Author(s): Lounassalo, Irinja; Salin, Kasper; Kankaanpää, Anna; Hirvensalo, Mirja; Palomäki, Sanna; Tolvanen, Asko; Yang, Xiaolin; Tammelin, Tuija H.

Title: Distinct trajectories of physical activity and related factors during the life course in the general population : a systematic review

Year: 2019

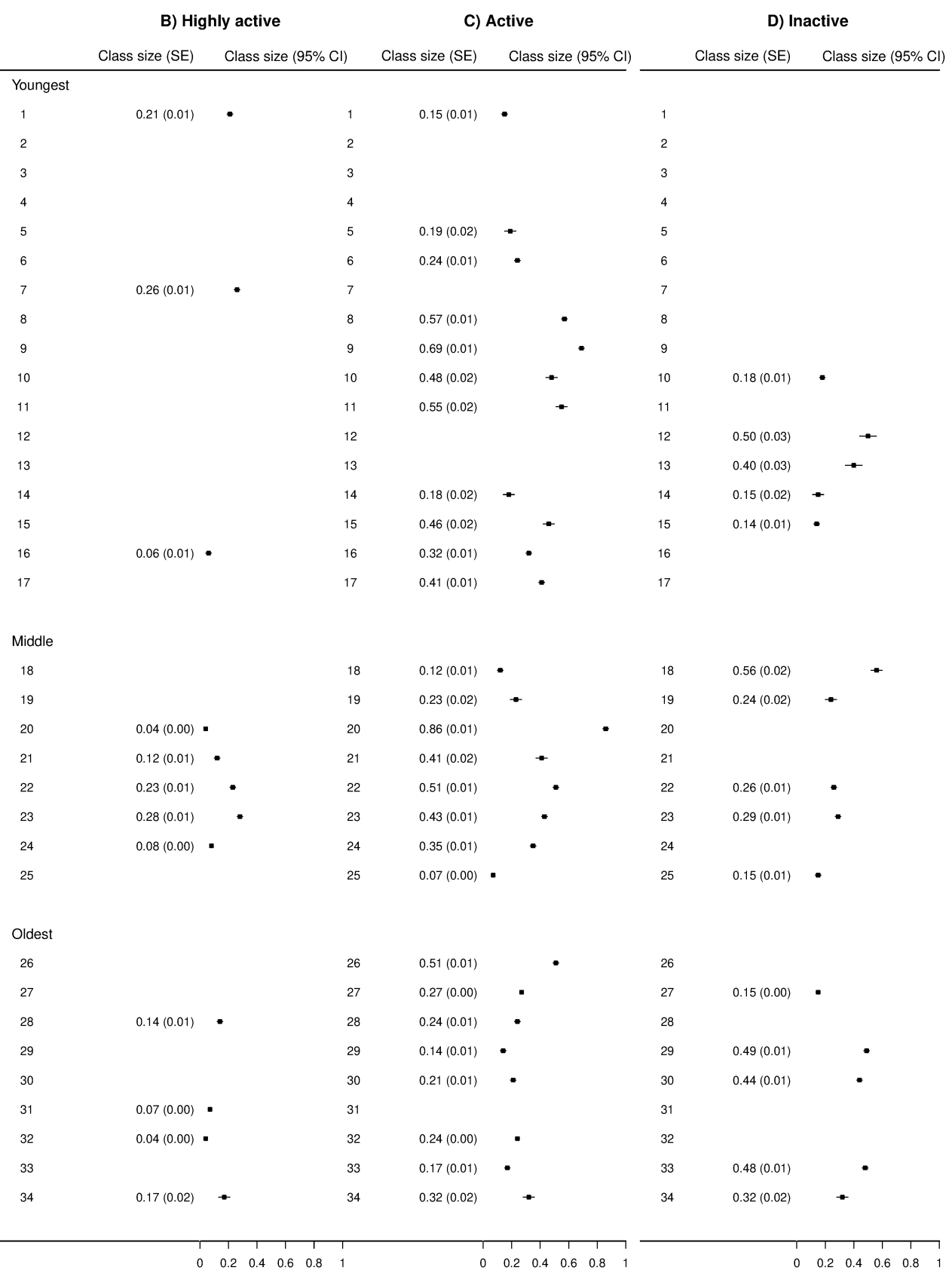Version: Published version

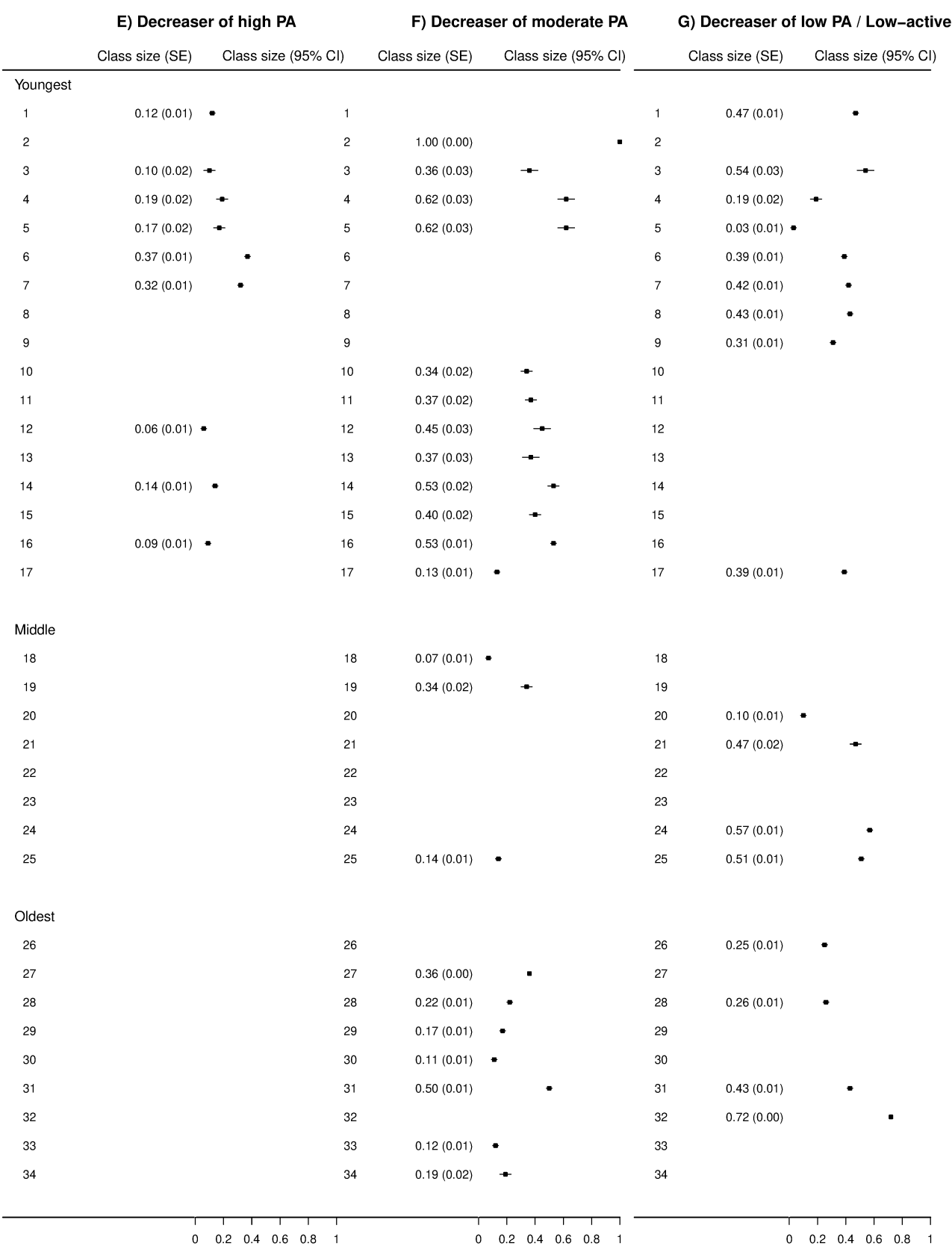Please cite the original version:

