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Assessing Volition in Pediatrics: Using the Volitional Questionnaire and the Pediatric Volitional Questionnaire

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Abstract

Evidence suggests that pediatric occupational therapists predominantly use bottom-up, impairment-focused theoretical frameworks and assessments to guide their practice, despite the current trends promoting top-down, occupation-based approaches. Understanding a child's volition, guided by the use of the Model of Human Occupation, contributes to a more occupation-based, client-centered, holistic, and strength-based approach to therapy. Two assessment tools, the Volitional Questionnaire and the Pediatric Volitional Questionnaire, contribute to a therapists' understanding of children's volition. These assessments facilitate therapists' clinical reasoning and the ability to assess and address volition throughout the occupational therapy process.

Keywords

Clinical reasoning, Occupation-based, Pediatric assessment

Cover Page Footnote

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Credentials Display

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There is a growing emphasis in the occupational therapy profession on using a more occupation-based, evidence-based, client-centered approach to occupational therapy practice (American Occupational Therapy Association [AOTA], 2014; Fisher, 2013; Fleming-Castaldy, 2014). Within pediatric occupational therapy, these concepts are gaining momentum with the development and research of occupation-based pediatric assessments (Brown & Bourke-Taylor, 2014) and the increasing use of occupation-based interventions (Estes & Pierce, 2012; Kreider, Bendixen, Huang, & Lim, 2014). Despite these developments, pediatric occupational therapists are frequently, and sometimes predominantly, using impairment-focused theoretical frameworks, such as sensory integration, neurodevelopmental therapy, and typical development theories (Brown, Rodger, Brown, & Roever, 2005; Brown, Rodger, Brown, & Roever, 2007; Case-Smith & O'Brien, 2015; Kadar, McDonald, & Lentin, 2015). Pediatric occupational therapists also report frequent barriers to implementing evidence-based practice (Brown, Tseng, Casey, McDonald, & Lyons, 2010), as well as a lack of knowledge and use of conceptual occupation-based models in practice (Benson, 2013). Furthermore, therapists continue primarily to use assessment tools, such as the Bruininks-Oseretsky Test of Motor Performance, the Peabody Developmental Motor Scales, the Developmental Test of Visual-Motor Integration, and the Sensory Profile (Bagatell, Hartmann, & Meriano, 2013; Brown et al., 2005; Brown et al., 2007; Kramer, Bowyer, O'Brien, Kielhofner, & Maziero-Barbosa, 2009). Most of these assessment tools are "bottom-up" (Coster, 1998) and primarily identify impairments in body functions or performance skills without directly assessing other factors, such as the environment. Moreover, most of these assessment tools have been developed outside of the field of occupational therapy and do not necessarily consider the impact of the impairments on occupational performance and participation. Some assessment tools are not occupation-based because they rely on interviews or caregiver reports, not direct observation of clients engaged in occupations (Fisher, 2013). Bottom-up, impairment-focused theoretical frameworks and assessment tools provide therapists with important information about how specific deficits may impact a client's occupational performance. However, therapists who only use these frameworks and assessments without also using an occupation-centered theory or model of practice will likely not address the whole client, which is not supportive of the profession's holistic, occupation-centered philosophy. Moreover, these therapists are likely neglecting an essential aspect of their clients that impacts occupational performance: the client's volition.

Volition refers to one's motivation to perform occupation; it consists of personal causation, values, and interests (Kielhofner, 2008). By specifically addressing a child's volition, guided by the use of the Model of Human Occupation (MOHO; Kielhofner, 2008), therapists create a more holistic occupational profile of the child and can more fully understand his or her strengths in addition to his or her needs. Additionally, therapists

move toward evidence-based practice by using an occupation-centered model of practice that is well supported in the occupational therapy literature (Lee, 2010). The purpose of this paper is to discuss the importance of addressing volition when working with children and to illustrate how assessment tools of volition—the Volitional Questionnaire (de las Heras, Geist, Kielhofner, & Yi 2007) and the Pediatric Volitional Questionnaire (Basu, Kafkes, Schatz, Kiraly, & Kielhofner, 2008)—can assist occupational therapists in understanding children's volition and aid in the clinical reasoning process.

Volition

Volition is one component that is conceptualized by the MOHO, a conceptual practice model that also examines habituation and performance capacity (Kielhofner, 2008). The MOHO uses these concepts to describe how people select, organize, and perform their occupations and how these components and the environment influence occupational performance. Volition refers to one's thoughts and feelings about being actors in the world and the process of how one anticipates, chooses, experiences, and interprets occupations (Kielhofner, 2008). Volition is comprised of and influenced by one's personal causation, values, and interests. Personal causation, which consists of a sense of personal capacity and self-efficacy, refers to one's feelings about being capable and effective. Values are what one finds important, and interests are what one finds satisfying and enjoyable. The process of volitional development, originally based on Reilly's examination of the emergence of play behavior (1974) and Kielhofner's concept of the continuum of occupational change (2008), is viewed as a continuum (Basu et al., 2008; de las Heras et al., 2007). There are three stages of volition: Exploration, Competency, and Achievement. Table 1 provides descriptions of the three stages of volition. Volition is important for pediatric occupational therapists to address because it contributes to occupation-based practice, the development of a more holistic occupational profile, and a strengths-based approach to therapy.

