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An Occupational Therapy Approach to Improving ADL/IADL Performance in Diabetic Adults with Stroke and Upper Extremity Pathologies

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An Occupational Therapy Approach to Improving ADL/IADL Performance in Diabetic Adults with Stroke and Upper Extremity Pathologies

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BACKGROUND

Diabetes is considered one of the most common co-morbidities globally, with over 425 million individuals diagnosed in 2017 (Tudor et al., 2019). A frequent symptom that can occur with uncontrolled diabetic management is impaired motor function of the shoulder. (Gupta et al., 2019).

Occupational therapy is a client-centered practice that can help with these deficits with interventions such as physical exercise, client-centered interventions focused on restoration, compensation, and identifying client barriers to maximize health outcomes (Shen, 2019). Occupational therapists (OT's) can work with this population to improve occupational performance in the clients' daily activities (Shen, 2019)

PROBLEM

Individuals diagnosed with diabetes may not receive adequate education regarding medications, equipment, and how lifestyle modifications are needed to assess and maintain healthy blood sugar levels.

PURPOSE

This capstone program aims to look for unmet needs in the adult stroke diabetic population and find cost-effective treatment options to reduce upper extremity dysfunction on the patient population.

METHODS

Setting:

- PATE: day neuro outpatient rehabilitation
- Irving, TX

Participants:

- Males and females
- 35+
- Diagnosed with type 1 & 2 diabetes mellitus
- History of a stroke within the past 12 months

Needs assessment:

- Conducted a needs assessment with pre-surveys gathering prior level of function, current level of function, and patient demographics.
- Motor assessments: Box and Blocks and Nine Hole Peg
- Collaborated with other disciplines to decipher who is appropriate to participate in the program.

Implementation:

- Individual & group therapy education sessions
- 3-4x a week for 6 weeks
- 15-20 minutes

Post-surveys:

- Written post surveys and motor assessments were gathered to determine the program effectiveness

Outcome Objectives:

1. Conduct a needs assessment with a written survey regarding upper extremity motor dysfunction
2. Develop a program with a manual providing resources and different interventions for diabetic management
3. Implement this program in the diabetic adult stroke population
4. Evaluate the program using pre and post program surveys for the patient population

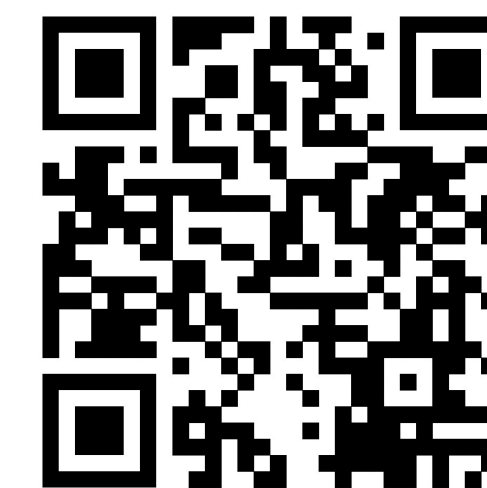
PROGRAM

General Program Goals:

1. Provide education to the diabetic stroke population
2. Decrease upper extremity motor dysfunction
3. Improve diabetic management strategies
4. Promote lifestyle modifications to improve quality of life

Theoretical Frameworks:

1. The Person-Environment-Occupation Model (PEO)



QR code for manual

Interventions:

Dietary Management Education Sheet:

- Provided evidenced-based foods that are lower in carbohydrates
- QR code link to the American Diabetes Association to sign up for healthy meals

Home Exercise Program:

- focused on weight-bearing positioning to reduce spasticity and improve motor return following a stroke

ADL One-Handed Strategies Handout:

- Incorporated education and additional links to resources regarding adaptive equipment for meal preparation, provided visual aids to assist with hemi-paretic dressing techniques, tips for self-care tasks, and strategies regarding oral medication and insulin management

Caregiver Education:

- Collaborated with caregivers to promote increased awareness regarding diabetic management to assist patients with daily routines

Conclusions / Future Directions

This program was designed to aid in diabetic management to improve motor recovery in the upper extremity leading to increased engagement in daily routines. The program was adjusted and administered based on the needs of the targeted population. This diabetic management program was analyzed using qualitative and quantitative data recordings. This program displayed positive results regarding improving quality of life among the adult diabetic stroke population. For future direction of this program, an area to explore is diabetic management among different settings.

References

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