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# **The Role of Occupational Therapy in Determining the Effectiveness of Functional Task Assessments Used to Improve Quality of Life for Older Adults with Parkinson’s Disease.**

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### **Focused Question**

What is the role of occupational therapy in determining the effectiveness of functional task assessments used for intervention planning to improve quality of life in ADLs and IADLs for older adults, (ages 65+) with Parkinson's disease?

### **Case Scenario**

This critically appraised topic focuses on the role of occupational therapy in ascertaining the effectiveness of specific functional assessments in improving the quality of life of older adults with Parkinson's disease.

### **Parkinson's and Occupational Therapy**

Parkinson's disease is the progressive loss of gross and fine motor functions in the upper extremities, trunk, face, and vocal muscles (Ott & Kolodziejczak, 2021). Occupational therapy is the therapeutic use of occupations with people, groups, or populations for the purpose of enhancing or enabling participation in valued activities. Examples of occupations include daily life activities, such as eating, bathing, shopping, socializing, financial management, and health and wellness (American Occupational Therapy Association [AOTA], 2020). Occupational performance problems in clients with Parkinson's disease include eating and feeding difficulties, dressing, fine motor coordination, lack of spontaneous facial expressions, slow and rigid movements in gross motor movements, and increased muscle tone (Gaudet, 2002). Cognitive impairments may become more noticeable, such as executive dysfunction, increased processing time, and delayed or decreased safety awareness (Gaudet, 2002).

In reviewing the role of occupational therapy and performance problems clients with Parkinson's may have, Wood et al. (2022) noted that occupational therapists promote health, well-being, and participation in meaningful activities for individuals with Parkinson's disease



and their caregivers. According to Welsby et al. (2019), Parkinson's disease is a neurodegenerative disease but the role of the occupational therapist is to slow down the progression of symptoms and maintain participation in daily life activities. Additionally, the authors noted the occupational therapist supports their client in adapting performance patterns such as roles and routines in order to maintain one's quality of life in a later progression of Parkinson's.

### **Functional Assessments, Occupation, and Occupational Therapy**

Functional assessments can be used to evaluate a client's functional level of performance and ability to perform certain tasks in a safe and efficient manner (Borras-Fernandez et al., 2021, para. 2). Some performance-based assessments occupational therapists use in evaluating functional cognition include the Complex Performance Task Assessment (CPTA) and the Weekly Calendar Planning Activity (WCPA). These assessments help create occupational therapy interventions to increase participation in daily life activities (Foster et al., 2022; Davis et al., 2019). The Canadian Occupational Performance Measure (COPM) is an "individualized measure designed to detect change in a client's self-perception of occupational performance over time." (Law et al., 2019, p. 1). It identifies areas of occupational performance problems and the client self-rates their importance, performance, and satisfaction.

Several functional assessments used with clients with Parkinson's disease focus on the performance of activities of daily living (ADLs) and instrumental activities of daily living (IADLs). The Performance Assessment of Self-care Skills (PASS) assesses a client's occupational performance during daily life tasks (Rogers et al., 2016). The PASS has been used with clients with Parkinson's as it objectively assesses IADL function to detect early functional changes in clients with Parkinson's disease (Foster, 2014). The Schwab and England Activities



of Daily Living Scale (SE-ADL) was designed to assess a person's ability to function in activities of daily living. The person selects a rating that most accurately describes their level of functional independence, which is then used to guide interventions. The SE-ADL is part of the Unified Parkinson Disease Rating Scale (UPDRS), which progressively measures the course of Parkinson's disease in clients (Ramaker et al., 2002). The UPDRS measures multiple areas of a client's life, including ADLs. However, the UPDRS is just a rating scale, and is not sensitive to illuminating an individual's valued occupations. The UPDRS captured less than one-third of a client's self-identified valued occupations as distinguished on the COPM (Alsaeed et al., 2021).

### **Quality of Life and Occupational Therapy**

An overarching goal of occupational therapy is to promote quality of life (AOTA, 2020). Functional assessments help with improved quality of life in daily life activities (Choi & Kim, 2022). Quality of life can be understood as a dynamic appraisal of life satisfaction, self-concept, health and functioning, and socioeconomic factors (AOTA, 2020). Performance-based measures derived from functional assessments guide intervention planning and development to increase participation and the quality of life in individuals with Parkinson's (Foster & Kwalwaser, 2018). These functional assessments set occupational therapy apart from other professions and make occupational therapy practitioners distinct. Occupational therapy uses a holistic approach to evaluate the mind and body, and enhance quality of life (McColl, 1994). Research has shown how using a holistic approach in clients with Parkinson's disease focuses on improving quality of life. Occupational therapists have specific knowledge and expertise to create interventions to promote wellbeing (Munneke et al., 2010, as cited in Welsby, 2019).