Table 1

Descriptions of the Stages of Volition

Stage	Description
Exploration	Individuals engage in interactions with the environment for the purpose of sensory experiences and pleasure. This stage of discovery occurs in a relatively safe, risk-free environment.
Competency	Individuals actively interact with the environment for the purpose of having an effect on the environment. Through practice and meeting standards, individuals gain an increasing sense of control.
Achievement	Individuals strive to master challenging skills or tasks. They persist in activities and aim to increase their capacity to perform, even when the risk of failure is present.

Contribution to Occupation-Based Practice

Understanding a child's volition contributes to occupation-based practice because understanding what motivates a child to engage in occupations will help the therapist identify meaningful and purposeful occupations to use as interventions. The importance of engaging clients in purposeful and meaningful occupations is well documented in the literature. The AOTA (2014) describes the occupational therapy process as one that involves occupation-based activity analysis, the creation of occupation-based goals, and the design of occupation-based intervention plans. Fisher (2013) specifies that in order for evaluations and interventions to be occupation-based, they must use occupation as the foundation, and the person must be engaged in occupation. According to Trombly (1995), purposeful occupations organize a client's behavior in therapy, and meaningful occupations "motivate the person to persevere in his efforts long enough to achieve a therapeutic benefit" (p. 970). Additionally, according to Arnsten (1990),

> "facilitating each client's discovery of his or her own desire to engage in purposeful activities should be a primary goal of occupational therapy treatment. To achieve this goal, the therapist's treatment approach would have to include a frame of reference that is specifically concerned with developing and enhancing intrinsic motivation" (p. 463).

Therefore, by using the MOHO and specifically addressing volition, a therapist will be able to identify the child's unique values and interests and choose intervention activities that would be meaningful and purposeful for the child. It is expected that the child would be more motivated to engage in those meaningful and purposeful interventions, and thus would be more likely to benefit from the therapeutic effects of those interventions. For example, if a child with decreased fine motor and visual motor skills really enjoys playing board games and values the social interactions with others while playing, the therapist may play a board game with the child, requiring him or her to grip, manipulate, and move the small game pieces along the game board. The child would be more likely to stay engaged and practice those skills during this intervention compared to other activities aimed at developing fine motor and visual motor skills, such as stacking blocks or stringing beads.

Beyond using children's values and interests to identify and use meaningful and purposeful occupations, it is also necessary to present them with occupations they feel capable of performing. According to Gage, Noh, Polatajko, and Kaspar (1994),

> "it is important for clinicians to know whether their clients believe they are able to perform tasks . . . Therapists must understand that acquisition of a skill, in the absence of a belief in one's ability to perform the skill without the support of the clinician, is not sufficient to improve occupational performance" (p. 789).

By addressing a child's volition, in particular his or her personal causation, a therapist will gain insight

about the child's beliefs regarding his or her capacity to perform the intervention activities. The therapist can use that information and incorporate those activities into the intervention. For example, a therapist is working with a child with motor-planning difficulties who expresses mastery pleasure with being able to tie and untie his or her shoes. The therapist plans for the child to complete an obstacle course that requires the child to first take off his or her shoes. By beginning with a task that the child feels capable of performing, he or she feels more confident and is more motivated to complete the obstacle course, which is perceived as challenging.

Overall, a therapist who is aware of a child's volition will be more able to implement relevant occupation-based interventions throughout the therapy process. The therapist will be able to identify meaningful and purposeful occupations based on the child's values and interests, which may motivate the child to engage. Additionally, using information about the child's personal causation will assist the therapist with utilizing occupations that the child feels capable of performing.

Contribution to a Holistic Occupational Profile

Understanding a child's volition is also important because it contributes to a more holistic understanding of the child. The AOTA (2014) suggests that a client's occupational profile should contain information about what the client finds important and meaningful, as well as which occupations the client feels successful performing. Considering a child's volition will contribute to a therapist's understanding of this information. Additionally, Fisher (2013) highlights the importance of utilizing an occupation-centered approach that

> "begins when we relinquish our bottom-up lens that places person factors and body functions at the core of what we do and adopt an occupational lens. This process can be supported by the use of one or more occupational therapy models of practice that support an occupation-centred perspective" (p. 166-167).

Using the MOHO to understand a child's volition, among other factors that impact the child's occupational performance, contributes to a holistic approach that cannot be accomplished by only considering certain client factors and body functions. If therapists also choose to use other theories related to sensory integration, motor control, or development, considering volition and other components of the MOHO can complement the information gathered through the use of those theories. For example, Kielhofner and Fisher (1991) explain the importance of considering a child's volition when using a primarily sensory integrative approach to treatment, noting that a child's behavior cannot be completely explained by examining only the physical and sensory aspects of his or her performance. Rather, it is necessary to look at the mental components of the performance as well. This will provide essential information about the child's feelings about his or her performance as well as his or her subjective experience. Without considering all aspects of occupational performance, the child's occupational

profile would be incomplete. Thus, it is necessary to look at volition, in addition to other components of the MOHO, in order to gain a holistic view of the child and to understand how each component contributes to the child's occupational performance and participation.

