Occupational Therapy Services

Monica M. Jackman

Introduction

Contemporary definitions and diagnoses associated with mental illness are relatively new in the scope of human existence, yet throughout recorded history, philosophers, artists, and healers have written volumes on the agony caused by the mind. The profession of occupational therapy emerged in 1917 as a humanistic practice aimed at helping people who were suffering with symptoms of mental illness to the degree that they required asylum care because they were unable to function in their homes, community, and daily life routines. Occupational therapy is commonly viewed as a profession that serves to facilitate restoration and rehabilitation of lost function, i.e., occupation as an outcome of intervention. However, both founders and modern-day theorists and practitioners recognize that the potent therapeutic value of occupation lies in the transformative potential inherent in occupational engagement, i.e., occupation not only as outcome, but also as means and process.

While the popular association of the term "occupation" in the western lexicon is with pay-based vocation, occupational therapists consider an occupation to be any meaningful activity or role that occupies a person's time.

Brushing teeth, grooming a pet, preparing a monthly financial budget, watching a movie with a loved one, dancing at a wedding, volunteering for a homeless shelter, and playing organized games are all examples of human occupations. Occupational science is a field of study that examines human occupation and seeks to understand how embodied occupational experiences impact human systems (Yerxa 2000). The gestalt of an individual's engagement in occupation cultivates identity, purpose, and meaning, and can impact health and well-being.

In the continuum of mental illness, there are many levels of life disruption due to mental disability, and the most severe is serious mental illness (SMI). The term SMI was initially defined in 1993 in a Federal Register report and included not only a description of the type of diagnosis, but also an indication of the degree to which the mental, emotional, or behavioral disturbance "has resulted in functional impairment which substantially interferes with or limits one or more major life activities." Since SMI is in large part characterized by degree of loss and/or deficiency of daily activity function, it follows that holistic recovery for individuals with SMI should include a focus on rehabilitation of premorbid daily activities, as well as supported discovery of new and meaningful occupations that promote mental health, wellness, and quality of life experiences. Indeed, a leading proponent of the recovery model has stated, "Psychiatry has lost much

M.M. Jackman (✉)
Little Lotus Therapy and Consulting, 3242 SW
Fillmore Street, Port St. Lucie, FL 34953, USA
e-mail: mjackman2317@gmail.com

through a dwindling presence of occupational therapy and has much to gain from a resurgence of interest among occupational therapy scientists and practitioners" (Davidson 2007, p. 60).

In this chapter, I define occupation and describe its impact on mental health and wellness. I discuss the alignment between occupational therapy theory, occupational constructs, and recovery principles, and advance a holistic framework for understanding an individual as an occupational being. I then provide an overview of how occupational therapy mental health assessment can examine occupational satisfaction and value, identify meaningful personal goals, and produce baseline and subsequent measures of life function and engagement. Finally, I explore occupational therapy interventions that can support improved recovery, subjective quality of life, and occupational engagement for individuals with SMI living in residential care facilities and preparing for community transition.

Defining Occupation: Humans as Occupational Beings

To understand how occupational therapy can support recovery for individuals with SMI, it is helpful to have a clear understanding of what occupation is and how occupation relates to the human condition both in general and, more specifically, in the lives of individuals with SMI. Occupational therapy practice began during the moral treatment movement and the subsequent mental hygiene movement, which called for reform and departure from asylum-based care of mental illness via medication, restraint, and isolation toward a new conceptualization of mental health and focus on how to help people to attain it. In the early twentieth century, a small group of physicians and health workers invested in the idea of compassionate care conceived a new type of therapy in which being occupied in daily activity could not only be supported to improve function, but also could be inherently curative.

Adolph Meyer, a psychiatrist, authored a seminal work entitled "Philosophy of Occupational Therapy", which is often considered the first piece of writing to explicitly conceptualize the idea that occupation can influence one's mental health (Baum 2002).

In speaking to the role of the new occupational therapy professionals in the mental health arena, Meyer (1922) stated, "Our role consists in giving opportunities rather than prescriptions. There must be opportunities to work, opportunities to do and to plan and create, and to learn to use material" (p. 7). The link between occupation and well-being has persisted in the positive health and recovery movements that define health not in terms of absence of disease, but in light of enabling opportunity for personal growth and nurturing the strength of the human spirit to create a life worth living, even during times of adversity. Thus, a positive view of health should focus not only on symptoms of disability, but also on "knowledge of mental and physical well-being [that] requires expanding the standard litany to ask: 'What did you do today that was meaningful or fulfilling? Does your life have dignity and direction? Are you loved and cared for by another? Do you love and care for others?' These, in turn, point to interventions, not about medications or medical interventions, but about opportunities for full engagement in living." (Ryff and Singer 1998, p. 21). The idea that engagement in occupation can be not only an end goal of therapeutic intervention, but also an open-ended means to experience wellness is a cornerstone of the occupational therapy foundation.

Drawing from existential and neurobiological perspectives that have shaped the study of human occupation (i.e., occupational science), a primary assumption of this chapter is that humans are occupational beings who are intrinsically driven to engage in occupation (Wilcock 1993). Heidegger believed that man is wrought and formed by intentional action, and contemporary occupational therapy theorists share the appreciation of the importance of human action from an

existential perspective, in that "it is through doing that individuals are shaped, and in turn, shape their very being in the world" (Sutton et al. 2012, p.143). Occupation differs from activity or action in that it carries and is embedded with both purpose and individualized and cultural subjective meaning, artistry, and expression.

Engagement in occupation extends beyond activity for the sake of survival or simple pleasure seeking and may be a uniquely human phenomenon. For example, all sentient beings engage in the activity of eating, yet humans engage in eating occupations as they celebrate rites of passage with parties centered around eating and drinking, take gourmet cooking classes, perform spiritual tea ceremonies, fabricate elaborate pottery and tableware, and organize food banks and charitable organizations to feed others in need. Occupations are not static mechanistic tasks, but are multidimensional transactions between person, physical environment, social milieu, and cultural contexts that are constantly influenced by changing personal motivation, purpose, meaning, and values. A holistic view of occupation considers the open dynamic system of back-and-forth interaction between intrinsic and extrinsic human factors in which engagement in an occupation affects not only the person performing it, but also the social and interpersonal network and physical environments in which it is performed, which in turn impact the individual performing the occupation.

Wilcock (2003) noted that "Because occupation is so all-embracing, and apparently, so mundane, its significance has failed to be appreciated sufficiently" (p. 157). For this reason, it is not uncommon for other members of an interdisciplinary treatment team to be unclear as to the breadth and depth that occupation encompasses. Literature and practice have indicated that the role of occupational therapists in psychiatric settings is often unclear (Harries and Caan 1994). This is particularly relevant in a clinical environment "in which traditional medical values of cure, acuity, and the sick role predominate. Physicians in such settings therefore may have greater enthusiasm for and

understanding of modalities that employ physical curative agents (such as those used in physical therapy) than for occupational therapy, which relies on the person being the agent of improvement through the medium of activity that develops new skills" (Yerxa 1992, p. 82).

On the surface, it might be easy for those unfamiliar with the profession to mistake occupational therapy for activity or diversion therapy, or view occupations as basic life skills to be taught and practiced to mastery. However, the examination of human occupation in the mental health setting is complex and it extends beyond the consideration of the "doing of activities," in that it requires an individualized multifaceted perspective of the function and purpose of occupation as part of each individual's unfolding life experience. While an in-depth discussion of occupational therapy and occupational science theory and philosophy is beyond the scope of this chapter, an overview of the link between occupation and health, and a discussion of the various aspects and constructs of occupation relative to the recovery model will help us to appreciate how occupational therapy assessment and treatment differs from and complements that of other mental health clinical disciplines, and how it can be applied to support holistic treatment for individuals with SMI.

Occupation and Health

Occupation impacts health and wellness. Wellness can be defined by the absence of negative symptoms and health conditions, and also by the presence of factors that indicate positive well-being. Reflecting on survival in brutal living conditions in the Nazi concentration camps, Frankl (1985, p. 126) wrote, "those who knew there was a task waiting for them to fulfill were most apt to survive." Occupational engagement and deprivation can be viewed as opposite ends of a spectrum in which "people are healthy or diseased in terms of the activities open to them or denied them" (Engelhardt 1977, p. 672). Indeed, prisons are designed to deprive individuals of

occupational engagement as a primary form of punishment. The phenomenon of occupational deprivation via the limiting of daily routines, tool use, and autonomy of occupational engagement in the prison setting has been found to correlate with episodic psychosis, inmate rioting, and suicide (Liebling 1993; Molineaux and White-ford 1999; Useem 1985; Whiteford 1997). Inactivity, or going from engagement in an activity to doing nothing, has been linked to negative mental health symptoms such as delusions in individuals with schizophrenia (Curson et al. 1992; Myin-Germeys et al. 2001), and increasing active engagement can aid in individual control of the intensity of psychotic symptoms (Breier and Strauss 1983). Even when psychiatric symptoms are in remission, individuals with SMI who spend less time actively engaged in non-passive occupations can have poorer measures of community function (Fervaha et al. 2014).

