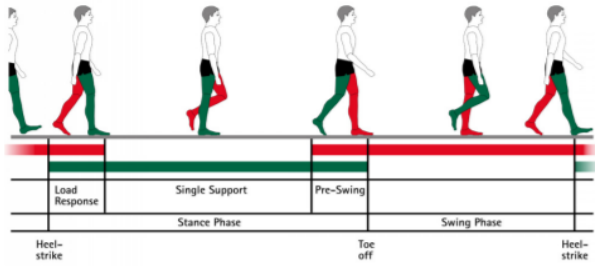


## Introduction

The aim of this study was to investigate the effects of fear of falling on time-distance parameters of gait (spatio-temporal parameters) in elderly with type-2 diabetes mellitus.



## Materials and Methods

Thirty-one type-2 DM patients who were diagnosed by an endocrinologist and twenty-nine healthy subjects over aged of 55 years were included this study. Fear of falling was evaluated with International Fall Efficacy Scale. Measurement of time-distance parameters of gait was performed with Zebris FDM-2.

Table-1: Demographic Information

	DIABETES (N:31) (mean ± SD)	CONTROL (N:29) (mean ± SD)	p
Age (year)	62.9 ± 6.1	60.93 ± 5.25	0.186
Height (cm)	162.48 ± 9.01	178.6 ± 18.57	0.491
Weight (kg)	84.6 ± 16.30	164.17 ± 9.84	0.232
BMI(kg/m <sup>2</sup> )	31.82 ± 5.6	29.0 ± 5.98	0.065
Diabetes Duration (year)	11.17 ± 7.64	-	-

## Results

In diabetics, as the fear of falling increased, the length of step (r:-0.660, p<0.01) and cadance (r:-0.401, p<0.01) decreased and duration of the step (r:0.390, p<0.05) increased. There was no statistically significant correlation between the fear of falling and the time-distance parameters of gait parameters in the control group (p>0.05).

Table-2: Effect of fear of falling on time-distance parameters

Time-Distance Parameters		DIABETICS	CONTROLS
Length of Step	r	-0.660	-0.065
	p	0.000*	0.738
Cadance	r	-0.401	-0.053
	p	0.250	0.786
Duration of the Step	r	0.390	0.045
	p	0.030*	0.817
Step Width	r	-0.160	-0.180
	p	0.391	0.351
Velocity	r	-0.651	-0.070
	p	0.000*	0.716

Pearson correlation test, \* p<0.05



## Conclusions

The results of this study showed that fear of falling could affect time-distance parameters of gait negatively. In the management of Type 2 DM patients, fear of falling should be considered during gait training.

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