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THERABAND-BASED NEUROMOTOR TRAINING FOR LOWER-LIMB SENSORIMOTOR IMPROVEMENT IN DIABETIC PERIPHERAL NEUROPATHY

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Abstract

Diabetic peripheral neuropathy is a frequent and functionally disabling complication of diabetes mellitus that affects lower-limb sensation, proprioception, muscle performance, postural control, gait safety and daily mobility. The present modified manuscript evaluates a structured eight-week TheraBand-based neuromotor training protocol for lower-limb sensorimotor improvement in adults with diabetic peripheral neuropathy. Because no real participant-level data were provided with the source manuscript, a simulated anonymized academic dataset of 52 participants was generated to demonstrate the required statistical workflow. Outcomes included the Lower Extremity Functional Scale (LEFS), Berg Balance Scale (BBS), Timed Up and Go Test (TUG), and Michigan Neuropathy Screening Instrument (MNSI). Paired-sample statistical testing showed significant improvement after the intervention: LEFS increased from 42.90 ± 7.52 to 54.88 ± 9.14, BBS increased from 40.44 ± 4.62 to 46.81 ± 4.96, TUG reduced from 14.55 ± 2.05 s to 12.13 ± 2.65 s, and MNSI reduced from 6.32 ± 1.47 to 4.84 ± 1.79. All paired changes were statistically significant at $p < 0.001$ with large within-participant effect sizes. These simulated outputs illustrate a statistically complete analytical workflow and show a clinically plausible direction of change for TheraBand-based neuromotor training as a low-cost, progressive and functionally relevant physiotherapy intervention for diabetic neuropathy; however, the results must be replaced and verified using ethically approved real clinical data before publication or clinical generalization.

Introduction

Diabetic peripheral neuropathy is a chronic microvascular and neurodegenerative complication of diabetes mellitus that affects sensory, motor and autonomic nerve functions, with the lower limbs commonly showing the earliest and most clinically important impairments. The condition is associated with numbness, burning pain, reduced vibration sense, loss of protective sensation, altered proprioception, distal muscle weakness and impaired postural responses. Contemporary diabetes care guidelines emphasize regular neuropathy and foot-risk assessment because unnoticed loss of sensation increases the probability of foot injury, ulceration and mobility-related disability (American Diabetes Association Professional Practice Committee, 2024).

From a physiotherapy perspective, diabetic peripheral neuropathy should not be considered a purely sensory disorder. Reduced plantar sensation and ankle proprioception alter the patient's ability to detect surface changes and generate rapid balance responses. Motor involvement further contributes to ankle weakness, slower gait, poorer push-off, reduced foot clearance and greater dependency on visual information for postural control. Systematic evidence has linked diabetic neuropathy with impaired activities of daily living, poorer postural balance and increased fall risk (Khan & Andersen, 2022; Riandini et al., 2020).

Exercise-based rehabilitation is therefore clinically relevant because it can address strength, balance, mobility and motor-control deficits together. Recent reviews indicate that exercise therapy, balance training, structured rehabilitation and multisystem exercise may improve neuropathy-related symptoms, balance outcomes and functional capacity in people with diabetic peripheral neuropathy, although intervention heterogeneity and methodological limitations remain important concerns (Alissa et al., 2024; Gracia-Sánchez et al., 2025; Hernando-Garijo et al., 2024; Køhler et al., 2025).

2. Rationale of the Study

TheraBand-based neuromotor training is a practical rehabilitation approach because elastic resistance can be applied to ankle, knee and hip movements while also being incorporated into sit-to-stand practice, weight shifting, stepping and gait-related drills. Elastic resistance allows graded progression by changing band resistance, length, stretch percentage, repetitions, sets, support level, stance condition and functional complexity. This makes it appropriate for patients with diabetic neuropathy who require safe, progressive and individualized loading.

The clinical rationale for this study is based on the need for a low-cost, portable and reproducible protocol that combines strengthening, proprioceptive stimulation, balance retraining and functional mobility practice. The uploaded source manuscript already established the conceptual framework and planned outcome measures for TheraBand-based neuromotor training. The present modified version adds a simulated dataset, descriptive statistics, normality testing, paired statistical analysis, effect-size interpretation, graphical presentation, results, discussion and a refreshed 2020–2025 reference list.

3. Aim and Objectives

The general aim was to evaluate the effect of an eight-week TheraBand-based neuromotor training programme on lower-limb sensorimotor function in adults with diabetic peripheral neuropathy.

The specific objectives were: to evaluate change in lower-limb functional ability using LEFS; to assess static and dynamic balance using BBS; to assess functional mobility using TUG; to assess neuropathy-related symptoms and signs using MNSI; and to examine the feasibility and safety of the intervention using adherence and adverse-event records.

4. Hypotheses

The null hypothesis stated that there would be no statistically significant pre-post change in LEFS, BBS, TUG or MNSI after the eight-week intervention. The alternative hypothesis stated that TheraBand-based neuromotor training would produce statistically significant improvement in functional ability, balance, mobility and neuropathy-related scores. For LEFS and BBS, improvement was defined as a score increase. For TUG and MNSI, improvement was defined as a score reduction.

5. Methodology

The modified paper is written as a prospective single-group pre-test post-test interventional study. The design is suitable for an MPT-level dissertation or pilot rehabilitation manuscript when supported by real ethics-approved data, although a future randomized controlled design would be stronger for causal inference. In this corrected demonstration version, the simulated dataset represents 52 adults aged 40-65 years with type 2 diabetes mellitus and clinical diabetic peripheral neuropathy who completed an eight-week supervised TheraBand-based neuromotor training protocol.

