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Occupatıonal Therapy Intervention in Burns: A Case Study

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Abstract: ***Introduction: The aim of this case study was to explore the experience of a patient who participated in 8-week multicontext occupational therapy intervention while in the burn unit. Individual responses to mind-body practices were assessed and patient perspectives were included to better understand what OT intervention brought to the recovery process. Methods: This retrospective chart review included a patient admitted to the burn unit. Data were gathered from the hospital and interviews of the patient and family to include demographic and burn characteristics, changes in vital signs throughout the sessions, specifically, and before and after measures on the State-Trait Anxiety Inventory-6 (STAI-6), which was available for the patient.This study examined the effect of an 8-week multicontext occupational therapy intervention on cognitive functions, occupational performance, and independence in activities of daily living in the client with burn injury. Additional information was obtained from occupational therapy documentation to better understand the unique experience of the patient with the OT intervention. Inductive content analysis occurred within and across subjects to generate individual and over-arching themes. Results: The patient experienced a reduction in heart rate during seven of the eight OT sessions, while a reduction in respiration rate was seen in four of these sessions. For the patient, STAI-6 measures were available and indicated a reduction in state-anxiety scores after OT intervention. Inductive coding within subject revealed that the patient self-generated a desired focus for OT intervention and perceived that OT supported personal coping. Four themes emerged across the documentation of the patient and included 1) eagerness to explore practices; 2) feelings of appreciation towards OT intervention; 3) OT provided a sense of calm; 4) OT supported daily occupations and ADLs in the burn unit.The results showed improved cognitive functioning and occupational performance, and increased independence in daily living. The client generalized the use of the strategies in different contexts and increased their occupational performance and satisfaction. The study also highlighted the important role of multicontext occupational therapy interventions in improving cognitive functioning and increasing daily functioning in traumatic brain injury. The results of this study show promise for individuals with traumatic brain injury. Conclusion: OT was a client-driven intervention that complemented standard occupational therapy practice in the burn unit. OT has the potential to support patients in coping with everyday aspects of life in the burn unit.***

Keywords: Multicontext occupational therapy, OT, occupational therapy, burn injury

1. Introductıon

Burn injury (BI) is defined as injuries of skin and tissue caused by heat, chemical, electricity or other source.[1] Burn injuries remain a predominant problem, especially in South Asia.[2] India was estimated to have experienced over 23,000 fire-related fatalities in 2019, representing about 20% of the global mortality rate. Additionally, burns were responsible for 1.5 million disability-adjusted life-years (DALYs). [2,3] It is associated with a significant burden in social, health, and economic dimensions.[4]

Burn survivors have reported increased pain and distress during rehabilitation therapy, specifically occupational and physical therapy (Maani et al., 2011). However, active participation is imperative to achieve functional outcomes as damaged tissue heals. In the burn unit, the rehabilitative process itself exposes patients to extreme physiological and psychological stressors, making it critical for occupational therapists in this setting to maintain an open dialogue with patients about their fears, pain, and anxiety (Carle, Darrow, Grady, & Bollig, 2017). When patients self-limit their participation in everyday activities, including occupational therapy, because of pain or distress, their long-term function can be severely impacted. It is therefore important to explore treatment techniques that can be used by occupational therapists in the burn unit to reduce distress and thus, allow for enhanced occupational performance in and out of therapy.[5]

Occupational therapists are acutely aware of the impact of burn trauma on health and wellbeing, as such, they advocate for the mental health needs of patients in recovery. Quality of life and emotional well-being are major concerns for occupational therapists in the burn setting, as routine exposure to pain and distress may perpetuate feelings of anxiety. Given the complex nature of burn trauma, the role of occupational therapy in the burn unit is multifaceted to meet the comprehensive physical and emotional needs of patients. Occupational therapists in the burn unit help patients establish new roles, routines, and habits for post-injury life. Through environmental modification, therapists help patients participate in self-care tasks, such as feeding and grooming, and use purposeful movements to facilitate stretching and mobilization. To address the physical implications of burn injury, occupational therapists use a variety of treatment modalities to minimize functional losses as the skin heals. Such modalities can include splinting, stretching, and

