- Normal aging leads to functional decline, worsened by sedentary lifestyles, especially in nursing homes (NHs).

- Over 30% of NH residents report reduced physical activity after admission.

- Sedentary behavior in NHs exceeds 10 hours per day.

- Regular physical activity improves physical performance, quality of life, and prevents falls.

- Barriers to participation include health perceptions, lack of motivation, environmental factors, lack of specific recommendations or pragmatic interventions for this population

- External motivation is key to promote physical activity in NHs.

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- To assess the feasibility and acceptability of the PUSH (Promoting the aUtonomy through exerciSe in nursing Home) tool in NH

- To study the impact of individual motivational interviews on adherence rates

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- **Study design**

Feasibility and acceptability pilot study

Carried out in 3 NH in the province of Liège, Belgium

- **Population**

Aged 65 or older

Living in nursing home

Able to practice physical activity

Able to give voluntary and informed consent

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• **Intervention: decisional tree**

A decisional tree, including validated physical tests for muscle strength, balance and muscle endurance, was used to establish individual score abilities

Laboratoire du Muscle et de sa Fonction

Evaluation date: _____
Name of evaluator: _____

DECISION TREE PUSH – Person *able to stand*

TESTING		POSITION	CRITERIA	SCORE
Cardio-muscular				
Test of the number of chair lifts in 30 seconds	With support	A	0 lift	*0*
		B	< 5 lifts	*1*
		C (If relevant, try without support)	5 to 9 lifts	2
		D (If relevant, try without support)	ỹ 10 lifts	3
	Without support	E (If ỹ 2, take the score with support)	3 to 5 lifts	3
		F	ỹ 5 lifts	4
Balance (Standing, unassisted)				
		- ATTENTION -		
		*If the Cardio-muscular score is **0 or** 1, only take into account the **balance score with both feet**		
Feet together		< 10 seconds		0
		ỹ 10 seconds		1
Semi-tandem legs		< 10 seconds		2
		ỹ 10 seconds		3
Tandem legs		ỹ 3 seconds		4
TOTAL SCORE (Cardio-muscular Score + Balance Score):				/8

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- **Intervention: PUSH program**

Based on this score, the PUSH tool assigns tailor-made exercise programmes to NH residents.

Each PUSH exercise programme includes two daily exercises combined with personalized walking or wheelchair distances.

For each exercise it is recommended to perform 1 to 2 sets of 10 to 12 repetitions, depending on the programme

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- **Intervention: PUSH program**

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- **Participant Assignment and Allocation Method**

Participants were divided into two different groups:
one that received external motivation (PUSH-EM group)
and one that did not (PUSH-NEM).

During the 4-week study period, the PUSH-EM group received two weekly visits from the physiotherapist to encourage adherence to their PUSH programme

The PUSH-NEM were left alone to complete their personalized programme.

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- **Data collected**

Socio-demographic characteristics: age, sexe, BMI

Two <u>acceptability</u> indicators: adherence and satisfaction (using a 4-point Likert scale)

Two <u>feasibility</u> proxies: perceived difficulty (using a 4-point Likert scale) and usability (using the validated SUS questionnaire)

Expected values:
> 80% for adherence and satisfaction
> 68/100 for SUS
< 40% for difficulty