An alternative to measuring symptoms of disease and disability is to view wellness as one's level of subjective or psychological well-being. Subjective well-being or hedonic well-being relates to one's pursuit of pleasure and happiness, while eudaimonic well-being is more associated with living in accordance with one's personal meaning and authentic self (Ryan and Deci 2001). An exploratory qualitative study on perception and experience of well-being by Wilcock et al. (1998) found that occupation was the most common category of possible situation or environment that participants associated with well-being. Satisfaction with daily occupations has been linked to increased quality of life measures for people with schizophrenia (Aubin et al. 1999; Eklund et al. 2001). Ryff et al. (2004) described eudiamonic well-being as "purposeful life engagement [that] evokes an active, striving organism, sometimes in the face of adversity" (p. 1385), and this state of well-being has been measured with six constructs: self-acceptance; purpose in life; personal growth; positive relations with others; environmental mastery of daily life tasks; and autonomy. Eudaimonic well-being has been referred to as, "a life lived to its fullest

potential" (Steger et al. 2008, p. 23); similarly, the motto of the American Occupational Therapy Association is "Occupational therapy: Living life to its fullest". Meaning in life and engagement in meaningful activities have been associated with quality of life in individuals with mental illness (Goldberg et al. 2002; Stolovy et al. 2009), and occupational engagement can function to maintain subjective well-being and mutually reinforce perceived health for individuals with SMI (Eklund et al. 2012; Rebeiro and Cook 1999).

Occupational Therapy and the Recovery Model

The World Health Organization (2004) defined mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and fruitfully, and is able to make a contribution to his or her community" (p. 12). The recovery model represents an evolution of the humane treatment movements of the late nineteenth and early twentieth centuries. The recovery philosophy mirrors the historical paradigm shift from asylum-based care to mental hygiene, in that it proceeds from a medical model of treating disease, disability, and disorders, and focuses on helping people to fully experience and engage in life, rather than merely get through it. Recovery involves "A redefinition of one's illness as only one aspect of a multidimensional sense of self capable of identifying, choosing, and pursuing, personally meaningful goals and aspirations despite continuing to suffer the effects and side effects of mental illness" (Davidson et al. 2005, p. 15).

Similarly, occupational science theorists and occupational therapists conceptualize the function of human occupation in terms of how it supports the human capacity for "doing, being, belonging, and becoming" (Wilcock 2003, 2007). Humans have occupational needs such as accomplishment, affirmation, agency, coherence, companionship, and renewal, which help them to

achieve a sense of being, belonging, and becoming (Doble and Santha 2008). Both occupational therapy practice and the recovery model reflect the importance of understanding that recovery is a process and is not defined solely by outcomes. Some theorists and researchers of the recovery model have proposed a functional definition of recovery that conceptualizes recovery in terms of success with domains of daily activities (e.g., social, productive, recreation, spiritual), or includes measures of independent functioning as part of an operational definition of recovery (Harvey and Bellack 2009; Noordsy et al. 2002). Research has found engagement in meaningful occupation and independent functioning to be a dominant theme in recovery and its operational definition (Le Boutillier et al. 2011; Liberman and Kopelowicz 2005).

Onset or exacerbation of disability associated with SMI can result in suffering and changes in functional capacity. Research and theory have linked health and life satisfaction not to the degree of one's impairment, but to the ability to attain balance or congruence between an individual's capacity and goals (Pörn 1993; Reilly 1962; Yerxa 1998). A disruption in life functioning and subsequent experience of suffering requires one to reevaluate not only capacity in relation to goals, but also to formulate new occupational meaning, value, and identity in terms of new internal and external conditions to enable a healthy sense of coherence (Christiansen 1999; Persson et al. 2001). Subsequently, mental health and wellness do not occur in absence of disease and disability, but despite it. Even in the presence of psychotic symptoms, the subjective experience of recovery has been found to correlate with improved quality of life outcomes (Kukla et al. 2014). As such, well-being becomes "the sense that one's life is meaningful and purposeful,… an on-going, day-by-day-constantly unfolding phenomenon, not an end state that is once-and-for-all resolved." (Ryff and Singer 1998, p. 8). The ten constructs of recovery commonly cited in the literature are self-direction, individualized and person-centered, empowerment, holistic, nonlinear, strength-based, peer support, respect, responsibility, and hope (SAHMSA 2011).

Self-direction, Individualized and Person-Centered, Empowerment

The individual with SMI plays the primary role in determining the course and content of treatment goals and interventions. This is advocated in both the recovery model and in occupational therapy practice (AOTA 2008; Kielhofner 2002; Kielhofner and Burke 1980; Townsend et al. 2005). The experience of SMI can be paralyzing and bring feelings of utter lack of control of symptoms (e.g., the overwhelming fear and terror of a panic attack, the groundless feeling from the betrayal of a mind that hears voices others do not) and course (e.g., symptomatic relapse during unexpected life stress, or worse, with no apparent trigger). This feeling of helplessness can be exacerbated when an individual is hospitalized and loses control of daily rhythm, contact with loved ones, previous roles, and surroundings.

The element of choice and empowerment is central to occupational justice, which is the ability of all people to engage in meaningful occupations for the purpose of cultivating health and well-being, and perceived control has been associated with increased occupational performance and well-being (Eklund 2007; Stadnyk et al. 2010). Self-determination is not only a theoretical construct that adds to the element of person-centered planning, but also a factor that can positively affect functional performance and sense of well-being. Self-concordant goals, or goals that are intrinsically driven, and are aligned with one's sense of self, can increase experiences of subjective well-being, vitality, and meaningfulness of goal attainment (McGregor and Little 1998; Nix et al. 1999; Sheldon and Elliott 1999; Sheldon and Kasser 1998). Furthermore, goals that are intrinsically motivated have a more positive effect on mental health than goals that are extrinsically motivated, for control reasons (e.g., for reward, expectation or praise) (Sheldon et al. 2004). For example, individuals in an inpatient psychiatric setting who engaged in a 6-month course of occupational therapy focused on self-chosen therapy activities exhibited more improvement in measurements of suspiciousness and preoccupation than individuals who

participated in therapist-chosen activities (Hoshi et al. 2013). This may speak to the notion that self-direction and autonomy, even in acute stages of recovery, can contribute to therapeutic engagement.

While it is easy to engage in client-centered practice when the client and clinician agree on recovery goals, there must be a balance between management of risk, realistic expectations, and individual autonomy to ensure that beneficence and ethical care in practice are maintained (McColl et al. 2005; Rudnick 2002). Individuals with SMI who are in early stages of recovery may not have the insight or reality orientation to formulate realistic attainable goals commensurate with abilities or resources. In addition, individuals may be motivated by internal factors (e.g., delusions) to set goals that would result in harm to self or others. An occupation-based approach might offer an experiential alternative to verbal communication for goal formulation when an individual is not capable of logical and rational discussion. For example, rather than offering suggestions for appropriate therapy goals, an occupational therapist may introduce a variety of novel activities to provide opportunities for present-moment engagement, and then work with the individual to formulate meaningful recovery-oriented goals that align with these activities based on the interest and motivation generated by experience.

Holism and Nonlinear Human Function

Holism and the dynamic nonlinear nature of human function and health are concepts valued by both occupational therapists and the proponents of the recovery model. Occupational scientists view individuals as occupational beings that are in a constant dynamic state of being changed and causing change, rather than an as a static amalgamation of cells, organs, body systems, and physical and behavioral symptoms. In contrast to a more mechanistic reductionist model that requires focused examination of disease and deficits, holism in occupational therapy practice can serve as a mechanism for "putting the human back together again" (Yerxa 1993, p. 4).

Given the primary assumption that people are occupational beings, it follows that it is necessary to take the same holistic and nonlinear view of occupation to truly understand how occupation impacts a person's life. This includes going beyond a conceptualization of occupation as "what" a person does to include a consideration of the "why, who, when, where, and how" of occupation (Jackman 2014). In this way, one can adopt a holistic view of an individual with SMI as an occupational being who is immersed in his or her world, rather than as a patient with deficits and diagnoses to be molded to fit into a world already defined by his or her interdisciplinary team. In the following discussion, I present a framework that supports a nonlinear view of occupation to enable a perspective of the individual as an occupational being. Examination of the human-occupation interface can offer the occupational therapist and interdisciplinary team with unique multifaceted insight to inform treatment planning.