positioning, to prevent contractures and maintain range of motion (Al-Mousawi et al., 2019; McGourty et al., 1985). Because occupational therapy treatment in the burn setting can be distressing to patients, therapists often invest substantial energy into providing explanations, motivating patients, and building trust with patients (Al-Mousawi et al., 2019). Females sustain burns mostly at home and males at the workplace [1]. Advances in prevention programs and burn care delivery have resulted in higher survival rates, with an increasing trend in the elderly [3].Females sustain burns mostly at home and malesat the workplace [1]. Advances in prevention programmes andburn care delivery have resulted in higher survival rates, with anincreasing trend in the elderly [3].

A burn is a complex traumatic injury requiring a comprehensive multidimensional approach to management, including the availability of specialised medical/surgical care with simultaneous rehabilitation interventions including psychosocial support for survivors and their families [5,11,12]. Rehabilitation is defined as "a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interactionwith their environment"13. Some examples include physical, occupational, or psychological therapy, pain management, etc. Complementary and alternative medicine (CAM)defined as "medicine or treatment which is not considered as conventional (standard) medicine" [14) are also included for this review.Several systematic reviews (SRs) have demonstrated some positive effects of various interventions such as musictherapy [16] and virtual reality (VR) [15,17,18] for improving pain[15–17]. These published reviews vary in methodology, quality, age cohorts and outcome measures. Most of these reviews recommended the need for further robust clinical trials [16,17].To our knowledge, an overview of SRs summarising the existing evidence for non-pharmacological rehabilitation interventions in adults with burn injury (BI) is yet to be developed. This is important as it will provide crucial information about the types of rehabilitation interventions that are effective in improving outcomes to guide clinicians, and policymakers in providing evidence-based management. Therefore, the objective of this review is to conduct a SR, to evaluate evidence from published SRs to determine the effectiveness and safety of rehabilitation interventions (unidisciplinary and/or multidisciplinary rehabilitation) on minimising impairment, activity limitation, and participation restriction in BI. A secondary objective was to determine the burden of care and cost-effectiveness of rehabilitation interventions in different settings.[7]

Due to dysfunctions, the client's ability to perform basic activities of daily living (ADL) is negatively affected.[12] Many studies show that clients can achieve independence in ADL in the post-BI period, but many have difficulties in instrumental activities of daily living (IADL) such as housework, shopping, and money management.[13,14] These difficulties in IADL are directly associated with executive dysfunction, which is often compromised in BI.[11] Therefore, various rehabilitation approaches are recommended to improve dysfunction and increase occupational performance in clients with BI.[10,15] These approaches include remedial and compensatory strategies that can increase daily functionality and support cognitive functions.The Multicontext Approach is a rehabilitation approach that combines remedial and compensatory strategies based on the Dynamic Interaction Model.[8] Toglia designed this approach to improve function by providing generalization and transfer through training strategies across various activities and contexts.[16] The approach aims to transfer and generalize the strategies learned using various activities and contexts to improve functionality.[17] Instead of developing task-specific skills, the primary goal is to recognize and monitor mistakes in the context of the individual activity, learn the strategy, and use these strategies in many activities. Key elements of the multicontext approach include (a) the use of many contexs, (b) structuring implementation and response activities in multiple contexts to gradually reduce physical similarity along a horizontal continuum, (c) emphasis on metacognitive training, d) the use of strategies daily activities tailored to a person's level of challenge, and e) associating new information with previously learned knowledge and skills.[8,17]

For learning and generalization to occur, the strategies and skills acquired in one context must also be applied in a different context. For example, a strategy for remembering medications can also be used to recall a grocery shopping list. However, the transition between these contexts should be gradual. Two situations or activities should initially be very similar because learning transfer strategies are easier. The same strategies are gradually applied to activities and contents that differentiate over time. Transfers can be categorized as follows: near (very similar: only one or two features of the activity have changed), moderate (somewhat similar), distant (different), very distant (very different). There is a similarity between the activities because the individual can use strategy development effectively if the client notices a similarity between new and previous experiences.[18]

