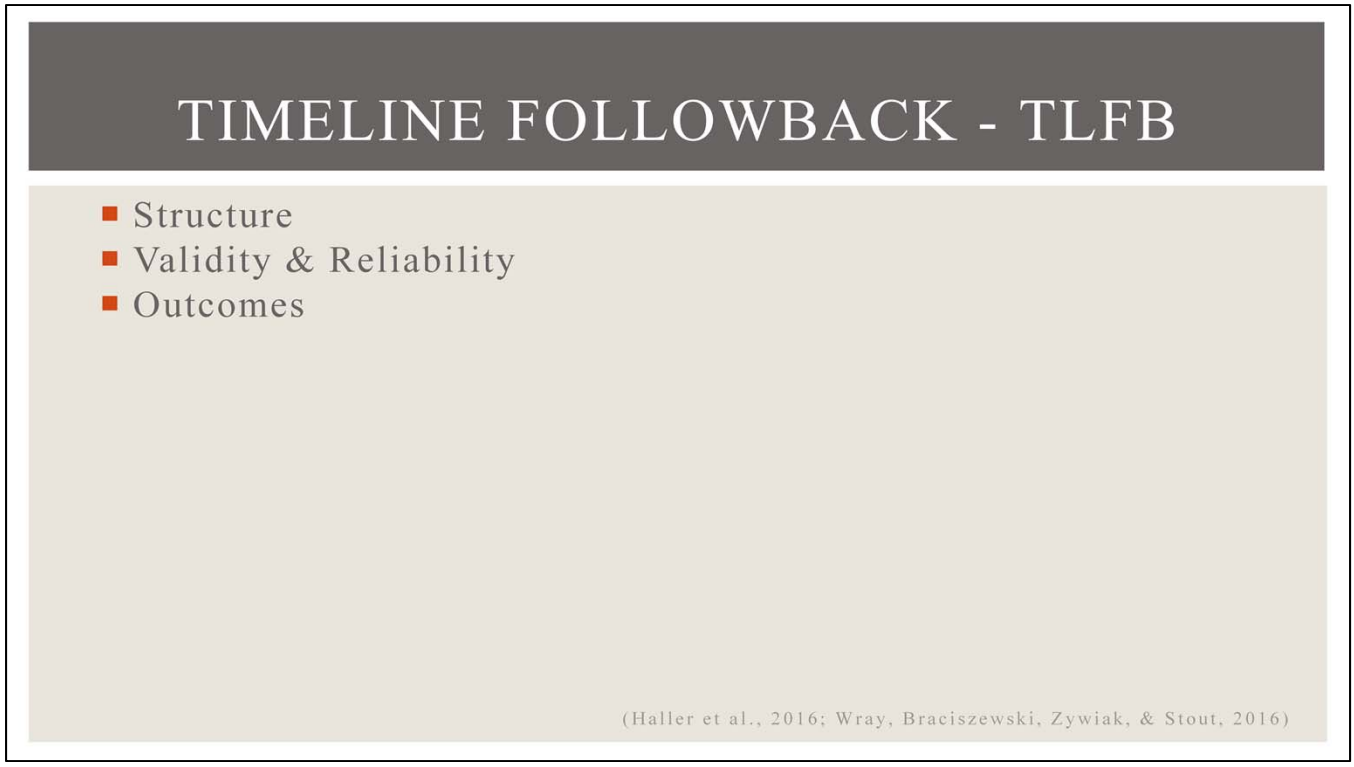
(Beck Youth Inventory, 2017; Wasmuth, Pritchard & Kaneshiro, 2016)



The other most common outcome measure used in studies, as reported by Wasmuth, Pritchard, and Kaneshiro (2016), is the Addiction Severity Index. This is a free assessment found at the website located on the slide as well as in the notes. This assessment takes 30-45 minutes and includes 161 items (EMCDDA, 2005). It is conducted through interview to assess the areas listed on the slide (EMCDDA, 2005). One set back to the Addiction Severity Index is that therapists should receive training on the implementation and scoring of the assessment prior to using it (EMCDDA, 2005). This assessment addresses mostly occupational and environmental factors of the PEO-model. This would be an appropriate assessment to use in treatment if the areas of occupation and environment appeared to be impacted the most by opioid addiction.

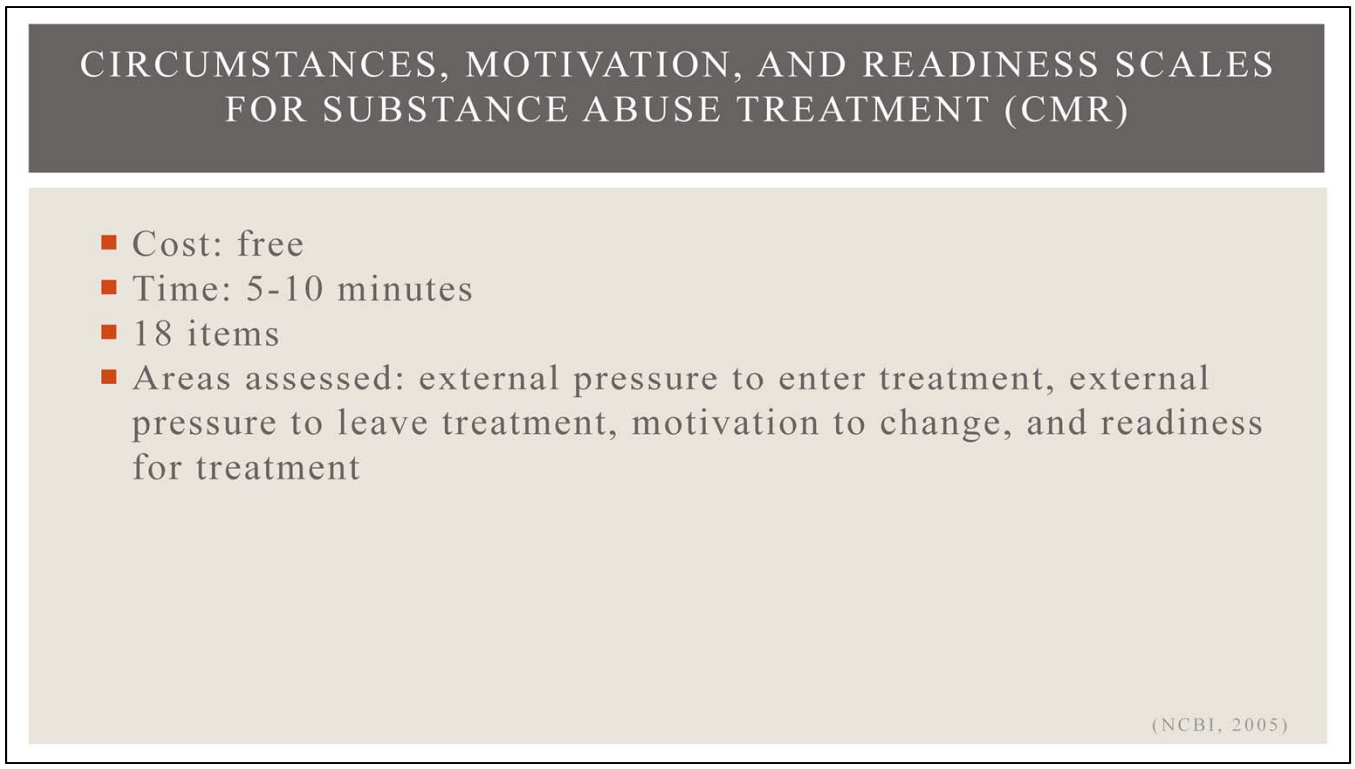
Addiction Severity Index - questionnaire
http://www.tresearch.org/wp-content/uploads/2012/09/ASI_5th_Ed.pdf

(EMCDDA, 2005; Wasmuth, Pritchard & Kaneshiro, 2016)



The Timeline Followback is a structured interview with the use of a calendar (Haller et al., 2016). Haller et al. (2016) wrote that the interview assesses the frequency of alcohol and drug use in the past 90 days. Validity and reliability have been studied with a population experiencing a psychotic disorder with a comorbid alcohol or drug abuse (Haller et al., 2016). In a study by Wray, Braciszewski, Zywiak, and Stout (2016), the TLFB was found to to have acceptable to excellent reliability for the majority of drugs, but ratings for those with opioid use was found to be poor. These results may be skewed by the specific sample in the study and "the complexity in [the] use for recreational versus medical purposed" (Wray, Braciszewski, Zywiak, & Stout, 2016, p. 5). These factors should be taken into consideration when choosing an appropriate assessment for a client.

(Haller et al., 2016; Wray, Braciszewski, Zywiak, & Stout, 2016)



The Circumstances, Motivation, and Readiness Scales for Substance Abuse Treatment (CMR) is a self-administered assessment with simple scoring for the therapist using it in practice (NCBI, 2005). The CMR addresses mostly person factors, but may address environmental factors that present by addressing external pressure on the client. This assessment is widely used with adults with substance abuse disorders or difficulties, and should be evaluated more closely if intended to be used children.

(NCBI, 2005)

CASE STUDY QUESTIONS CONTINUED

- After completing an occupational profile for Julia which assessments would you pull from the list discussed previously in order to gather more specific information to create a client centered plan of care? Why?
- Which assessments would be feasible for your facility to obtain and use?

CASE STUDY ANSWERS CONTINUED

- Assessments that would be most ideal to complete with Julia.
- Assessments feasible for facilities to purchase.

The authors of the case study would anticipate using the Lifestyle History Questionnaire during the initial evaluation so that all three factors of the PEO model are addressed. The writer's anticipate that Julia will score poorly in the person factor areas of the LHQ and would follow-up with having Julia participate in completing the Beck Youth Inventory - 2. If Julia scores poorly in the environment and occupation factors, we recommend following-up with the Addiction Severity Index.

These three assessments would be feasible for a facility to purchase as the Addiction Severity Index is located on-line for no cost, the Beck Youth Inventory - 2 is ~$120 for a first time purchase including the manual and a 1-yr subscription, and the LHQ is an all-encompassing assessment for the desired population. Other assessments that were discussed and are low cost for facilities to purchase include the CMR and the CEST.