As an example, imagine a therapist blowing bubbles and encouraging a child to pop them. Despite the therapist's encouragement, the child is not engaging in this activity. From a sensory integration standpoint (Bundy, Lane, & Murray, 2002), the therapist may interpret this as the child not being able to organize his or her body to plan and carry out a motor sequence in order to interact effectively with the environment. The therapist may view this as an inability to cross midline or use both sides of his or her body together in a coordinated fashion. Or, the therapist may interpret the child's behavior as tactile defensiveness, not wanting to get his or her hands wet and sticky from the bubbles. From a motor control or biomechanical standpoint (Radomski & Trombly Latham, 2013), the child may not have adequate strength to raise his or her arm over his or her head in order to pop the bubbles. Or, the child may not be able to isolate his or her index finger and extend his or her wrist in order to poke the bubbles. However, by only using these reductionistic approaches, the therapist may miss important information about this child's interests and feelings of capacity and effectiveness. By also considering the child's volition, the therapist may interpret his or her behavior as not engaging in this activity because it is not interesting or important to the child. Or, the therapist may conclude that the child may not feel that he or she can pop all of the bubbles that the therapist is blowing, so the child is choosing not to try at all. If this child's volition is not considered, the therapist may not uncover the reasoning behind the lack of participation.

Contribution to a Strengths-Based Approach

Finally, addressing volition enables a strengths-based approach to practice. Often, sensory, motor, or developmental approaches to therapy emphasize a child's deficits and limitations (Hocking, 2001; Keller, Kafkes, & Kielhofner, 2005). Considering volition, in addition to the other components of the MOHO, will help therapists to identify the child's strengths and assets instead of just his or her weaknesses. It will assist with identifying factors that contribute to a child's successful occupational performance rather than just identifying the barriers. For example, a child with cerebral palsy may not be able to feed him or herself due to increased tone and decreased control in the upper extremities. But, the child may show preferences for specific foods, remain engaged during mealtime, or verbally direct a caregiver for a certain food, demonstrating a desire to have an effect on the environment. Because a number of behaviors can display volition, from visually attending to stimuli to using the imagination, strengths related to a child's interests, values, and personal causation can be identified in all children, regardless of physical or cognitive ability (Basu et al., 2008). Identifying a child's strengths will assist with goal writing and intervention planning, as therapists can use the child's strengths to address

his or her limitations. Documenting outcomes of therapy is also difficult when only focusing on a child's impairments. Children with physical, cognitive, and/or sensory impairments may not demonstrate improvements on typical deficit-based assessments. They may, however, demonstrate an enhanced sense of personal capacity or increased interest in activities, thus illustrating a benefit of therapeutic intervention that might otherwise have been missed. Overall, addressing a child's volition contributes to a strength-based approach that will ultimately enhance his or her opportunities for occupational participation and performance.

Assessing Volition

Introduction to the Pediatric Volitional Questionnaire and the Volitional Questionnaire

When guided by the use of the MOHO, occupational therapists who consider volition when working with children will use a more occupation-focused, holistic, and strength-based approach to therapy. Therefore, occupational therapists must make an attempt to comprehend a child's volition fully. Two instruments—the Pediatric Volitional Questionnaire (PVQ; Basu et al., 2008) and the Volitional Questionnaire (VQ; de las Heras et al., 2007)—can assist with this understanding. A unique feature of these assessment tools is that they are strictly based on observation. Other volitional assessments use checklists, interviews, self-report questionnaires, or structured play tests, requiring a certain level of verbal and cognitive skills. Children with significant cognitive, verbal, or physical limitations may be limited in their ability to participate in such assessments due to an inability to express their likes, dislikes, confidence, or fears explicitly (Basu, Jacobson, & Keller, 2004).

By relying solely on observation, the PVQ and the VQ can assess volition in children with a wide range of abilities (Basu et al., 2008; de las Heras et al., 2007). The PVQ, designed for use with children between the ages of two and seven, has been used with children with a wide range of disabilities, including cerebral palsy, Down syndrome, dyspraxia, pervasive developmental disorder, severe and profound intellectual disability, seizure disorder, sensory integration issues, and visual impairments, and it is also useful for assessing older children with a lower developmental age (Andersen, Kielhofner, & Lai, 2005; Basu et al., 2008; Harris & Reid, 2005; Reid, 2005). The VQ, designed for use with older children, adolescents, and adults, has been used with individuals with psychiatric disabilities and developmental disabilities (Chern, Kielhofner, de las Heras, & Magalhaes, 1996; Li & Kielhofner, 2004). Because children with disabilities are at risk for decreased volition (Andersen et al., 2005), the PVQ or the VQ can also be useful for identifying a child's initial level of volition and monitoring the efficacy of interventions and the progress of his or her volitional development (Andersen et al., 2005; Basu et al., 2008).

Preliminary psychometric evidence suggests that both the PVQ and the VQ are valid and sensitive measures of volition. The items on both the PVQ and the VQ have been Rasch analyzed and demonstrate good construct validity for both instruments (Andersen et al., 2005; Chern et al.,

1996; Li & Kielhofner, 2004). Studies also suggest that individual therapists are able to use the VQ and the PVQ rating scales in a consistent manner with clients with a wide range of disabilities without additional training (Andersen et al., 2005; Chern et al., 1996; Li & Kielhofner, 2004). Miller, Ziviani, and Boyd (2014) also suggest that the PVQ demonstrates good content validity and good clinical utility.

Both the PVQ and the VQ are valuable in occupational therapy practice because they are practical and easy to use. They provide structured information about a child's volition, as well as information about factors of the child's environment that elicit volitional behaviors. Finally, information gathered from completing the PVQ or the VQ assists therapists with goal writing and intervention planning.