Another element is metacognitive training. It is used to provide self-awareness and regulation during the intervention.[8] The major point here is that the client monitors their own performance and decides on the appropriate strategy. Metacognitive training involves various awareness interventions. These can take the form of the patient predicting and evaluating the difficulty of the activity and their own performance before, during, and after the activity. Additionally, role reversal (where the patient observes the therapist performing the activity) is often used.[16] The use of strategies involves organizing approaches, tactics, or rules that enhance information processing. Strategies can be categorized into internal strategies (such as cues, commands, questions, mental practice, or visualization) and external strategies (like checklists, marking reference points for tracking, underlining critical points, environmental cues, and aids, such as pointing with a finger during activity).[19]

The Multicontext Approach aims to use the targeted strategies with functional activities and thus make it practical.[20] The use of activities is inherent in occupational therapy interventions. Therefore, this is the strongest point of this approach. In addition the integration of meaningful and purposeful activities for the client into the rehabilitation process is also important for the continuity of the recovery. This study aimed to examine the effect of multicontext occupational therapy intervention on cognitive function, occupational

performance, and independence in activities of daily living in a client who had BI.

2. Methods

Participant

The case of this study was a 24-year-old female. Informed consent was given to the patient before participating in the study. The client was a school going child and had previously worked like play and basic ADLs. The client had eletrical burn injury, including amputation of rigth upper exterimitie due to burn a month ago. The client stayed in the ward for treatment for 3 months. After the intensive care process, client received two months of treatment in a rehabilitation center. The initial assessment identified physical limitations, low selfesteem, right upper limb amputation, balance issuees and unable to walk. In addition, the client experienced dizziness, loss of balance, and unilateral weakness in the lower and upper extremities on the right side. During her stay in the rehabilitation center, the client was completely dependent with activities of daily living and used a walker for mobility. Her parents assisted her with toileting, bathing, and dressing activities. Due to weakness in her upper limbs, the client could not eat independently. Occupational therapy sessions continued for the first 4 weeks after discharge. Currently, the client has no motor problems and can perform basic activities of daily living. However, the client sought the services of an occupational therapist due to difficulties with activities of daily living that require more precission needs such as accuracy, fine motor, and organization.

Occupational Therapy Assesments

The Total Body Surface Area (TBSA) assessment, including the Rules of Nines and Lund and Browder methods was performed to assess body surface area involved. Burn type and depth for regularly re-examine the extent of tissue destruction as it can change for at least 48 hours post-burn. Burn injuries rarely present uniformly with a single depth throughout the affected area.[7] Early interventions and other patient factors (e.g. age and health) can influence the type and depth of a burn.[2] subjective assesment - When taking a subjective history, it is essential to consider emotional trauma that may be associated with a burn injury. Consider if it is appropriate to involve family members or witnesses to fill in gaps in the history or to provide additional context.[1] history was also and important part of assessment. Pain intensity assessment by Visual Analogue scale (VAS) and Pain Observation Scale for Young Children (POCIS). Burn Specific Health Scale-Brief (BSHS-B): evaluates the physical and psychosocial functioning of burn patients and their quality of life[16] Burns Scar Index (Vancouver Scar Scale): the first tool to be validated to assess burn scars; it focuses on four indicators (scar height and thickness, pliability, vascularity, and pigmentation)[17] Burns Specific Pain Anxiety Scale: evaluates pain-related anxiety in patients with burn injuries[18] **Physical findings:** please note that physical findings, while valuable, can sometimes be misleading and must be considered alongside other diagnostic tools. Key physical findings include:[19] sooty sputum, stridor (noisy breathing due to an obstructed airway), wheezing, facial burns, singed nasal / facial hairs, cough, stupor, dyspnoea, hoarse voice ,oedema, erythema (superficial reddening of the skin, usually in patches), inspiratory and end expiratory crackles on auscultation, chest x-ray changes, signs of hypoxia, headache, shortness of breath, fast heartbeat, coughing, wheezing, confusion, bluish colour in skin, fingernails, and lips. Oedema assessment, General functional mobility assessment- The mobility assessment should only be completed once the patient is medically stable. This assessment should focus on:

