

Life expectancy with and without disability by leisure time physical activity in Belgium 1997-2011

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INTRODUCTION

Vigorous and mild leisure time physical activity (LTPA) in adult populations have been associated with lower mortality. Less is known about the association with disability. In this study, the duration of life with disability (Disability Life Expectancy (DLE)) and without disability (Disability free Life Expectancy (DFLE)) in the Belgian population (15+ years) is estimated by level of LTPA.

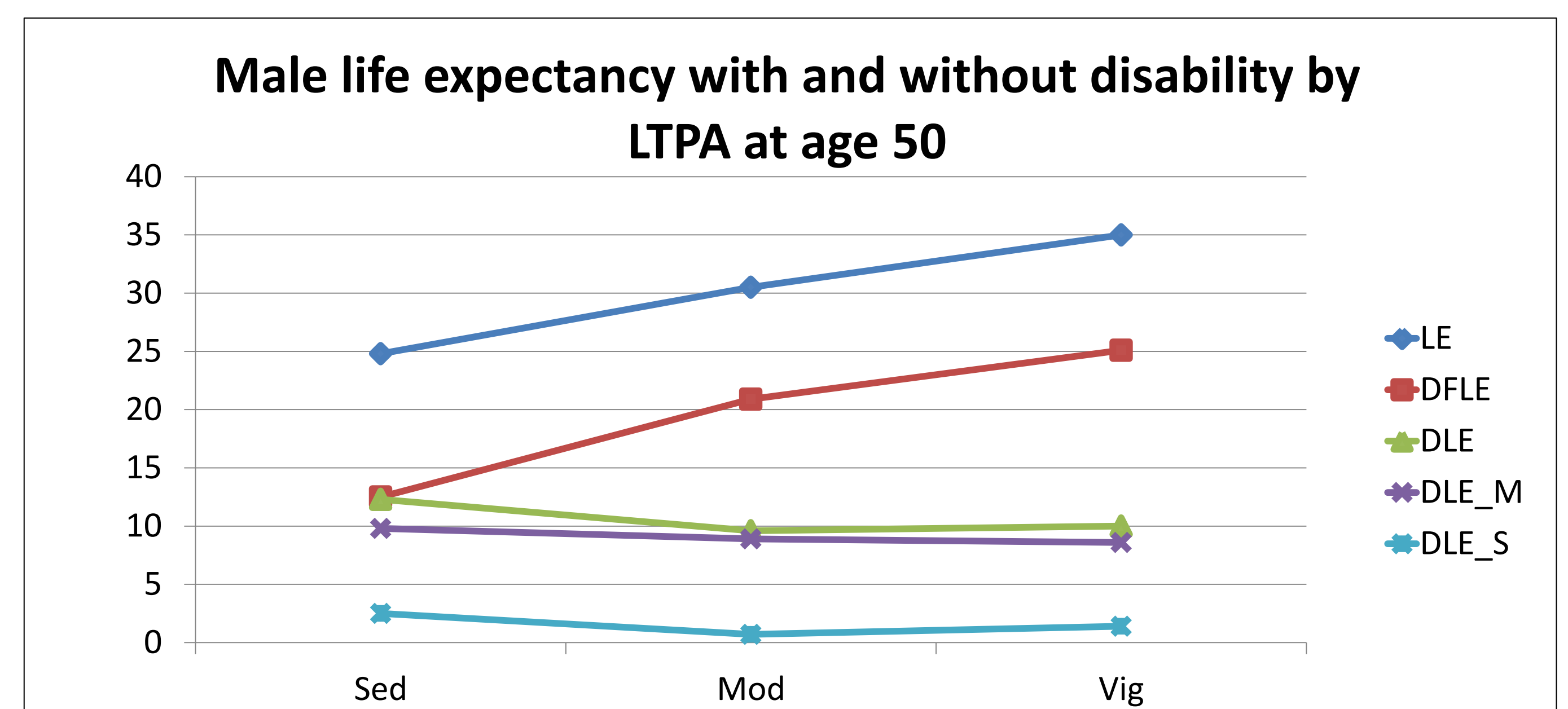
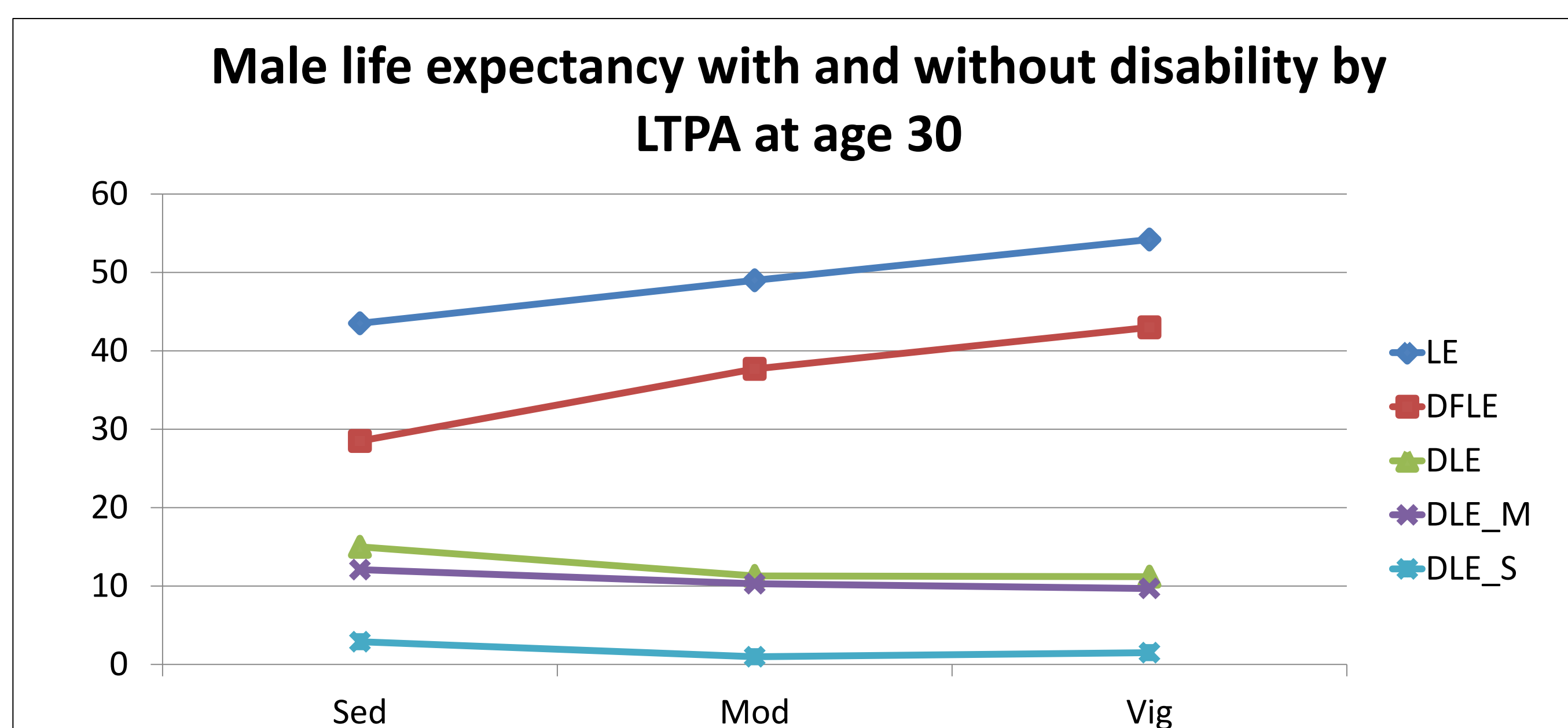
METHODS