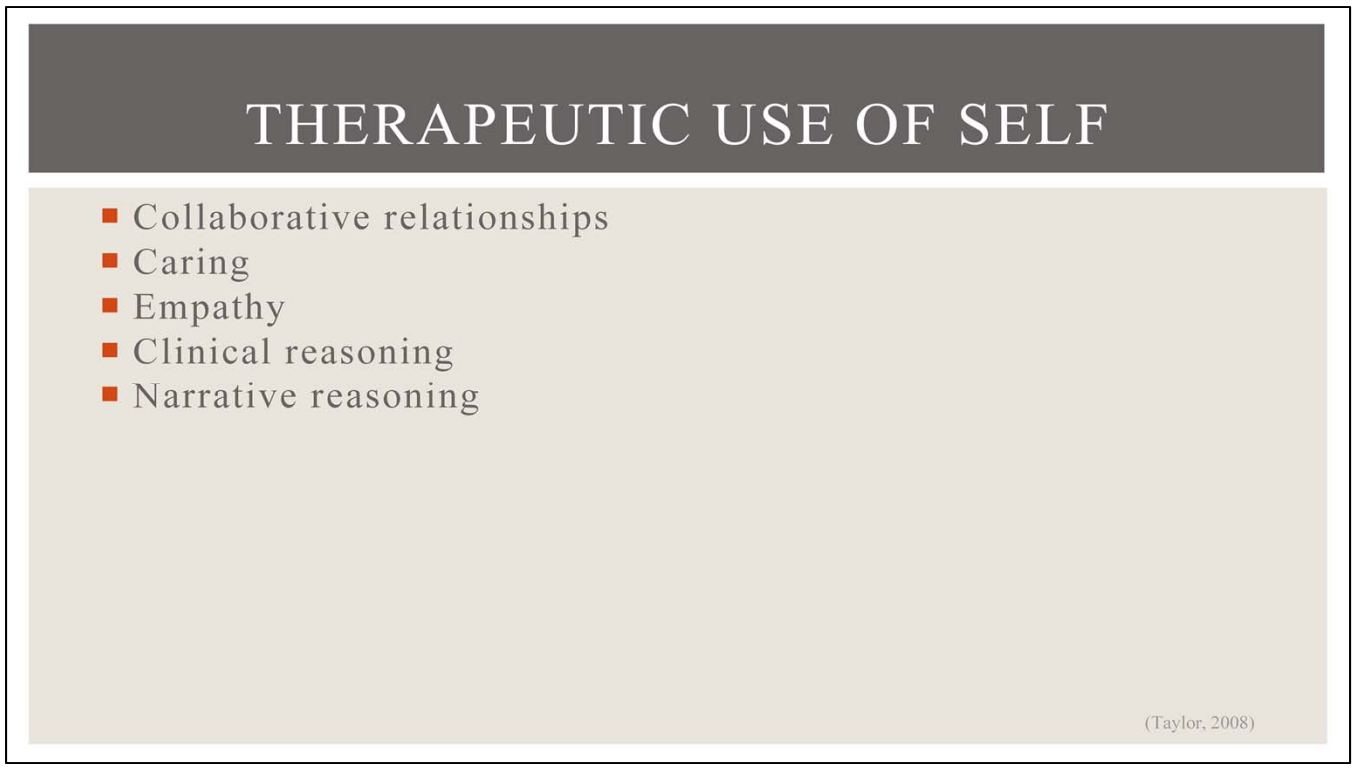
Broad Interventions

Within these interventions we broke the information down into the seven areas of activities of daily living and will address broad interventions that could be used for each activity of daily living while tying the interactions from the other areas of the PEO model.

CASE STUDY QUESTIONS CONTINUED

- Which therapeutic use of self strategies and Taylor's modes do you anticipate will be most effective to use when working with Julia?
- What areas of occupation do you anticipate will be priorities when planning interventions for Julia?

Please read through the questions on this slide. These questions will be asked again following the case study.



Collaborative relationships: When engaging in a collaborative relationship with a client, the occupational therapist is getting the client involved in his or her own treatment. In addition, the therapist is providing knowledge on the "purpose and relevance of any procedure or treatment approach" (Taylor, 2008, p. 8).

Caring: This is all about being able to connect with a client on an emotional level (Taylor, 2008). Taylor (2008) wrote that the following attitudes contribute to being caring toward a client: "patience, honesty, truth, humility, hope, and courage" (p. 11). Taylor (2008) also wrote that one needs to be "competent, belie[ve] in the dignity and worth of the individual, belie[ve] that each individual has the potential for change and growth, communication, values, touch, and sense of humor" (p. 12).

Empathy: This is the ability to chose if in another person's situation, and to see from his or her point of view. In occupational therapy, empathy to the ability to "convey respect for a client's personal dignity" (Peloquin, 2003 in Taylor, 2008).

Clinical Reasoning: Clinical reasoning is a therapist's ability to use his or her best judgement based on client-therapist interaction to develop a client-centered treatment plan (Taylor, 2008).

Narrative reasoning: This allows you, as an occupational therapist, to assist your client in addressing the disruption in his or her life (Taylor, 2008). This would be a therapist's opportunity to allow the client to evaluate how opioid addiction has disrupted aspects of his or her life.

(Taylor, 2008)

TAYLOR'S THERAPEUTIC MODES

- What is a therapeutic mode?
- Six therapeutic modes
  - Advocating
  - Collaborating
  - Empathizing
  - Encouraging
  - Instructing
  - Problem solving

(Taylor, 2008)

Therapeutic mode- specific way of relating to a client. For most therapists treatment tends to revolve around the mode(s) they are most comfortable with, or those that relate to their personality (Taylor, 2008).

Advocating- Focuses on understanding the client's disability and the environmental barriers he or she faces regarding occupational participation. Using this mode the therapist will focus on ensuring that the client is working with are provided with a variety of resources to aid in participation in occupation. In addition, the advocating role of an occupational therapist includes ensuring that the client's rights are respected (Taylor, 2008).

Collaborating- This mode focuses on client empowerment and client-centered practice. When using this mode, therapists will include the client in all aspects of therapy from goal setting to interventions (Taylor, 2008).

Empathizing- When using this mode, therapists are striving to fully understand what the client is experiencing. The therapist focuses on listening vigilantly to the client and carefully responds to the client's changes affect and behavior. The occupational therapist's goal when using the empathizing mode is attempting to gain further understanding of the client's "thoughts, feelings, and behaviors" (Taylor, 2008, p. 53).

Encouraging- Could also be called the "cheerleader" mode. The therapist is focused on motivating the client to perform or pursue important occupations. The therapist is also focusing on instilling the client with hope and courage (Taylor, 2008).

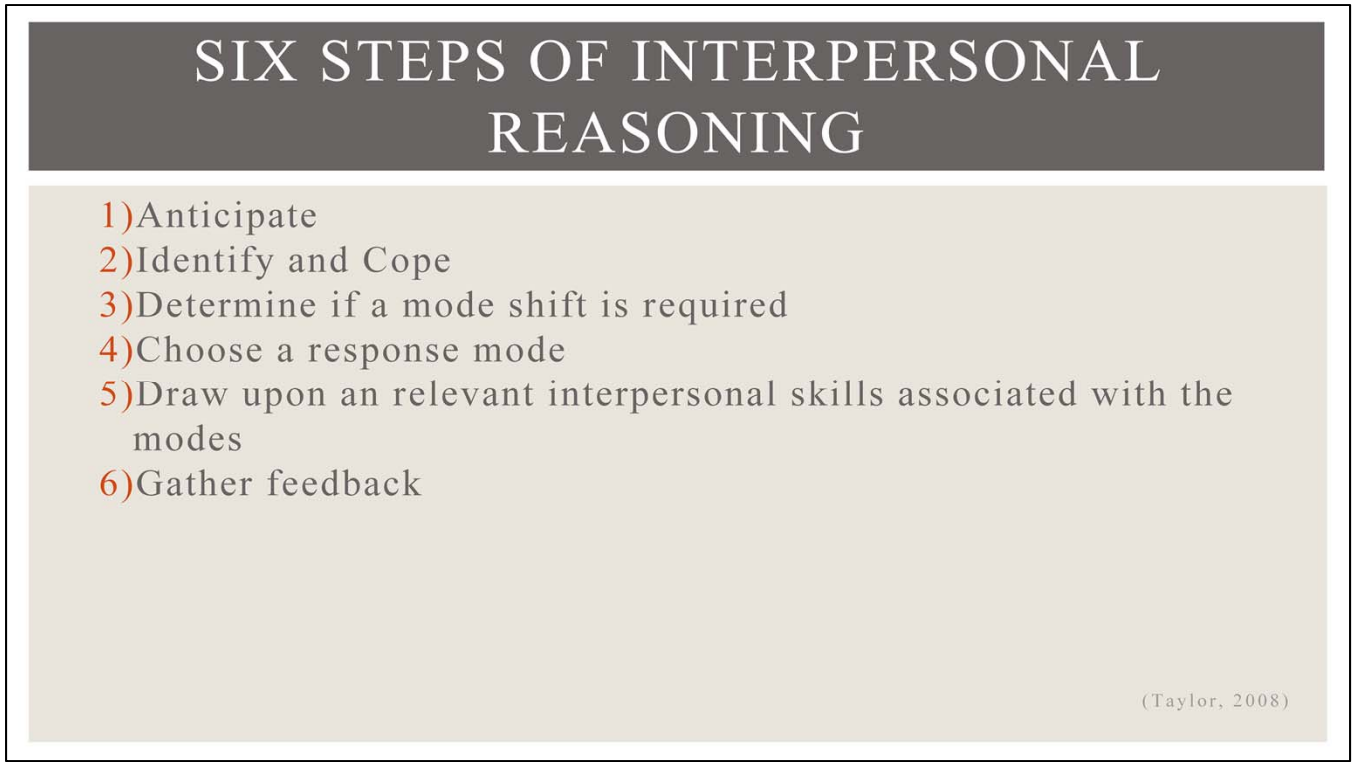
Instructing- Therapists using this mode often assume a teacher-like style of communication, using this mode clients are provided with specific instruction for various adaptive equipment or rationale for various interventions (Taylor, 2008).

Problem Solving- The problem solving mode is described by Taylor (2008) as a therapist's opportunity to outline choices and ask questions of the client to encourage the client on making decisions.

It is important to keep in mind that a therapist need not choose a single mode and remain in that mode

throughout an entire session. Using therapeutic reasoning and therapeutic use of self, a therapist is encouraged to change between modes to fit the needs of the client in the moment. It should also be noted that more than one mode can be used at one time. For example, a therapist may use both the encouraging and problem solving modes to guide a client during treatment.

(Taylor, 2008)



When working with Taylor's modes realize that the therapist needs the flexibility to quickly switch between modes, sometimes multiple modes will be required in a session.

Taylor identified 6 steps to go through to identify the correct mode to use with a client.

1) Anticipate
- This step involves the expectation that "an interpersonal event or other behavior on the part of the client is likely to occur that will incite a reaction in the therapist and test, challenge, or threaten the therapeutic relationship" (Taylor, 2008, p. 138)

2) Identify and cope
- The next step in the process is to identify the interpersonal event that has occurred, this can be done silently or addressed directly with the client. Once the interpersonal event has been identified the therapist will need will need to cope with the interpersonal event.

3) Determine if a mode shift is required
- A mode shift is defined as "an intentional change in the way a therapist relates to a client" (Taylor, 2008, p. 140). Mode shifts are frequently required when an interpersonal event occurs. In regards to the case study, if Julia became overwhelmed or defensive during a therapy session that would be a time to consider a mode shift.

4) Choose a response mode
- Each of the 6 modes has a corresponding set of response modes, for the purpose of this course I will give brief examples of response modes for each modes. The complete list can be found in *The Intentional Relationship* textbook, with the reference listed in the reference slides.
    - Advocating responses: "Communication and actions that respond to a need for physical or interpersonal resources or raise the client's awareness about available resources" (Taylor, 2008, p. 142).

- Collaborating responses: "Those that encourage and incorporate a client's active participation, choice and decision making" (Taylor, 2008, p 143).
- Empathizing responses: "Serve to understand, share, witness, and validate a client's thoughts and emotions" (Taylor, 2008, p. 143).
- Encouraging responses: Responses that "uplift, inspire, complement, and reinforce" (Taylor, 2008, p. 143).
- Instructing responses: These responses "intend to teach, demonstrate, inform, and provide structure for a client" (Taylor, 2008., p. 143)
- Problem-solving responses: These responses "engage clients in describing, evaluating, and sometimes questioning a series of options and possibilities (Taylor, 2008, p. 143).