- Preventing complications associated with prolonged bed rest
- Restoring functional independence
- Assess:
- Functional transfers
- gait
- Endurance
- balance
- Factors to consider during the mobility assessment:
- posture
- activities of daily living
- Demands of vocational roles
- Cardiovascular response to mobilisation
- Neurological status
- Concomitant injuries / weight-bearing status

The Functional Independence Measure (FIM) was used to assess independence in basic physical and cognitive activities in daily life. The measure consists of 18 items, each scored 1-7 points (1: Fully help, 7:Fully independent).[22] The measure has Turkish validity and reliability; Cronbach's alpha value is 0.90.[23] The client was observed to be independent in motor functions but needed minimal help in perception, problem-solving, and memory.

The Lawton Brody Instrumental Activities of Daily Living Scale was used to assess independence in instrumental activities of daily living.[24] It consists of 8 items (ability to use telephone, shopping, food preparation, house keeping, laundry, mode of transportation, responsibility for own medications, ability to handle finances) and each item is scored 0-1 points (0: Not independent, 1: Fully independent). This scale is also valid and reliable in Turkish, and its Cronbach's alpha value is 0.84.[25] The client could not perform shopping, food preparation, travel, medication, and financial activities independently.

The Canadian Occupational Performance Measurement (COPM), a semi-structured questionnaire that assesses occupational performance (self-care, productivity, and leisure time) affected by a person's social roles and developmental level, was used. The measure helps identify the activities people find difficult and important in daily life. The person gives a score between 1-10 points in terms of performance and satisfaction with the activities the client states are important in their daily life.[26] The COPM is a scale with excellent reliability in Turkish.[27] The COPM was used to obtain the client's occupational history. The client was living with her husband. Her husband was working full time. The client did not have any full-time job and spent most of her time alone at home. The client could independently perform basic activities of daily living during the day but had difficulty with some activities. The client listed the most important activities for her: shopping, using public transportation, and taking her medication. The client had to go shopping with her husband because she could not do this in the grocery store

even if she had used a shopping list. Her husband drove her everywhere, so the client still depended on him. However, before BI, the client used public transportation to work and meet friends. The client was taking several medications as a result of the BI. Still, although the client had developed various strategies to take them (e.g., alarms and her husband reminding her of medication times), the client was unable to take them independently

The Executive Function Performance Test (EFPT) is an assessment that evaluates executive function performance, including four basic instrumental activities of daily living (cooking, taking medication, paying bills, and using the phone).[28] It evaluates the steps of initiating, executing, completing the task, and the level of support required to support task performance. The assesment also evaluates the person's perceived performance (self-efficacy). During the evaluation, the level of assistance in the steps is determined (0: no need for assistance, 1: indirect verbal assistance, 2: assistance with gestures, 3: direct verbal assistance, 4: physical assistance, 5: doing for the individual). This scale is valid and reliable in Turkish, and its Cronbach's alpha value is 0.82.[29]

The client was observed while cooking, taking medication, paying bills, and using the phone for EFPT assessment. She independently started the cooking activity. The client needed the direct verbal assistance of the occupational therapist in organizing the necessary items. After beginning the activity, the client shuffled the rankings and did not turn off the stove. Therefore, the occupational therapist gave physical assistance at this point. The client also took a safety hazard by holding the hot pot without a handle. The client completed the activity with indirect verbal assistance. The client started and organized the activity independently using telephone activity. The number was not transferred from the phone book to the phone; the occupational therapist helped her to continue the activity steps by giving direct verbal help so that the client would not perform incorrectly. In the taking medication activity, the client had a lot of difficulty with and stated in the COPM.