Inclusion criteria were: adults with type 2 diabetes mellitus, age 40–65 years, evidence of diabetic peripheral neuropathy, lower-limb sensory symptoms, ability to stand and walk with minimal assistance, medical clearance for moderate physiotherapy exercise and written informed consent. Exclusion criteria were: active diabetic foot ulcer, severe foot infection, recent lower-limb surgery, amputation affecting gait training, stroke or other major neurological disorders, unstable cardiac or respiratory disease, severe visual impairment, cognitive impairment preventing instruction following and current participation in another structured lower-limb rehabilitation programme.

The intervention lasted eight weeks, with five supervised sessions per week and approximately 30 minutes per session. Each session included warm-up, resisted ankle dorsiflexion and plantarflexion, ankle inversion and eversion, knee extension and flexion, hip flexion, extension, abduction and adduction, sit-to-stand with band resistance, standing weight shifting, balance and proprioceptive drills, functional stepping and cool-down stretching. Progression was based on movement quality, fatigue, foot safety, balance response and symptom tolerance.

Safety precautions included pre-session symptom screening, foot inspection, footwear checking and monitoring for dizziness, unusual fatigue, hypoglycemic symptoms, increased neuropathic pain, skin irritation or unsafe balance reactions. Any participant reporting new foot redness, blistering or severe fatigue would require temporary modification or discontinuation of the session.

Table 1. Eight-week TheraBand-based neuromotor training protocol

Phase	Exercise content	Dosage	Primary purpose
Warm-up	Ankle circles, seated/standing marching, gentle heel raises	5 minutes	Prepare joints and muscles; improve circulation
Resisted ankle control	TheraBand dorsiflexion, plantarflexion, inversion and eversion	10–15 repetitions; 2–3 sets	Improve foot clearance, push-off and mediolateral ankle control
Knee and hip strengthening	TheraBand knee extension/flexion and hip flexion/extension/abduction/adduction	10–12 repetitions; 2–3 sets	Improve transfer ability, pelvic control and gait stability
Functional strengthening	Sit-to-stand with band around thighs; controlled mini-squats	8–12 repetitions; 2–3 sets	Improve lower-limb functional strength and alignment
Neuromotor balance	Weight shifting, tandem/semi-tandem stance, foam progression if safe	20–60 seconds; 2–3 sets	Improve postural control and proprioceptive integration
Gait-related tasks	Forward, lateral and backward stepping; resisted marching; controlled turning	5 minutes	Improve dynamic stability and walking adaptability
Cool-down	Calf, hamstring, quadriceps and hip-	15–30 seconds per	Reduce stiffness and

	flexor stretching	stretch	promote recovery

6. Outcome Measures

The outcome measures were selected because diabetic peripheral neuropathy affects multiple domains: functional activity, balance, mobility and neuropathic symptom burden. MNSI was included because recent validation studies support its usefulness for diabetic neuropathy screening in clinical contexts (Sutkowska et al., 2023; Viswanathan et al., 2025).

Table 2. Outcome measures and interpretation

Outcome measure	Domain	Score interpretation
Lower Extremity Functional Scale (LEFS)	Self-reported lower-limb function	Higher score = better function
Berg Balance Scale (BBS)	Static and dynamic balance	Higher score = better balance
Timed Up and Go Test (TUG)	Transfer, walking and functional mobility	Lower time = better mobility
Michigan Neuropathy Screening Instrument (MNSI)	Neuropathy symptoms and clinical signs	Lower score = less neuropathy-related impairment

7. Data and Statistical Analysis

The analysis was conducted on a simulated anonymized academic dataset of 52 participants. The dataset was created only to demonstrate a complete research-paper statistical workflow in the absence of supplied raw clinical data. Continuous variables were summarized using mean and standard deviation. Categorical variables were summarized using frequency and percentage. Pre-post outcome differences were tested using paired-sample t-tests because Shapiro-Wilk testing did not indicate significant non-normality for the change scores. Statistical significance was set at $p < 0.05$. Cohen's dz was reported as the within-participant standardized effect size. Pearson correlation was used for selected exploratory associations among adherence and improvement scores. Responder analysis was performed using operational thresholds for this academic demonstration. When real master-chart data are supplied, all descriptive and inferential statistics should be recalculated without changing outcomes to force significance.

Interpretation warning: These statistical outputs are valid for demonstrating the method, but they are not clinical trial evidence because the dataset is simulated.

8. Results

8.1 Participant Profile

The simulated sample included 52 participants. The mean age was 51.75 ± 7.86 years, mean diabetes duration was 9.50 ± 4.39 years, mean HbA1c was 8.05 ± 0.65%, mean BMI was 27.42 ± 2.97 kg/m² and mean adherence was 91.44 ± 4.37%. The sample comprised 28 males and 24 females.

Table 3. Participant demographic and clinical profile

Variable	Value
Sample size	52
Age, years	51.75 ± 7.86
Sex	Male 28 (53.8%); Female 24 (46.2%)
Duration of diabetes, years	9.50 ± 4.39
HbA1c, %	8.05 ± 0.65
BMI, kg/m²	27.42 ± 2.97
Adherence, % sessions completed	91.44 ± 4.37