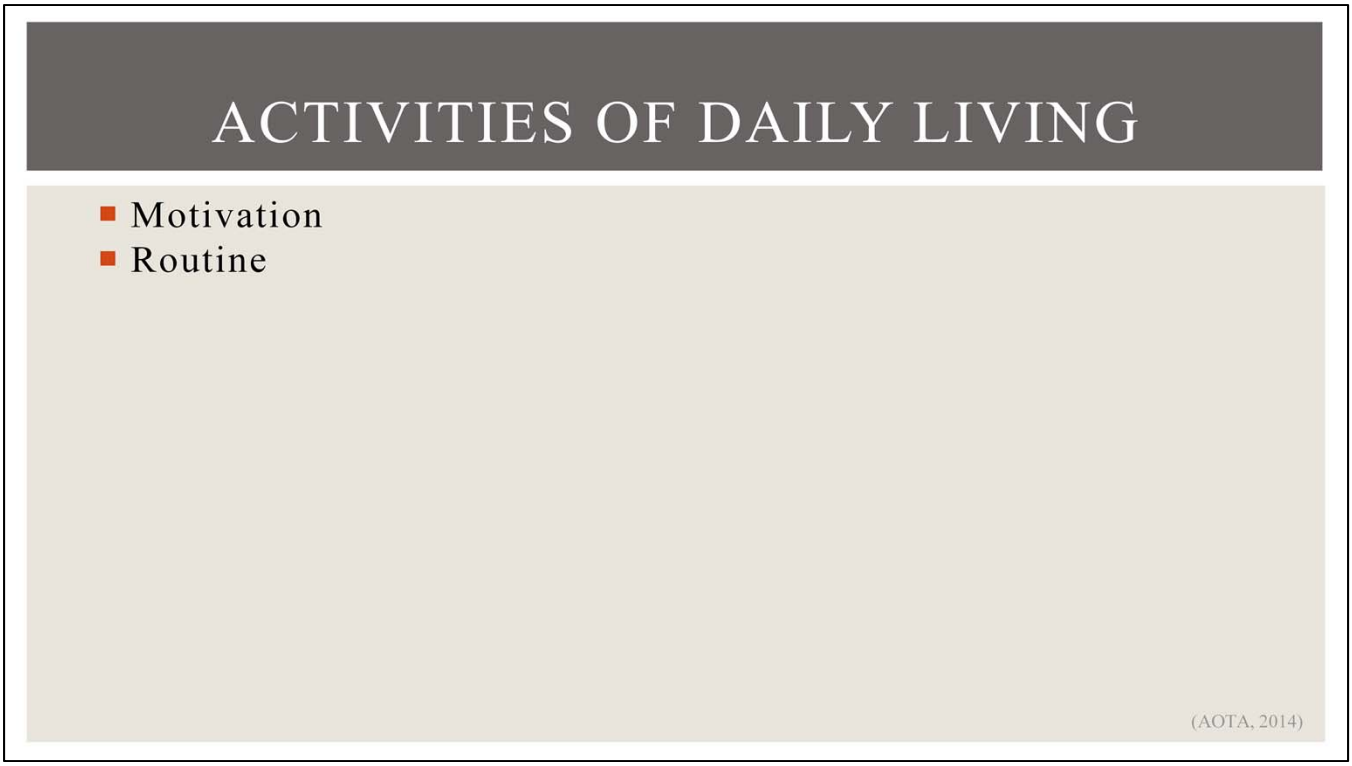
5) Draw upon any relevant interpersonal skills associated with the modes

- Taylor (2008) described many interpersonal knowledge skills that occupational therapists should have or gain that, when used in combination with the modes can be beneficial for practice. Some of these skills include: communication skills, professional boundaries and conflict resolution.

6) Gather feedback

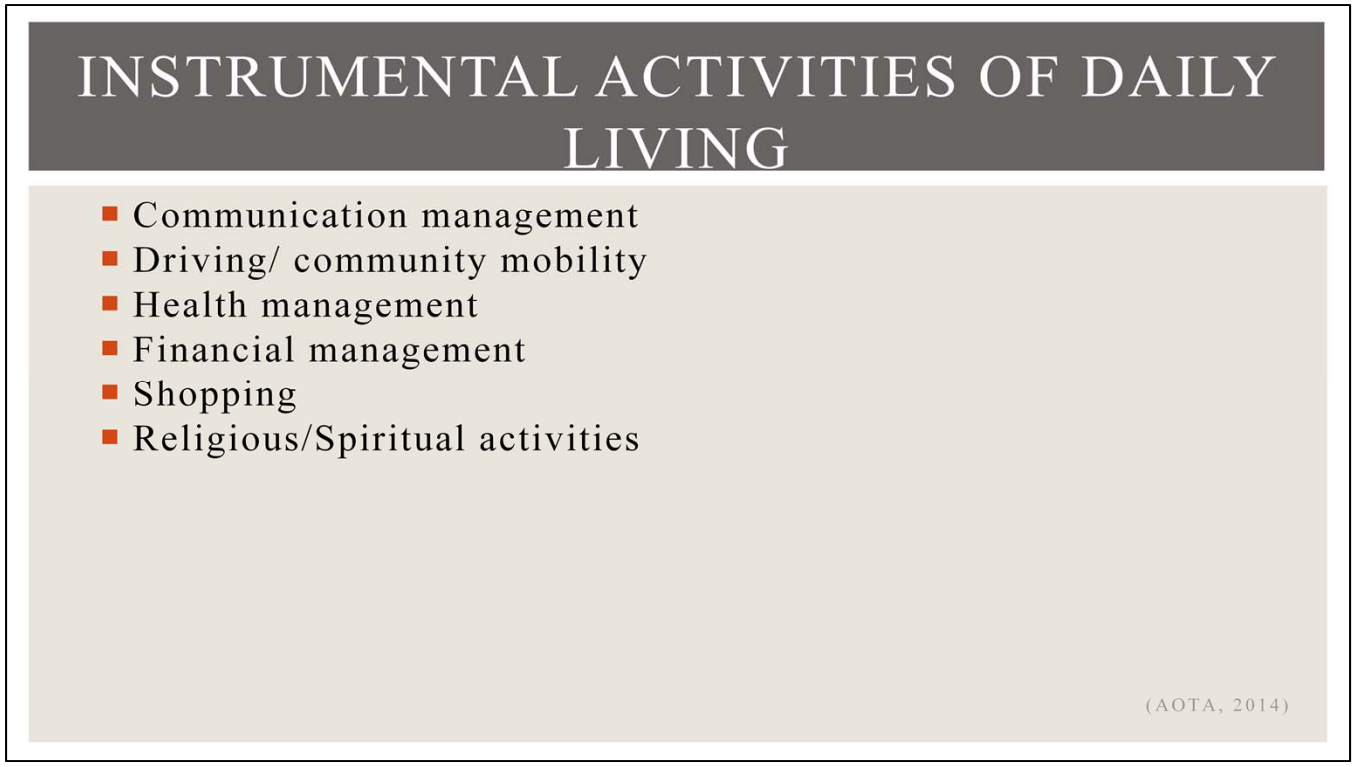
- The last step in utilizing the modes is gathering feedback from the client, this includes asking the client how he or she felt about the way the therapist responded to the interpersonal event that occurred and asking the client if there are any unresolved issues that the client would like to discuss. The therapeutic modes that we anticipate would be the most effective in Julia's case would be collaborating, encouraging and empathizing.

(Taylor, 2008)



For the occupations of ADL's, two of the areas that will likely need to addressed for the adolescent to be success in this area are motivation and routine. Interventions to assist the adolescent in developing a new routine may involve assisting them in setting up a daily schedule of necessary starting with a few ADLs and slowly increasing the number of ADLs that are completed each day. Establishing a routine for ADLs may also include setting alarms or reminders on the their phone if they have one. Motivation is also a factor that may need to addressed for the teen to be successful in completion of ADLs. Motivation would likely to fall into several areas of occupation and intervention areas. An example of this may be that once the adolescent has identified areas of leisure they would be more likely to complete the ADLs necessary to participate in these activities and be socially acceptable, which would also overlap with social participation.

(AOTA, 2014)



Above is the list of IADLs from the Occupational Therapy Practice Framework we identified that a majority of adolescents participate in at least once in the course of a week with the understanding that this list will not be all encompassing for all adolescents.

Community mobility

Lack of proper community mobility could be inhibiting adolescents from participating in leisure/social activities that do not involve the use of opioids. This lack of options could also be causing them to rely on rides from individuals who are abusing. If this is an area of concern, one option for the therapist would be to collaborate with the adolescent to identify options to get to activities and work (if applicable). One concern for small communities is the lack of public transportation options in most small towns. If the adolescent is working a paid job, the therapist could also assist the adolescent in setting up a budget and plan to save money for his or her own car.

Communication management

In the Occupational Therapy Practice Framework, this area is defined as "sending, receiving and interpreting information using a variety of systems and equipment including writing tools, telephones, keyboards and computers or tablets" (AOTA, 2014, p S19). For a majority of adolescents technology is ingrained into a majority of their tasks during their everyday. While the problem for most, may not be using the technology; for those abusing opioids the problem may lie in using technology to maintain healthy relationships with peers. Communication management could be woven into social participation and having the teen use technology for appropriate communication with peers.

Health management

Due to the opioid abuse, the adolescent has more than likely not been taking care of his or her body and/or avoiding necessary medical care out of fear that someone would discover what he or she was doing. This area could be combined with leisure if the adolescent had an interest in working out various

exercise program could be explored as new leisure activities and social participation.

Financial management

Depending on if the adolescent has a source of income, this could be an area that was was impacted by opioid abuse if the adolescent was purchasing the drugs illegally. Intervention to address this area may consist of assisting the teen to make a budget and identifying if there is something he or she would live to save money for to buy.

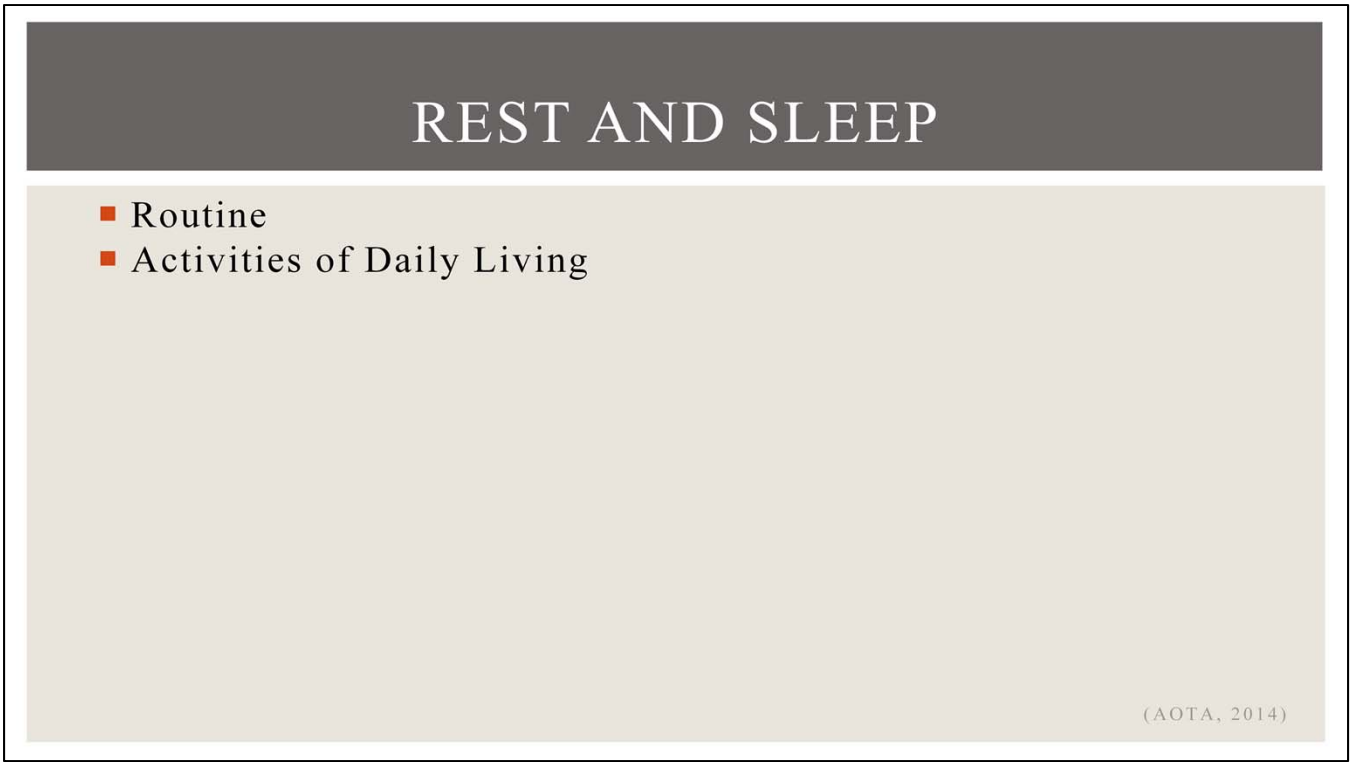
Shopping

This IADL could be combined into financial management skills and a leisure activity if shopping was a leisure activity that the teenage previously enjoyed. This IADL could also be used to help address social skills.