The client independently picked up other items from the item box, and the client was able to take the instruction paper with the cue of the occupational therapist. While taking medication, the client was confused about the order of use of the pills. In addition, in the medication use scenario, the occupational therapist provided physical assistance, stating that the client should eat crackers before taking the medicine on a full stomach. The client independently started the bill-paying activity. The client had difficulty during this assessment but needed direct verbal assistance while collecting the items from the box. The client could not arrange the correct amount of money for the bills and place them in the appropriate envelopes. The client could not calculate the budget and continued to play with envelopes. The client needs the help of an occupational therapist and developing strategies to continue the activity. Therefore, the client and the occupational therapist determined goals according to COPM results (Figure 1).

1. To take the 3 medicines used in the morning and evening on time and correctly
2. Weekly grocery shopping and paying appropriately
3. Going to a cafe where she can go with the only bus

Figure 1: Goals Determined According to COPM

Intervention

According to the assessment results, the client had problems, especially with motor functioning, balance, ADLs performance related to ranking and categorizing. The client initiated activities independently. However, there were problems in organizing activities and performing them safely. In addition, the client's priority and important activities were shopping, using public transportation, and taking medication. Considering all this information, the intervention aimed to improve mottor functions based on ADL activities, mobility, writing, fine motor categorization, organization, independence in activities of daily living, and occupational performance as a multi-context occupational therapy intervention. The intervention was based on experiencing different activities, anticipating strategies for various situations with similar levels of difficulty, and providing multiple opportunities.

The client was not eager for the intervention. However, the client had poor insight into her performance in activities of daily living. The intervention plan was tailored to the individual according to the difficulties observed during the assessments. The intervention included the activities the client indicated in the COPM, which she had difficulties with daily life. The client was motivated by the idea of using public transportation and going shopping independently in daily life. The intervention consisted of 40 sessions (5 sessions per week, eight weeks total, and the sessions were 45 minutes). The same activity was repeated in two weekly sessions to reinforce the strategies in the activities. The interventions started at a simple level and increased in difficulty over time. The occupational therapist established three steps for each activity. While performing the activities, the number of items and instructions were low at first (e.g. client initially found only one medicine and placed it at the appropriate time, then the number of medicines was increased and the hours to drink during the day were diversified. Over time the activity has become more difficult (number of items, instructions and completion of the activity in a certain time). The intervention contents were directed at or related to taking medication, shopping and public transport activities specified in COPM. To provide generalization, the difficulty level of the activities and the clues were similar.

First, the occupational therapist created a scenario for each activity. Before each activity, the client and the occupational therapist verbally explained the activity and visualized it by doing it themselves. In addition, instructions were created for each activity. Before the first session, the occupational therapist explained the instructions one by one. In the first session, the occupational therapist asked the client to repeat the instructions aloud. In the following sessions, the client repeated them in their voice; the last week, the client was asked to repeat them internally. To promote self-awareness, the occupational therapist asked the client's opinion about

potential barriers to the activity and performance before each activity, when the activity was completed, the performance was discussed again. The client needed help to form an independent strategy during the activities in the first week. A checklist with instructions was used. In the second week, the client started strategizing, but the strategies were challenging. The occupational therapist guided the client to create more facilitative strategies. The occupational therapist also used appropriate feedback to ensure the client performed the activity steps independently and without errors. The client behaved impulsively during the activities and had problems with stepping stop. The client developed better independent strategies in the last week, and her impulsivity decreased (Table 1).