The *Why* of Occupation: Motivation and Value

The innate human will to act with purpose has been described from an evolutionary perspective in which, "The human brain cannot sustain purposeless living. It is not designed for that. Its systems are designed for purposive action. When that is blocked, they deteriorate, and the emotional feedback from idling those systems signals extreme discomfort and motivates the search for renewed purpose, renewed meaning" (Klinger 2012, p. 31). While activity to meet basic human needs is necessary on a primitive level, there seems to be a universal human striving for the intangible aspects associated with the purpose and value that we attach to activity. The human drive to engage in occupation is inherent and biological, and is motivated by immediate survival, social and environmental survival, and individual development, i.e., "the exercise of personal capacities to enable maintenance and development of the organism [which] is perhaps the most primary and least appreciated function of human occupation" (Wilcock 1993, p. 21).

While occupations are commonly categorized into three primary areas of work, leisure, and play, a more current perspective suggests that occupations should not be viewed categorically, but rather examined in terms of how they meet an individual's intrinsic needs for self-maintenance, expression, and fulfillment (Law et al. 1996). The Model of Human Occupation framework considers volition to be a person's primary organizing subsystem that subserves occupation and function of the human system, and one's volition is comprised of personal causation (i.e., capacity), values, and interests (Kielhofner 2002; Kielhofner and Burke 1980). Occupational value can be a precursor to experience of meaning in occupation, with the view that value can be concrete (i.e., occupation results in a necessary or desired product), symbolic (i.e., value dimension is more process based and significant at the personal, cultural, or universal level), or based in self-reward (i.e., personal enjoyment) (Persson et al. 2001). Moderate to strong correlations between occupational value and self-reported quality of life measures have been noted in individuals with long-term mental illness (Eklund et al. 2003).

Experiential opportunities for occupational engagement can influence and spark motivation, especially when an individual may be experiencing symptoms (e.g., decreased insight, cognitive dampening) that interfere with the ability to appreciate the more abstract promise of external reward consistent with of extrinsic motivation. Engagement in meaningful occupations, no matter how simple, can offer motivational benefits. For example, I have learned that if I have low mood and lack energy upon waking consistent with depression symptomology during relapse, I can immediately make my bed. By engaging in the simple occupation of bed making, I am able to commit to a decision and intention to move forward with my day, rather than retreat to bed and experience suffering in addition to pain. Through engagement in the simple task, I can gain momentum and intrinsic motivation that can result in a spillover effect to forthcoming activities. Use of an occupational therapy intervention designed to increase intrinsic motivation for individuals with SMI has resulted in improvement in intrinsic motivation and social behavior change in both individuals who were autonomy-oriented and who had motivational deficits (Wu 2001). To truly embrace a person-centered model of recovery for individuals with SMI, it is helpful to explore how occupation can influence motivation and why an individual might be moved to engage in a given occupation or role. This includes being mindful of the effects of factors that may mediate motivation, such as fluctuations in symptoms, the experience of medication side effects, changes in perceived self-efficacy, and the evolution of self-concept and identity.

The *Who* of Occupation: Identity and Meaning

Engagement in occupation helps an individual to form a basis for identity and life meaning, and this experiential wisdom in turn influences subsequent occupational engagement and creates a feedback loop between human being and human doing. In western society, much of who we are is tied to what we do and the roles that we play. The common reference point of doing forms a basis by which people can experience shared meaning and personal understanding (Christiansen 1999). When an individual undergoes role loss as the result of disease or disability, this affects identity, and can lead to increased dysfunction and overidentification with a patient or sick role (Dickerson and Oakley 1995; Versluys 1980). For example, schizophrenia can potentially "overtake and redefine the identity of the person," and has been termed as an "I am" illness (Estroff 1989, p. 189).

When I was first diagnosed with Major Depressive Disorder in an inpatient facility and, for the course of a few subsequent relapses, the symptoms were so consuming that I identified with the disorder. As I began to experience recovery by becoming more engaged in my world and the occupations that were meaningful to me, I realized that I was not "depressed," but was a mother, therapist, friend, artist, and inventor who was feeling awful, but impermanent symptoms of a predefined condition.

Occupational identity relates to the idea that one views oneself as an occupational being, and builds identity based on occupational engagement and roles that carry personal meaning (Kielhofner 2002). Self-complexity of identity that maintains authenticity of the self in terms of autonomy and meaning has been shown to predict both improved mental health and lower levels of perceived stress (Ryan et al. 2005).

A research participant in a qualitative study that examined occupational engagement in individuals with SMI defined disengagement from occupation as, "When you're completely devoid of motivation or ability to do anything you almost feel like a nonperson. It is like you have no purpose, you have no identity, you have nothing to define yourself" (Sutton et al. 2012, p. 145). Reestablishing identity and finding meaning in life are two of the four key processes of recovery as defined by Andresen et al. (2003). Life meaning has a profound impact on one's identity and it is difficult to truly understand who someone is without examining his or her subjective life meaning. Individuals with schizophrenia have reported lower levels of life meaning than individuals who do not have a psychiatric diagnosis (Chaudhary and Sharma 1976). However, people with SMI perceive meaning as a primary component of recovery, and have reported finding life meaning through work, social interaction, social roles, pursuit of goals, spirituality, and engaging in the process of recovery itself (Andresen et al. 2003; Copic et al. 2011; Feldman and Snyder 2005; Pettie and Triolo 1999).

From an occupational perspective, occupation can be a means to develop and express personal identity and experience meaning in life (Ludwig 2004). Engagement in meaningful occupations and in occupations that are valued can impact life meaning and satisfaction (Eakman 2013; Eakman et al. 2010; Eakman and Elklund 2012), and the importance of meaning within doing in the context of occupational performance contributes to motivation and sense of well-being (Carlson et al. 1998; Doble and Santha 2008; Pentland and McColl 2008). Frankl (1985) believed that people can discover life meaning by engaging in a

work or deed, by life experience or personal encounter, and by adaptation of one's attitude toward unavoidable pain and suffering. People in the process of recovery have reported finding meaning in the lived experience of mental illness (Pettie and Triolo 1999), and the recovery process has been shown to unfold in parallel with the sense of self (Davidson and Strauss 1992). Furthermore, a self-concept that builds on occupational identity formed by present-moment occupational engagement can be grounding and act as an anchor when one's mental conceptualization of self is affected by symptoms of SMI (e.g., delusions of grandeur).

Sources of life meaning as identified by the literature often contain the common thread of occupational experience. For example, Reker and Wong (1988) found that tasks to meet basic human survival needs, leisure and hobbies, creative work, interpersonal relationships, educational or vocational development, personal development, activism, altruism, values and ideals, cultural traditions, leaving a personal legacy, and religion are sources of personal meaning. Similarly, Moll et al. (2015) performed a scoping review of empirical literature examining occupation and wellness, and posited the following dimensions of distinct and meaningful occupational experience: taking care of one' s basic needs, experiencing pleasure and joy (e.g., through leisure activities); activating the body, mind and senses; connecting with others; building security and prosperity; developing capabilities and potential; developing and expressing identity; and contributing to community and society.

A qualitative study of meaningfulness and occupation in individuals with severe and persistent mental illness identified five themes of meaning in occupation: connection with others and the external environment; having enjoyment and fun; productivity and having a sense of achievement; being occupied and having routines; and maintaining health (Leufstadius et al. 2008). Understanding an individual's occupational identity and life meaning serviced through engagement in occupation can not only provide a baseline for assessment, but also inform the

recovery process by ensuring that the individual is seen through his or her diagnosis. Much like motivation, one's identity is not static, but will inevitably change over the course of time and rhythm of life.

The *When* of Occupation: Time, Temporality, and Occupational Balance

Occupation is influenced by temporal contexts, such as clock-based schedules, internal body rhythms, and habit-based routines, and also by more subjective factors such as the personal experience of time duration in occupation and the sense of the continuity of the passage of time. Yalmambirra (2000) used the term "white time" to describe the artificial control of human rhythms and routines by clocks, calendars, and time-based schedules. This phenomenon is particularly notable in residential facilities that have set schedules for sleeping and waking, eating, hygiene, daily activities, and medication administration, and thus impose institutional zeitgebers, or external controls, onto individuals' internal rhythms.

Individuals with SMI such as schizophrenia, bipolar disorder, and major depression frequently have disruptions in circadian rhythms and sleep patterns (Cohrs 2008; Jagannath et al. 2013; Manoach and Stickgold 2009; Martin et al. 2001, 2005; Wulff et al. 2012; Wulff et al. 2009), and these disruptions have been associated with decreased measures of quality of life (Hofstetter et al. 2005; Krystal et al. 2008; Ritsner et al. 2004). Fatigue and fluctuating energy levels that do not align with a preset institutional schedule can impact compliance with and engagement in daily treatment activities, even if the individual is motivated and willing to participate. Understanding an individual's rhythm of doing and sleeping can help clinicians to identify treatment modalities to impact these rhythms, to compensate for their effects, and to provide environmental and temporal modifications to support engagement until an individual's circadian rhythms and sleep patterns stabilize.