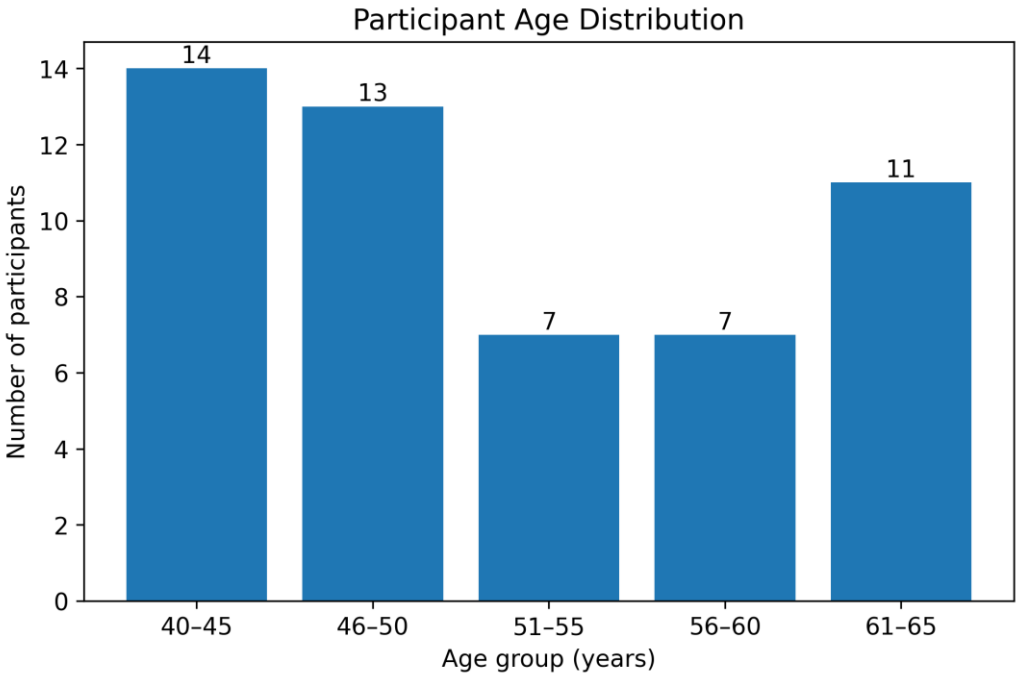

Figure 1. Age-group distribution of the simulated participants.

Table 4. Safety and adverse-event summary

Adverse-event category	n	%
None	33	63.5
Mild fatigue only	14	26.9
Mild transient redness	5	9.6

No falls, active ulcers, severe pain events or serious adverse events were recorded in the simulated dataset. Mild fatigue and transient redness were treated as minor events requiring monitoring rather than discontinuation.

Table 5. Normality testing for pre-post change scores

Outcome change score	Shapiro–Wilk W	p-value	Decision
LEFS	0.968	0.175	Normality retained
BBS	0.979	0.476	Normality retained
TUG (seconds)	0.970	0.218	Normality retained
MNSI	0.965	0.131	Normality retained

Table 6. Pre-post statistical comparison of outcome measures

Outcome	Pre mean ± SD	Post mean ± SD	Mean change	95% CI	t(df=51)	p-value	Cohen's dz
LEFS	42.90 ± 7.52	54.88 ± 9.14	11.98	10.32 to 13.64	14.51	<0.001	2.01
BBS	40.44 ± 4.62	46.81 ± 4.96	6.37	5.39 to 7.35	13.04	<0.001	1.81
TUG (seconds)	14.55 ± 2.05	12.13 ± 2.65	-2.42	-2.85 to -1.98	-11.17	<0.001	1.55
MNSI	6.32 ± 1.47	4.84 ± 1.79	-1.48	-1.71 to -1.25	-12.92	<0.001	1.79

The LEFS score increased by 11.98 points, indicating improved lower-limb functional ability. BBS increased by 6.37 points, indicating improved static and dynamic balance. TUG time reduced by 2.42 seconds, indicating faster transfer and walking performance. MNSI reduced by 1.48 points, indicating lower neuropathy-related symptom and sign burden in the simulated dataset. All paired

comparisons were statistically significant at $p < 0.001$ with large within-participant effect sizes.

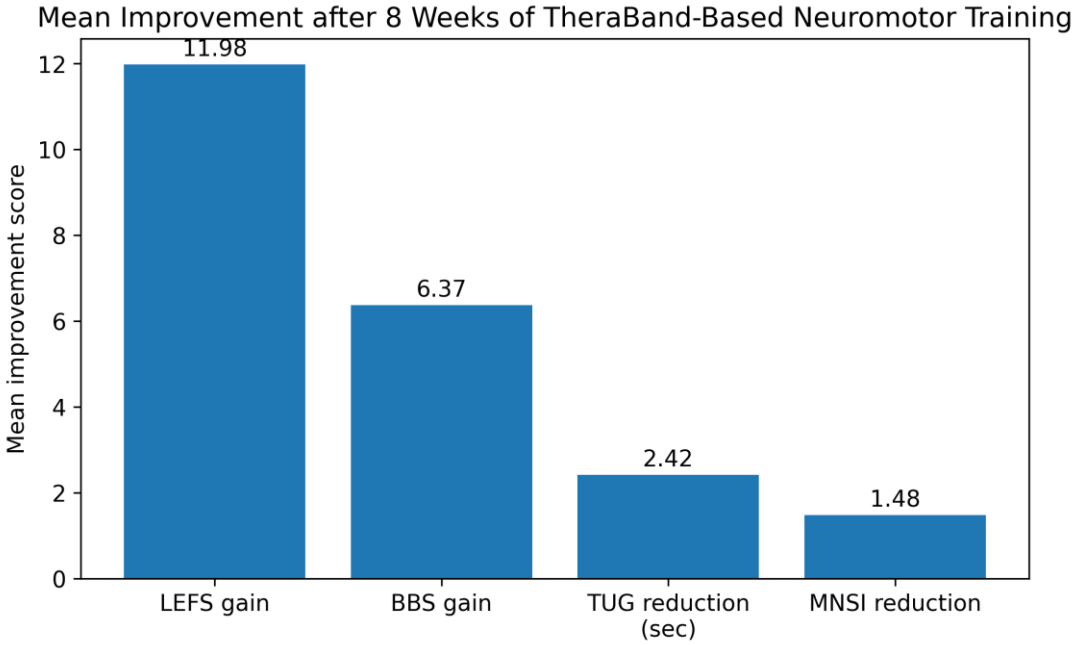

Figure 2. Mean improvement in functional, balance, mobility and neuropathy-related outcomes.