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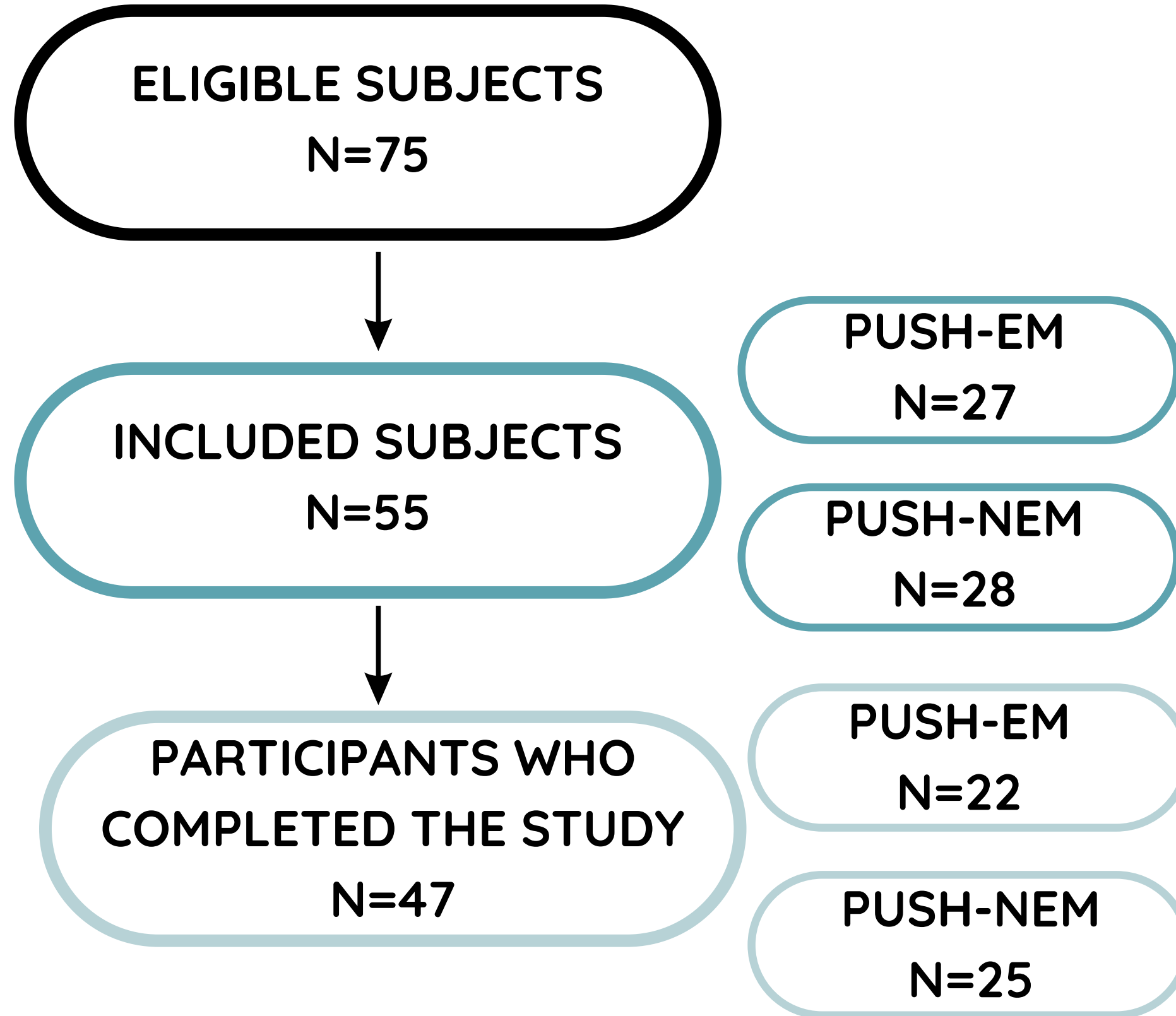
BASELINE CHARACTERISTICS

Variables	PUSH-EM group (n=27)	PUSH-NEM group (n=28)	p-value
Age (years)	83.9 ± 7.9	86.1 ± 7.0	0.28
Sex (n (%), men : women)	8 (29.6) : 19 (70.4)	8 (28.6) : 20 (71.4)	0.93
BMI (kg/m²)	24.3 (22.3-27.9)	24.9 (22.9-27.8)	0.36

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ACCEPTABILITY

Variables	PUSH-EM group (n=27) n (%)	PUSH-NEM group (n=28) n (%)	p-value
• Adherence (n ; %)			
Number of completed sessions / number of prescribed sessions	36.4/56 (65%)	35.4/56 (63.2%)	0.82
• Satisfaction (n ; %)			0.17
Not satisfied at all with the programme	2 (8.3)	2 (7.5)	
Somewhat satisfied with the programme	3 (12.5)	8 (29.6)	
Satisfied with the programme	12 (50)	6 (22.2)	
Highly satisfied with the exercise programme	7 (29.2)	11 (40.7)	

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FEASIBILITY

Variables	PUSH-EM group (n=27) n (%)	PUSH-NEM group (n=28) n (%)	p-value
Feasibility			
• SUS (/100)	77.5 (66.9- 83.1)	77.5 (63.8- 82.5)	0.75
• Difficulty			0.19
The perceived difficulty during the execution of the programme's exercises is **non-existent**	12 (50)	9 (33.3)	
The perceived difficulty during the execution of the programme's exercises is **slight**	4 (16.7)	12 (44.5)	
The perceived difficulty during the execution of the programme's exercises is **moderate**	6 (25)	4 (14.8)	
The perceived difficulty during the execution of the programme's exercises is **extreme**	2 (8.3)	2 (7.4)	

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CONCLUSION

- PUSH tool : acceptable and feasible in NH settings.

- Despite slightly lower than expected adherence rates (80%).

- Future research should focus on evaluating the factors facilitating the long-term adherence of the PUSH programme among NH residents.

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THANK YOU

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