Data from the Belgian Health Survey 1997, 2001 with 10 years mortality follow-up were used (n=15930). Disability was defined as difficulty in activities of daily living, in mobility and incontinence. Probabilities of death and prevalence of disabilities were calculated in relation to age, gender and level of LTPA (sedentary behaviour, moderate LTPA (less than 4 hours per week of sport or light activities), vigorous LTPA (4 or more hours per week of sport or intensive training)). Sullivan method was used to calculate life tables for DFLE and DLE by severity level at age 30 and 50.

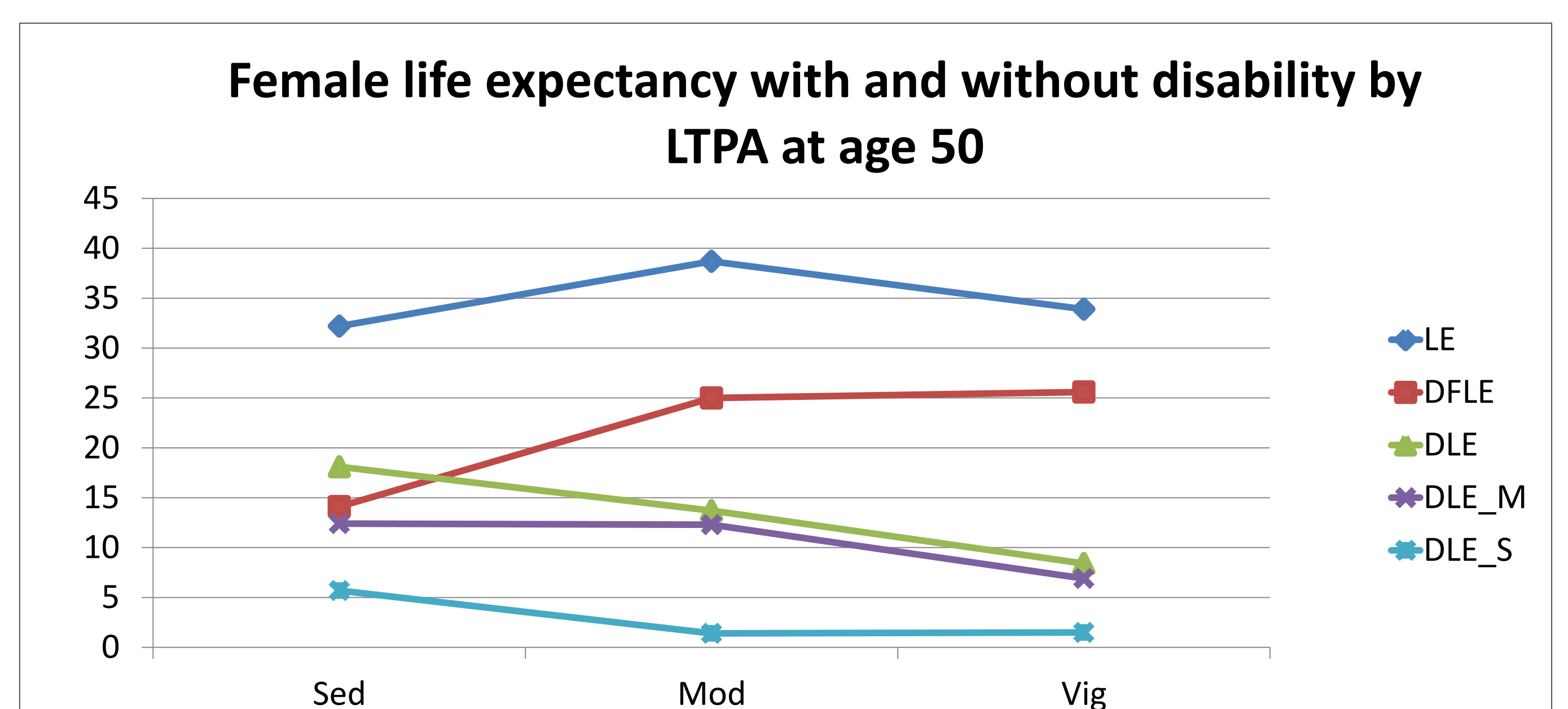
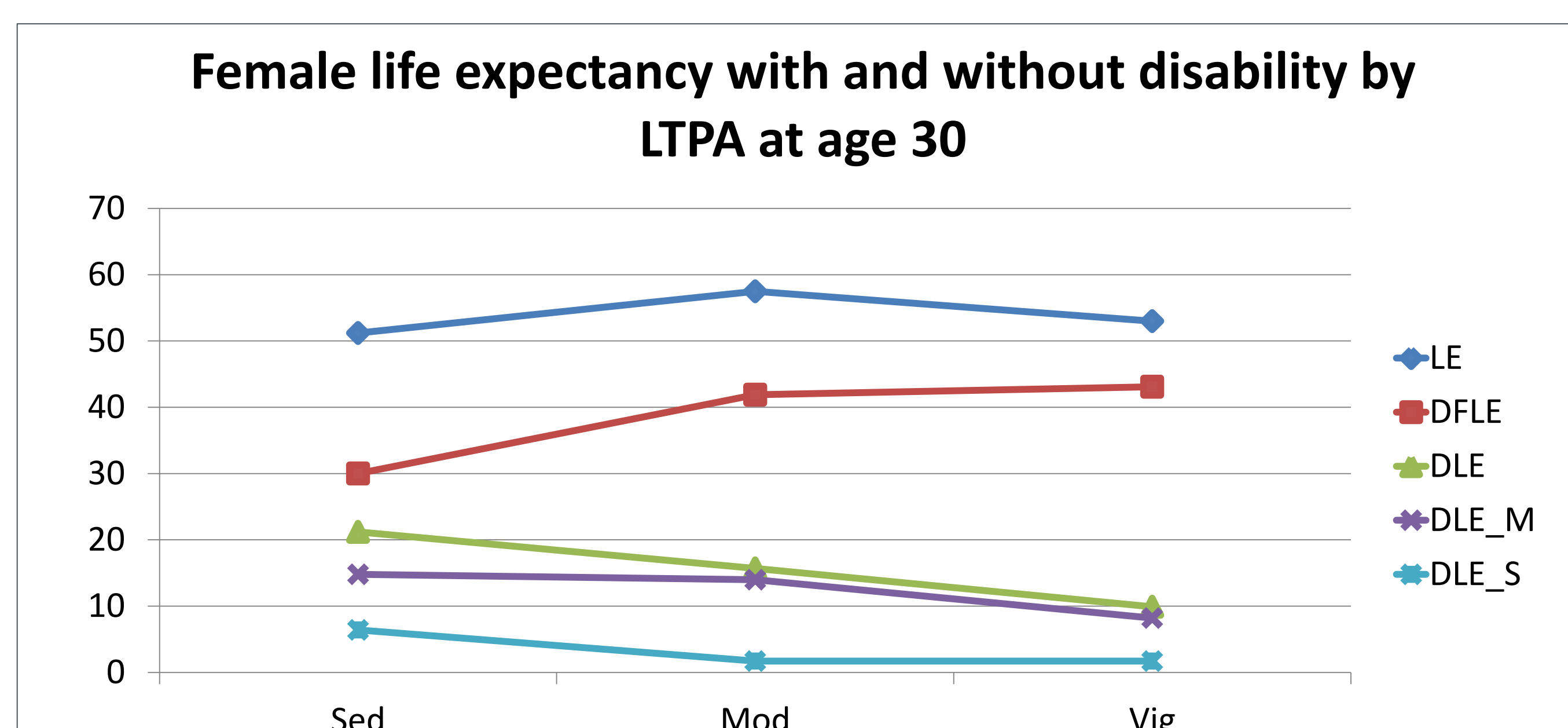
RESULTS