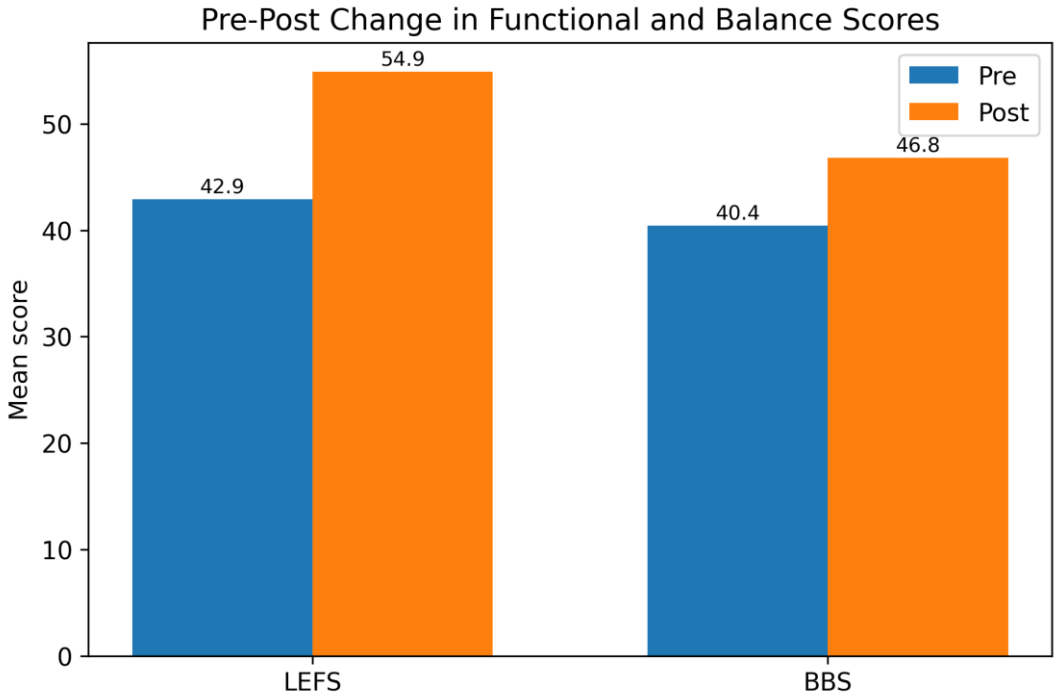

Figure 3. Pre-post change in LEFS and BBS mean scores.

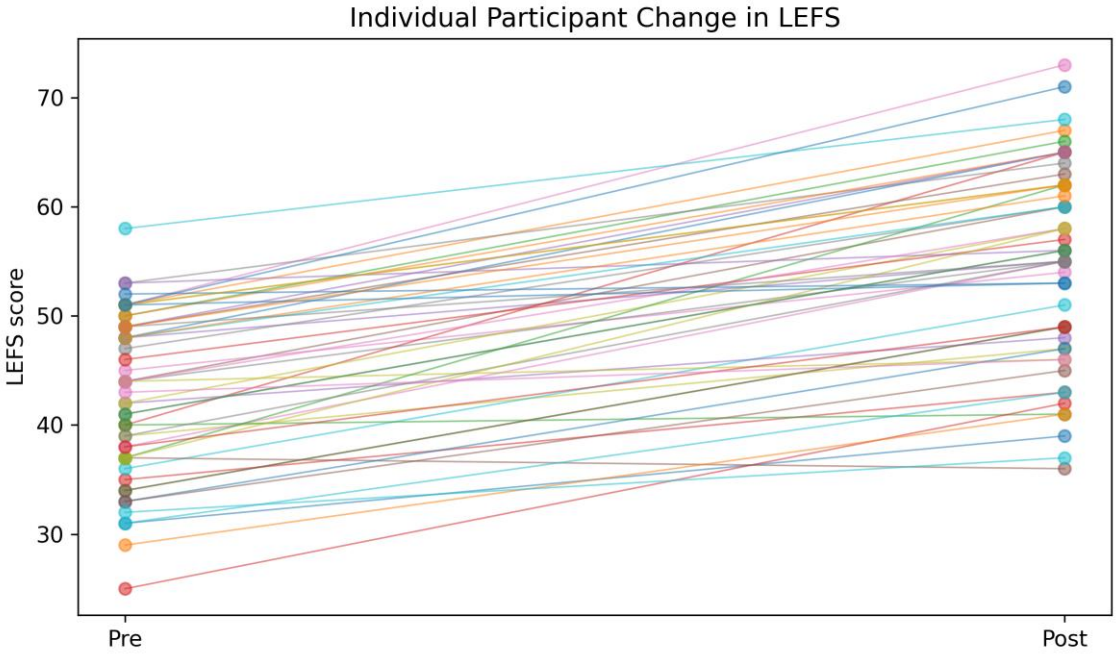

Figure 4. Individual participant change in LEFS from baseline to week 8.