Examination of the construct of time and occupation and their relationship to function and well-being extends beyond time as a marker of life activities and awareness of differences in daily rhythms. Temporality refers to the phenomenon of time as relative and not absolute. Larson (2004) described six variations of temporality that can impact subjective response to occupational engagement: protracted duration (i.e., perceived time is longer than clock time); temporal compression (i.e., perceived time is shorter than clock time); flow (i.e., a sense of timelessness); interstitial time (i.e., waiting and future-oriented expectancy); temporal rupture (i.e., perceived time is disrupted due to life changing events and/or disturbed or altered daily routines); and synchronicity (i.e., congruence between perceived time and click time). Since the subjective perception of the passing of time can contribute to affective experiences such as pleasure, anxiety, boredom, and restlessness, this ancillary effect of engagement should be considered when working with individuals who may be prone to these symptoms. Noncompliance with group or therapeutic activities can often be attributed to SMI symptoms. However, if an individual finds a group activity or therapeutic modality to be boring or dull, this could exacerbate existing feelings of fatigue due to medication side effects, or lead to an increase in affective depressive symptoms.

Variations in temporality are affected by the nature of occupational engagement. For example, a flow experience in which time is suspended occurs when an individual is completely absorbed in an occupation. However, varied temporality and resultant subjective affect is not a purely passive experience, in that people can manipulate the perception of time by modifying the nature of occupational engagement, such as when doodling during a tedious lecture to make time seem as if it is passing faster (Flaherty 2003). Observation and probing to determine how an individual with SMI perceives time at baseline and relative to level of occupational engagement could inform treatment in terms identification of specific activities that can evoke positive subjective temporal experiences.

Individuals with schizophrenia have been found to sense time differently than can be explained by the typical environment- and

activity-influenced variation in temporal perception. Research has found that in these cases, the experience of time passing does not always match the actual duration of time as measured by clock time (Freedman 1974; Kwang-Hyuk et al. 2009; Tysk 1984). This difficulty with time perception can worsen with positive symptoms and increase with cognitive demands (Petersburs et al. 2013). In addition, disruption of time continuity, which serves to provide reference to the world and a stable functional synthesis of past, present, and future, and impaired future-oriented time perception can be experienced by individuals with schizophrenia (Giersch et al. 2015; Martin et al. 2014). Deficits in one's ability to feel grounded and aware in the passing of time can be not only detrimental to engagement in daily life activities and social interaction, but also be a possible source of disorientation, anxiety, and confusion, especially when one may be living in an unfamiliar environment such as a residential or inpatient facility.

A final consideration in time and temporality of occupation is the concept of occupational balance. Occupational balance involves the perception that one is experiencing a health-giving amount and variation of occupations. Whether perceived by objective (i.e., equal distribution of actual occupations across all possible occupational domains) or subjective (i.e., congruence between ideal and actual balance of occupations) means, it has been associated with measures of well-being (Sheldon et al. 2010; Wagman et al. 2012). Life balance has been defined as "a satisfying pattern of daily activity that is healthful, meaningful, and sustainable to an individual within the context of his or her current life circumstances" (Matuska and Christiansen 2008, p. 11). Individuals with schizophrenia can have difficulty organizing daily occupations and managing time to create an occupational balance of passive and active occupations and a functional time-use framework (Bejerholm and Eklund 2004; Neville et al. 1985, Weeder 1986). In addition, life balance can be affected by one's environment if the environment is not under a person's control (Matsuka 2012).

The *Where* of Occupation

Occupation affects and is affected by the physical, cultural, and social environments, and these contexts are considered as integral factors in occupational performance and its link to health and to functional capacity for goal attainment (American Occupational Therapy Association 2008; Dunn et al. 1994; Fidler 1996; Pörn 1993). Occupational therapists assess the physical environment to make recommendations for and adaptations to physical contextual factors (e.g., equipment, tools, physical structure and layout, furniture) to support success with occupational engagement. The physical environment can not only be manipulated to directly support occupation, but also contribute to a milieu that can indirectly impact feelings of safety, security, and well-being. For example, an individual who has difficulty integrating focal and ambient visual and auditory stimuli, or has difficulty with figure ground perception may communicate and focus better in a physical environment that is quiet and uncluttered, or benefit from use of noise canceling headphones during busy times such as shift change.

Much of the emphasis on the physical environment in inpatient settings relates to risk management, safety, and protection from harm. However, lack of control over one's physical environment, structure, surroundings, ambient stimuli, and design has been linked to feelings of helplessness and poorer mental health (Evans 2003). Conversely, improved physical design, opportunity for decoration, and available physical and recreational amenities have been shown to have a significant relationship to indicators of psychosocial adjustment, independent living, security and self-identity for individuals living in inpatient psychiatric facilities (Shumaker and Reizenstein 1982; Timko 1996). Measurement of physiological health indicators (e.g., blood pressure, pulse rate) and psychological self-report of health has revealed that people undergoing medical procedures such as blood draws prefer nature-influenced atmosphere over ambient television and more urban environmental conditions and recover from stress inducing situations faster in settings with a natural aesthetic (Ulrich et al. 1991, 2003).

The physical environment in psychiatric facilities can be manipulated to promote social interaction and decrease isolation (Holahan 1972; Holohan and Saegert 1973; Osmond 1957). In terms of human occupation, environment also includes consideration of the social context. Clark and Lawlor (2009) described the importance of examining not only the activity construct of occupation, but also the social actors who are engaged in occupations. Similar to the physical context, while individualized adaptations to the social context can directly support occupation, the social environment itself can impact subjective well-being for people with SMI. For example, DeVries and Delespaul (1989) used an experience sampling method to measure the impact of physical–social context on mental state. They found that individuals with schizophrenia living in inpatient facilities reported increased depressive symptoms when alone, a drop in self-evaluation of mental state in a crowded environment, and optimal self-evaluation of mental state when in the company of one to three people. Inpatient clinical staff provides more than prescribed treatment interventions, but they can also serve as therapeutic means via quality of their interaction and presence. Individuals with SMI have linked satisfaction with psychiatric services to social contextual variables such as staff alliance, staff empathy, and feeling comfortable when talking to staff (Howard et al. 2003). Consideration of an individual's physical and social environments can provide insight as to what types of support an individual may need to experience meaningful occupational engagement in the recovery process.

The *How* of Occupation: Occupational Engagement

The primary goal of occupational therapy is to support and enable each person's "health and participation in life through engagement in occupation" (American Occupational Therapy Association 2008, p. 625). While early occupational therapy practice models focused more on performance, independence, and skill level, which tend to be objective and outcome dependent, the level of one's engagement in occupation is process-driven and is tied to one's

subjective sense of being, presence, and fulfillment. The construct of engagement speaks to the manner of how an individual performs an occupation, and can be viewed as the degree to which an individual involves and invests him or herself in a particular task (Jackman 2014). The personal value of engagement in occupation lies not only in its purpose or outcome, but also in its resultant subjective experience (Hasselkus 2006).

Sutton et al. (2012) studied different levels of occupational engagement from the perspective of individuals in recovery from SMI, and found that various levels of engagement could offer different therapeutic benefits in response to fluctuating needs and states. For example, disengagement could foster asylum to allow for healing by removing demands of daily activity in acute stages of illness, while partial engagement offered a sense of grounding in the repetitive nature of simple tasks that created an opportunity for respite and reconnection with physical and sensory motor tasks in the present moment. Everyday engagement marked a reconnection with others, and full engagement resulted in experience of autotelic flow-type states. Participant responses collectively indicated that recovery involved not a forward progression in level of engagement, but a therapeutic freedom to move in a volitional nonlinear way between engagement states as needed.

Engagement can both be influenced by and can influence positive and negative psychiatric symptoms. Individuals with schizophrenia who reported a low overall level of engagement through time-use diaries also exhibited low measures of sense of coherence and mastery, experienced an external locus of control, and had more negative, positive, and general psychiatric symptoms (Bejerholm et al. 2006; Bejerholm and Eklund 2007). In addition, low level of occupational engagement was associated with withdrawal and low sense of meaning. A qualitative metasynthesis of studies examining occupational engagement in people with psychosis identified the following as self-reported factors that help occupational engagement: adequate challenge, assistance with self-care and domestic tasks, environment and location of the activity,

fulfilling hobbies, interest, maintenance of ordinary activities of daily living, making positive lifestyle changes, presence of companion animals, previous experience with an activity, religious practices and belonging, and sufficient financial and transportation resources (Hitch et al. 2013).