Lounassalo, I., Salin, K., Kankaanpää, A., Hirvensalo, M., Palomäki, S., Tolvanen, A., Yang, X., &
Tammelin, T. H. (2019). Distinct trajectories of physical activity and related factors during the
life course in the general population : a systematic review. BMC Public Health, 19, Article 271.
https://doi.org/10.1186/s12889-019-6513-y

	N	Measure	Method	Class size (SE)	Class size (95% CI)
Youngest group					
1 Audrain–McGovern, 2012	1,429	MVPA	SR	0.05 (0.01)	
2 Farooq 2017: Females	283	Total PA volume	OBM		
3 Farooq 2017: Males	262	Total PA volume	OBM		
4 Farooq 2017: Females	283	MVPA	OBM		
5 Farooq 2017: Males	262	MVPA	OBM		
6 Findlay, 2009: Females	4,497	Organized PA	PR + SR		
7 Findlay, 2009: Males	4,320	Organized PA	PR + SR		
8 Findlay, 2010: Females	4,489	Unorganized PA	PR + SR		
9 Findlay, 2010: Males	4,489	Unorganized PA	PR + SR		
10 Howie, 2016: Females	823	Organized SP	PR		
11 Howie, 2016: Males	856	Organized SP	PR	0.08 (0.01)	
12 Janz, 2014: Females	265	MVPA	OBM		
13 Janz, 2014: Males	265	MVPA	OBM	0.23 (0.03)	
14 Kwon, 2015a*	537	MVPA	OBM		
15 Kwon, 2015a*	537	SP	SR		
16 Kwon, Lee, Carnethon, 2015: Females	2,155	PA	SR		
17 Rodriguez, 2004	1,098	Team participation	SR	0.07 (0.01)	
Middle group					
18 Barnett, 2008	884	LTPA	SR	0.25 (0.01)	
19 Dishman, 2010	497	MVPA	SR	0.19 (0.02)	
20 Kaseva, 2016	3,564	LTPA	SR		
21 Kim, 2016: Females	669	PA	OBM		
22 Kiviniemi*, 2016: Females	1,776	LTPA	SR		
23 Kiviniemi*, 2016: Males	1,286	LTPA	SR		
24 Laddu, 2017a	3,175	LTPA	SR		
25 Rovio, 2017	2,841	LTPA	SR	0.14 (0.01)	
Oldest group					
26 Aggio, 2018: Males	4,952	PA	SR	0.24 (0.01)	
27 Artaud, 2016	10,205	PA	SR	0.23 (0.00)	
28 Gabriel, 2017: Females	1,771	Sport and exercise	SR	0.13 (0.01)	
29 Hsu, 2013: Females	2,256	Regular exercise	SR	0.19 (0.01)	
30 Hsu, 2013: Males	2,544	Regular exercise	SR	0.23 (0.01)	
31 Laddu, 2017b: Males	5,964	PA	SR		
32 Nguyen, 2013: Females	92,629	PA	SR		
33 Pan, 2015	4,018	PA	SR	0.23 (0.01)	
34 Xue, 2012: Females	433	PA	SR		