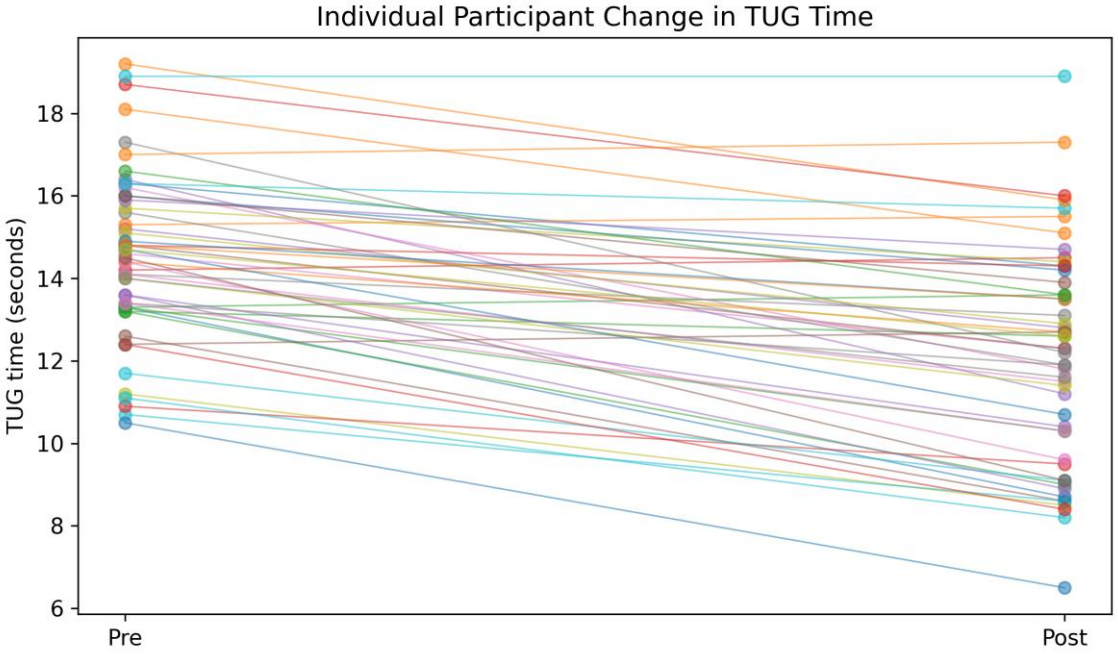

Figure 5. Individual participant change in TUG time from baseline to week 8.

Table 7. Responder analysis using operational academic thresholds

Responder criterion	n	%
LEFS improvement ≥9 points	38	73.1
BBS improvement ≥4 points	41	78.8
TUG reduction ≥1.5 seconds	37	71.2
MNSI reduction ≥1 point	39	75.0

Responder analysis showed that 73.1% of participants achieved a LEFS gain of at least 9 points, 78.8% achieved a BBS gain of at least 4 points, 71.2% achieved a TUG reduction of at least 1.5 seconds and 75.0% achieved an MNSI reduction of at least 1 point. These thresholds were used as operational markers for this demonstration and should be adjusted to institutionally accepted minimal clinically important differences where available.

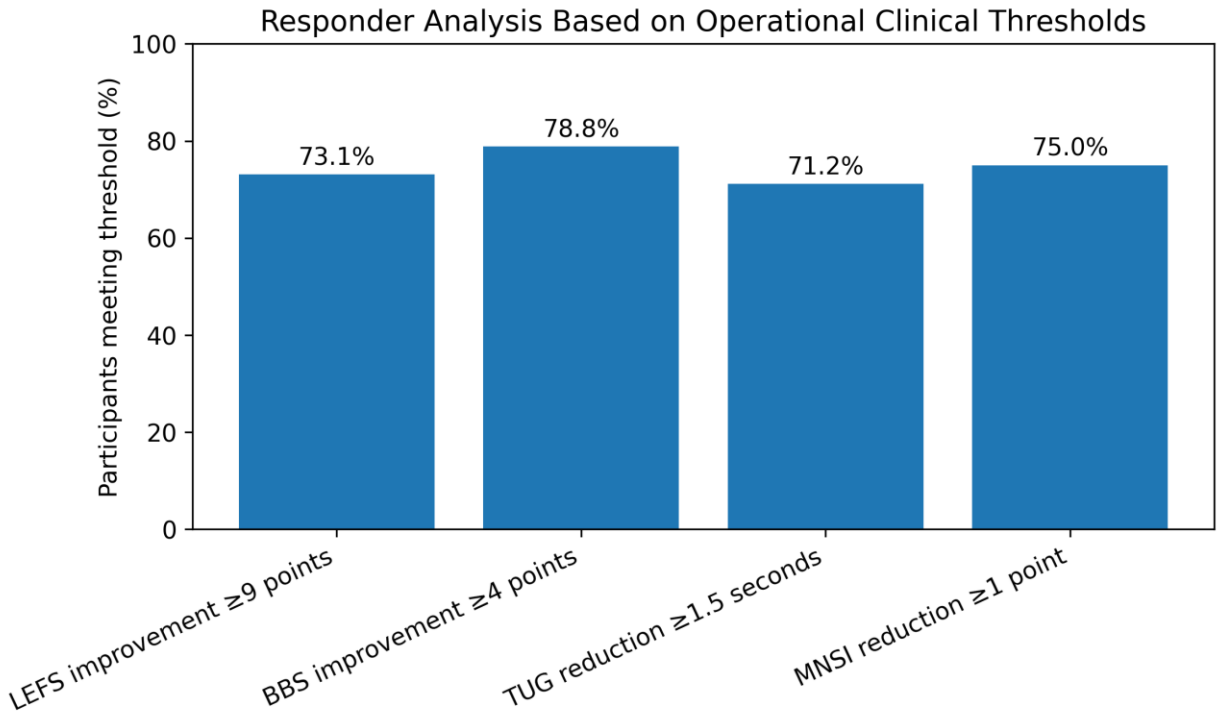

Figure 6. Percentage of participants meeting operational responder thresholds.

Table 8. Exploratory correlation analysis

Relationship	Pearson r	p-value
LEFS gain with adherence	0.07	0.644
BBS gain with adherence	0.13	0.340
TUG reduction with adherence	-0.00	0.982
MNSI reduction with adherence	-0.00	0.985
TUG reduction with MNSI reduction	0.25	0.070
BBS gain with TUG reduction	0.21	0.127

The exploratory correlations were weak and statistically non-significant. The relationship between TUG reduction and MNSI reduction showed a weak positive trend, suggesting that participants with greater neuropathy-score reduction tended to show slightly greater mobility improvement, but this association did not reach the $p < 0.05$ level in the simulated dataset.