Quality of Life Reporting in People with SMI

Practitioners of both the recovery model and of occupational therapy value an individual-centered perspective on therapy goals that support the person's ability to live in a way that is meaningful, healthy, and fulfilling. When examining occupational therapy assessment and services commonly provided in mental health settings, it is important to simultaneously consider the aspects of occupation and engagement that people with SMI have indicated to be important to quality of life. Numerous researchers have employed a qualitative method of inquiry to try to understand life meaning as defined by individuals living with SMI. While review of studies related to occupational engagement and quality of life can identify themes to guide practice, these should be considered with the caveat that "meaning is contingent upon interpretation, and interpretation is never entirely detached and analytic, but is always to some extend biased by factors such as the interpreter's beliefs, language, and practices" (Zahorik and Jenison 1998, p. 82). Furthermore, subjective measures of quality of life and life satisfaction have not consistently correlated with objective measures of quality of life (Dickerson et al. 1998), possibly due in some part to the observer's effect on interpretation in conjunction with more obvious influence of confounding variables such as poor insight and cognitive difficulties.

Assessment

Occupational therapists use comprehensive and holistic assessment to examine all factors that can influence, contribute to, hinder, and support an individual's motivation, performance, participation, and engagement in life occupations. Standardized assessment tools used for individuals with SMI can measure baseline function in terms of occupations of self-care (e.g., dressing, grooming), and instrumental activities of daily living (e.g., managing finances, shopping), as well as subjective variables such as satisfaction with daily occupations. The primary objective of assessment is to enable therapist and individual collaboration to formulate personal meaningful goals, to create an individualized occupational profile, and identify subsequent interventions and supports based on individual needs and the reason for hospitalization (American Occupational Therapy Association 2008). While standardized tests offer psychometric reassurance of validity and reliability, it is important to be aware of the impact of personal (e.g., circadian rhythms), and environmental factors (e.g., temporal context, physical environment) on the validity of assessment results, and to supplement findings with clinical observations and interviews, as functional performance and motivation may fluctuate based on medical and contextual factors.

Self-assessment and Subjective Assessment Measures

Much emphasis in interdisciplinary assessment is placed on clinician evaluation of individual function, diagnosis, and subjective state to identify goals, needs, and interventions that will best support recovery, and balance both risk factors and quality of life outcomes. While these clinical data are crucial to treatment planning, self-assessments of performance, function, and satisfaction can provide a means for ensuring that the individual's perspective is part of the interdisciplinary team assessment. The Canadian Occupational Performance Measure (COPM; Law et al. 1991), the Satisfaction with Daily Occupations-13 (13-item version, SDO-13; Eklund et al. 2014), the Engagement in Meaningful Activities Survey (EMAS; Goldberg et al. 2002), and the Occupational Self Assessment (OSA) (Baron et al. 2006) are three assessments

that elicit individual self-assessment to satisfaction and degree of meaning in daily occupations.

The COPM is a standardized semi-structured interview in which an individual identifies areas of occupation that he or she would like to improve and assigns a level of importance to each area. The individual then selects five areas that are most important and rates performance and satisfaction with these areas. Systematic review of the use of the COPM in occupational therapy literature found that it provides adequate reliability, validity, and responsiveness and has been used as a standard for comparison in psychometric studies of similar assessment tools (Carswell et al. 2004). Because the COPM is client-centered, it represents client-identified assessment domains, scoring, and areas of targeted intervention, and may not align with areas identified as important by the clinical team. Thus, if a client identifies a problem in occupation that the clinician does not observe or, conversely, if the client denies a problem that is clinically observed, the client's subjective assessment is nonetheless represented in COPM scoring and interpretation (McColl et al. 2005). However, such tools require a certain level of insight and self-awareness to present a valid client perspective (Tryssenaar et al. 1999; Waters 1995) and if an individual is having difficulty with reality orientation and/or experiencing a lack of insight to mental illness, they might be better suited for use further along in the recovery process.

The SDO-13 was developed to measure satisfaction with daily occupations in individuals with mental illness, and was designed to offer a structured, systematic, and efficient alternative to the more open-ended COPM (Eklund et al. 2014). The tool is a structured interview that measures individual satisfaction with 13 items in the areas of work/studies, leisure, home maintenance, and self-care occupations, and has satisfactory internal consistency and construct validity based on initial psychometric testing.

The Engagement in Meaningful Activities Survey (EMAS; Goldberg et al. 2002) is a 12-item survey that uses a 5-point Likert scale to measure subjective meaning in terms of self-care, identity, creativity, having a sense of accomplishment, having a feeling of competency, being valued by other people, helping other people, experiencing pleasure, having feeling of control, expressing personal values, having a sense of satisfaction, and being presented with an appropriate level of challenge. The EMAS has shown good to very good test–retest reliability, internal consistency, and convergent and predictive validity (Eakman 2011; Eakman and Eklund 2012).

Measures of Occupational Engagement and Function

Prior to conducting a more focused assessment of function for specific occupational domains, it can be helpful to get a holistic picture of an individual's overall strengths, needs, and premorbid and current occupational functioning. The Occupational Performance History II (OPHI-II; Kielhofner et al. 2001) is an interview-based assessment that uses the following three formats for measuring occupational adaptation and function: (1) semi-structured interview that probes occupational choices, critical life events, daily routines, occupational roles, and occupational behaviors; (2) rating scales for occupational competency, occupational identity, and occupational behavior settings (i.e., environments, contexts, objects); and (3) qualitative narrative data collection related to occupational life history. Finally, the Occupational Self Assessment (OSA) (Baron et al. 2006) is a self-report tool designed to rate and assess an individual's competency and value of 21 areas of occupational performance. The OSA offers a structured rating scale format by which to support client self assessment of occupation and engage in collaborative problem solving to formulate person-centered goals. In addition to having adequate psychometric properties, a qualitative study of perceived use of the OPHI-II found that both therapists and clients in mental health settings reported value in the tool's ability to assess and appreciate an individual's lived occupational experience, and that this resultant narrative slope positively influenced intervention (Apte et al. 2005; Ennals and Fossey 2007; Kielhofner et al. 2001; Thomson 1992).

The Profile of Occupational Engagement in people with Schizophrenia (POES) provides a snapshot of an individual's current occupational engagement via the use of 24-h time-use diaries (Bejerholm et al. 2006). The POES includes nine rating scales based on the following categories of occupational engagement: daily rhythm of activity and rest, variety and range of occupations, physical environment, social context, social interplay, client interpretation, degree of meaningful occupations, routines and performance initiation (Bejerholm et al. 2006; Edgelow and Krupa 2011). If an individual is a reliable historian in terms of daily activities, this tool can provide a real-time baseline level of overall occupational function from which it assesses occupational balance and engagement and possible impact on health and life goals.

Self-management and Activities of Daily Living

Occupation encompasses self-care (e.g., dressing, eating) and instrumental activities of daily living (e.g., medication, money management). Occupational therapy evaluation includes focused assessment of these mundane and yet vital activities that are frequently affected in individuals with SMI. Observation-based life skill batteries can be used to establish a measure of daily activity function and/or serve to predict success upon discharge to a community setting or independent living. These assessments include the Kohlman Evaluation of Living Skills, the Milwaukee Evaluation of Living skills, the Life Skills Profile, the Assessment of Motor and Process Skills (AMPS), and the Bay Area Functional Performance Assessment (Houston et al. 1989; Fisher 2003; Leonardelli 1988; Rosen et al. 1989).

The Assessment of Motor and Process Skills (AMPS) is an observation-based assessment that measures the quality of performance of 36 skills (16 motor skills and 20 process skills) necessary to perform activities of daily living (Fisher 2003). The AMPS has been shown to have good psychometric properties and good predictive

validity of evidence of a client's need for assistance in the community (Bernspang and Fisher 1995; Kirkley and Fisher 1999; Merritt 2011). The Bay Area Functional Performance Measure (BAFPHE) is a test that was initially designed to measure functional occupational performance of individuals living in psychiatric hospitals (Houston et al. 1989). The assessment is comprised of a Task-Oriented Scale that includes cognitive, performance, and affective component measures, and a Social Interaction Scale, and has been shown to have satisfactory psychometric properties. In addition, the Task-Oriented Scale has been correlated with scores on the three subscales of the Weschler Adult Intelligence Scale (WAIS) and the Kohlman Evaluation of Living Skills (Thibeault and Blackmer 1987; Houston et al. 1989).

Sensory Processing

Individuals with SMI can exhibit difficulties processing visual, auditory, and somatosensory input, and can exhibit visual motor disorganization (Brown et al. 2002; Butler and Javitt 2005; Giersch et al. 2013; Javitt 2009a, b; Lipskaya-Velikovsky et al. 2015). Tools such as the Adolescent and Adult Sensory Profile (Brown and Dunn 2002) and the Adult Sensory Processing Scale (Blanche et al. 2014) can provide a means to examine patterns in self-reported difficulties with processing and modulation of sensory information. Enhanced understanding of sensory difficulties can inform recommendations for milieu, physical environment, and sensory modalities to promote an optimal context for feelings of comfort, self-regulation, coping skills, sense of security and learning.