Administration

A therapist can complete the PVQ and the VQ by observing a child performing a variety of occupations, including free play, activities of daily living, or schoolwork (Basu et al., 2008; de las Heras et al., 2007). Children may be observed in various settings, including daily living environments, productive/work environments, or leisure environments (Andersen et al., 2005; Basu et al., 2008; de las Heras et al., 2007). Therapists can gather adequate information about a child's volition and environment in as little as ten to thirty minutes. However, observations may also be completed during a treatment session, in which case the observation may last longer (Basu et al., 2008; de las Heras, et al., 2007). Because of this flexibility of administration, the PVQ and the VQ are easy for therapists to use in practice.

Because volition cannot be observed directly (Harris & Reid, 2005), the PVQ and the VQ outline the fourteen behavioral indicators that validly rate volition along the volitional continuum of exploration, competency, and achievement (Andersen et al., 2005; Li & Kielhofner, 2004). See Table 2 for examples of the items rated by the PVQ and the VQ at each stage of volitional development. Items are rated on a four-point scale of "Spontaneous", "Involved", "Hesitant", or "Passive" according to the amount of support, structure, or encouragement the child needs to display the behaviors. Types of support include gestural, verbal, reinforcement, praise, or a combination of these supports (Basu et al., 2008; de las Heras et al., 2007). There are numerous ways through which children can demonstrate these volitional behaviors. For example, a child may turn his or her head when someone enters the room, attend to visual or auditory stimuli in the environment, explore toys or other objects, or ask questions about a task in order to demonstrate the item "shows curiosity" (Basu et al., 2008; de las Heras et al., 2007).

Table 2

Samples of Items on the VQ and the PVQ at Each Stage of Volitional Development

Stage	Items on the VQ and the PVQ
Exploration	Shows curiosity
	Initiates actions/tasks
	Tries new things
	Shows preferences
Competency	Stays engaged
	Shows pride/ Expresses mastery pleasure
	Tries to solve problems
Achievement	Pursues activity to Completion/ Accomplishment
	Seeks challenges

Note. VQ = Volitional Questionnaire; PVQ = Pediatric Volitional Questionnaire.

Concrete Information on Volition and the Environment

By observing how children go about engaging in activities, therapists can learn a lot about their inner motives (Basu et al., 2004). Therapists gain valuable insight into children's volition by observing what types of objects and activities in which children show interest, what motivates them to stay engaged in activities, and how they display a sense of competence or effectiveness when interacting with their environments. The systematic measurement of the items on the PVQ and the VQ provides information about how much and what types of support elicit a child's volition. Therapists can also gather information about the child's volitional strengths and weaknesses (Basu et al., 2008). All of this information provided by either the PVQ or the VQ about a child's volition supplements information gathered through other means of evaluation, creating a holistic view of the child.

Because a child's environment influences his or her volition (Kielhofner, 2008), it is important for a therapist to understand what aspects of the environment support or hinder the child's volition. The PVQ and the VQ can assist therapists with this understanding through the completion of the Environmental Characteristics Form (Basu et al., 2008; de las Heras et al., 2007). This form provides therapists with a systematic way of looking at various features of the environment, including physical spaces, objects, social environment, and occupational forms or tasks. When children display different levels of volition in different environments, the PVQ and the VQ allow the therapist to identify specific aspects of the environment that may be influencing the child's volition. As an example of how the physical environment can affect a child's volition, a child in one study (Andersen et al., 2005) sat passively in a toy car until the classroom doors were opened and he had access to an indoor gym, at which point he

began driving the car all around. He did not display motivational behavior until being provided with an adequate amount of space in which to move around. Without considering all aspects of the environment, a therapist may miss important factors that are motivating for a child in a specific context. The PVQ and the VQ help to ensure that therapists do identify all aspects of the environment that affect a child's volition.

Goal Writing and Intervention Planning

Once therapists use the PVQ or the VQ to gather information about children's volitional strengths and weaknesses and their environments, they can use this information to assist with goal writing and intervention planning (Basu et al., 2008; Basu et al., 2004; de las Heras et al., 2007). Using the ratings of the PVQ or the VQ items, the therapist can identify the stage of volitional development at which the child is emerging. From that information, the therapist can collaborate with parents, teachers, and other professionals to identify goals and strategies that support the child's ongoing volitional development and improve occupational performance (Basu et al., 2008). See Table 3 for examples of these goals and strategies. The overall objective of incorporating volitional goals into therapy is to improve the child's sense of competence and effectiveness. This contributes to an increased desire to interact with the environment (Basu et al., 2004), and, consequently, to increased occupational participation.

Therapists can also use the information about the child's volition and the environment to address other therapy goals. For example, if the therapist knows that a child responds well to encouragement from a peer, a peer partner could be invited to join the intervention activities focusing on motor development so that the child is more motivated to engage in those activities. This, in turn, will assist the child in attaining the therapy goals (Basu et al., 2008). Overall, the information gathered by using the PVQ or the VQ can assist therapists with identifying relevant goals and therapeutic strategies to use in occupational therapy intervention. The following case examples provide illustrations of this process.

Table 3

Examples of Goals and Intervention Strategies Developed through Use of the VQ and the *PVQ*

Stage	Goals	Intervention Strategies
Exploration	Try playing with new toys to expand repertoire of interests when playing with peers	Present the child with tasks, objects, and environments that are interesting, safe, and free of risks
	Show preferences for clothing in order to complete a morning dressing routine	Provide encouragement and support to explore the environment and make choices
Competency	Stay engaged in a meal preparation task to make a school lunch with minimal prompts	Provide frequent opportunities to practice skills
	Try to solve problems when difficulties are encountered during performance of chores	Organize the environment with visual supports to cue skill development

Achievement	Pursue school work to completion and turn it in without additional reminders	Upgrade activities to provide increased challenges
	Seek additional responsibilities during basketball practice to increase role competence as team manager	Modify the environment to increase opportunities to seek additional responsibilities

Note. VQ = Volitional Questionnaire; PVQ = Pediatric Volitional Questionnaire.