0 0.2 0.4 0.6 0.8 1

	B) Highly active		C) Active		D) Inactive	
	Class size (SE)	Class size (95% CI)	Class size (SE)	Class size (95% CI)	Class size (SE)	Class size (95% CI)
Youngest						
1	0.21 (0.01)		0.15 (0.01)			
2						
3						
4						
5			0.19 (0.02)			
6			0.24 (0.01)			
7	0.26 (0.01)					
8			0.57 (0.01)			
9			0.69 (0.01)			
10			0.48 (0.02)		0.18 (0.01)	
11			0.55 (0.02)			
12					0.50 (0.03)	
13					0.40 (0.03)	
14			0.18 (0.02)		0.15 (0.02)	
15			0.46 (0.02)		0.14 (0.01)	
16	0.06 (0.01)		0.32 (0.01)			
17			0.41 (0.01)			
Middle						
18			0.12 (0.01)		0.56 (0.02)	
19			0.23 (0.02)		0.24 (0.02)	
20	0.04 (0.00)		0.86 (0.01)			
21	0.12 (0.01)		0.41 (0.02)			
22	0.23 (0.01)		0.51 (0.01)		0.26 (0.01)	
23	0.28 (0.01)		0.43 (0.01)		0.29 (0.01)	
24	0.08 (0.00)		0.35 (0.01)			
25			0.07 (0.00)		0.15 (0.01)	
Oldest						
26			0.51 (0.01)			
27			0.27 (0.00)		0.15 (0.00)	
28	0.14 (0.01)		0.24 (0.01)			
29			0.14 (0.01)		0.49 (0.01)	
30			0.21 (0.01)		0.44 (0.01)	
31	0.07 (0.00)					
32	0.04 (0.00)		0.24 (0.00)			
33			0.17 (0.01)		0.48 (0.01)	
34	0.17 (0.02)		0.32 (0.02)		0.32 (0.02)	

0 0.2 0.4 0.6 0.8 1   0 0.2 0.4 0.6 0.8 1   0 0.2 0.4 0.6 0.8 1

	E) Decreaser of high PA			F) Decreaser of moderate PA			G) Decreaser of low PA / Low-active	
	Class size (SE)	Class size (95% CI)		Class size (SE)	Class size (95% CI)		Class size (SE)	Class size (95% CI)
Youngest								
1	0.12 (0.01)		1			1	0.47 (0.01)	
2			2	1.00 (0.00)		2		
3	0.10 (0.02)		3	0.36 (0.03)		3	0.54 (0.03)	
4	0.19 (0.02)		4	0.62 (0.03)		4	0.19 (0.02)	
5	0.17 (0.02)		5	0.62 (0.03)		5	0.03 (0.01)	
6	0.37 (0.01)		6			6	0.39 (0.01)	
7	0.32 (0.01)		7			7	0.42 (0.01)	
8			8			8	0.43 (0.01)	
9			9			9	0.31 (0.01)	
10			10	0.34 (0.02)		10		
11			11	0.37 (0.02)		11		
12	0.06 (0.01)		12	0.45 (0.03)		12		
13			13	0.37 (0.03)		13		
14	0.14 (0.01)		14	0.53 (0.02)		14		
15			15	0.40 (0.02)		15		
16	0.09 (0.01)		16	0.53 (0.01)		16		
17			17	0.13 (0.01)		17	0.39 (0.01)	
Middle								
18			18	0.07 (0.01)		18		
19			19	0.34 (0.02)		19		
20			20			20	0.10 (0.01)	
21			21			21	0.47 (0.02)	
22			22			22		
23			23			23		
24			24			24	0.57 (0.01)	
25			25	0.14 (0.01)		25	0.51 (0.01)	
Oldest								
26			26			26	0.25 (0.01)	
27			27	0.36 (0.00)		27		
28			28	0.22 (0.01)		28	0.26 (0.01)	
29			29	0.17 (0.01)		29		
30			30	0.11 (0.01)		30		
31			31	0.50 (0.01)		31	0.43 (0.01)	
32			32			32	0.72 (0.00)	
33			33	0.12 (0.01)		33		
34			34	0.19 (0.02)		34		

0 0.2 0.4 0.6 0.8 1   0 0.2 0.4 0.6 0.8 1   0 0.2 0.4 0.6 0.8 1

Abbreviations: N = sample size of the study population; SE = standard error; CI = confidence interval; PA = physical activity; MVPA = moderate to vigorous intensity physical activity; LTPA = leisure-time physical activity; SP = sport participation; OBM = objectively measured; SR = self-reported; PR = parent-reported.

*These exact same trajectories were reported in other study / other studies as well. The duplicates were omitted from the figure.

**The From increaser to decreaser category applies to the youngest group while the Increaser category applies to the middle and the oldest group.