Religious/ spiritual activities

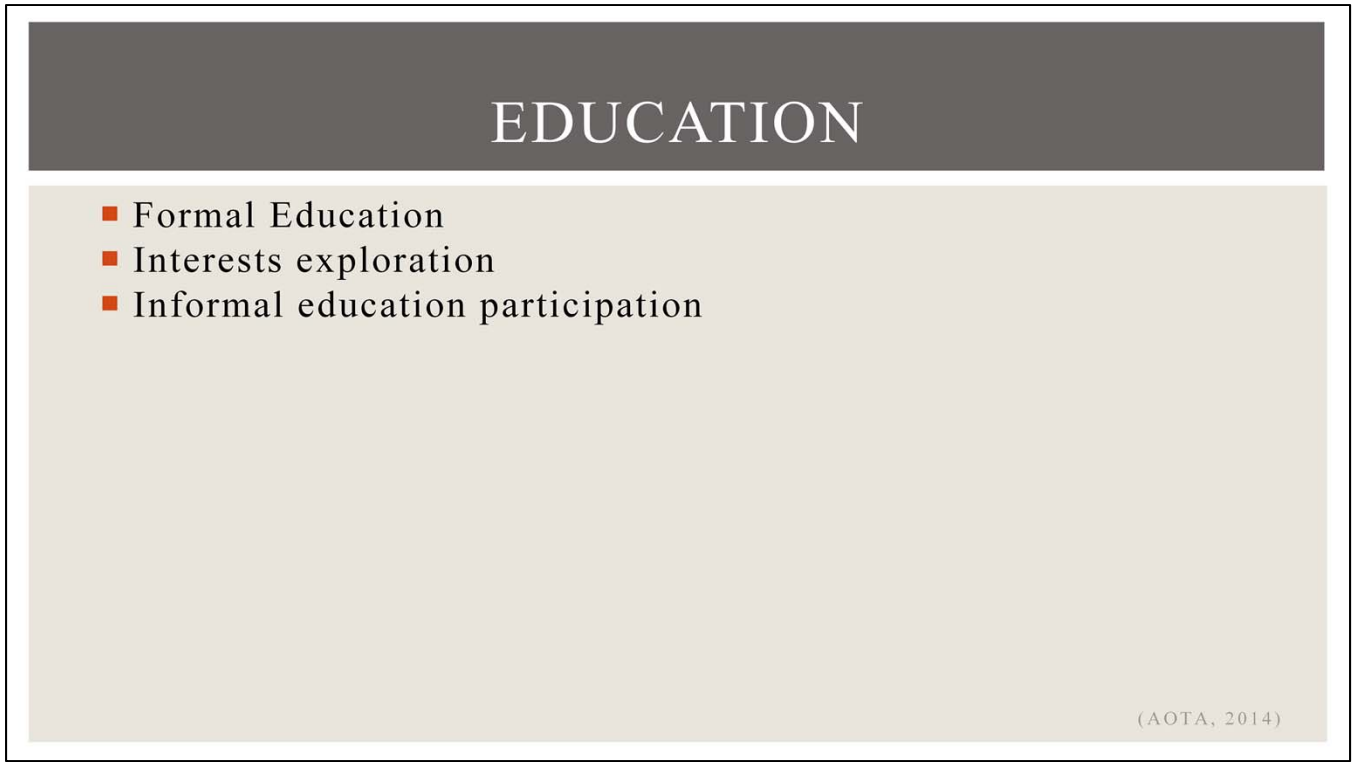
This IADL could incorporated into helping the adolescent find extra-curricular activities, different social support groups, and changing the environment into a more positive environment.

(AOTA, 2014)



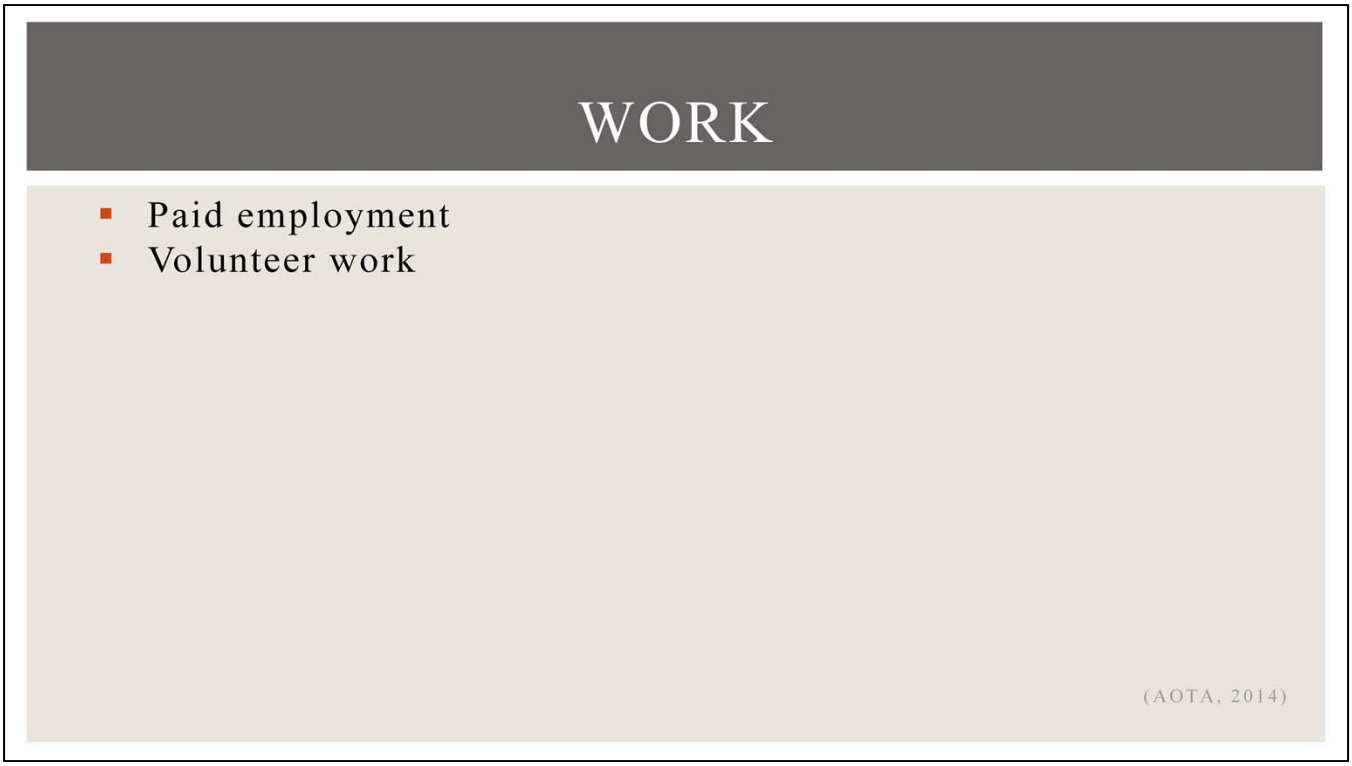
Getting the proper amount of sleep is crucial for an adolescent. The National Sleep Foundation (2015) recommended that adolescents aged 14-17 get 8-10 hours a sleep a night. This can be difficult for adolescents who have not been abusing opioids. One of the best interventions to help these adolescents get enough rest is to assist them in establishing a routine. This ties into the ADLs as well to give themselves a nighttime routine that will allow them to get the rest they need. Interventions for rest and sleep may also include discussions about having a healthy sleep environments, avoiding the use of technology right before going to bed and incorporating yoga or meditation into a nighttime routine is they are having difficulty relaxing before going to sleep.

(AOTA, 2014)



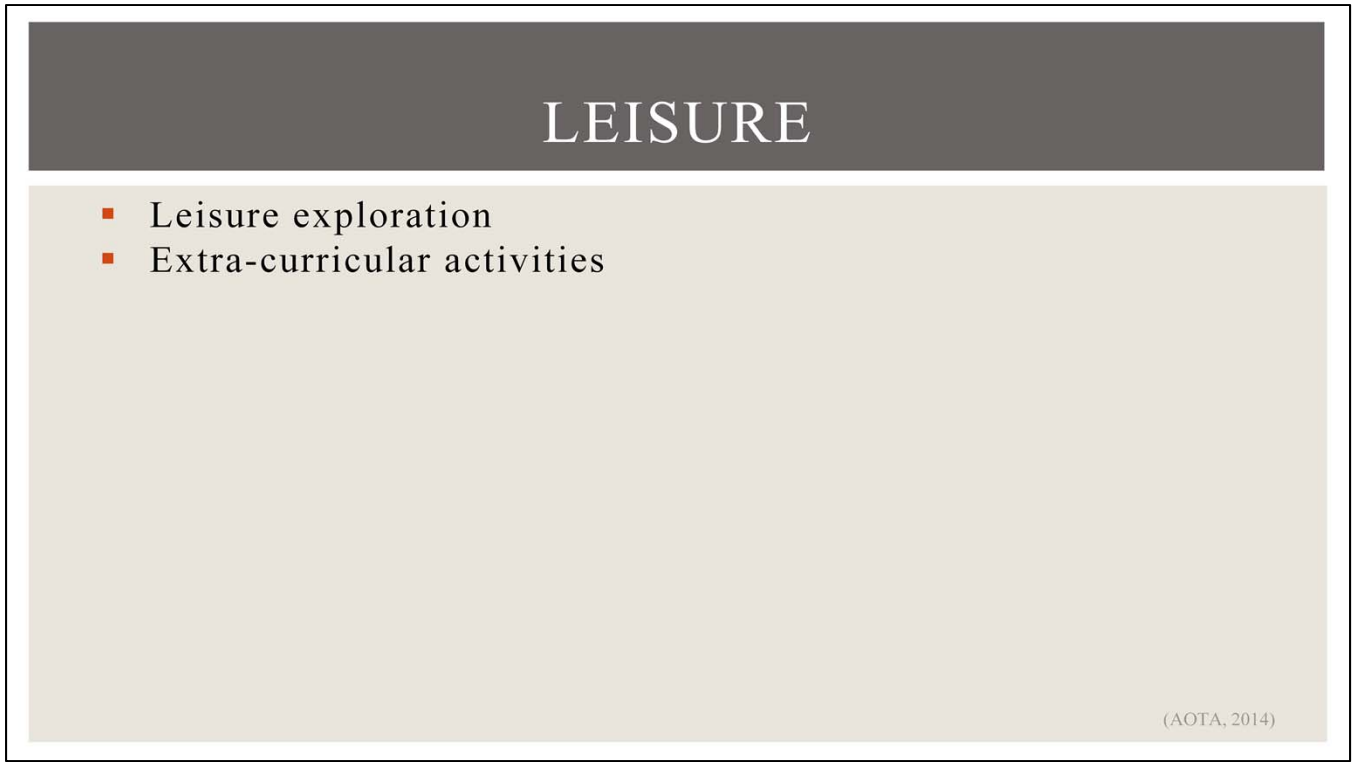
The Occupational Therapy Practice Framework breaks the occupation of education down into the following areas: formal education, interests exploration and information education participation. Within the area of formal education, interests and motivation will likely be areas that can be addressed with the adolescent. For a majority of those adolescents who abuse opioids, there is often a decrease in school attendance. As these adolescents work to either re-establish or learn a healthy routine motivation and interests can again be addressed. The adolescent may not find school enjoyable, so assisting the adolescent in exploration of class options may increase motivation for school attendance and success. The therapist could also work with the adolescent to begin to consider options for school or work after high school with exploration of interests. Informal education participation may include the adolescent participating in art classes, group exercise classes or a variety of other options that would also correlate with leisure.