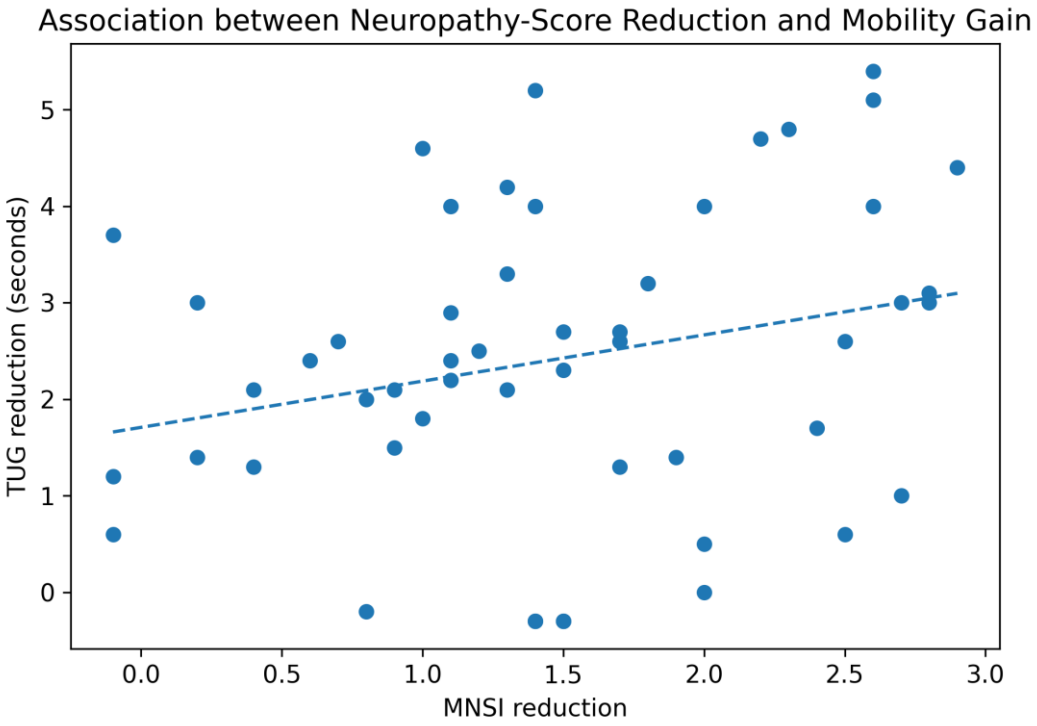

Figure 7. Scatter plot showing the weak association between MNSI reduction and TUG reduction.

9. Discussion

The simulated analysis illustrates that an eight-week TheraBand-based neuromotor training programme could be evaluated through lower-limb function, balance, mobility and neuropathy-related scores in adults with diabetic peripheral neuropathy. The direction of improvement across LEFS, BBS, TUG and MNSI is consistent with the theoretical mechanism of a combined intervention that targets muscle performance, proprioceptive control, postural stability and functional task execution, but the present figures remain demonstration values until replaced by real clinical data.

The improvement in LEFS may be explained by enhanced strength of ankle, knee and hip muscle groups and by repeated practice of transfer, stepping and gait-related activities. Elastic resistance provides progressive loading through the range of motion and demands continuous adjustment of force output, which can improve motor-control quality during daily tasks. These mechanisms are compatible with recent systematic evidence that structured exercise may improve physical function and neuropathy-related outcomes in diabetic neuropathy (Gracia-Sánchez et al., 2025; Nguyen et al., 2025).

The increase in BBS and reduction in TUG time are particularly important because diabetic neuropathy is strongly associated with poor balance confidence, impaired postural control and fall risk. Balance-oriented rehabilitation studies and reviews have reported that physical rehabilitation and balance training can improve balance outcomes in people with diabetic peripheral neuropathy, although authors repeatedly note that intervention content, dosage and intensity are often insufficiently reported (Alissa et al., 2024; Køhler et al., 2025; Lima et al., 2021). The present protocol addresses this limitation by describing weekly progression, exercise dosage and safety precautions in detail.

The reduction in MNSI score should be interpreted cautiously. Exercise may reduce neuropathic symptom burden through better circulation, improved metabolic regulation, reduced inactivity, enhanced muscular support and improved functional confidence. However, peripheral nerve pathology is complex and may not reverse quickly. Therefore, MNSI change should be interpreted together with functional change, foot-risk status and long-term follow-up rather than as proof of nerve recovery.

The simulated safety profile suggests that the protocol is feasible when delivered under physiotherapist supervision with diabetic foot

precautions. TheraBand is inexpensive, portable and adaptable, making it suitable for outpatient departments, community rehabilitation and home-exercise continuation. Nevertheless, progression must be individualized, especially in patients with severe sensory loss, poor glycemic control, visual impairment, vestibular symptoms or musculoskeletal comorbidities.

10. Limitations

The most important limitation is that the dataset is simulated and does not represent actual participants. Therefore, the statistical findings cannot be claimed as real treatment evidence. The study design is single-group pre-test post-test, so improvements may be influenced by placebo effects, learning effects, natural variation or non-specific attention. The simulated dataset also does not include nerve conduction studies, plantar pressure analysis, objective gait analysis, long-term follow-up or a conventional physiotherapy comparison group. Future research should use a randomized controlled design with blinded outcome assessment, sufficient sample-size calculation, longer follow-up and real ethically approved clinical data.

