

York College Department of  
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# **The Effectiveness of Cognitive Behavioral Interventions on Executive Functioning and Social Skills in Children with FASD: A Systematic Review**

Demi Agrapides OTS, Karen Baguyo OTS,

Lis Zarina Li OTS, Siarra Oliva OTS

Research advisor and mentor: Dragana Micic, PhD

## **ABSTRACT**

**OBJECTIVE:** This systematic review examines the effectiveness of cognitive behavioral interventions to improve executive functioning and social skills in children ages 3 to 12 years old with a diagnosis under fetal alcohol spectrum disorder (FASD) by evaluating the quality of full, peer-reviewed articles published between years 2000 to 2020 in the English language.

**METHOD:** Utilizing six databases (EBSCO, Wiley Online Library, Springer Link, ProQuest, AJOT, and Google Scholar), eleven articles met the inclusion criteria (1 Level 1B, 7 Level 2B, and 3 Level 3B). The risk of bias for all articles was assessed based on the American Occupational Therapy Association Guidelines for Systematic Reviews.

**FINDINGS:** Several studies highlighting cognitive behavioral interventions have revealed promising results and outcomes in improving various domains specific to executive functioning and social skills in children with FASD. Moderate strength evidence supports the use of cognitive behavioral interventions in improving executive functioning and social skills.

**CONCLUSION:** Occupational therapy practitioners should consider the use of cognitive behavioral interventions for children with FASD.

## **TO VIEW NARRATED PRESENTATION:**



## Effectiveness of Driver Rehabilitation Interventions Post-Stroke: A Systematic Review

Justyna Alaszewska, OTS, Alexia Donis, OTS,  
Melissa Mintz, OTS, Fangli Wu, OTS  
Research advisor and mentor: Dragana Micic, PhD

### ABSTRACT

**OBJECTIVE:** This systematic review evaluates the top-down and/or bottom-up treatment approaches, commonly used by Occupational Therapists to help adults return to driving post-stroke.

**METHOD:** We searched electronic databases and conducted a hand search according to our inclusion and exclusion criteria for quantitative studies reporting outcomes related to fitness-to-drive post-stroke as a result of either one or both intervention approaches.

**FINDINGS:** We found 8 level I articles, 1 level II article, and 1 level III article. 9 articles had a low risk of bias with the exception of the level II article.

**CONCLUSION:** Collected evidence indicates that both interventions lead to improved performance during on-road evaluations. Nevertheless, a consensus on which driving intervention approach yields better outcomes is lacking.

**TO VIEW NARRATED PRESENTATION:**



## Occupational Therapy and Sexual Health in the Spinal Cord Injured (SCI)

### Population: A Systematic Review

Irene Davidov OTS, Casey Franco OTS, Melana Khafizova OTS,  
Larisa Mirzakandov OTS, Jake Rakochy OTS  
Research advisor and mentor: Dragana Micic, PhD

### ABSTRACT

**OBJECTIVE:** The purpose of this systematic review was to explore the existing evidence regarding the patients' perceived quality and quantity of sexual health rehabilitation post spinal cord injury. Our objective was to determine if current rehabilitation services adequately address sexual health in the view of both male and female patients.

**METHOD:** Articles were collected from Proquest, PubMed, Google Scholar, EBSCOHost, CINAHL, AOTA, and SpringerLink. After screening quantitative, qualitative, and mixed methods studies, 102 articles were reviewed for eligibility of which 19 met criteria. Studies were appraised for quality and analyzed through triangulation.

**FINDINGS:** A total of 19 qualitative, quantitative, and mixed methods studies were included. Cohort, cross sectional, phenomenological, longitudinal, prospective and retrospective study designs were reviewed. Both quantitative and qualitative indicate; a lack of client centered approach, disproportionate emphasis on male reproductive concerns, apparent discomfort of health care providers, and privacy during intervention concerns.

**CONCLUSION:** Evidence suggests that participants were generally unsatisfied with the sexual health intervention they received post spinal cord injury, indicating the need for further studies, improved methods for delivering client-centered intervention, up-to-date and personally relevant information, and further education for health care providers.

### TO VIEW NARRATED PRESENTATION:



## **Effectiveness of Occupational Therapy Fall Prevention Programs: A Comparison of Patient Education and Home Modification Interventions for Older Adults**

Rebecca Bisnauth OTS, Sun Ja Jung OTS; Brayon Krishnanand OTS  
Research advisor and mentor: Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### **ABSTRACT**

**OBJECTIVE:** To investigate: 1) the effectiveness of OT's fall prevention education; and 2) home modification programs on reducing risks of fall among community-dwelling frail older adults.

**METHOD:** We reviewed 321 intervention studies published from 2010 to 2020, with levels of evidence from II & III. The method used for conducting the review was based on the Preferred Reporting Items on the Systematic Reviews and Meta-Analyses (PRISMA) protocol. Selected articles were identified from York Online Library database: AOTA, AJOT, CINAHL, and SCOPUS. During the screening process, 10 studies were selected (four patient education and six home modification interventions), however only three studies were included in this poster.

