



P-41. Home-Visit Rehabilitation: Addressing Diverse Needs in Neurological and Musculoskeletal Patients



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Introduction

• This study investigates the characteristics and effects of home-visit rehabilitation programs in patients with neurological and musculoskeletal disorders.

Methods

• Thirty-eight patients receiving home-visit rehabilitation were included (Table 1): neurological disorders (n = 31) and musculoskeletal disorders (n = 7). Neurological conditions included stroke (n = 18), ALS (n = 4), dementia (n = 3), hypoxic brain injury (n = 2), SCI (n = 2), Parkinson's disease (n = 2), anaplastic astrocytoma (n = 1), bacterial encephalitis (n = 1), and post-polio syndrome (n = 1). Musculoskeletal conditions included fractures (n = 2) and arthritis (n = 3).

Table 1. Characteristics of the patients and functional outcomes

Disease	Patient Count	Mean MBI	Mean MMSE	Mean Treatments	Mean Satisfaction	Mean EQ-5D
Neurological disorders						
Stroke	18	54.67(31.27)	19.69(10.64)	7.27(5.06)	4.99(0.03)	45.56(22.35)
Hypoxia Brain Injury	2	8.00(11.31)	12(-)	8.00(5.66)	5.00(-)	45(49.50)
ALS	4	19.75(10.63)	25.67(3.51)	12.00(0.00)	4.60(0.42)	26.67(20.82)
Dementia	3	43.67(37.90)	10.00(14.14)	10.67(2.31)	4.92(0.14)	46.67(25.16)
spinal cord injury	2	58.00(9.90)	-	6.50(7.78)	4.8(-)	60(14.14)
parkinson's disease	2	61.50(27.58)	22.00(7.07)	19.50(10.61)	5.00(0.00)	55.00(7.07)
Anaplastic Astrocytoma	1	53(-)	30(-)	5(-)	-	90(-)
Bacterial Encephalitis	1	20(-)	21(-)	13(-)	5.00(-)	90(-)
post-polio syndrome	1	58(-)	25(-)	12(-)	5(-)	0(-)
Total	34	46.47(29.88)	20.21(9.62)	9.08(5.57)	4.94(0.16)	46.67(25.61)
Musculoskeletal disorders						
Fracture	2	61.50(48.79)	22.50(3.54)	8.00(5.66)	5.00(-)	15.00(21.21)
Rheumatoid Arthritis & Joint Contracture	1	52(-)	28(-)	4(-)	-	80(-)
arthritis	2	81.50(2.12)	-	3.50(0.71)	4.90(-)	35.00(35.36)
Total	5	67.60(27.79)	24.33(4.04)	5.40(3.71)	4.95(0.07)	36.00(33.62)

Results

• Treatment goals were pain control, ADL improvement, dysphagia management, gait training, strength improvement, contracture prevention, and functional enhancement (Table 2).

Table 2. Characteristics of the patients and functional outcomes

Treatment Goal	Patient Ratio (%)
Pain control	38.10%
ADL improvement	31.00%
Dysphagia improvement	28.60%
Walking ability improvement	26.20%
Strength improvement	21.40%
Preventing contracture	11.90%
Upper extremity function improvement	9.50%
Cognition improvement	7.10%
Respiratory muscle strengthening	7.10%
Edema management	4.80%
Balance and walking ability improvement	4.80%
Transfer and sit-to-stand improvement	4.80%

• The mean MBI score for neurological disorders was 46.47 (range: 8.00-61.50), with Parkinson's disease patients showing the highest (61.50) and hypoxic brain injury the lowest (8.00). In musculoskeletal disorders, the mean MBI was 67.60. MMSE scores ranged from 10.00 to 30.00. The average number of treatments was 9.08 for neurological disorders and 5.40 for musculoskeletal disorders.

• Patient satisfaction was consistently high (4.60-5.00). EQ-5D scores averaged 46.67 for neurological disorders and 36.00 for musculoskeletal disorders.

• Treatment programs included pain management (45.20%), dysphagia therapy (38.10%), ROM exercises (38.10%), gait training (35.70%), ADL training (28.60%), strengthening (lower extremity 19.00%, upper extremity 16.70%), stretching (9.50%), and cognitive training (9.50%) (Table 3).

Table 3. Treatment programs of of Home-visit rehabilitation

Treatment Protocol	Patient Ratio (%)
Pain control	45.20%
Dysphagia therapy	38.10%
ROM exercise	38.10%
Gait training	35.70%
ADL training	28.60%
Lower extremity strengthening	19.00%
Upper extremity strengthening	16.70%
Ergometer exercise	11.90%
Stretching	9.50%
Cognition training	9.50%
Transfer training	7.10%
Respiratory rehabilitation	7.10%
Balance training	7.10%
Electrical stimulation	7.10%

Conclusion

• Home-visit rehabilitation addresses diverse needs in patients with neurological and musculoskeletal disorders. Chronic pain, ROM limitations, and dysphagia were the most common issues. Further research is needed to refine patient-centered home-visit rehabilitation programs.