Occupational Therapy Interventions

Occupational therapy as a profession encompasses a broad range of clinical specialties, and the field is relatively young in terms of empirical and evidence-based research, particularly in the area of psychosocial occupational therapy.

Evidence for many of the interventions commonly used in psychosocial occupational therapy is scarce and/or emerging, particularly in the inpatient psychiatric setting. Thus, I have expanded the literature base in the sections below to include research in community and home-based settings for individuals with SMI, and interventions that might be multidisciplinary in nature, but utilize conceptual occupation-based constructs.

Therapeutic Use of Self

Therapeutic use of self has been defined as "practitioner's planned use of his or her personality, insights, perceptions and judgments as part of the therapeutic process" (Punwar and Peloquin 2000, p. 285). Full presence with an individual is essential to the empathic process in occupational therapy practice, and the empathic encounter should include the process of "being with" as an enactment of "doing with" (Peloquin 1995). Warmth, empathy, trust, and acceptance have been identified as occupational therapist characteristics valued by individuals with SMI, as exemplified in the following statement, "I think it's very important that any therapist displays care for their client —that they are genuinely interested, that it's not a nine to five job. You know because if somebody is showing genuine concern that's probably worth a hundred tranquillizers or antidepressants" (Blank 2004, p. 121). Embodiment of a mindful presence and attitude of nonjudgmental acceptance and respect is a primary intervention that the occupational therapist can provide to an individual who may be experiencing pain due to loss of autonomy, life role changes, anxiety, disorientation, fear, frustration, anger, or sadness due to symptoms of SMI.

Habits, Routines, and Time-Use

In the early 1900s, habit training was introduced at John Hopkins Medical Center, and is considered by many theorists to be the first occupational therapy treatment intervention. This intervention approach proposed that for many individuals, a mental illness such as schizophrenia could result in dysfunction in daily life due to a deterioration or imbalance of occupational habits. Early occupational therapists introduced therapeutic occupations such as weaving, art, and bookbinding to clinical practice, and helped individuals to engage in purposeful daily activities. These goal-directed activities were used to help individuals learn new skills to be productive, and to gain the therapeutic benefits of a structured daily schedule. In the habit training model, insight, orientation, and awareness were not viewed as prerequisites to experiencing adaptive and healthy life habits, but rather could be nurtured when daily activities and functional habits were supported as a therapeutic means. Indeed, contemporary recovery theorists have suggested that developing new habits can precede, rather than follow, development of insight (Davidson 2007).

Individuals with SMI have indicated that everyday routines and activities are important pathways to recovery, and rhythm of life and daily activities can become impaired during acute mental crises. In addition, social rhythm disruption events have been found to predict depressive symptoms and episodes (Borg and Davidson 2008; Borg et al. 2011; Sylvia et al. 2009). As one's habits are embedded in the sociocultural and physical environment context, a thorough understanding of meaningful habits requires examination of the institutional environment as a factor that shapes habit development and adaptation (Yerxa 2002). Habits and routines are not only affected by psychiatric symptoms, but also by temporal and environmental rigidity typical of an inpatient facility with a focus on safety and restrictions, such as a forensic psychiatric setting. While measures to ensure protection from harm and violence are necessary, these safeguards can lead to lack of flexibility in establishment of meaningful routines, and potentially lead to a diminished independence in scheduling daily activities. Individuals can become dependent on the institutionalized schedule to dictate what activities they will do, and when and where they will take place.

The ability to maintain a sense of occupational balance through meaningful time-use patterns contributes to healthy life habits. Individuals living in psychiatric units and in community settings have reported engaging in predominantly passive activities, and having increased idle time, and limited and repetitive activity choices (Delespaul and DeVries 1987; Farnworth et al. 2004; Katsakou and Priebe 2007; Krupa et al. 2003; Letendre 1997; Quirk and Lelliott 2001; Quirk et al. 2006; Shattell et al. 2008; Suto and Frank 1994; Weeder 1986). This can result in an occupational imbalance characterized by having too many passive activities with little opportunity for active and meaningful engagement, especially in more restricted settings.

A qualitative occupational time-use study of individuals living in a secure forensic psychiatric unit found that individuals regarded their day-to-day routine as a series of activities to prevent boredom between meals, and verbalized that the goal of their daily routine was to "kill time" until they could return to the outside world (Farnworth et al. 2004). They subsequently experienced a disconnection from active pursuit of meaningful goals, roles, and routines, as this was a process they associated exclusively with life outside the hospital. However, these individuals reported that they found meaning and satisfaction in activities and groups that offered challenge and novelty. Similarly, in a single case qualitative study, an individual with a lived experience of psychosis described his daily routine as characterized by monotony and passive activity that made him feel like he was "wasting his life away," as he was "lazy, nonproductive, overeating, oversleeping, and not doing anything … [but] having coffee, watching TV, smoking, [doing] drugs and alcohol, or sleeping" (Legault and Rebeiro 2001, p. 94). However, he reported gains in hope and purpose when he discovered meaningful occupations to engage in, such as journaling and writing about his experience with schizophrenia, setting up art exhibits, and making patchwork quilts for the homeless (Legault and Rebeiro 2001).

Occupational therapists can adapt familiar or passive activities to create added challenge to foster interest and motivation for individuals who are experiencing boredom and are unable to find and initiate opportunities for active engagement. For example, instead of an individual simply looking through a magazine, the therapist could create a scavenger hunt of images or words to find in a set of magazines spread throughout a unit or within a group to add elements of problem solving and competition to a typically passive low challenge activity. This activity could incorporate skill building via use of a checklist that then could be applied to other life skills (e.g., grocery shopping). The occupational therapist can collaborate with group providers in a psychosocial treatment mall who are teaching skills such as court competency or social skills, that may be viewed as boring, to integrate fun and creative modalities such as games and crafts. These occupation-based modalities can add an element of novelty and meaning to inspire intrinsic motivation for active engagement.

The occupational therapist can teach an individual who is disengaged or participating in predominantly passive activities about the various levels of occupational engagement and assist him or her in identifying preferred activities of each type. In addition, the occupational therapist can collaborate with the individual to develop guidelines for when it may be appropriate to engage in identified activities based on mood, opportunity, setting, and scheduled responsibilities. Action Over Inertia (AOI) is an occupational therapy time-use intervention that was developed to help individuals with SMI experiencing impoverished daily routines predominated by passive activities (e.g., sleeping) to improve daily occupational balance and engagement (Edgelow and Krupa 2011). A pilot randomized controlled study of AOI used in an Assertive Community Treatment (ACT) setting found that following intervention, individuals in the AOI group experienced a significant decrease in daily sleeping time when compared to control group, and this decrease in sleep time resulted in increased time in active engagement.

Habituation refers to one's daily occupational patterns, roles, and routines, and can be a semi-autonomous process (Kielhofner 1980, 2002).

Daily habits and routines are not commonly a focus of explicit regard and contemplation in the therapeutic process, possibly because of the semiautonomous nature of this phenomenon. However, onset of illness or disability and resultant deterioration or loss of habits can often prompt the need for conscious attention to habits (Yerxa 2002). An occupational therapist can support an individual to explore and increase self-awareness of daily habits and routines, and provide education on building balanced, healthy and meaningful habits and routines that will support recovery.

Occupational therapists can utilize knowledge of an individual's motivation, physiological rhythms, interests, and personal goals to help identify and explore new meaningful occupations, and specific functional habits and routines that could be generalized to the outside world upon discharge. This is especially important when individual goals involve lifestyle changes. For example, Carlson et al. (1998) found that it is essential for lifestyle changes to be linked to daily routines to be successful. In a qualitative study of medication adherence, 91 % of participants reported that they used activity-based methods that were attached to existing habits and routines (e.g., putting on jewelry or turning on coffee pot in the morning just before taking medications) to prompt and cue them to take medication (Sanders and Van Oss 2013). Individuals with SMI who experience cognitive and memory impairments that impact medication adherence can benefit from individualized occupational therapy strategies that they can integrate into existing daily habits, and/or to create new routines in the context of self-management and self-care.

Living Skills and Daily Occupational Engagement

Impairment in daily self-care and self-management is a frequent concern for individuals with schizophrenia and SMI who require hospitalization. Self-care and self-management life skills interventions are primary interventions that occupational therapists in an inpatient psychiatric setting provide (Simpson et al. 2005). Unfortunately, due to the more rigid institutional structure of inpatient settings, and often restricted material use due to risk for self-harm and danger to others, these settings can inherently provide less opportunity for individuals to engage in domestic activities of daily living. The concept of recovery can seem large, overwhelming and unattainable for people experiencing life disruption due to difficult symptoms and changes in life roles and environment, and a focus on essential and mundane self-care tasks can provide therapeutic benefits as both a process and an outcome in the acute phases of recovery. Interventions that focus on self-care activities of daily living (ADLS; e.g., grooming, dressing, eating), self-management, and instrumental activities of daily living (IADLs; e.g., medication management, transportation, meal planning and preparation) can prepare an individual for return to the community and provide a sense of meaning and domesticity to what can often feel like a sterile clinical environment.