Disability	Sedentary behaviour			Moderate LTPA			Vigorous LTPA		
	N	Observed deaths	Observed person years	N	Observed deaths	Observed person years	N	Observed deaths	Observed person years
No Disability	2667	266	24702.39	4704	328	48317.10	1397	62	14530.10
Mild Disability	1055	325	8094.99	813	124	7044.62	188	13	1602.37
Severe Disability	617	263	3539.26	227	49	1709.53	42	5	261.20

At age 30 and 50, life expectancy (LE) and DFLE among men increased with LTPA intensity level. The expected years of life with disability and especially with severe disability was the highest among sedentary men. E.g. at age 50, DFLE was 12.5, 20.9, 25.1 years among men with sedentary, moderate and vigorous LTPA, while the DLE was respectively 12.3, 9.6 and 10 years with respectively 2.5, 0.7, and 1.4 years expected in severe disability.



Among women, at age 30 and 50, LE was the highest for the moderate LTPA category, while the DFLE increased with LTPA intensity level. DLE and especially severe DLE decreased sharply with increasing LTPA. E.g. at age 50, LE and DFLE were respectively 32.2, 38.7, 33.9 years and 14.1, 25.0 and 25.6 years for women with sedentary, moderate and vigorous LTPA. The proportion of life lived with disability for sedentary women was 56% (18.1 years, with 5.7 years with severe disability). DLE (and severe DLE) was respectively 13.7 (1.4) and 8.4 (1.5) years in women with moderate and vigorous LTPA.



CONCLUSIONS

A sedentary behaviour during leisure time is associated with a shorter life, a shorter life without disability and more years with disability and severe disability. DFLE is higher when LTPA intensity is higher. Caution is necessary as disability estimates were based on prevalence rates and reverse causation cannot be excluded.