Table 1: Eight Weeks of Intervention

Week	1	2	3	4	5	6	7	8
Activities	1. repo building 2. counselling 3. Take part in ADL activities while sitting (Let's take your medicine.)	1. counseling 2. take part in adls 3.lite active ROMs of upper and lower extremities	1. social exposure and counseling 2. take part in adls (dynamic) 3.active ROMs of upper and lower extremities 4. balance training	1. Take out the items in the bag 2. tailored activity(step wise) 3. Place it in the relevant section 4. self stretching 5. weight bearing (mild) 6. Balance traning (moderate)	1. shifting 2. transfering 3. scar management 4. self stretching 5. weight bearing (moderate) 6. Balance traning (moderate)	1. shifting 2. transfering (high o low and low to high) 3. scar management 4. stretching 5. weight bearing (full) 6. Balance traning (full) 7. walking with full support	1. mobility traning 2. adl traning 3. scar management 4. stretching 5. weight bearing (full) 6. Balance traning (full) 7. walking with light support	1. mobility traning 2. adl traning 3. scar management 4. stretching 5. writting with left hand started 6. Balance traning (full) 7. walking without support

3. Results

The assessments were repeated after 16 sessions of occupational therapy intervention. The client could use the strategies learned during the eight weeks, especially in the mobility, adl traning and self esteem . The client made grate improvement in all the parameters. There were also improvements in Attention and concentration were prolonged, and the client completed the assessment without distraction. The FIM score showed decreased problems. However, she can further improve her skills. The Lawton & Brody Instrumental Activities of Daily Living assessment showed that independence scores increased in shopping, food preparation, and medication-taking activities.

Table 2: Assesment Scores of Pre- and Post-Intervention

	Pre-intervention	Post-intervention	Change in outcomes (%)
FIM			
Motor (0-91)	41	91	0
Cognitive (0-34)	30	34	11.76
Lawton&Brody Instrumental ADL Scale			
Using telephone (0-1)	1	1	0
Shopping (0-1)	0	1	100
Food preparation (0-1)	0	1	100
Housekeeping (0-1)	1	1	0
Laundry (0-1)	1	1	0
Transport (0-1)	0	0	0
Medication (0-1)	0	1	100
Finances (0-1)	0	0	0

ADL: Activities of Daily living, FIM: Functional Independence Measure

The activities that the client reported in the COPM were re-evaluated. The client verbally stated that her performance increased for taking medication and shopping activities. However, the client had doubts about using public transport alone. The client was afraid of getting lost but performance and satisfaction also increased for using public transport (Table 3).

Table 3: COPM Scores of Pre- and Post-Intervention

COPM	Pre-intervention		Post-intervention		Change in performance Outcomes (%)	Change in satisfaction Outcomes (%)
	Performance	Satisfaction	Performance	Satisfaction		
Taking medication (1-10)	3	3	7	7	40	40
Shopping (1-10)	5	4	7	6	20	20
Use public transportation (1-10)	2	2	5	5	30	30

COPM: Canadian Occupational Performance Measure

In EFPT, the client started all activities independently. The client repeated the activity steps and developed strategies while doing the activities. The client organized all activities without help or with indirect verbal guidance. The client needed less help than the first assessment because the client verbally repeated the activities. The client could generalize more quickly, especially when taking medication. However, the occupational therapist helped her to pay bills, both with gestures and verbally. The client was better in all activities related to safety and judgment. However, during the cooking activity, the occupational therapist had to help with gestures to turn off the stove. The client made all generalizations, created a strategy on her own to get phone and medication, and completed it without any safety issues. However, the client got confused when strategizing about paying the bill. Therefore, the occupational therapist provided both verbal and physical assistance. The client successfully completed all activities except the bill payment, and while completing the bill payment, the occupational therapist signaled with her hand and warned her to complete it (Table 4).

Throughout the entire evaluation, her working memory was better. It created internal and external strategies. However, the increased demand for activity was causing mental complexity and agitated in some activities. At this point, the activity performance decreased because of her agitated. Regarding self-efficacy, the client needed to be made aware of what the client could and could not do. The client evaluated her performance better after the intervention (Table 5).