(AOTA, 2014)



According to the Occupational Therapy Practice Framework, work is categorized into paid employment and volunteer work. Both of these areas would be opportunities for the therapist to address areas of interest for the adolescent. As discussed before in the education section, if the adolescent is able to explore various options for potential future career courses, they may be more motivated to attend school. Paid employment and volunteer work also allow the the adolescent to have a routine. Other interventions that could be used for this occupation would include: seeking out potential job or volunteer options, filling out applications, practice interviews, appropriate job behavior, and appropriate co-worker interaction. Some of these intervention overlap with social participation but are all important for the adolescent to be successful in his or her work, both for paid and volunteer.

(AOTA, 2014)



Strategies for interventions for finding new, healthy areas of leisure might include: leisure exploration and helping the adolescent find extra-curricular activities that are exciting and motivating for him or her. These extracurricular activities would also provide a structured environment to fill time to get the adolescent away from the environment that lead them to the opioid addiction. One challenge for smaller communities may be the limited activities that the teenager is able to choose from. The therapist could also work with the teen to find activities to participate in within the community, such as various religious groups. Within this area the therapist may also work on social skills, such as initiating contact with the new groups and communication with the members to find common topics to talk about and feel comfortable with the process of making new friends.

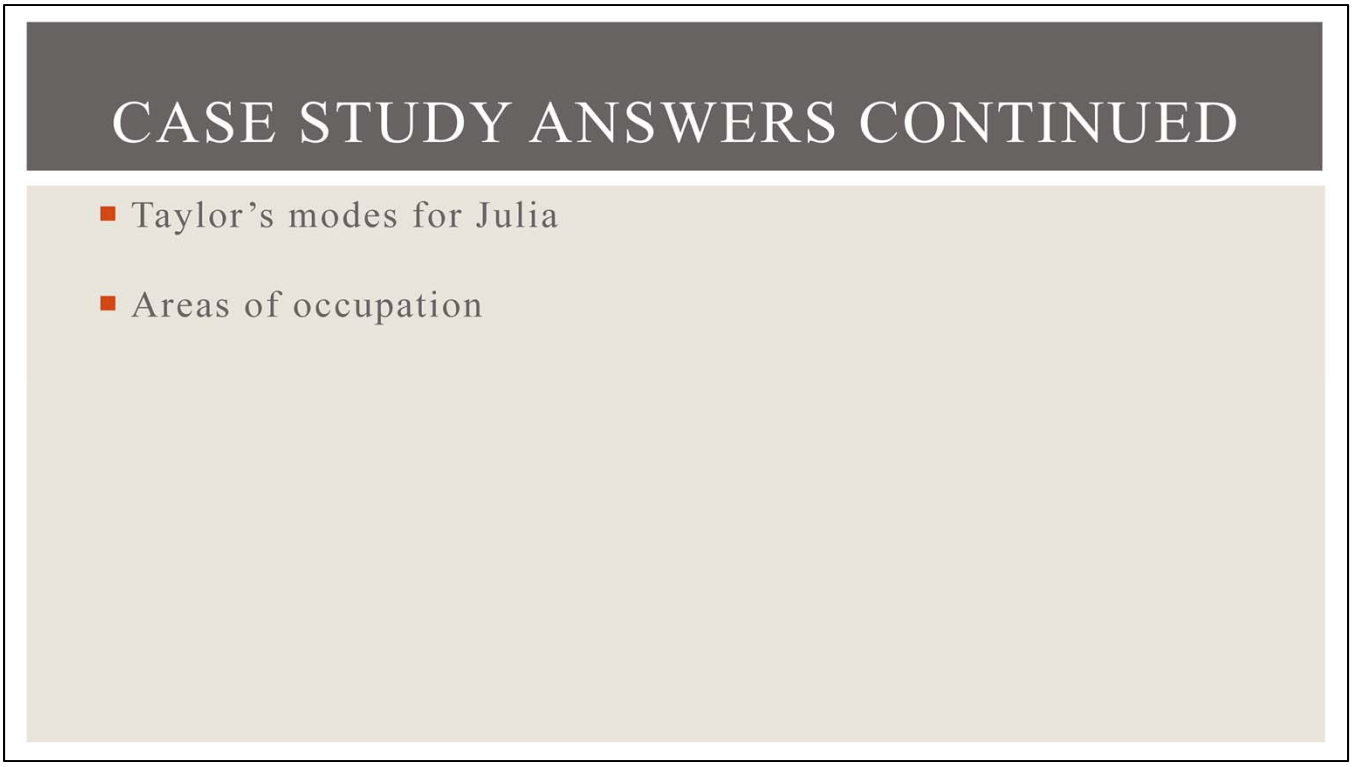
(AOTA, 2014)

Within the occupation of social participation there may be many factors that a teen may have lost during his or her opioid abuse. Social skill training may be necessary for the adolescent to feel comfortable and confident participating socially with his or her peers. During the abuse the adolescent may have also lost his or her identity and need help to regain identify, which could be addressed across multiple occupations and has many transactive factors. Exploration and participation in extracurricular activities would be an intervention to assist the teen in gaining identity, practicing social skills, and having a healthy leisure activity.

(AOTA, 2014)

CASE STUDY QUESTIONS CONTINUED

- Which therapeutic use of self strategies and Taylor's modes do you anticipate will be most effective to use when working with Julia?
- What areas of occupation do you anticipate will be priorities when planning interventions for Julia?



Question 1
When looking at the modes, remember the steps of interpersonal reasoning and that multiple mode shifts may be required during a session. Looking at the information from the case study we choose the following 3 modes to use when working with Julia.

- Encouraging- This mode may work very well for Julia depending on her personality but it is one we would try to celebrate with her through her accomplishments and help her through the bad days.
- Empathizing- This would also be relevant to her treatment because we would want to help her process her emotions and have a better understand of her thoughts and feelings to help adjust the course of treatment as necessary.
- Collaborating- Collaborating would be a relevate mode to use with Julia due to the client-centeredness of this mode. If Julia has a say in what her priorities are for therapy she will be more motivated for therapy

Question 2
Areas of occupation that we would anticipate would be priorities when planning interventions for Julia would be: Leisure, Education, social participation based on the the information that was provided in the case study. After constructing an occupational profile more areas may become apparent.

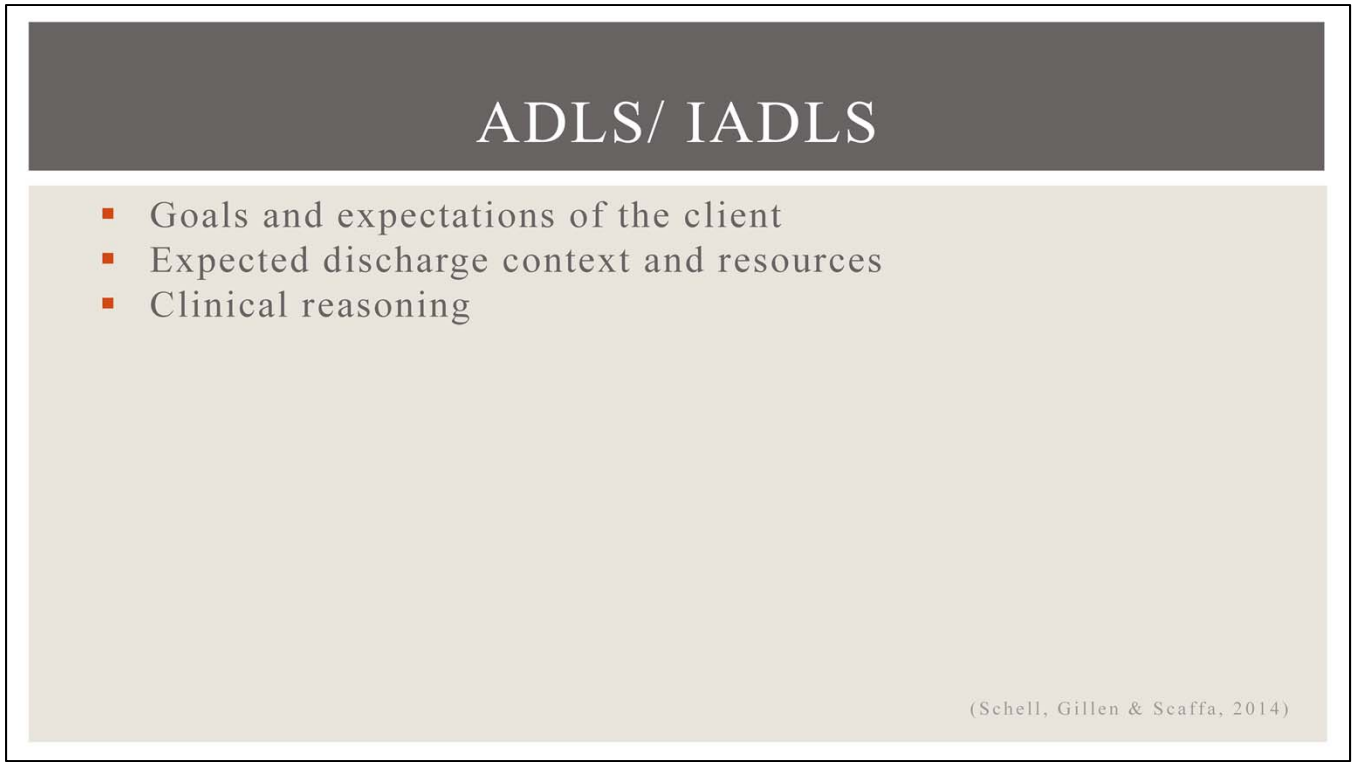
- Education would be an anticipated occupation due to the fact that Julia had a high GPA before she began using drugs.
- Leisure would be an anticipated occupation due to her prior involvement in volleyball and choir.
- Social participation would be an anticipated occupation to focus on due to her prior involvement with going to events with her teammates.

Specific Interventions

CASE STUDY QUESTIONS CONTINUED

- Based on the areas of occupation that you identified as priorities in the previous section, what specific interventions would you include in your plan of care?
- What are potential setbacks that Julia may experience during her course of therapy?
  - How would you address or overcome these setbacks?

