Occupational Therapy Interventions and Vision Issues

January is National Eye Care and Glaucoma Awareness Month. In 2017, 26.9 million adults in the U.S. reported a visual impairment.  By 2050, the number of adults diagnosed with AMD is expected to double to 17.8 million, and those with diabetic retinopathy is expected to be 9.9 million. In the same period, glaucoma will rise to 6.3 million and 50 million adults will be diagnosed with cataracts. One in 17 preschoolers and 1 in 4 school age children have a vision issue, which requires medical treatment. According to the Bureau of Labor Statistics, there are approximately 20,000 workplace eye injuries every year in the United States, costing 300 million dollars. As humans age, people commonly experience presbyopia. It affects 128 million Americans, and the numbers continue to grow as the population ages. Nearly 80% of patients with uncorrected presbyopia have reported functional difficulty in performing daily activities such as reading, writing, threading needles and using mobile phones (<http://aoa.org>). Because of the dominant and critical role sight plays in ADLs, IADLs, leisure, social participation, work, and education, occupational therapy practitioners (OTP) need to consider and account for vision status in their treatment plans for clients.

Based on a systematic review of evidence from peer-reviewed journals from 2010 to 2016 Kaldenburg and Smallfield (2020) created practice guidelines for OTPs working with older adults with low vision. Low vision is a permanent loss of visual acuity or visual field with best-corrected visual acuity of 20/60 or worse. It cannot be corrected through surgical, pharmaceutical, or optical intervention (US Department of Health and Human Services, 2004). The authors concluded that there was strong evidence for OTPs to routinely provide multicomponent interventions that include education about low vision conditions, use of low vision devices, problem solving skills, and low vision resources to promote performance of ADLs and IADLs.

Kaldenburg and Smallfield (2020) also published a systematic review to determine the effectiveness of interventions to improve reading required for performance of occupations by older adults with low vision. Difficulty with reading tasks was the most frequently reported reason for seeking services. They separated the articles into three themes; 1) technology, 2) visual skills training, specifically related to central visual impairment and hemianopsia, and 3) multicomponent interventions. Moderate evidence supports stand based electronic magnification (e.g. closed circuit television) and training, which increased reading acuity and maximum reading speed and decreased the number of errors. There was moderate evidence to support use of eccentric viewing training, in steady eye technique. This intervention improved reading speed and duration for older adults with central visual field impairment. Multicomponent interventions including vision therapy, low vision device prescription and training, environmental modification, and homework for older adults were effective supports for occupational performance.

OTPs working with younger clients with visual impairments designed interventions to address barriers to occupational performance and participation. Whitlow (2023) reviewed research of the menstrual management challenges facing people with blindness and low vision. Clients had difficulties knowing when cycles started and stopped, disposing of products in public, and using hygiene practices, such as washing hands before and after changing products, cleaning genitals daily, wiping from front to back, and changing products 6 to 8 times daily. They also noted that most information came from mothers or schools, with only about 17% of survey respondents having received information from health care providers. In a different study, a smaller sample size of respondents had difficulties with using tampons, locating preferred products when shopping, and navigating public restrooms.

Lavery (2021) contends that occupational therapists can advocate for children with visual impairments to participate in sports, particularly because of its positive effects on emotional well being, emotional regulation, self esteem, life satisfaction, academics, and social skills in addition to the physical benefits of forming a healthier lifestyle habit. Strategies for participation included environmental modifications to improve safety, changing color or size of balls, adding bell, sound box or beeper to ball or target, advocating for descriptive language, and auditory prompts.

Given the prevalence of vision impairments, occupational therapists have an opportunity to help clients learn more about their conditions, incorporate assistive technology, adapt their environments, and learn and practice compensatory techniques to participate more fully in occupations of choice. For additional information and research about various eye conditions,

The American Optometrist Association (https://www.aoa.org/?sso=y)website and the Academy of American Ophthalmology (https://www.aao.org/eye-health) website are good resources.

Sources cited:

<https://childrensvision.preventblindness.org/helping-children-succeed/>

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