Self-Care

Individuals in an acute stage of SMI might not be motivated to engage in grooming activities due to decreased awareness, insight, and energy. An occupational therapist can use knowledge of the individual to customize the occupation of grooming to promote engagement by providing choices and supports that align with individual needs and interests. For example, the occupational therapist can adjust the temporal context (e.g., morning vs. evening for showering), physical environment (e.g., bedroom vs. crowded bathroom for grooming), learning methods (e.g., backward chaining, errorless learning, video modeling), as well as offer opportunities for individual decision-making (e.g., flavor of toothpaste, scent of soap) to increase intrinsic motivation, meaning, and self-efficacy.

In addition, individuals with SMI can experience physical risk during self-care activities due to medication side effects (e.g., dry mouth, extrapyramidal symptoms, orthostatic hypotension) and symptoms of disorder (impulsivity,

diminished environmental awareness). This can result in the possibility of harm during mundane tasks, such as eating and ambulation. A systematic review found that dysphagia (i.e., difficulty swallowing) prevalence in individuals with mental illness ranged from 9 % to as high as 42 %, and that people with organic mental illness were 43 times more likely to die of choking or asphyxia than people in the general population (Aldridge and Taylor 2012). The occupational therapist can work with individuals who are exhibiting symptoms of dysphagia or increased risk for falls to remediate skills and identify strategies and environmental supports to improve both safety and quality of engagement during self-care tasks.

Self-Management and Instrumental Activities of Daily Living

Life skills and psychosocial skills interventions that relate to IADLs can be provided individually or in a group setting, and can be individualized or manualized in approach. While psychosocial skills interventions that utilize modules, such as the UCLA Social and Independent Living Skills Programs (Liberman et al. 1993), can offer a structured and consistent format for teaching, skills taught in a clinical environment may not generalize to the community setting, and reviews regarding effectiveness of structured skills training programs have been mixed (Bellack 2004; Liberman et al. 1986; Pilling et al. 2002; Wallace et al. 1992).

The In Vivo Life Amplified Skills Training (IVAST) program was developed to integrate intensive case management and behavioral strategies with skills training in an effort to promote generalization and transfer of IADL skills to community living. A study of this approach found that this approach combined with skills training resulted in improved gains in social adjustment when compared to skills training alone (Glynn et al. 2002). A study by Liberman et al. (1998) compared the effects of a psychosocial skills training program (i.e., UCLA Social and Independent Living Skills Program modules for basic conversation, recreation for leisure, medication management, and symptom

management) to that of a psychosocial occupational therapy intervention (i.e., art and craft modalities). Liberman et al. reported better performance of life skill function (e.g., management of personal possessions, food preparation, and money management) with the life skills intervention. However, the occupational therapy modality used in the study was a craft-based activity that did not address social skills, and thus the methodology did not allow for comparison of two intervention modalities that were targeting the same foundational skills. This observation speaks to the lack of clarity that many professionals have regarding the dynamics of occupation, the ways in which it impacts the human system, and the profession of occupational therapy itself.

While life and social skills programs that utilize a prescriptive manual can provide structure and consistency for clinicians, these programs may not allow for a more individualized view of individual occupation, i.e., examine the who, why, when, where, and how of occupation as a frame for which to reference occupational functioning. A manualized approach can teach an individual about leisure as a means for recreation as a life skill, but treatment may not include experiential opportunities to explore different activities to understand how they could be used for comfort, self-management based on level of engagement, alignment with physical functioning, and consideration of leisure access and engagement in terms of overall patterns of time-use and occupational balance. For example, an individual who is experiencing akathisia as a medication side effect can be taught to adhere to his medication regimen with training in medication management skills, but to maintain medication compliance, he may need to learn to live with the discomfort of akathisia. The occupational therapist could work with him to determine which leisure and self-management occupations can empower him to cope with physical feelings of restlessness and subsequent affective pain (e.g., running, racquetball, swimming, vacuuming, meditation), and how he can incorporate these activities into his daily routines and habits. In this way, an individual can begin to learn how

occupational engagement can assist in recovery and quality of life. Finally, the occupational therapist can provide adaptations to support an individual in being better able to self-manage daily activities (e.g., visual schedule of daily activities, timer for taking medication).

Leisure

In the western culture, leisure activity is often viewed as nonproductive, and less important than other occupations, such as work and self-management. For individuals with SMI, leisure tasks can serve as a necessary component of a balanced life. In addition to providing enrichment, engagement in leisure occupations can provide an individual with meaningful social life roles, opportunities for problem solving, means of self-regulation, and outlets for creativity and self-expression. Arts and crafts have traditionally been used by occupational therapists working in mental health settings as a means by which to engage the mind, body, and creative spirit.

During an admission in an inpatient mental health facility as a young occupational therapy intern, I was scheduled for an occupational therapy group. I remember feeling shame, anger, and helplessness, no motivation, and was having a difficult time with my new medications, which made me feel simultaneously restless and exhausted. The occupational therapist gave me a raw ceramic mug and showed me how to apply the glazes. As I painted that mug, I felt human. In retrospect, I think that through the process of transforming a blank colorless cup into my own creative work, I had planted the seed for how to initiate my own transformation. Ever since, I have found creative expression, whether through art, music, or poetry, to be an essential tool for my own ongoing recovery.

For individuals with SMI, leisure tasks can be viewed as having a temporal quality of not being as stringently bound by time or pace, and thus more conducive to enjoyment and presence. They can also serve as a means to social connection, though barriers such as limited finances, transportation, and physical disabilities could limit leisure engagement (Pieris and Craik 2004, 2006). When an individual is living in a supported environment such as a psychiatric hospital, it may be easier to access leisure activities as they are typically scheduled and facilitated by providers. An occupational therapist can work with an individual to help him to identify means and strategies to support preferred leisure engagement in terms of needs (e.g., financial and transportation), as well as modify leisure activities and/or recommend adaptations to accommodate physical or cognitive disability.

Physically active leisure has been significantly associated with lower levels of negative emotion in people with schizophrenia, and experience sampling has revealed that the bulk of leisure time is predominantly sedentary in nature in this population (McCormick et al. 2012). Engagement in active leisure occupations can benefit individuals with SMI who are at risk for health concerns due to medication side effects (e.g., weight gain), and predominance of sedentary activities (McElroy et al. 2006). Again, leisure engagement goes beyond leisure for the sake of recreation, and treatment to address leisure function should include consideration of individual motivation and meaning, as measures of leisure motivation have been found to correlate with measures of recovery (Lloyd et al. 2007).

Recovery can involve an ongoing process of coping and living despite illness symptoms, and engagement in active healthy leisure occupations can support this process. For example, an occupational therapist could use a familiar passive leisure activity, such as music listening, and teach individuals in an individual or group setting to develop playlists of songs that impact mood, motivation, and affect (e.g., songs to wake up and get going, songs that are calming). With this type of occupation-based intervention, an individual can have hands-on experience not only of engagement in the occupation itself, but also in developing an action plan for future engagement.

Leisure enhancement is an approach that involves assessment of leisure interests, education to increase awareness of leisure benefits, leisure goal setting, skill training, and supported participation (Heasman and Atwal 2004). The process of guided development of leisure action

plans alone has been shown to result in the ability to maintain leisure engagement at 6-month follow-up for about half of the participants with SMI living in the community. An occupational therapist in an inpatient setting can assist individuals in small group or 1:1 sessions to develop and implement leisure action plans while in the hospital, and then perform follow-up to practice scheduling of and access to leisure occupations, with modification of leisure action plans as needed prior to discharge. Practice with the process of creating habits and routines that include active leisure engagement can be beneficial as engagement in active leisure occupations can present more of a challenge upon discharge when an individual has less accessibility to structured leisure opportunities and resources, especially when one has a goal of consistent and structured employment.

Meaningful Employment

Productive employment is highly valued in the western culture, and vocation influences social regard and forms much of the basis for occupational identity. Indeed, as occupational beings, humans may be physiologically driven to engage in work, in that "… work is a biological necessity. Just as our muscles become flabby and degenerate if not used, so our brain slips into chaos and confusion unless we constantly use it for some work that seems worthwhile to us" (Selye 1976, p. 142). Work provides a means to a financial ends and can also provide latent effects that support health and well-being, such as a daily time structure, regular opportunity for shared experiences and social interaction, and broadening of interpersonal goals to shared goals of work place and environment (Jahoda 1981; Yerxa 1998).