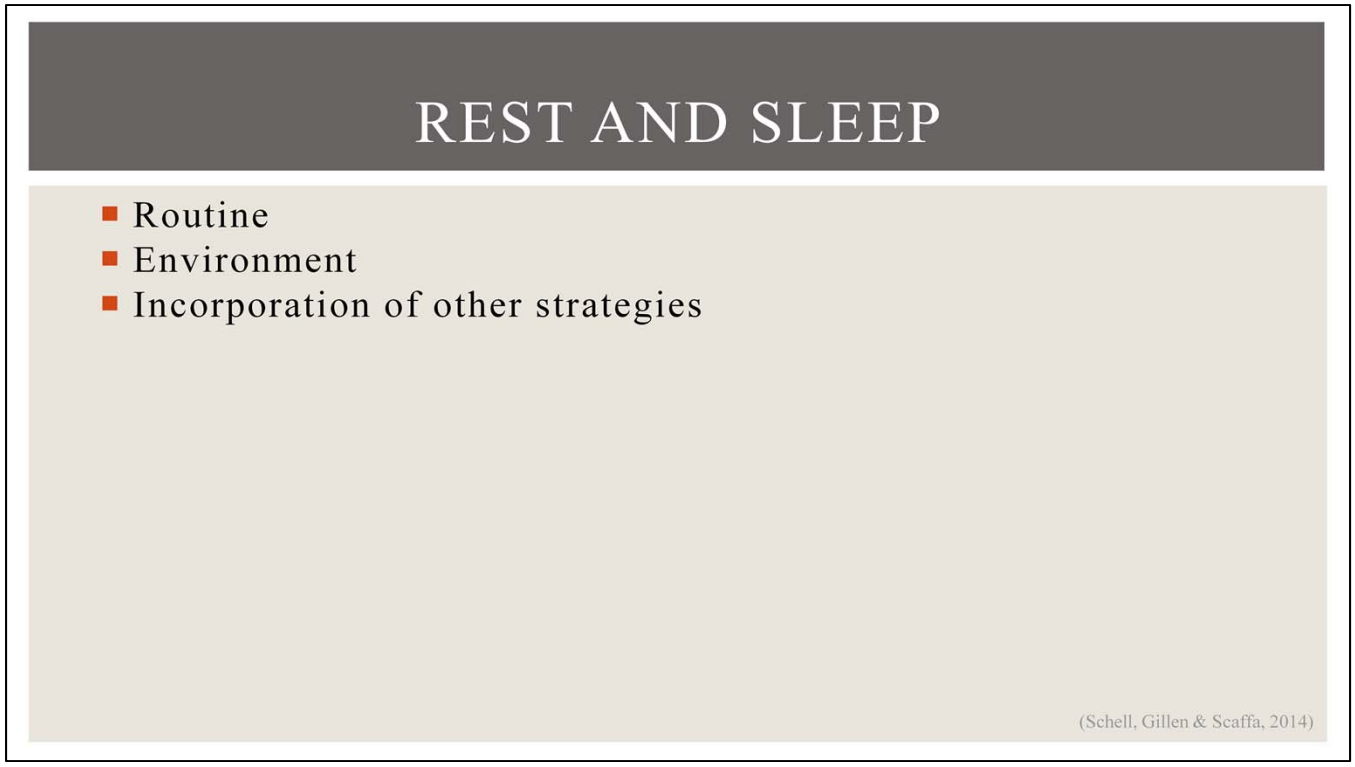
Please read through the questions on this slide. These questions will be asked again following the case study.



We were not able to find any recent occupational therapy research that has been conducted for evidence-based interventions for people with substance abuse. With this in mind there are steps to remember as part of the clinical reasoning process for occupational therapists.

- Goals and expectations of the client: while adolescents experiencing opioid abuse may have difficulty with identifying their goals, it is still important to include them in every step of the process to achieve client-centered practice.
- Expected discharge context and resources- while the discharge may not be as perteninent in a rural area, remember to keep in mind the resources the adolescent has to assist them in recovery.
- Some examples of intervention strategies that may be used with the adolescents include: creating a daily schedule for ADLs/IADLs , incorporating coping tasks into ADLs/IADLs if the teen is overwhelmed and incorporating occupations that the adolescent finds motivating into ADLs/IADLs
- Other interventions depending on the adolescents goals may include: working on healthy eating and meal management and budgeting skills

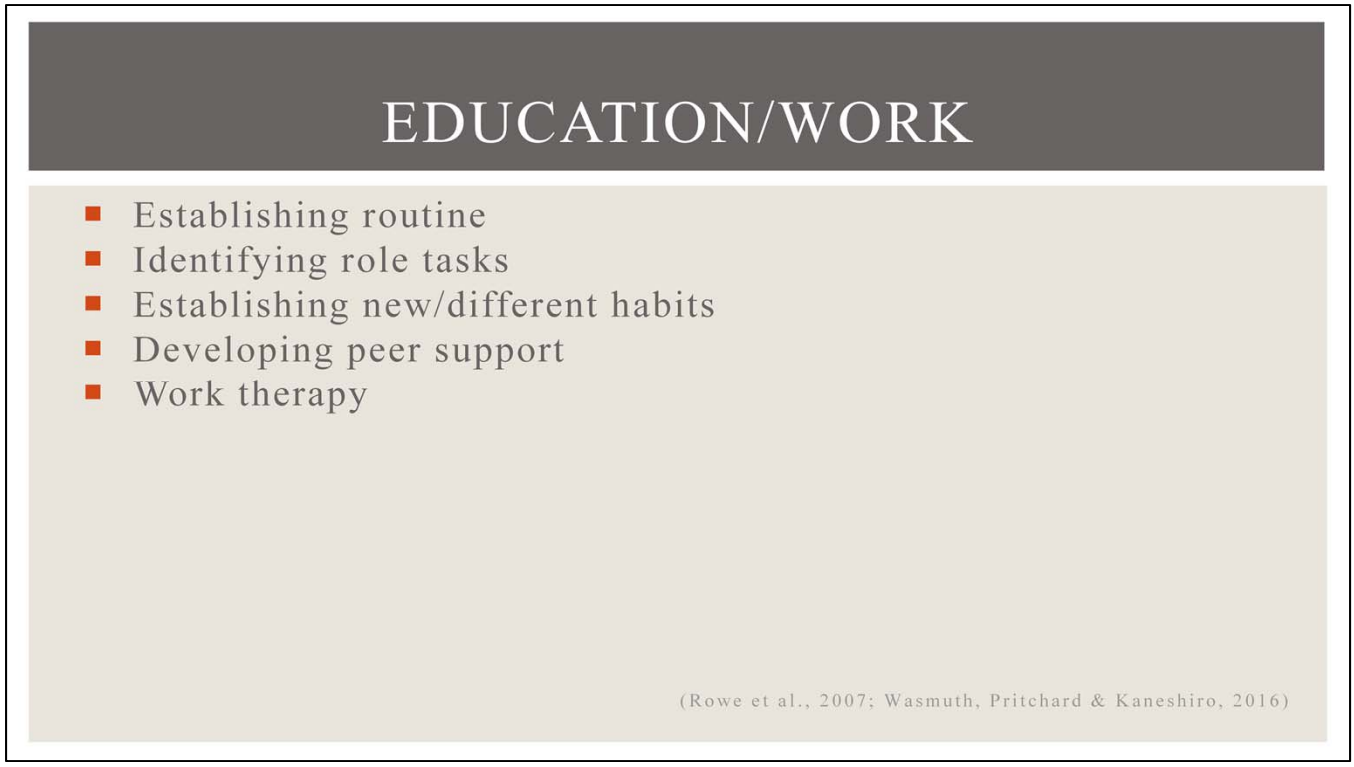
(Schell, Gillen & Scaffa, 2014)



For this occupation, we were unable to find specific evidence-based interventions related to substance abuse so these interventions are again based on clinical reasoning or interventions that would be used for a variety of diagnoses.

- Create a bedtime routine with the adolescent that facilitates healthy sleep routines and may include relaxation strategies (yoga, meditation, progressive relaxation) before going to sleep.
- Environment is key: condition that the bed is only for sleep, room should be quiet, dark, cool, clean and safe.
- Using interventions such as: cognitive behavioral therapy, relaxation response, graded exercises, activities to increase social integration may also improve sleep difficulties in those experiencing substance abuse.

(Schell, Gillen & Scaffa, 2014)



Wasmuth, Pritchard, and Kaneshiro (2016) wrote, "Occupations have been identified as critical in structuring time, experiencing motivation and enjoyment, interacting with others, and developing one's identity, routines, roles, and habits" (p. 3). These things: identity, routines, roles, and habits; are often associated with the occupations of education and work. Adolescents build their education on their values and the values of their peers. A profession is chosen based on interest, identity, and habits that elicit appropriate behaviors for the chosen profession. By designing interventions around establishing routine, identifying new and appropriate role tasks, establishing healthy habits, and developing positive peer supports, occupational therapists can best impact a client's recovery. Working with the adolescent to establish a new, healthy environment is also key to success.

A study by Rowe et al. (2007) found that group intervention decreased substance abuse among those who attended. Group intervention can lead to peer support among members. This allows members to communicate with others who have similar experiences and receive encouragement and accountability on staying sober. It is not uncommon for individuals with addiction to opioids to fall back into their addiction as a result of a lack of opportunity to interact with others who are recovering or sober.

Establishing routines and identifying role tasks can be accomplished by educational worksheets and implementing positive habits by using a calendar and participating in positive role tasks such as home making tasks and educational tasks (i.e. completing homework, going to a tutor, applying for scholarships, etc.).

Interventions for work could also include: practice in resume writing and job interviewing, job coaching and assisting the teen in exploring volunteer options which would additionally assist in identity development.

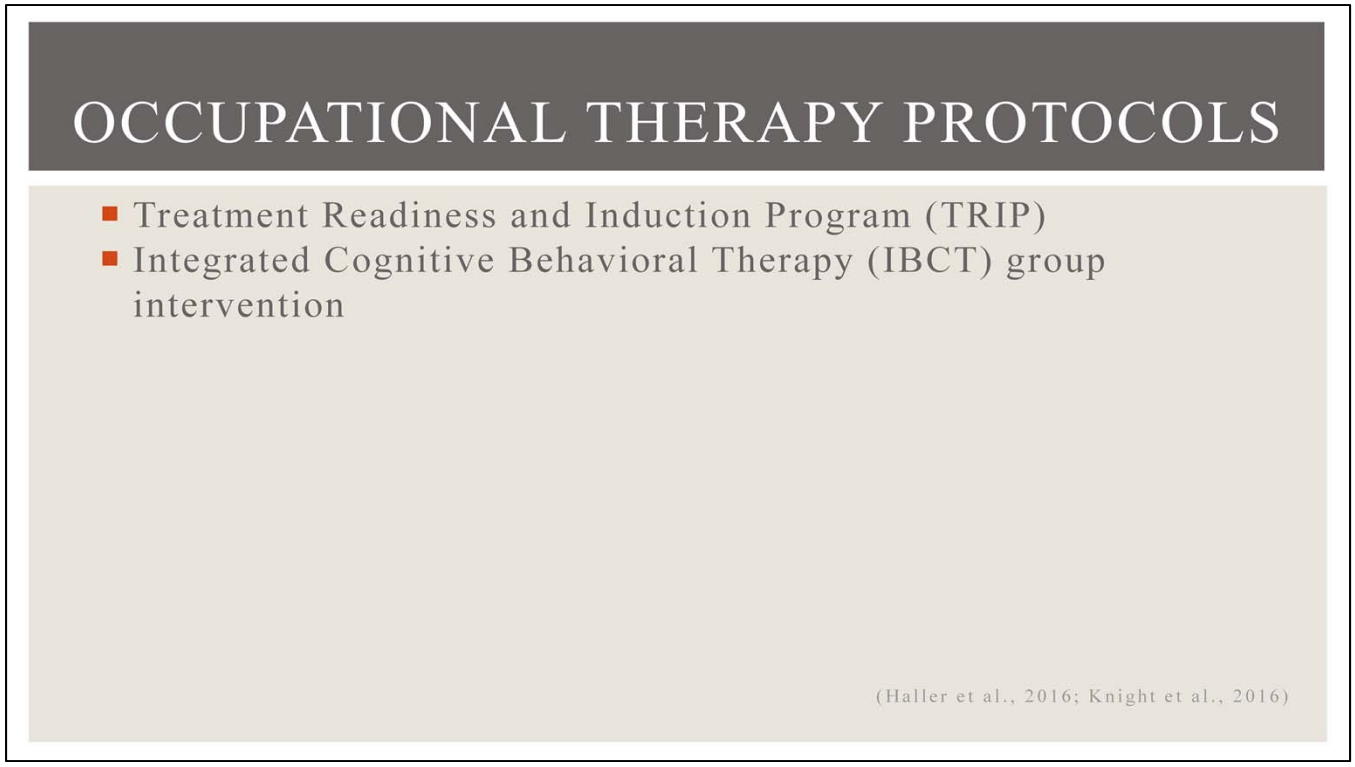
(Rowe et al., 2007; Wasmuth, Pritchard & Kaneshiro, 2016)

Activities that have been proven to work in the literature include: yoga, exercise, music therapy (Wasmuth, Pritchard & Kaneshiro, 2016). Wasmuth, Pritchard, and Kaneshiro (2016) found that in studies completed by Shaffer et al. in 2004 and Zhuang et al. in 2013, "addictions to opiates were treated solely with yoga-based" interventions (p. 7). The uses of tai chi and qi-gong were to be used in Li et al. in 2002 and 2013 (Wasmuth, Pritchard & Kaneshiro, 2016). Other specific interventions Wasmuth, Pritchard, and Kaneshiro found in research include: music, exercise bike, jogging, brisk walking, lyric analysis, and songwriting.

