



A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project

Intensive occupational therapy in the home benefits persons with rheumatoid arthritis (RA)

CITATION: Helewa, A., Goldsmith, C. M., Lee, P., Bombardier, C., Hanes, B., Smythe, H. A., & Tugwell, P. (1991). Effects of occupational therapy home service on patients with rheumatoid arthritis. *The Lancet*, 337, 1453–1456.

LEVEL OF EVIDENCE: IA1b

Randomized control trial, n=20 per condition, high internal validity (no alternate explanation for outcome), moderate external validity (between high and low)

RESEARCH OBJECTIVE/QUESTION

To assess the efficacy of a comprehensive home occupational therapy program for patients with RA.

DESIGN

X	RCT		Single Case		Case Control
	Cohort		Before-After		Cross Sectional

SAMPLING PROCEDURE

	Random		Consecutive
X	Controlled		Convenience

SAMPLE

N=105 [a=53; b=52]	M age a=52.7; b=55.3	Male=a=6; b=8	Ethnicity=NR	Female=a=47; b=44
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NR = Not reported

PARTICIPANT CHARACTERISTICS

Group members were similar in 32 of 33 features; one difference was “morning stiffness”

MEDICAL DIAGNOSIS/CLINICAL DISORDER

Rheumatoid Arthritis (RA)

OT TREATMENT DIAGNOSIS

NR = Not Reported

OUTCOMES

<u>AREA</u>	<u>OT TERMINOLOGY</u>	<u>ICIDH-2</u>	<u>MEASURE</u>	<u>FREQUENCY</u>	<u>RELIABILITY/ VALIDITY</u>
Functional evaluation (dressing, hygiene, feeding, communication, locomotion, transfers, homemaking, use of splints, work and leisure, housing)	Performance area	Activity Limitations	Completed by treating OT	Pretest	
Measure the effect of OT on the patients level of function	Performance area	Activity Limitations	Questionnaire (developed by OTs, PTs, and a rheumatologist) <ul style="list-style-type: none"> • assessor was masked • areas included dressing, eating, grooming, hygiene, household management, light housekeeping, heavy cleaning, social roles, 	Pretest 6-week test 12-week test	<ul style="list-style-type: none"> • Sensitive to treatment change • Same observer should measure at two points in time

			mobility, social function, communication, leisure, and appearance.		
Secondary Outcomes	Performance Component Performance Area	Impairments Activity Limitations	<ul style="list-style-type: none"> • Pooled Index (included active joints, grip strength, erythrocyte, sedimentation rate, morning stiffness, functional change) • Pain Assessment Visual Analogue Scale • Beck Depression Scale • Stanford Health Questionnaire 		Previously validated

INTERVENTION

Description

Group A

Received comprehensive occupational therapy for 6 weeks; continued to receive treatment as required for the second 6 weeks.

Group B

Received no treatment for the first 6 weeks, followed by treatment for 6 weeks

Treatment included

- Evaluation (level of function, disease activity)
- Problem list developed
- Treatment plan developed

Specific treatment consisted of education, splints, orthotics, joint protection, aids, adaptations to home, wheelchairs, energy conservation, psychosocial counseling, social skills, stress management, and community resources.

OT & ICIDH-2 Terminology

Performance areas, Performance components
Impairments, Activity limitations

Who Delivered

Four occupational therapists who were assigned to the study (they were masked to the groups)

Setting

Participants' homes

Frequency

Duration

12 weeks

RESULTS

<u>STATISTICAL TESTS</u>	<u>STATISTICAL RESULTS</u>	<u>DESCRIPTIVE INFORMATION</u>	<u>SUMMARY OF KEY RESULTS</u>
SPSS-X	<ul style="list-style-type: none">analyses of covariance of results with morning stiffness as a covariable did not affect the results.	<ul style="list-style-type: none">at baseline there was no difference between Groups A & B.	<ul style="list-style-type: none">Between weeks 6 and 12, group A was stable.
Release 2.2 Minitab 7.0	$F(1, 91) = 6.59$ $p=0.012$ [two-tailed]	<ul style="list-style-type: none">at 6 weeks, Group A had significantly improved from baseline compared with B [control]	<ul style="list-style-type: none">No significant difference between improvements was shown in the first 6 weeks by Group A and the second 6 weeks in the control group (when they received active treatment)
Mann-Whitney test corrected for ties (for "non-normal" distribution)	Mann-Whitney test did not alter conclusions	<ul style="list-style-type: none">at 12 weeks there was no significant difference between the experimental and control groups	<ul style="list-style-type: none">Groups A & B were broadly similar throughout in terms of pain scores.
Included in analysis:	Pain scores:		<ul style="list-style-type: none">pooled index

drop-outs due to death, voluntary withdrawal, change of address	A	B		showed Group A with a significant improvement from weeks 1 through 6, Group B did better weeks 6-12, no difference in groups between base and week 12.
	Base	51.6		
	6-week	49.8		
	12-week	48.7		
	56.0	55.4		
	50.6			

CONCLUSIONS

Patients with RA clearly benefit from a program of OT in their home

- 1) The benefits of occupational therapy last at least 6 weeks.
- 2) The authors accounted for attention bias, masking/blinding, contamination, co-intervention and drop-outs.

LIMITATIONS

Both groups were similar on 33 features; only “morning stiffness” was recorded as clinically important for adjustment of the outcomes.

Biases

	Attention		Masking/blinding	X	Drop outs
	Contamination		Co-intervention		

drop-outs= 4

- Terminology used in this document is based on two systems of classification current at the time the evidence-based literature reviews were completed: *Uniform Terminology for Occupational Therapy Practice—Third Edition* (AOTA, 1994) and *International Classification of Functioning, Disability and Health (ICIDH-2)* (World Health Organization [WHO], 1999). More recently, the *Uniform Terminology* document was replaced by *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2002), and modifications to *ICIDH-2* were finalized in the *International Classification of Functioning, Disability and Health* (WHO, 2001).

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For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, x 2040.

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