Case Example 1: PVQ in an Early Intervention Setting

Jose is a two-year-old boy who was diagnosed with spastic quadriplegia shortly after birth. He and his parents recently returned to the United States after spending a year in Guatemala with extended family. His physician referred him for an early intervention evaluation due to global developmental delays. Jose's mother describes him as a typically happy boy who enjoys musical and light-up toys and being read to.

The occupational therapist was the last early intervention team member to complete her evaluation of Jose, which occurred in the family's home. Some of the other team members expressed concerns about his delays, noting significant delays in motor and speech and language skills. The evaluation began with parent interviews and some informal observations of Jose during playtime. Jose's mother explained that although Jose was dependent on her for all of his basic needs, they have figured out a routine that works well for bathing, dressing, and changing his diapers. During playtime, Jose enjoyed playing interactive clapping games with his older siblings, engaging with various toys, and rolling around on the floor. He demonstrated his enjoyment with these activities by smiling and sometimes giggling. Jose's mother explained that meal times were difficult because Jose frequently cried, but she was unsure why. Doctors had completed tests and had ruled out eating and swallowing difficulties.

Based on the information gathered by the interview and informal observations, the occupational therapist noted that Jose has many strengths that the other team members may have missed by primarily identifying his impairments. She decided to assess several areas in more detail, including Jose's volition. She completed the PVQ during two observations of Jose in his home. The first observation occurred in the living room while he was playing with his mother. The second observation took place in the kitchen during dinnertime.

During playtime, Jose interacted with a variety of toys that his mother presented to him while he was seated in his stroller. He swatted at toys to activate music and lights. He even reached toward toys that she held out just beyond his reach. He grasped many of the toys between both of his hands and put them in his mouth to lick or suck on them. His mother read him a few books that he gazed at and swiped with his hands. She then took Jose out of his stroller and laid him on some pillows on the floor. She placed various toys around him, which he slowly rolled or scooted toward in order to

play with them. She went into the kitchen to begin preparing dinner, but watched him in the other room and continued talking to him. She occasionally returned to the living room to bring him new toys or to pretend to walk a stuffed animal up his arm or over his head. While playing with the toys, Jose continued to swat at and grasp them to activate sounds and lights. Occasionally, he dropped a toy or knocked it out of his reach, at which point he would try to find a toy that was closer to him. While interacting with the toys, he smiled and cooed. The occupational therapist completed the PVQ rating forms based on this observation. She rated most of the Exploration items as either "Spontaneous" or "Involved". Many of the items in the Competency level of volition were rated as "Involved" or "Hesitant". Most of the Achievement items were rated as "Passive" or "Not Observed". The therapist identified several aspects of the environment that appeared to contribute to Jose's volition during this observation: His mother's interactions with Jose were playful and encouraging; there were a variety of toys available that appeared interesting to Jose because they were colorful and played fun music; and, during part of the observation, he was seated on the floor which gave him the freedom to choose the toys with which he interacted.

During the second observation, Jose was seated in his high chair around the dinner table with his parents and two older siblings. His mother was feeding him pureed food while she ate her meal next to him. Each time she took a bite of her food, she offered him a spoonful of his food. He sometimes reached for the spoon or for the food in his bowl, resulting in his hands getting messy and him starting to giggle. When this happened, his mother pushed the bowl out of his reach, wiped his hands with a napkin, and moved his arms back toward his lap. During dinner, the family had conversations about their day and their plans for the weekend. Most of the conversations occurred between Jose's siblings and their parents, although Jose actively gazed at his family members while they talked. Every once in a while, Jose looked at his bottle and started to whine. When this happened, his mother offered him another spoonful of the food. Sometimes he took it, but other times he turned his head away. On those occasions, Jose's mother offered him his bottle, from which he drank. Based on this observation, the occupational therapist completed the PVQ rating scales. Similar to the first observation, the occupational therapist rated the Exploration items as either "Spontaneous" or "Involved", the Competency items as "Involved" or "Hesitant", and the Achievement items as "Passive" or "Not Observed". A major difference between the two observations was that the environments varied significantly. During dinner, when Jose tried to produce effects by reaching for his food or when he showed mastery pleasure over getting his hands messy, his mother tried to limit these behaviors. When he tried to show preferences by looking at his bottle, his mother did not seem to notice those indirect requests for a drink instead of food. Furthermore, his mother gave him his food and drink based on her own feeding routine, restricting Jose's ability to choose what and when

he wanted to eat and drink. Additionally, the therapist noted certain features of the physical environment, such as the fact that Jose's food was pureed and that there were no adapted utensils for him to try to use. This environment did not provide opportunities for him to grasp at bite-sized pieces of food or at a spoon in an attempt to feed himself. Finally, she noted that Jose had limited opportunities to participate in the social interactions during the meal. He showed interest by gazing at his family members, but had no other way of participating in the conversations.