11. Conclusion

This modified research paper presents a complete empirical-style version of a TheraBand-based neuromotor training study for diabetic peripheral neuropathy. The simulated data analysis demonstrated how statistically significant pre-post changes in LEFS, BBS, TUG and MNSI may be reported, including within-participant effect sizes and responder rates. These outputs support the clinical plausibility of a structured TheraBand-based protocol that combines progressive elastic resistance, proprioceptive stimulation, balance retraining and functional stepping practice. However, because the dataset is simulated, the results should be used for academic demonstration only. Real clinical data are required before the findings can be submitted as original patient-based research or translated into definitive clinical recommendations.

12. Recommendations for Future Research

Future studies should compare TheraBand-based neuromotor training with conventional physiotherapy, balance-only training and aerobic-resistance combined programmes. Researchers should include standardized diabetic foot-risk screening, objective gait parameters, plantar pressure analysis, nerve conduction or small-fiber measures where feasible, fall incidence and long-term adherence. Reporting should follow CONSORT or appropriate rehabilitation reporting standards so that intervention content, progression and safety monitoring can be reproduced in clinical practice.

13. Publication Ethics and Journal Submission Note

This corrected manuscript should be treated as a data-analysis template until real anonymized participant-level data, ethics approval details and institutional permissions are available. The statistical direction of the result must come from the actual dataset and not from post-hoc alteration of sample size, objectives or outcome definitions.

For thesis-derived publications, multiple papers may be prepared only when each paper has a genuinely separate research question, non-overlapping primary outcome focus, transparent reporting of the shared source dataset and appropriate acknowledgement of any dataset overlap. Dividing a dataset only to create multiple favourable papers or to conceal duplicated analyses is not acceptable.

Journal selection should prioritise legitimate peer review, transparent editorial policies, verifiable indexing status, clear publication charges and recognised publication-ethics practices. Avoid outlets that advertise guaranteed acceptance, false indexing, unusually broad scope, hidden charges or extremely rapid review without transparent editorial assessment.

Appendix A. Simulated Dataset Used for Statistical Demonstration

The following tables contain the simulated anonymized data used to generate the descriptive statistics, paired t-tests, responder analysis and charts. These data are included only to make the paper complete for academic formatting and statistical demonstration. They must be replaced with real participant data before thesis submission, clinical submission, journal submission or publication.

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Table A1. Simulated demographic and clinical dataset

ID	Age	Sex	DM duration	HbA1c %	BMI	Adherence %	Adverse event
P01	43	Male	19.8	8.9	27.7	92.6	None
P02	44	Male	5.6	7.5	27.1	92.4	None
P03	64	Female	9.0	7.6	25.1	92.3	None
P04	43	Male	4.5	8.0	25.5	86.3	None
P05	50	Male	19.2	9.3	30.5	86.6	None
P06	59	Female	7.7	8.3	21.0	95.8	None
P07	57	Male	5.0	8.3	21.6	91.3	None
P08	50	Female	4.2	8.1	29.7	94.3	None
P09	62	Male	13.6	7.3	27.1	88.1	Mild fatigue only
P10	40	Female	10.7	7.8	27.1	85.3	Mild fatigue only
P11	48	Female	11.8	6.9	30.6	89.5	None
P12	52	Female	8.3	7.9	26.1	97.2	Mild fatigue only
P13	42	Female	4.7	8.5	27.4	89.7	None
P14	54	Male	14.7	8.1	21.8	90.3	None
P15	60	Female	8.9	8.4	29.8	98.1	Mild transient redness
P16	50	Male	6.9	8.4	30.9	96.7	None
P17	61	Female	16.1	8.4	30.2	86.5	None
P18	43	Male	6.6	8.7	22.6	88.9	None
P19	40	Male	4.6	8.6	29.0	86.0	None
P20	42	Male	9.0	7.1	32.0	86.3	Mild fatigue only
P21	52	Male	4.0	8.3	22.7	93.5	Mild transient redness
P22	60	Male	8.4	8.0	34.9	98.0	None
P23	65	Male	5.3	7.7	29.3	99.3	Mild fatigue only
P24	50	Female	11.2	9.3	26.4	95.3	Mild fatigue only
P25	41	Male	5.8	8.7	26.2	96.4	None
P26	63	Male	10.4	6.7	29.3	88.2	None
P27	43	Female	14.6	8.1	27.3	88.4	None
P28	62	Male	7.6	9.0	31.0	94.0	None
P29	63	Female	7.2	8.1	29.4	89.1	None
P30	50	Male	9.8	7.7	27.8	94.5	Mild fatigue only
P31	46	Male	12.8	7.7	28.8	98.8	Mild fatigue only
P32	65	Male	12.7	7.9	28.3	87.1	Mild fatigue only

P33	49	Male	4.4	8.1	27.1	87.5	None
P34	54	Female	5.9	7.8	21.0	93.1	None
P35	54	Female	5.1	7.7	26.9	89.7	Mild transient redness
P36	49	Female	17.8	6.9	25.3	91.0	None
P37	61	Female	5.7	8.4	29.5	89.0	Mild fatigue only
P38	41	Male	15.0	7.5	24.6	88.7	Mild fatigue only
P39	56	Male	10.0	7.8	27.7	93.4	Mild fatigue only
P40	62	Female	10.2	8.3	29.2	84.0	Mild fatigue only
P41	50	Female	5.2	7.6	33.2	91.1	Mild fatigue only
P42	47	Female	10.5	8.2	28.7	94.7	Mild transient redness
P43	43	Female	12.6	7.6	30.0	86.3	None
P44	57	Female	14.9	9.0	27.3	90.3	None
P45	43	Male	2.0	9.0	27.0	94.7	None
P46	46	Male	14.2	8.8	24.4	96.4	None
P47	41	Male	12.6	8.5	28.8	84.5	None
P48	61	Male	8.9	7.4	25.0	83.8	None
P49	55	Female	10.3	7.6	26.5	91.7	None
P50	51	Female	15.0	9.2	25.4	97.4	Mild transient redness
P51	59	Male	11.0	6.5	27.9	90.6	None
P52	48	Female	2.0	7.6	26.0	100.0	None