**FINDINGS:** Moderate evidence supported patient education addressing the risk of falls and environmental hazards, as an effective strategy for improving fall outcomes. Strong evidence supported occupational therapy led home modification interventions at reducing the risks of falls for individuals 65 years of age and older. The researchers note study limitations, such as high dropout rates, small sample sizes, inclusion of self-report and variations in the methods for recording falls and injuries. The implications for the findings of our study were expressed in terms of education and further studies.

**CONCLUSION:** Occupational therapy fall prevention interventions were very beneficial in promoting and maintaining independence of frail older adults and provides necessary education and environmental modification strategies to reduce fall risks

### **TO VIEW NARRATED PRESENTATION:**



## Exploring Multidisciplinary Interventions for Children with Autism Spectrum Disorder in the School-Based Setting

Blimie Gross, OTS; Rivka Inayev, OTS; Rachel Khizkiyayeva, OTS;  
Leora Larian, OTS; Liora Shemtob, OTS;  
Research advisors and mentors: Marta Daly, PP-OTD, OTR/L  
and Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### ABSTRACT

**OBJECTIVE:** This systematic review investigated multidisciplinary approaches that support occupational performance in children with ASD within school-based settings.

**METHOD:** The literature search was conducted by searching the following databases: CINAHL, Medline, PsycINFO, ScienceDirect, and American Journal of Occupational Therapy (AJOT). Forty-four articles published from January, 2008 to December, 2020 met the inclusion criteria. However, only five were selected for the systematic review. These studies investigated the following interventions: ASAP, Classroom Schedules, SKILLS and ENGAGE, Transporters, and DSI-EI interventions for children with ASD in school-based settings.

**FINDINGS:** The research found evidence that all interventions among multiple disciplines examined in this study were effective in promoting education-related occupations for children with ASD. This study was limited due to the small number of relevant articles available.

**CONCLUSION:** The study concludes that various multidisciplinary intervention approaches exist to enable effectiveness in education-related occupations in children with ASD. This study can serve as a baseline for future research needed to assess how these interdisciplinary approaches can be utilized by occupational therapists.

### TO VIEW NARRATED PRESENTATION:



## **Cognitive Interventions and Its Effectiveness in Military Service Members with TBI**

Brian Adversalo, OTS; Marta Chojnacka, OTS;

Hyosun Lee, OTS; Michael Tubon, OTS.

Research advisor and mentor: Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### **ABSTRACT**

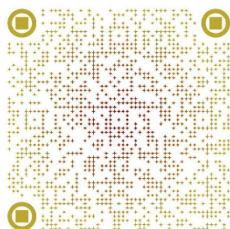
**OBJECTIVE:** The objective of this study was to examine the evidence of cognitive-related interventions within the scope of OT that addressed mental functions and occupational performance in IADLs for military service members with TBI in post-acute care settings.

**METHOD:** A systematic review design was used. Articles were selected from peer-reviewed scientific literature published 01/2012-01/2020. Studies retrieved were levels of evidence I - IV through online databases including Pubmed, CINAHL, PsycINFO, Medline, AJOT, and OTseeker found at York college library. Seven studies met the full inclusion/exclusion criteria. However, for the purpose of this poster only four were included.

**FINDINGS:** Evidence supports effectiveness for using cognitive-related interventions within cognitive strategy models to improve mental functions such as memory, learning, attention, and executive functioning among military service members with TBI. There was limited evidence to support effectiveness of interventions using functional cognition models to improve occupational performance.

**CONCLUSION:** Interventions with the use of cognitive strategies demonstrated greater effectiveness to improve some areas of mental functions among military service members with TBI. Implications for occupational therapy practice, education, and further research were discussed.

### **TO VIEW NARRATED PRESENTATION:**





## **Evidence for Occupational Therapy Caregiver-based Interventions for Families of Children with Cerebral Palsy**

Adeola F. Otulaja OTS, Genesis Warren OTS, Lucevanie Gedeon OTS,  
Ruwaida Musa OTS

Research advisors and mentors: Marta Daly, PP-OTD, OTR/L  
and Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### **ABSTRACT**

**OBJECTIVE:** This systematic review was used to examine the evidence for occupational therapy related interventions that focused on 1) Reducing caregiver burden, 2) Improving skill development of caregivers of children with Cerebral Palsy (CP), and 3) Promoting occupational performance of children with CP.

**METHOD:** The methods used by the review team were based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher, et al., 2009). Electronic databases and sites searched included AJOT, PubMed Central, CINAHL, and Google Scholar. The studies retrieved included Levels I, II, III, and IV evidence as defined by Sackett et al., (1996). Seven articles met the inclusion criteria; however, only three were included in this poster. The strength of evidence for each article was evaluated according to the guidelines of the U.S. Preventive Services Task Force (2018).