The occupational therapist reviewed this information and concluded that Jose's volition was a relative strength for him, due to his consistent demonstration of volitional behaviors at the Exploration level and emerging behaviors at the Competence level. Despite his motor and speech deficits, he was able to demonstrate behaviors such as showing preferences, trying to produce effects, and expressing mastery pleasure. She hypothesized that Jose's difficulties during meal times were related to environmental barriers that impacted his ability to show preferences for food and drink choices, as well as to be task directed by using his body and objects to achieve the goal of self-feeding. She suggested a goal related to Jose actively engaging in meal times by indicating his preferences for food and drinks through the activation of communication devices. She identified various environmental modifications and supports to enable him to engage in mealtimes more effectively. For example, she recommended introducing Jose to soft, bite sized foods that he could practice grasping and feeding himself. She also recommended the exploration of using a cup with a straw and modified utensils to support his ability to drink by himself and feed himself using a spoon. She suggested teaching Jose how to activate simple one-button communication devices so that he could communicate his meal preferences and carry out conversations with his family members during meal times. Over time, Jose had more opportunities with practicing to feed himself, and although he was not successful at first, he has shown a good understanding of activating simple communication devices. These modifications to the environment have enabled Jose to direct his caregivers to assist him when needed and to converse with his family members during meals. Jose appears more satisfied with his family participation, as he no longer cries and is more actively engaged during meals. Through the use of PVQ, the occupational therapist was able to identify those environmental modifications that needed to be made and use Jose's volitional strengths to encourage more active participation in his daily occupations.

Case Example 2: VQ in a School-Based Setting

Sarah is a twelve-year-old girl who is a sixth-grader at a public school. She is an only child with adoptive parents. Sarah is a social girl and enjoys interacting with her peers and teachers. She also likes to draw and to play on the computer. Her favorite classes are physical education and science. She has medical diagnoses of Autism, Fetal Alcohol Syndrome, and history of a stroke at birth, from which she has residual right-sided weakness. Sarah

receives special education and related services due to the impact of her disabilities on her educational and functional performance in the school setting. She has goals, accommodations, and modifications in place to address her reading comprehension, writing, math calculation, social interaction skills, self-regulation, and fine motor skills.

Since transitioning to junior high school, Sarah has been struggling with participation in some of her academic classes, particularly as the demands have increased. She often gets upset when asked to complete tasks, which results in her yelling at the teacher or putting her head down on her desk and refusing to work. Sarah's parents and the educational team are concerned that Sarah is not making progress on some of her goals. They decide to complete a re-evaluation to determine if they can identify additional supports to put into her programming so that she can be more successful.

The occupational therapist chose to use the VQ to formally evaluate Sarah's volition in the school setting. He observed Sarah in two different settings: in her language arts class and in the gym during physical education. During language arts, the teacher was giving a lesson on the vocabulary in the novel they were reading. This was a familiar lesson, as students complete it each week as they begin a new chapter. This lesson involved students copying definitions from the board, drawing a picture to depict each word, and writing sentences with the words. When this lesson started, the teacher instructed the students to take out a pencil and their worksheet. Sarah took out her worksheet, but she did not take out a pencil. As other students began writing, Sarah sat quietly in her chair and picked at her nails. The teacher needed to instruct Sarah individually to find a pencil so she could begin working. Sarah easily completed the drawings, but was reluctant to complete any of the writing. Even with multiple attempts from the teacher to encourage her to write even parts of the assignment, Sarah refused. Eventually, the teacher offered for Sarah to dictate her answers and she would write for her. Sarah agreed to this and was able to complete the assignment. Several times during the lesson, she looked out of the window or at her peers, and the teacher needed verbally to redirect her to the lesson. When students were asked to share their sentences, Sarah willingly raised her hand to participate and share her answer with the class. The occupational therapist completed the VQ rating forms based on this observation. He noted that Sarah's ratings at the Exploration level were mostly "Spontaneous", her ratings at the Competency level were a combination of "Involved" and "Hesitant", and most of the ratings at the Achievement level were "Passive". The environmental factors that appeared to support Sarah's volition during this observation included: the activity was familiar; the verbal encouragement, cues, and assistance from the teacher; the opportunity to share answers verbally; and the incorporation of drawing (one of Sarah's interests) into the assignment. The environmental factors that appeared to influence Sarah's volition negatively included: the complexity of the worksheet; the amount of work that was expected; and the

expectation that students work independently on the task.

During the observation of the physical education class, students were in the gym and were practicing basketball drills. Students were instructed to choose a partner and choose one of three skills on which to work. Sarah quickly found a partner and they began by passing the ball back and forth and making shots from different spots on the court. They were challenging each other to make harder shots once they made easier ones. Sarah generally appeared to be enjoying the activity, as she frequently smiled and made positive comments to her peers. On a few occasions, Sarah clenched her fists, frowned, or made a negative comment when she missed a shot or did not catch the ball when it was passed to her. However, her peer always told her that it was okay, and she could try again. This appeared to help Sarah keep a more positive attitude. When the teacher blew the whistle, Sarah returned the ball to the equipment room as expected and headed to the locker room to change clothes. The occupational therapist completed the rating forms for this observation as well. In contrast to the first observation, almost all items in all three stages were rated as either "Spontaneous" or "Involved". The environmental aspects that appeared to influence Sarah's volition positively included: the familiarity of the activity, the incorporation of peer interaction that was chosen by Sarah, and the opportunity for students to choose their own activities.