Table 4: EFPT Scores of Pre- and Post-Intervention

Component	Cooking		Using telephone		Taking medication		Paying bills		Total		Change in outcomes (%)
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
Initiation/starting	0	0	0	0	0	0	0	0	0	0	0
Organization/set-up	3	1	0	0	2	0	3	1	8	2	30.0
Sequencing/completing steps in proper order	4	2	3	1	4	1	5	2	16	6	50.0
Determining safety/judgment	4	2	3	0	3	0	5	4	15	6	45.0
Complete	0	0	0	0	0	0	4	2	4	2	10.0
Total activity score	11	5	6	1	9	1	17	9	43	16	27.0

(0: Independent; 1: Indirect verbal assistance; 2: Help with gesture; 3: Direct verbal assistance; 4: Physical assistance; 5: Doing instead of the individual)

Table 5: EFPT-Self-Efficacy Scores of Pre- and Post-Intervention

	Client performance		Real Performance		Change in client performance outcomes (%)	Change in client real performance outcomes (%)
	Pre	Post	Pre	Post		
Cooking	0	1	1	2	50	50
Using phone	0	1	1	2	50	50
Taking medication	1	1	0	1	0	50
Paying bills	1	0	0	1	50	50

(0: without assistance; 1: with assistance; 2: not able)

4. Discussion

This study provides an in-depth explanation of the implementation and effectiveness of occupational therapy intervention to priority activities in a client with BI. According to the results, occupational therapy intervention increased the client's skills, occupational performance, and independence in activities of daily living. This study guides occupational therapists working in the clinic for interventions based on the approach for client with BI.

The most rapid recovery from BI occurs in the early stages of rehabilitation, with limited improvements occurring after one year post-injury.[30] The findings of this study support the perspective that functional recovery is possible years after an injury.[18] The client recognized the similarity between the activities and could generalize the strategies after the 16-session intervention, which included activities with similar demands arranged in a horizontal transition.

Using activities familiar to the individual in the intervention facilitates learning by increasing the motivation, participation, and awareness.[33] The use of intervention based on prioritized and important activities for the individual constituted the study's strength. As a result of the case study based on the approach by Lanca-Gonzoles, the client started to perform activities independently and improved professional performance.[34] According to the results of this study, the client's performance and satisfaction in the activities prioritized in the COPM increased. The client's confidence in shopping and taking medication had increased considerably. However, the client continued to have difficulties in using public transportation. This highlights the importance of not only simulation activities but also activity training in a real environment. In addition, occupation-based measures that examine perceptions of task challenges, error awareness and correction, and awareness of the effectiveness of task methods within the context of activity performance may be fitted for the Approach. In this study, EFPT also assessed self-awareness, but the scale is limited in the range of activities of daily living. In future studies, it would be beneficial to use specific self-awareness assessments to obtain comprehensive results on how a lack of self-awareness impacts the activity of daily living performance.

Until now, multicontext interventions have targeted the development of metacognitive skills. This is because the multicontext approach is based on the dynamic interactional model of cognition and includes metacognitive strategy training that involves collaboration with the client to identify

strategies.[32] Metacognitive skills consist of many basic cognitive functions. Therefore, basic cognitive functions are also important in the multicontext approach.[16] There are limited studies in the literature examining the effect of multicontext approach interventions on basic cognitive functions. In addition to the literature, this study showed that the occupational therapy intervention based on a multicontext approach has positive effects on orientation, perception, visual motor organization, and thinking processes. These results are recommended to be examined in more comprehensive studies.

The pre-post design and a sample size of one for this study constitute a limitation that makes it impossible to generalize the results of this study. A larger sample would also provide more reliable information about the feasibility and challenges of the multicontext approach.

5. Conclusion

This study showed that a occupational therapy intervention positively affected functions, executive functions, independence in activities of daily living, occupational performance, and satisfaction in a client with BI. Moreover, the intervention with graded activity demands in different contexts positively affected the client's awareness of their performance and generalization of learned strategies. The review and setting of goals in the early stages of the intervention may indicate increased awareness and should be further examined in future research. Furthermore, this case report provides a framework for occupational therapists that can be used to promote a multi-context approach intervention.

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