**FINDINGS:** Strong evidence was found for occupational therapy related interventions for improving skill development for caregivers and promoting occupational performance of children with CP. Moderate evidence was found for reducing caregiver burden for caregivers of children with CP.

**CONCLUSIONS:** Based on the overall evidence found to support our research objectives, there was limited evidence to support the effectiveness of caregiver-based interventions to reduce caregiver burden, improve skill development among caregivers of children with CP, and promote occupational performance of children with CP. Our implications were discussed in terms of occupational therapy practice, education, and need for further study.

**TO VIEW NARRATED PRESENTATION:**



## The Impact of Fall Prevention Programs for Patients with Parkinson's Disease

Hamad Hussain, OTS; Hsi Tung Lu, OTS; Amanda Mackie, OTS

Research advisor and mentor: Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### ABSTRACT

**OBJECTIVE:** To examine the effectiveness of fall prevention programs to reduce the risk of falls among patients with Parkinson's Disease.

**METHOD:** The study design was a systematic review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. The team used specialized databases at York College online library including: CINAHL, EBSCO, and PubMed, which provided peer-reviewed articles and summaries of journal articles. Nine peer-reviewed scientific studies from 2011 to 2020 at Levels I, II & III were examined. However, only three studies were included in this poster.

**FINDINGS:** Analysis of the included studies showed that participation in resistance training, physiotherapy exercise, and other physical activity interventions were beneficial for participants. In other words, exercise interventions can help people with Parkinson's Disease reduce risk factors for falls associated with the natural course of aging.

**CONCLUSION:** This study on fall prevention interventions within the scope of occupational therapy practice for patients with Parkinson's Disease, showed moderate evidence to support physiotherapy exercise, resistance training and other physical activity interventions. Implications for occupational therapy practice, education, and research are discussed.

### TO VIEW NARRATED PRESENTATION:



## Occupational Therapy's Role in Alcohol Use Among Adults and Adolescents

Keisha Charles, OTS, Gaelle Desroches, OTS Nikia Charles, OTS

Research advisor and mentor: Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### ABSTRACT

**OBJECTIVE:** To investigate the use of occupation-based and mindfulness-based interventions in promoting abstinence and healthy performance patterns in adults and adolescents with alcohol use issues; and, to examine the most effective occupational therapy interventions to guide treatment for individuals with alcohol use dependency.

**METHODS:** A systematic review was conducted to examine studies with levels of evidence I-V, published between 2017 and 2020. Utilizing the SCOPUS, MEDLINE Complete, and Pubmed databases and adhering to the PRISMA guidelines, seven articles met the inclusion criteria although only three were presented in this poster.

**FINDINGS:** Limited to moderate evidence was found for occupation-based interventions reducing alcohol dependency among adults and adolescents. Moderate evidence was found for mindfulness and brief interventions that fell under the scope of OT practice and supported the outcomes of healthy psychosocial outcomes and positive gains in daily functioning in individuals with alcohol use issues.

**CONCLUSIONS:** The overuse of alcohol can negatively impact daily habits, routines, and roles in adults and adolescents. There is emerging evidence of the role of OT in providing effective interventions for adults and adolescents with alcohol use issues. Although there are a vast number of therapeutic approaches that are being used to address the adverse effects of alcohol use, more studies need to be conducted to provide evidence for the use of effective occupational therapy treatment strategies for this population. Implications for OT practice and further studies are discussed.

### TO VIEW NARRATED PRESENTATION



## **Alternative Interventions to Manage Chronic Pain in Older Adults with a History of Opioids Overuse**

Edna Juliet Colon, OTS, Yenny Diaz, OTS, Juana Hernandez, OTS

Research advisor and mentor: Beverly P. Lyons, PhD, FGSA, LMSW, RDN, CDN

### **ABSTRACT**

**OBJECTIVE:** This systematic review examined the effectiveness of occupational therapy interventions used to manage chronic pain and prevent the overuse of prescribed opioids.

**METHODS:** The team used a systematic review design consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. The articles included were peer-reviewed and within the scope of occupational therapy practice as defined in the *Occupational Therapy Practice Framework: Domain and Process*. The 10 studies selected for analysis were from 2013-2020 with levels of evidence II thru IV. Only 3 studies were analyzed and included in this poster.

**FINDINGS:** The findings were presented in three themes. 1) CBT and Mindfulness were shown to reduce physical and mental symptoms relating to chronic pain. 2) Sit 'N' fit chair Yoga was an effective treatment for older adults with OA and moderate chronic pain who are unable to participate in standing exercise. 3) Motivational interviewing can provide techniques to better understand the patient's strategies, resources, and strengths for modifying their medication-taking behaviors.

**CONCLUSIONS:** The examined studies were found to support physical activity, self-management, patient education, and mindfulness as alternative interventions to treat chronic pain in older adults.

### **TO VIEW NARRATED PRESENTATION**