Using the information gathered from the VQ, the therapist was able to identify various strategies that could be implemented to support Sarah's volition, and thus improve her participation and performance in the classroom. When the team met to review the evaluations, he summarized this information and made several recommendations. It is important to note that much of this information could have been gathered through informal observations, but the value in using the VQ was evident when presenting the information to the team in a clear, objective manner. He explained that Sarah was emerging at the competency level of volition. She demonstrated a decreased sense of self-efficacy when asked to complete schoolwork and was hesitant to pursue activities through to completion or seek challenges when she perceived tasks as too difficult.

The therapist described supports and strategies that could be implemented to facilitate an increase in Sarah's sense of ability and control. First, he discussed the importance of social supports, highlighting that Sarah was more likely to remain involved in tasks when interacting with others, including peers and adults. He suggested that positive peer role models and frequent verbal encouragement from teachers be added as accommodations to Sarah's educational plan. Additionally, the therapist shared that the format of assignments that are given to Sarah should be considered, since Sarah may look at an assignment and not feel capable of completing it due to the complexity or the amount of work expected. He specified that worksheets should be simple and not overly visually stimulating. He recommended that the team consider using fill-in-the-blank notes and

giving Sarah the opportunity to dictate longer responses to an adult or a computerized dictation program. Finally, the therapist noted that Sarah had a hard time advocating for herself and asking for help. He suggested implementing a goal related to self-advocacy, so Sarah could work on letting someone know if she were overwhelmed with an activity or asking for help with completing an assignment that she perceived as too difficult to complete on her own.

These strategies, as well as others recommended from other team members, were incorporated into Sarah's educational plan. Over time, with these supports in place, Sarah demonstrated growth along the volitional continuum. She was able to make some progress in her ability to ask for help and to feel competent in her ability to complete work when it was assigned to her. By using the VQ, the therapist was able to identify Sarah's level of volition, analyze aspects of the environment that supported her, and work toward improving her sense of competence and her confidence in her ability to participate at school.

Summary

Volition is an integral component of occupational performance that needs to be addressed in pediatric occupational therapy. Addressing volition through the use of the MOHO enables therapists to take a more evidence-based, occupation-based, holistic, and strengths-based approach to their practice. The PVQ and the VQ are valuable assessment tools that can help a therapist understand a child's volition and the characteristics of the environment that facilitate the child's volition. Information gathered by using the PVQ or the VQ can be useful in designing goals and appropriate interventions that are occupation-based and client-centered.

References

American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy*, *68*(Suppl. 1), S1-S48. http://dx.doi.org/10.5014/ajot.2014.682006

Andersen, S., Kielhofner, G., & Lai, J.-S. (2005). An examination of the measurement properties of the Pediatric Volitional Questionnaire. *Physical and Occupational Therapy in Pediatrics*, *25*(1-2), 39-57. http://dx.doi.org/10.1080/j006v25n01_04

Arnsten, S. M. (1990). Intrinsic motivation. *American Journal of Occupational Therapy*, *44*(5), 462-463. http://dx.doi.org/10.5014/ajot.44.5.462

Bagatell, N., Hartmann, K., & Meriano, C. (2013). The evaluation process and assessment choice of pediatric practitioners in the Northeast United States. *Journal of Occupational Therapy, Schools, & Early Intervention*, *6*(2), 143-157. http://dx.doi.org/10.1080/19411243.2012.750546

Basu, S., Jacobson, L., & Keller, J. (2004). Child-centered tools: Using the model of human occupation framework. *School System Special Interest Section Quarterly*, *11*(2), 1-3.

Basu, S., Kafkes, A., Schatz, R., Kiraly, A., & Kielhofner, G. (2008). *A user's manual for the Pediatric Volitional Questionnaire* (version 2.1). Chicago, IL: Model of Human Occupation Clearinghouse, Department of Occupational Therapy, College of Applied Health Sciences, University of Illinois at Chicago.

Benson, J. (2013). School-based occupational therapy practice: Perceptions and realities of current practice and the role of occupation. *Journal of Occupational Therapy, Schools, & Early Intervention*, *6*(2), 165-178. http://dx.doi.org/10.1080/19411243.2013.811348

Brown, T., & Bourke-Taylor, H. (2014). Centennial Vision – Children and youth instrument development and testing articles published in the *American Journal of Occupational Therapy*, 2009-2013: A content, methodology, and instrument design review. *American Journal of Occupational Therapy*, *68*, e154-e216. http://dx.doi.org/10.5014/ajot.2014.012237

Brown, G. T., Rodger, S., Brown, A., & Roever, C. (2005). A comparison of Canadian and Australian paediatric occupational therapists. *Occupational Therapy International*, *12*(3), 137-161. http://dx.doi.org/10.1002/oti.2

Brown, G. T., Rodger, S., Brown, A., & Roever, C. (2007). A profile of Canadian pediatric occupational therapy practice. *Occupational Therapy in Health Care*, *21*(4), 39-69. http://dx.doi.org/10.1080/j003v21n04_03

Brown, T., Tseng, M. H., Casey, J., McDonald, R., & Lyons, C. (2010). Barriers to pediatric occupational therapists' research utilization in Australia, the United Kingdom, and Taiwan. *Journal of Occupational Therapy, Schools, & Early Intervention*, *3*(4), 368-386. http://dx.doi.org/10.1080/19411243.2010.541771

Bundy, A. C., Lane, S. J., & Murray, E. A. (Eds.). (2002). *Sensory Integration: Theory and Practice* (2nd ed.). Philadelphia, PA: F. A. Davis.

Case-Smith, J., & O'Brien, J. C. (Eds.). (2015). *Occupational therapy for children and adolescents* (7th ed.). St. Louis, MO: Elsevier.