When looking at a specific theory, the Person-Environment-Occupation (PEO) model is the most fitting for our focus question. A component of holistic occupational therapy is the



understanding that occupational dysfunction can result from the synthesis of a person in their environment, which relates to PEO through elucidating the “fit” of a person with their environment (McColl, 1994, p. 75). The person is made up of older adults with Parkinson’s disease. The environment includes where they performed the interventions or assessments, specifically their natural context. The occupation focuses on what is being measured in the functional assessments which are activities of daily living and instrumental activities of daily living.

### **Purpose Statement**

Currently, there is limited research on looking at the role of occupational therapy with clients with Parkinson’s disease in the context of functional assessments. The purpose of this critically appraised topic is to determine how occupational therapy is critical to this specific population and how the use of functional assessments can improve quality of life for older adults, (ages 65+) with Parkinson’s disease.

### **Methodology**

The literature search took place from February 22, 2023 to March 1, 2023. Throughout this process a number of occupational therapy, multi-disciplinary, and other clinical databases were used. These databases included: American Journal of Occupational Therapy, American Occupational Therapy Association, Pubmed, CINAHL Complete, and DynaMed. Search terms used to define our literature base were: “Parkinson’s”, “Parkinson’s disease”, “occupational therapy”, “functional assessment”, “culture”, “evaluation”, “quality of life”, “interdiscipline”, “interdisciplinary”, “intervention”, “occupation”, “intervention planning”, “older adults”, “geriatric”, “role”, “guidelines”, “activities of daily living”, “instrumental activities of daily living”, “participation”, “adaptive devices”, “cognitive function”, “motor planning”,



“performance”, and “satisfaction”. The search terms “AND” and “OR” were used between terms to produce an accurate data search. Exclusion criteria included articles not written in English and articles older than 25 years. Limitations of this literature search were based on the availability of relevant literature, time to critically appraise relevant literature, and access to certain databases.

### **Types of Articles Reviewed**

There were a total of 38 articles reviewed. Of the 38 articles reviewed, 23 research articles were selected for further review. Out of the 23 selected, 10 articles were Level I studies (Choi & Kim, 2022; Foote & Town, 2007; Foster et al., 2014; Foster et al., 2022; Wood & Foster, 2022; Munneke et al., 2010; Ramaker et al., 2002; van Uem et al., 2016; Welsby et al., 2019). Two articles were Level II studies (Alsaeed et al., 2021; Peterka et al., 2020). Four articles were Level III studies (Davis et al., 2019; Foster, 2014; Hill et al., 2020; Rahmen et al., 2008). Three articles were Level IV studies (Cavalcanti et al., 2020; Rukavina et al., 2022; Yu et al., 2017). Four studies were Level NA (Foster, 2018; Gaudet, 2002; McColl, 1994; Ott, 2021). Additionally, six sources used were government sources or other organizational resources (AOTA, 2020; AOTA, 2020; Borres-Fernandez et al., 2016; Law et al., 2019; Rogers et al., 2016; Baptiste, 2017).

### **Synthesis**

#### **Occupational Therapy and Functional Assessments**

The purpose of occupational therapy is to determine the best functional assessment for the client and diagnosis. The assessments used most often with clients with Parkinson’s are the WCPA, CPTA, COPM, PASS, SE-ADL, and the UPDRS. This list was based on the prevalence of each assessment used in literature relating to occupational therapy interventions for Parkinson’s clients. These assessments can be used to evaluate a client and develop a plan for



intervention, but not all are based on an occupational therapy framework. The COPM, WCPA, CPTA, and PASS are all occupational therapy-based assessments, but the SE-ADL and the UPDRS are focused on interdisciplinary use. Each assessment can be used to evaluate a particular aspect of the client; for example, the WCPA is used to evaluate a client's functional cognition (Foster et al., 2022). The PASS, UPDRS, and SE-ADL assess IADLs or ADLs (Alsaeed et al., 2021; Rogers et al., 2016; Ramaker et al., 2002). Cognitive function or motor function is how occupational therapists determine which functional assessment to use.

There are limitations within certain assessments based on the reviewed literature. A limitation of the UPDRS "is that it is not a client centered tool and does not account for the variability in the presentation of the disease (i.e. there is no weighing of the components)" (Gaudet, 2002, p. 7). The COPM - while being an occupational assessment - is also limited as it is a performance-based assessment, ordinal data is not generated, and the assessment itself is not criterion-referenced (Gaudet, 2002). These limitations also help occupational therapists determine which specific assessments to use in figuring out the best intervention for that client.