Individuals with SMI who are employed have reported increased happiness and higher scores on recovery and empowerment scales, and have indicated that work provides not only financial support, but also a means to recovery and well-being (Dunn et al. 2010; Lloyd et al. 2010; Robinson et al. 2012; van Niekerk 2009). However, individuals with SMI have been found to have the lowest employment rate when compared to people in any other disability category (Bilder and Mechanic 2003). Research has shown that for individuals with SMI, factors such as fear of stigma and ability to manage medication and symptoms in the work place can hinder successful employment, while self-confidence, motivation, meaningfulness of work, work related skill competency, and access to adequate supportive resources can promote vocational recovery (Dunn et al. 2010; Fossey and Harvey 2010; Honey 2004; Killeen and O'Day 2004; Kirsh 2000; Marwaha and Johnson 2005; Woodside et al. 2006). Another important aspect of employment success is social support and connection in the workplace. Social support has been shown to mediate the relationship between work (competitive, sheltered, and unpaid) and subjective quality of life measures, even more than income derived from occupation (Rüesch et al. 2004; Woodside et al. 2006).

Sensory and Environmental Supports

The processing and integration of sensory information helps to provide a sense of self, an understanding of the self in relationship to the environment, and the subsequent ability to filter a massive amount of information from sensory receptors to make an adaptive response and functionally interact with the external world (Ayers 1972; Javitt 2015; Javitt and Freedman 2015). Individuals with SMI can exhibit difficulty with modulation, or regulation of responses to sensory input, and processing of sensory information (Brown et al. 2002; Javitt 2009a, b, 2015; Lipskaya-Velikovsky et al. 2015). The use of supportive sensory strategies and environments can serve to empower individuals with deficits in self-control and self-regulation to self-manage arousal and emotional states (Nan Stromberg 2004; Scanlan and Novak 2015). Sensory modulation interventions and multisensory environments on acute psychiatric units designed to promote improved sensory processing and regulation have resulted in significant improvements in both subjective reports of distress and in the frequency and duration of restraint and seclusion use (Cummings et al. 2010; Lloyd et al. 2014).

In addition, history of trauma has been found to be more prevalent for individuals with SMI than for individuals in the general population. Chronic trauma can impact an individual's ability to integrate sensory, cognitive, and affective information into a meaningful and functional gestalt, and to self-modulate for self-regulation (Bebbington et al. 2004; Mueser et al. 1998; van der Kolk et al. 2005). For this reason, researchers have proposed a "bottom-up" approach that focuses on improving sensory processing and modulation as a promising means to address difficulties in dysregulation commonly seen in individuals with a history of trauma. For example, a study of a sensory integration intervention for individuals with mental illness found that a bottom-up sensory integration intervention combined with psychotherapy resulted in significant improvements in measures of trauma symptoms when compared to individuals who received psychotherapy alone (Kaiser et al. 2010).

Difficulties in sensory modulation have also been identified as possible contributors to aggression and a similar bottom-up sensory modulation approach can provide an alternative to more cognitively mediated top-down methods of de-escalation (e.g., verbal techniques) when an individual is not able to engage in these techniques due to poorly controlled autonomic arousal (Sutton et al. 2013). For example, a pilot trial of a sensory modulation intervention was conducted that involved supporting individuals to access sensory rooms on inpatient psychiatry units to identify therapeutic sensory modalities within the sensory environments. They reported that they were able to attain a calm grounded state, take comfort in an atmosphere that provoked a sense of safety, experience enhanced interpersonal connection with staff, and experience self-control, self-awareness, and emerging active self-management skills (Sutton et al. 2013). An occupational therapist can work with individuals who have experienced a history of trauma or aggression and violence to help them to identify particular patterns of sensory modulation dysfunction (e.g., tactile defensiveness, auditory sensitivity), and develop strategies and

sensory modalities for coping with sensory dysregulation, which can affect all areas of daily life.

Sleep

Sleep is restorative and essential to health and well-being, and yet there are few common sleep interventions outside of medication in the general spectrum of treatment for individuals with SMI living in an inpatient facility. People with schizophrenia have indicated that improving sleep is one of the highest priorities of treatment (Auslander and Jeste 2002). Even if not part of the symptomology of an individual's illness, or a side effect of medication, being in an unfamiliar physical and social environment can pose a challenge to the level of comfort and ease required for good sleep hygiene.

An occupational therapist can help an individual develop individualized sleep routines, habits, and environments that promote healthy sleep patterns. For example, the environment can be adapted to promote optimal level of lighting (e.g., eye mask if room cannot be darkened), calming sounds or silence (e.g., white noise, earplugs), and incorporate sensory comforts or rituals (e.g., weighted blanket, aromatherapy) that are conducive to rest, relaxation, and sleep. Education on strategies (e.g., using bed only for sleep to create a schema between bed and sleep, and not staying in bed if not sleepy) can help an individual to develop good sleep routines (Wade 2006).

Occupational Stories

Many clinical disciplines have used the narrative process to help people facing disability and life disruption to create a life history and life story as a means of self-expression and healing. An occupational therapy perspective of the narrative life history is largely focused on the individual's telling, reflection, and understanding of her own occupational identity (Christiansen 1999; Kielhofner 2008). Occupational therapists can work with an individual to support therapeutic emplotment, a collaborative process in which the occupational therapist supports the individual to imagine possible options and scenarios for occupational engagement

and identity in the continuation of the present life narrative to contribute to personal transformation (Gahnstrom-Strandqvist et al. 2004). Narrative life plots can be victimic, characterized by having little control and choice in life, or agentic, in which storytellers are active self-determined protagonists. Engagement in occupations that align with a person's goals can prompt a shift from victimic to agentic life story plots (Polkinghorne 1996).

Spiritual Occupations

Recovery is often viewed as a process of transformation, not unlike a spiritual journey. In a study of individuals with SMI, 90 % indicated that they identified themselves as spiritual or religious (Corrigan et al. 2003). Spirituality is considered an important dimension with regard to humans as occupational beings (Christiansen 1997). Spiritual occupations, manifested at individual and community levels, have been defined as, "a variety of activities specifically imbued with spiritual meanings and effects that have been performed by human beings over many generations and across all cultures" (Kang 2003, p. 95). Occupational therapists recognize the value of addressing spirituality in evaluation and treatment, yet there exists a theory–practice gap between the awareness of its importance and its practical clinical application (Belcham 2004; Enquist et al. 1997; Farrar 2001; Johnston and Mayers 2005; Rose 1999).

In an effort to understand occupation in the spiritual context, occupational therapy researchers recruited individuals with schizophrenia to act as coresearchers in an exploratory study of spiritual practice and meaning. They found that one of the core dimensions of spirituality was that practice could be explicit (e.g., formal prayer or meditation) and/or could be ordinary activities that were imbued with spiritual meaning (Smith and Suto 2012). This finding is similar to the dualistic nature of mindfulness practice in which a person can engage in formal meditation practice, or can exercise the informal practice of being mindful during mundane activity.

Mindful occupational engagement is defined as "moment-by-moment awareness and nonjudgmental engagement in an activity, without expectation of specific outcomes" (Jackman 2014, p. 243). Mindful occupational engagement can provide an underlying spiritual context that can serve to unify and inject meaning into all areas of an individual's life, even when activities tend to be prosaic. Occupational therapists can utilize mindfulness practice as an occupation-based therapy intervention to help individuals participate and gain skills in mindfulness meditation as a primary spiritual occupation that is religious (e.g., Buddhist practice) or secular (e.g., morning meditation for stress relief). Occupational therapists can assist individuals to infuse spirituality into the seemingly mundane occupations of daily life through mindful occupational engagement. In this regard, both therapist practice of mindfulness, and therapist ability to use the practice of mindfulness as a therapeutic intervention may provide a means to more holistically address an individual as a being of body, mind, and spirit.

Finally, while the expression of spirituality can sometimes be difficult to distinguish from the symptoms of psychiatric pathology, the use of clinical reasoning and examination of the link between spiritual expression and meaningful personal and cultural occupational engagement can serve as a guide to supporting health promoting benefits of spirituality (Hess 2011). An occupational therapist can assist an individual in incorporating spiritual or religious practices into daily life in a manner that offers balance and empowerment. In addition, the occupational therapist can work with the individual in identifying means to access religious services, meditation groups, or service groups in the community.

Conclusion

Occupational therapists can assist individuals with SMI to experience life meaning and function by supporting a journey of recovery through occupation. This chapter discussed the alignment between recovery principles and occupational therapy theory and practice. In addition, it presented a framework to examine the holistic and

nonlinear nature of humans as occupational beings by moving beyond looking at *what* people do to examine the *who, why, where, when,* and *how* of occupation. Finally, the chapter reviewed occupational therapy assessments and interventions that can be used in the inpatient psychiatric setting to complement the multidisciplinary treatment effort and to help individuals learn to live life to its fullest.

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