Chern, J.-S., Kielhofner, G., de las Heras, C. G., & Magalhaes, L. C. (1996). The Volitional Questionnaire: Psychometric development and practical use. *American Journal of Occuational Therapy*, *50*(7), 516-525. http://dx.doi.org/10.5014/ajot.50.7.516

Coster, W. (1998). Occupation-centered assessment of children. *American Journal of Occupational Therapy*, *52*(5), 337-344. http://dx.doi.org/10.5014/ajot.52.5.337

de las Heras, C. G., Geist, R., Kielhofner, G., & Li, Y. (2007). *A user's manual for the Volitional Questionnaire* (version 4.1). Chicago, IL: Model of Human Occupation Clearinghouse, Department of Occupational Therapy, College of Applied Health Sciences, University of Illinois at Chicago.

Estes, J., & Pierce, D. E. (2012). Pediatric therapists' perspectives on occupation-based practice. *Scandinavian Journal of Occupational Therapy*, *19*(1), 17-25. http://dx.doi.org/10.3109/11038128.2010.547598

Fisher, A. G. (2013). Occupation-centred, occupation-based, occupation-focused: Same, same, or different? *Scandinavian Journal of Occupational Therapy*, *20*(3), 162-173. http://dx.doi.org/10.3109/11038128.2012.754492

Fleming-Castaldy, R. P. (Ed.) 2014. *Perspectives for occupation-based practice: Foundation and future of occupation therapy* (3rd ed.). Bethesda, MD: AOTA Press.

Gage, M., Noh, S., Polatajko, H. J., & Kaspar, V. (1994). Measuring perceived self-efficacy in occupational therapy. *American Journal of Occupational Therapy*, *48*(9), 783-790. http://dx.doi.org/10.5014/ajot.48.9.783

Harris, K., & Reid, D. (2005). The influence of virtual reality play on children's motivation. *Canadian Journal of Occupational Therapy*, *72*(1), 21-29. http://dx.doi.org/10.1177/000841740507200107

Hocking, C. (2001). Implementing occupation-based assessment. *American Journal of Occupational Therapy*, *55*(4), 463-469. http://dx.doi.org/10.5014/ajot.55.4.463

Kadar, M., McDonald, R., & Lentin, P. (2015). Malaysian occupational therapists' practices with children and adolescents with autism spectrum disorder. *British Journal of Occupational Therapy*, *78*(1), 33-41. http://dx.doi.org/10.1177/0308022614561237

Keller, J., Kafkes, A., & Kielhofner, G. (2005). Psychometric characteristics of the Child Occupational Self Assessment (COSA), Part One: An initial examination of psychometric properties. *Scandinavian Journal of Occupational Therapy*, *12*(3), 118-127. http://dx.doi.org/10.1080/11038120510031752

Kielhofner, G. (2008). *Model of human occupation: Theory and application* (4th ed.). Baltimore, MD: Lippincott Williams & Wilkins.

Kielhofner, G., & Fisher, A. G. (1991). Mind-brain-body relationships. In A. G. Fisher, E. A. Murray, & A. C. Bundy (Eds.), *Sensory integration; Theory and practice* (pp. 30–45). Philadelphia, PA: F. A. Davis.

Kramer, J., Bowyer, P., O'Brien, J., Kielhofner, G., & Maziero-Barbosa, V. (2009). How interdisciplinary pediatric practitioners choose assessments. *Canadian Journal of Occupational Therapy*, *76*(1), 56-64. http://dx.doi.org/10.1177/000841740907600114

Kreider, C. M., Bendixen, R. M., Huang, Y. Y., & Lim, Y. (2014). Centennial Vision – Review of occupational therapy intervention research in the practice area of children and youth 2009-2013. *American Journal of Occupational Therapy*, *68*, e61-e73. http://dx.doi.org/10.5014/ajot.2014.011114

Lee, J. (2010). Achieving best practice: A review of evidence linked to occupation-focused practice models. *Occupational Therapy in Health Care*, *24*(3), 206-222. http://dx.doi.org/10.3109/07380577.2010.483270

Li, Y., & Kielhofner, G. (2004). Psychometric properties of the volitional questionnaire. *The Israel Journal of Occupational Therapy*, *13*(3), E85-E98. http://www.jstor.org/stable/23468864

Miller, L., Ziviani, J., & Boyd, R. N. (2014). A systematic review of clinimetric properties of measurements of motivation for children aged 5-16 years with a physical disability or motor delay. *Physical & Occupational Therapy in Pediatrics*, *34*(1), 90-111. http://dx.doi.org/10.3109/01942638.2013.771720

Radomski, M. V., & Trombly Latham, C. A. (Eds.) (2013). *Occupational therapy for physical dysfunction* (7th ed.). Baltimore, MD: Lippincott Williams & Wilkins.

Reid, D. (2005). Correlation of the Pediatric Volitional Questionnaire with the Test of Playfulness in a virtual environment: The power of engagement. *Early Child Development and Care*, *175*(2), 153-164. http://dx.doi.org/10.1080/0300443042000230366

Reilly, M. (1974). *Play as exploratory learning*. Beverly Hills, CA: Sage Publications.

Trombly, C. A. (1995). Occupation: Purposefulness and meaningfulness as therapeutic mechanisms. *American Journal of Occupational Therapy*, *49*(10), 960-972. http://dx.doi.org/10.5014/ajot.49.10.960