### **Assessments, Outcomes, and Intervention Planning**

Information gleaned from the array of assessments help occupational therapy practitioners discern specific occupational performance needs of their clients and how they should be addressed to meet the client's goals (Gaudet, 2002). In turn, these assessments guide occupational therapy interventions to increase participation in daily life activities. The CPTA and WCPA are functional cognition assessments that evaluate performance-based measures and difficulties clients with Parkinson's are facing in daily life tasks (Foster, 2018; Foster, 2022; Davis et al., 2019). The CPTA also assesses executive function, as it has been shown that clients with Parkinson's demonstrate decreased executive function abilities (Davis et al., 2019). When





used together, these assessments provide detailed information about a client's functional state and their performance in complex activities of life (Davis et al., 2019; Foster, 2018). The COPM is better for identifying valued occupation of clients with Parkinson's rather than the UPDRS, which assesses motor impairment and disability (Alsaeed et al., 2021; Ramaker et al., 2002). Additionally, the PASS, CPTA, and the WCPA can be used to evaluate cognitive functional changes that inform intervention and increase participation in clients with Parkinson's (Foster, 2014; Foster & Kwalwaser, 2018).

### **Quality of Life Interventions**

Based on the validity, reliability, and rigor of the current literature, multiple interventions were shown to be effective in reducing or maintaining symptoms of Parkinson's. Current evidence-based practices promote interventions that are intermittent, intensive, and short-term, as well as customizing intervention plans for a specific client's goals (Welsby et al., 2019). Interventions can be previously established, such as Lee Silverman Voice Treatment-BIG (LSVT-BIG), or more customizable for a client, such as adaptive eating devices. LSVT-BIG aims to increase movement amplitudes in clients with Parkinson's and has shown to be effective in reducing motor symptoms (Peterka et al., 2020). Using LSVT-BIG interventions have been shown to improve hand function, daily life activities, psychological function, and quality of life (Choi & Kim, 2022). The effects of LSVT-BIG can be seen in other areas of life, such as feeding. An intervention for feeding could be an adaptive eating device. Cavalcanti et al. (2020) addressed the use of adaptive eating devices to significantly improve performance and satisfaction with quality of life in clients with Parkinson's. This intervention added weight to the device to mitigate tremors clients with Parkinson's may experience while eating. Occupational therapists can also use interventions across the lifespan with clients with Parkinson's disease,



such as home modifications and fatigue management programs (Foster et al., 2014). Hill et al. (2021) determined that after participating in an eight-week yoga program, clients with Parkinson's demonstrated improvement in activity, occupational participation, and fatigue management skills. These interventions promote one's quality of life and level of independence while managing symptoms of Parkinson's.

### **Occupational Therapy and Culture**

Occupational therapist practitioners follow the Code of Ethics as dictated by the AOTA. When practicing culturally competent care, occupational therapists strive to promote altruism, equality, and justice, as well as engage in advocacy efforts on behalf of their client to ensure one's culture is respected and upheld as it befits the client's wishes (AOTA, 2020). Noncompliance can still emerge, and disparities exist in the treatment of Parkinson's based on one's ethnicity or cultural identity. In evaluating chronic pain experienced by clients with Parkinson's, it was found that significantly more white clients with Parkinson's received pain relief when compared to similar Asian or Black patients in the United Kingdom (Rukavina et al., 2022). Additionally, the Chinese version of the UPDRS identified more cognitive impairments and difficulties with ADLs in Chinese clients with Parkinson's while Western clients with Parkinson's experienced more difficulty with motor and neuromusculoskeletal tasks (Yu et al., 2017). These differences are noted in various cultures so occupational therapists must be educated and know what to look for when treating diverse populations.

### **Limitations of Occupational Therapy Services**

Clients with Parkinson's disease often receive interdisciplinary services, which do not have a specific focus on occupational therapy intervention. As such, the client may not be getting enough occupational therapy to promote performance in valued occupations. Disease timeline



varies between clients, and some may have developed effective coping strategies prior to receiving occupational therapy services and may be resistant to changes (Hill et al., 2021). Insurance companies may be resistant to paying for certain interventions, such as costly specialized adaptive devices. Instead they will pay for alternative interventions and must see failure to progress with that intervention before paying for more specialized services, such as adaptive eating devices (Foote & Town, 2007). Welsby et al. (2019) determined that more research concerning the effects of specialized occupational therapy programs targeting primary symptoms of Parkinson's is warranted. This lack of research can lead to insurance companies' denial of claims.

### **Summary of Synthesis**

After reviewing the best available literature through the lens of the PEO model, the role of occupational therapy in Parkinson's disease is to use specific functional assessments to develop interventions to ultimately promote engagement in daily life activities with the goal of improving quality of life. PEO assesses the “fit” of the client between their occupations, self, and environment (Baptiste, 2017). The best outcome is usually found when the “fit” is most complementary to the individual and their goals (Baptiste, 2017). This usually entails a unique and holistic approach to intervention and application of therapy through identifying the valued occupations of each client (McColl, 1994; Ott & Kolodziejczak, 2021). Quality of life can be improved with the use of culturally sensitive interventions, and can be adapted to specific individual needs and goals (Cavalcanti et al., 2020; Foster & Kwalwaser, 2018; Choi & Kim, 2022). Routines and rituals are most often molded by cultural traditions, and are highly valued occupations with deep personal meaning (AOTA, 2020). By considering occupations that hold



personal meaning and shaping intervention to promote participation in such occupations, quality of life and satisfaction with therapeutic services can be improved.