Table A2. Simulated outcome dataset

ID	LEFS Pre	LEFS Post	LEFS Δ	BBS Pre	BBS Post	BBS Δ	TUG Pre	TUG Post	TUG Δ	MNSI Pre	MNSI Post	MNSI Δ
P01	48	65	17	37	45	8	16.3	14.3	-2.0	4.8	4.0	-0.8
P02	51	62	11	43	51	8	18.1	15.1	-3.0	5.9	5.7	-0.2
P03	34	49	15	35	37	2	13.3	13.6	0.3	8.5	7.1	-1.4
P04	35	43	8	41	42	1	14.2	14.5	0.3	3.8	2.4	-1.4
P05	48	55	7	44	55	11	15.2	12.8	-2.4	8.3	7.7	-0.6
P06	44	60	16	32	39	7	12.6	8.6	-4.0	5.0	3.9	-1.1
P07	45	54	9	46	46	0	14.6	12.3	-2.3	6.9	5.4	-1.5
P08	44	55	11	51	56	5	14.1	13.1	-1.0	5.2	2.5	-2.7
P09	39	47	8	37	46	9	11.2	8.5	-2.7	4.4	2.7	-1.7
P10	36	51	15	43	49	6	10.7	8.6	-2.1	5.9	5.0	-0.9
P11	31	39	8	45	49	4	13.3	8.7	-4.6	7.5	6.5	-1.0
P12	51	67	16	43	53	10	15.3	15.5	0.2	7.6	6.8	-0.8
P13	50	66	16	39	46	7	13.2	12.6	-0.6	7.6	5.1	-2.5
P14	40	65	25	38	40	2	10.9	9.5	-1.4	8.8	6.9	-1.9

P15	42	48	6	38	45	7	16.4	11.2	-5.2	5.1	3.7	-1.4
P16	49	63	14	43	56	13	14.8	12.3	-2.5	8.9	7.7	-1.2
P17	51	73	22	40	50	10	16.2	11.8	-4.4	5.2	2.3	-2.9
P18	53	64	11	45	55	10	15.6	11.9	-3.7	6.7	6.8	0.1
P19	42	58	16	41	47	6	15.7	14.4	-1.3	6.5	4.8	-1.7
P20	58	68	10	44	50	6	11.1	8.2	-2.9	5.0	3.9	-1.1
P21	51	71	20	43	44	1	16.0	14.2	-1.8	5.3	4.3	-1.0
P22	50	65	15	41	45	4	14.4	12.7	-1.7	5.7	3.3	-2.4
P23	40	41	1	39	44	5	13.2	9.0	-4.2	7.6	6.3	-1.3
P24	25	42	17	42	50	8	14.8	14.3	-0.5	7.8	5.8	-2.0
P25	41	56	15	32	41	9	15.9	14.7	-1.2	6.7	6.8	0.1
P26	37	36	-1	50	49	-1	16.0	13.9	-2.1	9.5	9.1	-0.4
P27	38	55	17	41	46	5	14.1	11.5	-2.6	3.5	1.8	-1.7
P28	47	60	13	38	48	10	17.3	12.2	-5.1	5.2	2.6	-2.6
P29	44	46	2	30	39	9	15.1	12.9	-2.2	4.3	3.2	-1.1
P30	31	43	12	44	56	12	11.7	9.1	-2.6	4.7	4.0	-0.7
P31	33	47	14	44	50	6	14.9	13.5	-1.4	6.6	6.4	-0.2
P32	29	41	12	48	49	1	14.8	13.5	-1.3	5.4	5.0	-0.4
P33	37	62	25	41	48	7	16.6	13.6	-3.0	7.7	5.0	-2.7
P34	46	57	11	43	52	9	12.4	8.4	-4.0	7.4	6.0	-1.4
P35	53	56	3	44	46	2	13.6	10.4	-3.2	5.7	3.9	-1.8
P36	34	49	15	36	42	6	12.4	12.7	0.3	7.6	6.1	-1.5
P37	44	58	14	40	47	7	14.4	9.6	-4.8	6.1	3.8	-2.3
P38	39	55	16	38	48	10	13.4	11.9	-1.5	7.3	6.4	-0.9
P39	37	58	21	42	47	5	14.0	11.4	-2.6	6.6	4.1	-2.5
P40	48	60	12	40	42	2	16.3	15.7	-0.6	5.8	5.9	0.1
P41	52	53	1	36	46	10	14.7	10.7	-4.0	4.4	1.8	-2.6
P42	48	61	13	42	47	5	19.2	15.9	-3.3	7.4	6.1	-1.3
P43	41	56	15	31	45	14	13.3	10.3	-3.0	8.0	5.2	-2.8
P44	38	49	11	43	49	6	18.7	16.0	-2.7	6.6	5.1	-1.5
P45	49	65	16	39	46	7	13.6	8.9	-4.7	8.0	5.8	-2.2
P46	33	45	12	34	38	4	14.5	9.1	-5.4	3.5	0.9	-2.6
P47	43	46	3	35	40	5	13.4	10.3	-3.1	4.5	1.7	-2.8
P48	49	55	6	47	49	2	14.0	11.6	-2.4	6.3	5.2	-1.1
P49	51	62	11	35	42	7	14.7	12.6	-2.1	7.0	5.7	-1.3
P50	32	37	5	44	56	12	18.9	18.9	0.0	5.4	3.4	-2.0
P51	51	53	2	40	48	8	10.5	6.5	-4.0	6.0	4.0	-2.0
P52	49	62	13	36	38	2	17.0	17.3	0.3	7.5	6.0	-1.5

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