Review Article
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Evidence of occupational therapy's contribution to healthcare

Abstract

Objectives: to examine the effectiveness of occupational therapy in the interventions of different diagnoses and age groups, and to provide evidence of occupational therapy's contribution to healthcare system.

Methods: PICO method was used. A thorough review was conducted to identify most relevant evidence-based research related to the effectiveness of occupational therapy and its contribution to healthcare.

Results: occupational therapy has been applied in a variety of clinical and research settings and has proven to be effective in many therapeutic approaches and rehabilitative fields, such as but not limited to: neurorehabilitation approach, biomechanical approach, mental and behavioral health, geriatrics, and pediatrics.

Conclusion: occupational therapy has proven to be useful and effective and contributes significantly in managing symptoms of a variety of disorders and enhancing and/or maintaining functional performance for persons with disabilities and health-related problems. The inclusion of occupational therapy professionals to the existing interdisciplinary medical and rehabilitation team would foster collaboration and integrated intervention planning.

Keywords: occupational therapy, function, rehabilitation, healthcare, neurorehabilitation, biomechanics, mental health, geriatrics, pediatrics

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Introduction

Occupational therapy (OT) is recognized by the World Health Organization as a health profession which is represented by the World Federation of Occupational Therapy.[1] The WFOT was established in 1952 and is the official international organization that supports and promotes occupational therapy profession.[2] As members of health teams, occupational therapists work with other health professionals and share the occupational therapy's unique body of knowledge on occupation. Occupations are those purposeful and meaningful functional activities of everyday living. The occupational therapists knowledge and practice embrace a client-centered, holistic, and dynamic perspective of the person, the occupation, and the environment. This integrated practice approach makes occupational therapy's contribution to rehabilitation, recovery and health so effective.[3] The primary goal of OT is to enable people to participate in the activities of everyday life. Occupational therapists achieve this goal by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement.[4] OT has been used along with other medical treatments in treating patients with different diagnoses and age groups and proven to be useful and effective in managing symptoms and enhancing and/or maintaining functional performance for persons with disabilities.[5] When working with a person with disability and a health condition, occupational therapists apply a variety of evidence-based assessments and interventions.[6] Once a thorough assessment has been conducted and adequate information has been obtained, the therapist creates a personalized occupational profile. This profile is used for goal-setting, treatment planning, and implementation of treatment.[7]

OT is a vital part of the interdisciplinary approach of evidence-based practice. OT has been integrating the individual clinical expertise with the best available research evidence in making decisions about the care of individual patients while highlighting the individual risks and benefits of potential interventions and keeping into consideration the client's preferences and values.[8]

This review article provides an overview of the role of occupational therapy in the interdisciplinary rehabilitative and medical team and highlights evidence of occupational therapy's contribution to healthcare. The PICO question (population, intervention, comparison, and outcome) formed for the purpose of our study is as follows:

(P): For persons from different age groups and different diagnoses and health-related conditions

(I): Is occupational therapy

(C): Compared to other medical treatments

(O): Effective in managing symptoms and enhancing and/or maintaining functional performance?

Methods

For the purpose of this study, we created a research PICO question, a key to evidence-based decision.[9] A thorough review was conducted to identify most relevant evidence-based research studies related to the effectiveness of OT and its contribution to healthcare. Evidence study design and study level were determined based on the hierarchy of levels of evidence in evidence based practice.[8]

Search strategies and selected articles

The following electronic databases were searched to identify

literature relevant to this study: PubMed, Ovid (MEDLINE, PsychINFO, and Global Health), and Cumulative Index of Nursing and Allied Health Literature (CINAHL). Search terms (keywords) used were occupational therapy combined with function, rehabilitation, healthcare, neurorehabilitation, biomechanics, mental health, geriatrics, and pediatrics. Fifty four potential relevant research studies were identified and screened for the literature review (Figure 1). Research studies were selected and included in the literature review if they were written in the English language and published between 1999 and 2017 in peer-reviewed journals. Based on these criteria, 41 studies out of the 54 were identified and reviewed and 13 studies were excluded. Furthermore, studies were screened again for more detailed evaluation and were included if they involved occupational therapy assessments and interventions, comparisons between occupational therapy interventions and other interventions. In addition, previous studies that addressed functional performance among persons with disabilities from different age groups were also included. Studies were excluded if they included one intervention only and did not compare between different interventions, or because the dependent variables were not well defined in terms of functional capacity or performance based on the International Classification of Functioning, Disability and Health (ICF) (WHO, 2001). This yielded a total of 18 studies that were included in the literature review and 36 studies were excluded.

