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Multiple Sclerosis

Over the years, assistive technologies such as personal digital assistant (PDAs) have been used for management of multiple sclerosis. It is evidenced that cognitive impairment can have adverse effects on a patient's life affecting his daily personal activities as well as family and social life. Studies have demonstrated the effectiveness of occupational therapy in patients with multiple sclerosis as they assist in managing the symptoms but have failed to provide efficacies of the evidence based methods.

Critical evaluation of Evidence based assistive technologies

The numbers of studies that have demonstrated the effectiveness of therapeutic intervention of patients with symptoms of multiple sclerosis have not been without criticism.

First, extensive literature that covers rehabilitation techniques for cognitive impairment are mostly concentrated on brain injury therapy which is mostly theoretical and fails to demonstrate practical functional improvement of the patient in the real world. Secondly, the emergence of computers in the 1970s introduced gamelike remedial programs that were evidenced to improve memory attention and concentration. Research conducted in this field however did not show results of improved cognitive impairment following use of computer programs as many of the patients recorded high results in game scores which did not reflect in their every day learning activities. This therefore brings us to the conclusion that computer use as compensatory rehabilitation tool may not be affectively applied in remedial therapy (Gentry, 2008, p. 18).

Desktop task prompting systems such as on screen keyboards specifically developed for people with cognitive impairment are only based on theoretical analysis as they provides no evidence to support on their efficacy in improving patient's functional performance. Another study conducted to asses the Psion Organizer, as a memory aid in patients with brain injury did show limitations of the evidence based practices despite remarkable improvement in functionality of the patient after practice. The problem, however, is that, memory aid used in cognitive impairment recorded high levels of response to Psion Organizer as a reminder system but failed to describe how participants were trained and track functional outcomes (Gentry, 2008, p. 19).

Electric reminder systems that include cognitive aids tools such as electric pager, voice recorder and cell phone have widely been reported in numerous case studies to help people with cognitive disability carry out their daily activities by helping them stick to one schedule. Although userbility of reminder system have showed improvement after administration, the assistive technology only displayed minimum functions that were used in the study hence unreliability of the results. It has also been argued that cognitive aids rely on theoretical research which is drawn from client-based practices, innovation theories and cognitive rehabilitation theories. Since theoretical based studies such as client-centered practice involve the collaboration of a patient and a clinician in solving everyday functional problems, use of assessment tools such as Canadian Occupational Performance Measure (COPM) need adequate and thorough training which

was not administered in the beginning of the case study (Gentry, 2008, p. 19).

Importance of assistive technology

Different practices relate to different functional needs, and as Takai (1986) affirms, most of the assistive tools are widely found, durable, pocket size, light-weighted and offer multiple organizational functions that are very beneficial. For example, assistive technologies used in cognitive impairment that include hand held computers, dressing sticks, adapted clothing and button aides are simplified, easy to adopt and affordable as they enhance functional independency. Feeding devices for patients with amyotrophic lateral sclerosis that include electronic feeders and fore-arm orthoses have enabled patients improve articulation. Reports from Takai (1986), case study indicated that after practice, many patients with muscle weaknesses were able to draw diagrams, feed themselves and even limited the number of visits to occupational therapy as they had mastered the adoptive techniques. Other assistive devices such as grab bars, bathseats, walkers among others have been widely credited for increasing independency of multiple sclerosis patients and even improve work life(Finlayson, 2000, p. 549). Grasp kinematics that incorporates motor coordination help patients grasp objects and improve muscle movement of patients with amyotrophic lateral sclerosis (Maitra et al, 2010, p.

101). The benefit of using hand held computers as an assistive technology is that they are easy to carry around which can be used both at home and in the community. The personal electronic devices that included calendars, alarm and memo pads enabled patients to adhere to daily schedules as <https://assignbuster.com/multiple-after-practice-the-problem-however-is-that/>

opposed to paper-based schedules hence. All the participants in the case study demonstrated the ability to operate a PDA functions independently after training as majority of them of them were able to set calendar alarms and perform basic PDA which improved their lives significantly (Gentry, 2008).

Relevance to occupational therapy

Assistive technology relates to occupational therapy since they represent significant of daily living. In assessing activities of daily lives performance for patients, lower and upper extremity dressing has been showing disparities with patients recording different observable benefits. Occupational therapies for this case should consider all the aspect and incorporate them into patient training activities.

Some of the adoptive cognitive aids of dressing that facilitate occupational engagement of wearing slippers instead of shoes as patients experience difficulties in combining socks and shoes together result to decreased mobility since patients may shy away from leaving the house. Occupational therapists should instead fabricate assistive tools that can make dressing easier. Activities that can be incorporated in the program to help these patients quickly adapt to functional independency will require introduction of sitting while dressing and other simple tools that can be used as single items.

Therapists for this case should also research into new adoptive methods and incorporate them into patients (Mann et al, 2005, p. 406). Assistive technology also relates to occupational therapy since it sufficiently trains

individual with cognitive impairment to use therapeutic devices to improve their functional performances and satisfaction of their every day tasks.

Occupational therapists engages in facilitating occupational engagement of the patient by encouraging their active participation which helps build self-esteem and deal with the illness amicably (Takai, 1986, p. 360).

Conclusion

The research showed improvement in patient's functional improvement more specifically in compensatory assistive technology as opposed to remedial therapy.

Although this research showed lack of evidence to support the effectiveness of occupational therapy, majority of the patients successively achieved the needs of the assistive devices by partnering with therapists. This therefore brings us to the conclusion that computer use as compensatory rehabilitation tool may not be affectively applied in remedial therapy. Occupational therapies on the other hand should consider all aspect cognitive functionality and incorporate them into patient training activities to help these patients quickly adapt to functional independency. Desktop task prompting systems such as on screen keyboards developed for people with cognitive impairment should provide evidence to support on their efficacy in improving patient's functional performance.

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