### **Focused Question**

What is the role of occupational therapy in determining the effectiveness of functional task assessments used for intervention planning to improve quality of life in ADL's and IADL's for older adults, (ages 65+) with Parkinson's disease?

### **Clinical Bottom Line**

Parkinson's disease is a neurodegenerative disease, and based on the literature reviewed, the role of the occupational therapist is to help slow down the progression of symptoms and maintain participation in daily life activities. Occupational therapists aim to emphasize a client's occupational nature and uphold the importance of one's occupational identity (AOTA, 2020). In treating clients with Parkinson's, occupational therapists have a discrete role in promoting health, well-being, and participation in meaningful activities (Wood et al., 2022). Occupational therapy plays a critical role in improving the quality of life in older adults with Parkinson's disease by thorough intervention planning and assessment selectivity. Functional assessments that occupational therapists can administer include the Weekly Calendar Planning Activity (WCPA), Complex Performance Task Assessment (CPTA), Performance Assessment of Self-Care Skills (PASS), Canadian Occupational Performance Measure (COPM), Schwab and England Activities of Daily Living Scale (SE-ADL), and Unified Parkinson's Disease Rating Scale (UPDRS) (Foster et al., 2022; Davis et al., 2019; Law et al., 2019; Rogers et al., 2018; Gaudet, 2002; Ramaker et al., 2002). These assessments mainly focus on the performance of activities of daily living (ADLs) or instrumental activities of daily living (IADLs), but can also assess specific mental functions such as higher level cognition, attention, and executive functioning. Through



using a holistic approach, occupational therapists enhance one's quality of life by looking at the mind and body as a whole. This approach allows a personalized plan for intervention that promotes one's specific valued occupation and well-being (Munneke et al., 2010, as cited in Welsby, 2019; Foster & Kwalwaser, 2018).

The model that fits best with this approach is Person-Environment-Occupation (PEO), which gauges the "fit" and determines the best transactive environment for a person to engage in their meaningful occupations (Baptiste, 2017). The "person" consists of older adults diagnosed with Parkinson's disease. The "environment" consists of where assessments and interventions are performed. The "occupation" includes ADLs and IADLs (Baptiste, 2017). The choice of assessment guides intervention planning, such as selecting the COPM over the UPDRS; the COPM identifies valued occupations over the level of disability one is experiencing (Alsaeed et al., 2021; Ramaker et al., 2002). In keeping up with evidence-based practices, current literature promotes intermittent, intensive, and short-term interventions. Current literature encourages the use of personalized intervention plans in order to meet individual client goals (Welsby et al., 2019). Intervention types can be standardized or non-standardized, such as Lee Silverman Voice Treatment-BIG (LSVT-BIG) or adaptive eating devices. The aim of LSVT-BIG is to increase movement amplitudes in clients with Parkinson's, and it was shown to be effective in reducing motor symptoms brought on by neural degeneration (Peterka et al., 2020). Adaptive eating devices, such as weighted spoons, can promote independence in one's life and increase one's perceived quality of life (Cavalcanti et al., 2020). Other types of interventions include home modifications, fatigue management programs, or yoga (Foster et al., 2014; Hill et al., 2021). In all, a variety of interventions can promote quality of life in older adults with Parkinson's depending on the client's goals and satisfaction with performance.



A client's culture can influence their valued occupations, so occupational therapists must approach each client with an understanding of cultural sensitivity. Various international populations experience differences in care and disease impairment (Yu et al., 2017; Rukavina et al., 2022). Based on the literature reviewed, including occupational therapists as part of an interdisciplinary team can promote better client-centered care that fits the client's needs. Other team members include physical therapist, speech-language pathologist, family members or other caregivers, primary care physicians, and social workers. Limitations of this critically appraised topic include the exclusion of international populations, exclusion of assessments that did not evaluate functional concerns, the progressive timeline of each client's Parkinson's symptoms, and policies held by the client's insurance company. The studies included in this critically appraised topic were limited by the amount of research published on functional assessments for occupational therapists treating Parkinson's disease. Some areas that were devoid of quality research were functional assessments as a whole, as well as interventions and their efficacy as they relate to Parkinson's (Welsby et al., 2019; Alsaeed et al., 2021; Ramaker et al., 2002; Ott & Kolodziejczak, 2021).



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