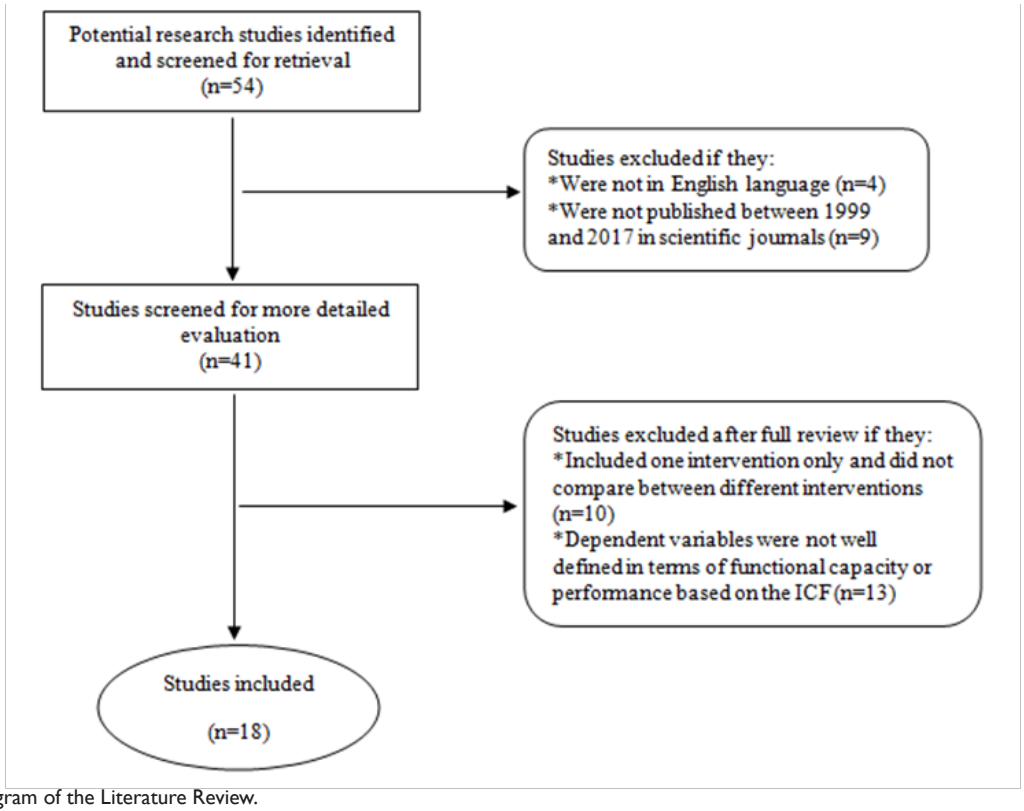

Figure 1 Flow Diagram of the Literature Review.

Results

A summary of studies identified in relation to the evidence of OT's contribution to healthcare is represented in Table 1.

Table 1 Summary of Studies Identified in Relation to the Evidence of OT's Contribution to Healthcare

Field / Approach	Research study	Level of evidence	Summary
Neurorehabilitation	Interdisciplinary Dutch researchers Kwakkel et al.[10] Stroke	Level I	A 16 hour difference in treatment time in the first 6 months after stroke can make a significant positive difference in Activities of Daily Living (ADL) outcomes.
	Interdisciplinary British researchers Legg et al. (2012) BMJ	Level I	OT focused on daily activities improved performance and reduced the risk of a poor outcome (dependence/death)
	Interdisciplinary British researchers Walker et al. (2004) Stroke	Level I	Community-based OT significantly improved ADL, Instrumental ADL (IADL), and leisure activities in stroke survivors.
Biomechanics	Interdisciplinary Dutch researchers Steultjens et al.[11] Cochrane Database of Systematic Reviews	Level I	Strong evidence to support that OT "instruction on joint protection" for persons with rheumatoid arthritis yields a positive effect on functional ability.

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Table Continued....