Occupational therapists can assist adolescents in exploring and identifying new leisure interests or reestablishing old leisure interests that do not involve opiate use. New leisure opportunities could be trialed during therapy or found within his or her community. Maintaining the focus on occupation-based interventions that are client-centered will allow occupational therapists the opportunity to be most effective with working with this population.

Wasmuth, Pritchard, and Kaneshiro (2016) found that research supports "therapeutic communities, time limited care coordination, community reinforcement approaches, ecologically based family therapy, multidimensional family therapy, peer support, and 12-step facilitation" (p. 6). The twelve step facilitation can include social or spiritual support groups, which have been shown to encourage the maintenance of abstinence (Stoffel & Moyers, 2004). The role for an occupational therapist in 12 step facilitation might include: assisting the client in finding a group that fits his or her needs and incorporating the steps that are being covered in the group into therapy (Stoffel & Moyers, 2004).

(Stoffel & Moyers, 2004; Wasmuth, Pritchard & Kaneshiro, 2016)



The following slides give more detail on these occupational therapy protocols that have been studied and are evidence-based.

(Haller et al., 2016; Knight et al., 2016)

Just as it states in the name, the Treatment Readiness and Induction Program, or Trip, aims to increase readiness and promote personal change in order to enhance the standard for substance abuse treatment for adolescents (Knight et al., 2016). It is aligned with the transtheoretical model (Knight et al., 2016). Knight et al. wrote that this "is accomplished through interactive modules and activities that promote problem recognition and more thoughtful, reasoned decision making" (p. 21). A unique aspect of the TRIP program is that there are 8 different modules. The modules can be completed in any order as well as can be completed in open or closed groups (Knight et al., 2016). The reason the modules are designed this way is to allow for new members to join the program at any stage. Intervention titles include guide maps, nudge, downward spiral, and work it (Knight et al., 2016). Knight et al.'s (2016) interventions are designed to change the way clients think in order to promote change; similar to that of cognitive-behavioral therapy.

Knight et al. completed a study that found that participants of the TRIP program "has significantly better during-intervention outcomes" (p. 24) then compared to the control group. In addition, it has been found to increase positive decision making and problem solving (Knight et al., 2016).

(Knight et al., 2016)

INTEGRATED COGNITIVE BEHAVIORAL THERAPY (ICBT) GROUP INTERVENTION

Main idea:

"teaching participants to manage negative cognitions related to depression and substance use, increase pleasurable activities to promote positive mood and reduce substance relapse risk, and build healthy social networks." (Haller et al., 2016, p. 40)

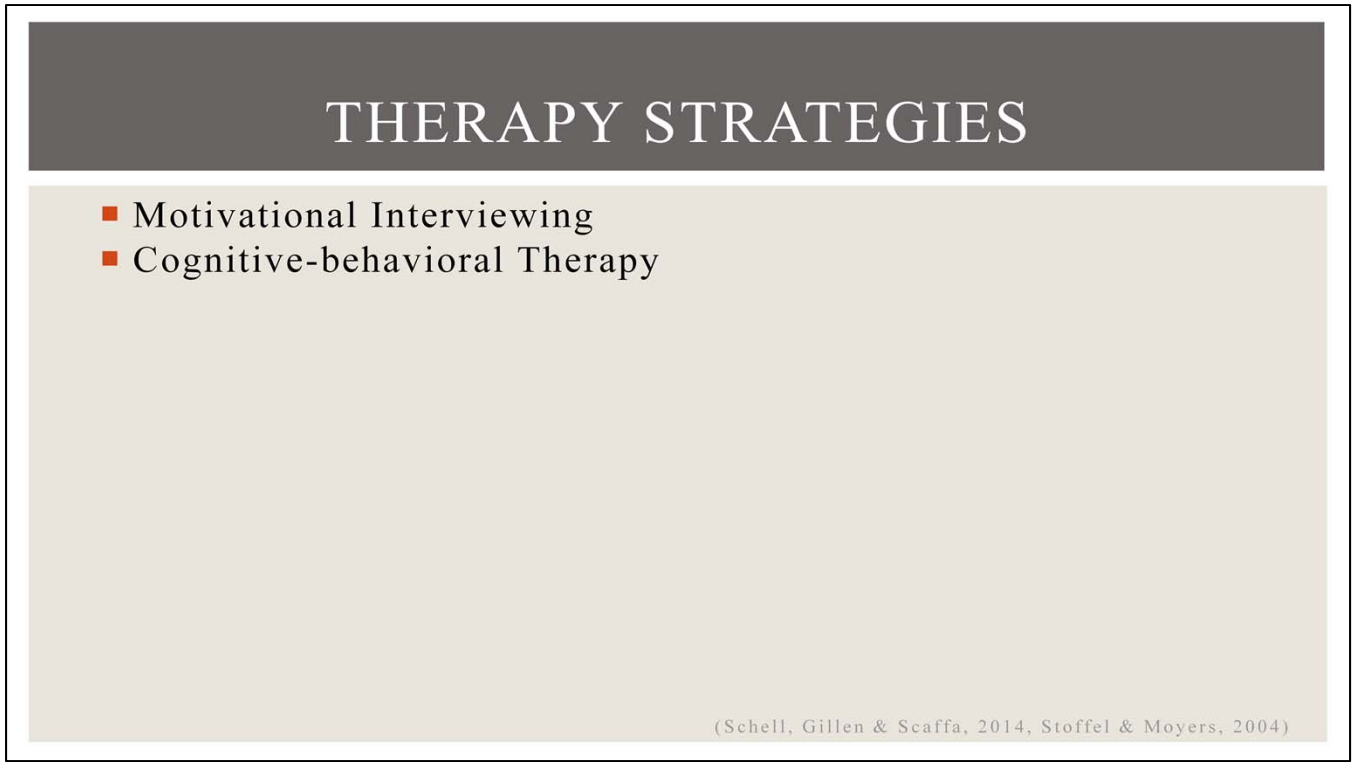
(Haller et al., 2016)

Integrated Cognitive Behavioral Therapy (ICBT) Group Intervention strives to include CBT strategies from the Cognitive-Behavioral Coping Skills Training Manual (Kadden et al., 1992 in Haller et al., 2016). This protocol also incorporates CBT strategies related to "depression from the Group Therapy Manual for Cognitive-Behavioral Treatment of Depression" (Munoz & Miranda, 1996 in Haller et al., 2016, p. 40).

The treatment focuses on the management of negative cognitions commonly experienced in depression and substance use (Haller et al., 2016). Haller et al. (2016) wrote that the ICBT Group Intervention "increase[s] pleasurable activities to promote positive mood and reduce substance relapse risk, and build healthy social networks" (p. 40).

This treatment program really works to reform and improve on the person and occupation aspects of the PEO model.

(Haller et al., 2016)



Motivational Interviewing

Using specific methods of communication to enhance the individual's intrinsic motivation for change. The style of therapy is very empathetic and non confrontal. Exploring resistance towards change is a key part of the intervention and the client ultimately voices arguments for change.

CBT

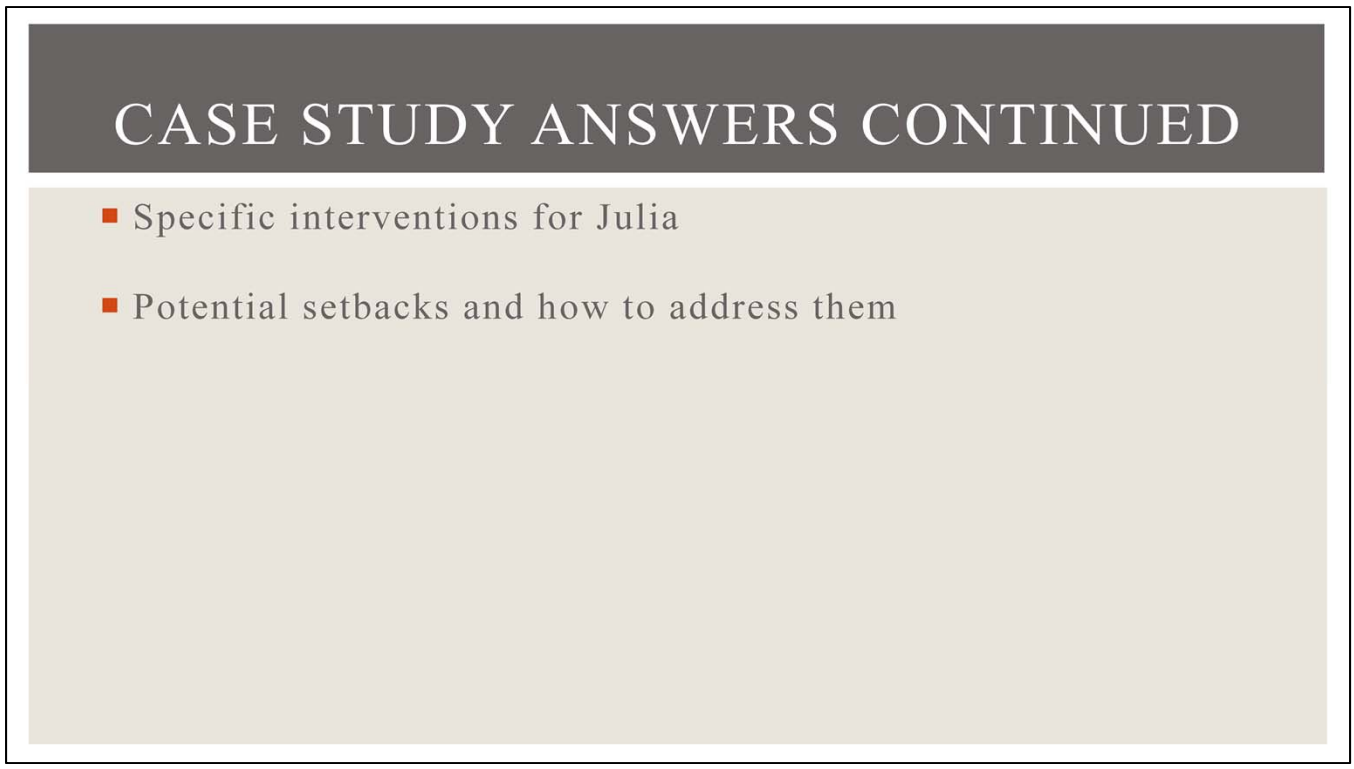
While this is not defined by one specific occupation, it is a strategy that should be intertwined throughout therapy. CBT emphasizes the development of coping strategies and self-efficacy, allowing the individual to change their thoughts and actions regarding substance abuse.

(Schell, Gillen & Scaffa, 2014, Stoffel & Moyers, 2004)

CASE STUDY QUESTIONS CONTINUED

- Based on the areas of occupation that you identified as priorities in the previous section, what specific interventions would you include in your plan of care?

- What are potential setbacks that Julia may experience during her course of therapy?
  - How would you address or overcome these setbacks?



Question 1:

Education: Some of the potential interventions for Julia in the area may include: exploring classes to help establish or renew interests, exploring what motivated her to maintain a high GPA before the drug use and incorporating the motivation back into her day, establishing a routine with leisure activities woven in and identifying future goals for after high school.