Field / Approach	Research study	Level of evidence	Summary
	Interdisciplinary team Murphy et al. (2008)	Level II	Strong evidence to support that exercise + OT activity strategy training yielded significant higher peak physical activity compared to exercise + health education and larger decrease in pain, and overall increased physical activity.
	Arthritis & Rheumatism		
	Interdisciplinary Canadian researchers Loisel et al. (2003) Clinical Journal of Pain	Level II	Compared to the control group, those in the multidisciplinary functional rehabilitation group (OT) showed faster return to work and better quality of life at 1 year and better cost-effectiveness at 6 years.
Mental Health	Interdisciplinary Canadian researchers	Level I	Strong evidence that intensive multidisciplinary bio-psycho-social rehabilitation with a functional restoration approach (OT) improved function of persons with chronic disabling low back pain
	Guzman et al.[12] Cochrane Database of Systematic Reviews		
	Interdisciplinary Australian researchers	Level I	A multidisciplinary program that included physical conditioning and an OT cognitive-behavioral approach reduced work lost by 45 days/year for workers with back and neck pain.
	Schonstein et al. (2003) Cochrane Database of Systematic Reviews		
	British occupational therapists Cook, Chambers & Coleman,[13] Clinical Rehabilitation	Level II	Strong evidence that OT over 12 months significantly reduced negative psychotic symptoms. OT interventions yielded significant improvements in relationships, performance, competence, and recreation.
Geriatrics	Interdisciplinary Dutch researchers Steultjens et al.[11] Age and Ageing	Level I	An OT home hazard assessment in conjunction with skills training contributed to falls reduction in community dwelling older adults.
	Australian interdisciplinary team Peri et al. (2008) Age and Ageing	Level II	Repetitive practice of meaningful ADLs among nursing home residents compared to controls, the OT group significantly improved physical health status at 3 months.
	Italian interdisciplinary team Di Monaco et al. (2008) Journal of Rehabilitation Medicine	Level II	Compared to controls, older women fallers hospitalized for hip fractures, who received a home visit by an OT within 1 month of hospital discharge, significantly reduced falls at home for the next 6 months.
	Occupational therapy researchers Thomas, Frampton & colleagues (1999) Journal of the American Geriatrics Society	Level II	Among older adults at risk for falling, compared to the control group, falls were significantly lower among the group that received an OT home visit (with modification recommendations and a follow-up phone call).
	USA interdisciplinary team Stark et al.[14] Canadian Journal of Occupational Therapy	Level III	Following an OT Home Modification assessment and recommended home modifications, older adults' performance of everyday tasks increased significantly. Satisfaction with performance increased significantly. Barriers in the environment decreased significantly.
Pediatrics	Interdisciplinary researchers	Level I	Using "play" interventions that are responsive to the child's developmental needs provides the best gain for children. Involving the parents in the play session provides even greater benefit.
	Bratton et al.[15] Professional Psychology: Research and Practice		
	Occupational therapy researchers Fucile, Gisel and colleague,[16] Developmental Medicine and Child Neurology	Level II	Preterm infants randomized to the experimental oral stimulation group achieved full oral feedings 7 days faster than the controls, with greater intake and rate of milk transfer.

Table Continued....

Field / Approach	Research study	Level of evidence	Summary
	Occupational therapy researchers Denton, Cope & Moser,[17] American Journal of Occupational Therapy	Level II	Children with handwriting dysfunction randomized to a therapeutic practice program showed moderate improvement after 5 weeks; those in the sensorimotor program showed a decline in handwriting performance.
	Occupational therapy researchers Schilling, Washington, Billingsley, & Dietz,[18] American Journal of Occupational Therapy	Level III	In a single-subject design (in-seat-on-chair and in-seat-on-therapy ball), 3 fourth graders with ADHD demonstrated increased in-seat behavior and legible word productivity when sitting on the therapy ball.

Discussion

Our evidence-based review provided an overview and summarized evidence of occupational therapy's contribution to healthcare. This study revealed that occupational therapy has been applied in a variety of clinical and research settings and has proven to be effective in many therapeutic approaches and rehabilitative fields , such as but not limited to: neurorehabilitation approach, biomechanical approach, mental and behavioral health, geriatrics, and pediatrics. Occupational therapy complements other rehabilitative and medical treatments and has proven to be useful and effective in managing symptoms of a variety of disorders and enhancing and/or maintaining functional performance for persons with disabilities and health-related problems.

Conclusion

Occupational therapy services provided to persons with disabilities contribute significantly in improving satisfaction and empowering their functional perform ance and everyday living skills in terms of independence, safety, and quality. The inclusion of occupational therapy professionals to the existing interdisciplinary medical and rehabilitation team would foster collaboration and integrated intervention planning which would have a positive significant impact on patients and overall healthcare system.

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Conflicts of interest

Author declares that there is no conflicts of interest.

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