Leisure: Potential interventions might include: assisting Julia is exploring new leisure activities or initiating the process to join in playing volleyball or signing in the choir again. With these leisure activities, there is likely to be some negative backlash from her peers in these activities. Some examples of the backlash may include: name calling, socially isolating her from the group and starting hurtful rumors about Julia. Other interventions may include helping Julia develop coping skills to deal with these interactions with peers. Leisure could also include activities such as yoga if she is having difficulty relaxing or sleeping.

Social Participation: Some interventions for this area may include: helping Julia find and social support in her area with other individuals going through substance abuse recovery, such as helping her find a 12-step recovery program such as narcotics anonymous. Social participation will most likely also tie into leisure, one Julia establishes old or new leisure activities she wants to participate in, she may need help re-acquiring appropriate social skills.

Question 2:

Some potential setbacks that Julia may experience might include relapse, medication side effects, and undiagnosed mental health disorders. As mentioned earlier in the presentation, statistics have shown that over 50% of individuals that go through treatment for addiction-related disorders have a relapse within their first year (Wasmuth, Crabtree, & Scott, 2014).

One intervention that could be used to help her would be to encourage and assist Julia to find a social support group that meets her needs and in which she feels comfortable in. A social support group is also something that could be developed in there are a number of adolescents in a close geographical area who are recovering from substance abuse. Intervention may also include making sure Julia is surrounded by an environment that will be supportive throughout her recovery and develop a trusting relationship with Julia so she feels like she can bring forth issues and adjust the course of treatment if certain aspects are not working for her.

RESOURCES FOR CLIENTS

- https://teens.drugabuse.gov

When looking for resources on the internet we found it difficult to find resources that were written specifically just for adolescents. The website on the slide includes various blogs on different topics for teens such as what to do if you have a drug problem, facts and games to learn about drugs and addiction.

Suggestions we had in this area included a student project to develop appropriate resources for adolescents on this topic with possibly developing a presentation that could be taught at the high schools which could be similar to a D.A.R.E program.

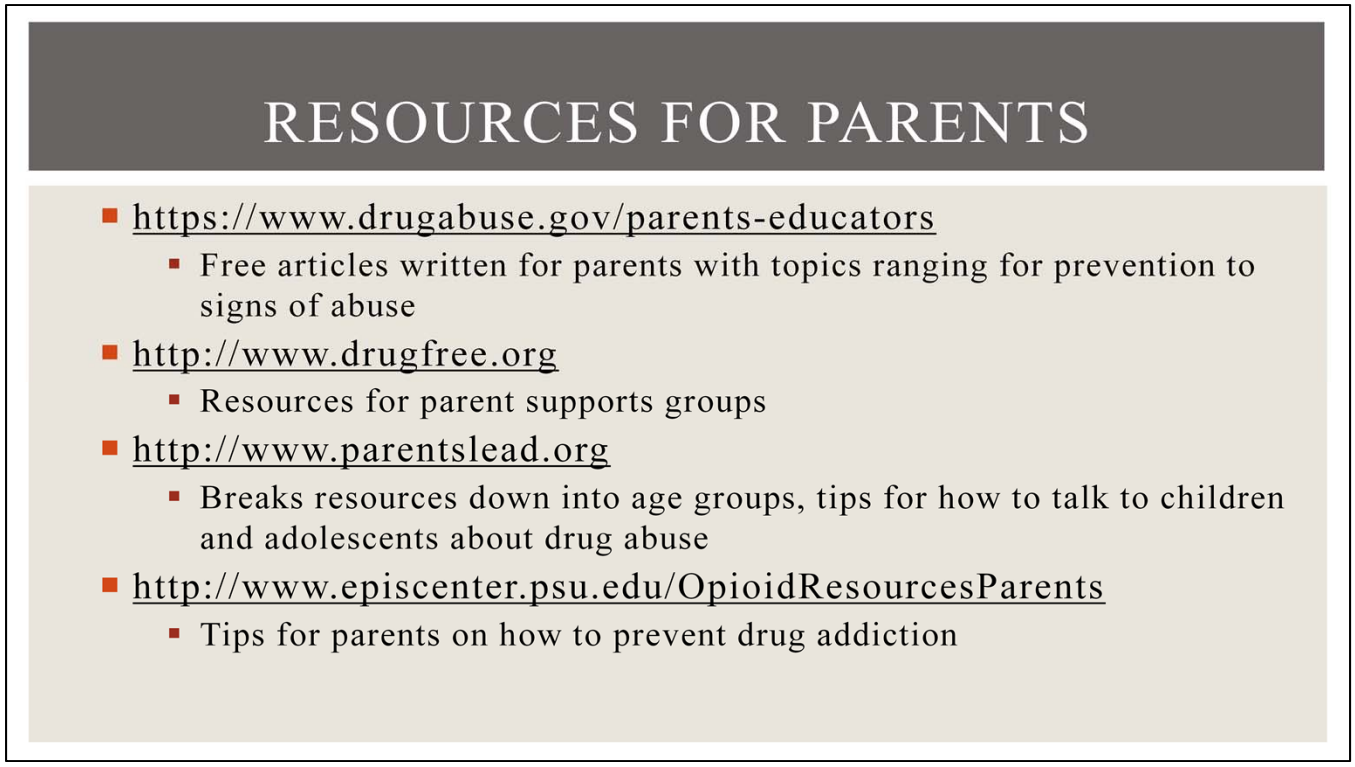
RESOURCES FOR CLINICIANS

- https://prevention.nd.gov/stopoverdose
  - Provides facts about opioids, overdose, and Naloxone
- http://store.samhsa.gov/shin/content//SMA16-4742/SMA16-4742.pdf
  - Provides overdose prevention toolkit
- http://turnthetiderx.org
  - Provides treatment options and resources for patients.

First website: Has resources that clinicians can access along with facts about opioids, signs of an overdose and facts about Naloxone

Second website: SAMHSA overdose prevention toolkit, PDF that can be printed.

Third website: Surgeon general's call to action that was mentioned earlier. The site contains treatment options and resources for patients.



First website: Has many free resources for parents to read with articles ranging from prevention to recognizing signs of abuse

Second website: Has resources to connect with other parents and a number for a help line, along with resources to help their child

Third website: My personal favorite out of the sites for parents. This site breaks resources down into age groups and offers tips for parents on how to discuss drugs and alcohol to their kids along with information on what is going on in North Dakota related to the problem.

Fourth website: A Pennsylvania based site that has good resources for parents on topics such as how to prevent drug addiction in their home.

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Appendix B

Quiz

1. What activity of daily living (ADL) will a parent most likely report as an issue for his or her child

    a. Decrease in bathing/showering.
    b. Increased amount of make-up application.
    c. Brushing teeth twice a day.
    d. Only styling hair four days a week.

2. Which of the following websites provides therapists with an overdose prevention toolkit?

    a. SAMHSA
    b. Prevention.nd.gov
    c. Drugfree.org

3. John's goal is to explore new leisure activities to assist with managing a more structured schedule. What intervention would assist him in achieving his goal?

    a. Instructing John to participate in yoga.
    b. Giving John homework to fill out a calendar with scheduled extra-curricular activities on it.
    c. It is unlikely John will achieve his goal despite occupational therapy.
    d. Assisting John in creating a checklist to improve sleep hygiene.

4. True or **False**. The Beck Youth Inventory - 2 has an emphasis on evaluating a client's occupation and environment.

5. A friend of yours is concerned about her daughter. She reports that her daughter has lost weight and no longer talks with her typical girlfriends. Based on your previous knowledge of the daughter and the knowledge just gained by your friend, you start to wonder if opioid addiction is the cause of the changes. What other signs might you expect to see in your friend's daughter?

    a. Daughter being more argumentative.
    b. Daughter complaining of cold symptoms.
    c. Daughter having increased performance in school.
    d. A. & B.
    e. None of the above

6. All of the following are opioids EXCEPT:

    a. Heroin
    b. Morphine
    c. Methamphetamine
    d. Fentanyl

7. Which of the following assessments is the most holistic assessment to complete during a client's initial evaluation?

    a. Lifestyle History Questionnaire
    b. Timeline Followback
    c. Beck Youth Inventory - 2
    d. Brief Symptom Inventory
    e. Revised Symptom Checklist

8-13. Match Taylor's Mode with the corresponding statement:

Taylors Mode	Statement
Advocating **C**	A) Offering support to a client who is completing a community mobility task of going to the grocery store.
Collaborating **B**	B) Working together with a client to develop a new routine.
Empathizing **F**	C) Ensuring a client's rights are respected when he/she returns to work.
Encouraging **A**	D) Providing additional support for a client having difficulty with making decisions during treatment sessions.
Instructing **D**	E) Working with a client to identify his/her motivation level and developing strategies to improve motivation.
Problem Solving **E**	F) Listening to a client share his/her feelings and behaviors that drove him/her to use opioids during a group session.

14. Hannah is a senior in high school who has been addicted to opioids for five years. Which of the following might you expect to see when evaluating her education performance?

    a. Hannah receiving an award for perfect attendance.
    b. **Hannah skipping 10 days during fall semester.**
    c. Hannah's grade in mathematics dropping to a 'B' from an 'A'.
    d. A. & C.
    e. B. & C.

15. According to research, which two areas of occupation are addressed most frequently in occupational therapy?

a. Work and education
b. Education and social participation
c. Social participation and rest and sleep
d. Leisure and education
e. Leisure and social participation

16. Sam is a 17-year-old male involved in motocross. He was brought to the emergency department of the local hospital after racing his vehicle against peers, an activity that resulted in a crash. Sam presented with bloodshot eyes, agitation, complaint of nausea, headache, and high levels of opioids in his system. Which of the following is most likely NOT related to opioid addiction in Sam's situation?

a. Bloodshot eyes
b. Risky behavior
c. Agitation
d. Nausea
e. Headache

17. **True** or False. Opioid addiction resources directed towards clients are limited on the internet.

Appendix C

Parent Handout

Signs of Addiction:

- Dependency
- Risky behavior
- Difficulty managing responsibilities
- Depression
- Frequent sickness (cold and flu symptoms)
- Low motivation
- Difficulty focusing on tasks

(National Institute of Drug Abuse, 2014)

Resources:

- https://www.drugabuse.gov/parents-educators
- http://www.drugfree.org
- http://www.parentslead.org
- http://www.episcenter.psu.edu/OpioidResourcesParents

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Opioid Addiction: Parent Perspective

What to look for in your adolescent

Prevalence:

- In 2014, nonmedication prescription opioid use was especially high among young adults particularly between the **ages of 18 and 25 years** (Liebling et al., 2016).
- The rate of opioid abuse increases at a rate of **5% each year** (Cerda et al., 2017).
- Enough prescription opioids were written in the year 2013 to supply **every American** with his or her own bottle of pills (Costa et al., 2017).

Changes you may notice in your adolescent's everyday activities:

SCHOOL:

- Frequent absences
- Change in study habits resulting in lower grades
- Low motivation to participate
- Teacher report about a change in attitude

SELF-CARES:

- Showering less often
- Messy hair style (not brushed)

SOCIAL LIFE:

- Sudden change in friend group
- Isolation – requesting more alone time
- Increased number of arguments due to agitation

(Opiate Abuse, 2017; Wilcox, 2015)

Appendix D

Evaluation of Education Materials

Evaluation of Learning

1) **The content presented in this session was valuable.**

Strongly Disagree Disagree Agree Strongly Agree

2) **The content from this session will be useful in my future practice.**

Strongly Disagree Disagree Agree Strongly Agree

3) **I would pursue additional continuing education presented in an open-access, online style.**

Strongly Disagree Disagree Agree Strongly Agree

4) **The content presented in this session was well organized.**

Strongly Disagree Disagree Agree Strongly Agree

5) **I would recommend this session to coworkers or peers.**

Strongly Disagree Disagree Agree Strongly Agree

Additional comments:

Thank you for participating in this educational session on opioid addiction and the role that occupational therapists have when working with this population!