

Table 1. Study characteristics.

#	Author Year	Sample size	Average age (SD ^a ; range)	Gender (%female)	EMA ^b design	Additional mobile device used	Incentive structure
Nonclinical population							
1	Dunton 2007	524	14.5 (0.5; NR ^c)	NR	Time ^d	Heart rate monitor Accelerometer	Incremental ^e
2	Weinstein 2006	562	8th grader: 13.9 (0.4; NR), 10th grader: 16.0 (0.4; NR)	8th grader: 52, 10th grader: 57.5	Time ^d	NR	Fixed ^f
3	Gwaltney 2007	13	17.4 (0.8; 14-18)	38.5	Mixed ^g	NR	Fixed ^f
4	Reid 2009	18	Male: 15.8 (0.8; 15-17) Female: 15.9 (1.1; 14-17)	68.9	Time ^d	NR	Fixed ^f
5	Nock 2009	30	17.3 (1.9; 12-19)	86.7	Mixed ^g	NR	Fixed ^f
6	Suveg 2010	38	Male: 9 (1.5; 7-12), Female: 9	49.0	Time ^d	NR	Fixed ^f

			(1.9; 7-12)				
7	Dunton 2011	121	11.0 (NR; 9-13)	49.0	Time ^d	Heart rate monitor Acceleromete r	Incremental ^e
8	Scharf 2013	20	12.8 (1.6; 11-17)	50.0	Mixed ^g	NR	Fixed ^f
9	Kim 2013	35	13.6 (0.5; NR) (youth subsample)	86.7	Mixed ^g	No	N/A ^h
1 0	Crooke 2013	41	15.4 (1.0; 14-17)	61.0	Time ^d	NR	Fixed ^f
1 1	Rusby 2013	82	NR	51.2	Time ^d	NR	Incremental+Other ⁱ
1 2	Bickham 2013	91	14 (NR; 13-15)	49.5	Time ^d	NR	Incremental ^e
1 3	Grenard 2013	158	16.0 (1.0; 14-18)	57.0	Mixed ^g	NR	Fixed ^f
1 4	Rahdar 2014	45	16.5 (0.8; 15-17) (n=22, youth subsample)	40.1	Time ^d	No	N/A
1 5	Garcia 2014	24	15 (NR; 14-17)	100.0	Mixed ^g	NR	Other ^h
1 6	Miranda 2014	65	18.3 (0.9; 15-19) (n=29, youth subsample)	55.0	Event ^j	NR	N/A

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1 7	Ranzenhofer 2014	30	14.9 (1.5; 12-17)	100.0	Time ^d	NR	N/A
1 8	Johnson 2014	35	12.1 (0.3; 12-13)	63.0	Time ^d	NR	Incremental ^e
1 9	Hoepfner 2014	202	16.5 (1.2; 14-18)	38.3	Mixed ^g	NR	Incremental ^e
2 0	Roedel 2014	278	14.2 (0.6; 13-16)	59.0	Time ^d	NR	Fixed ^f
2 1	Sokolovsky 2014	461	15.7 (0.6; 13.9-17.3)	55.1	Time ^d	NR	Fixed ^f
2 2	Dunton 2015	166	NR (NR; 8- 12)	NR	Time ^d	Acceleromete r	Fixed ^f
2 6	Bjorling 2009	31	16 (NR; 14-18)	100.0	Time ^d	NR	N/A
3 8	Chin 2016	82	13.9 (0.7; 13-15)	37.5	Time ^d	NR	N/A
4 0	Russel 2015	151	13.0 (0.9; 11-15)	48.0	Time ^d	NR	Fixed ^f
4 2	Mason 2015	172	16.2 (1.4; 14-18)	52.5	Time ^d	NR	N/A
Clinical population							
2 3	Whalen 2006	52	ADHD ^k group: 10.6 (1.46; NR), Control group 10.9 (1.12; NR)	35.5	Time ^d	NR	Incremental ^e
2 4	Lewandows ki 2009	6	NR (NR; 14-17)	67.0	Time ^d	NR	N/A
2	Connelly	25	12.3 (2.9;	84.0	Time ^d	NR	N/A

5	2009		8-17)				
2	Helgeson	76	14.5 (1.0;	50.0	Time ^d	Blood glucose	Fixed ^f
7	2009		13-16)			meter	
2	Rosen	27	9.29 (1.1;	29.6	Time ^d	NR	Incremental ^e
8	2012		8-12)				
2	Connelly	43	13.2 (2.7;	86.0	Time ^d	NR	N/A
9	2012		8-17)				
3	Rosen	5	NR NR; 8-	25.0	Time ^d	NR	N/A
0	2013		11)				
3	Stinson	14	13.2 (2.3;	64.0	Time ^d	NR	Other ⁱ
1	2013		NA)				
3	Borus	36	16.6 (1.5;	53.0	Time ^d	NR	Fixed ^f
2	2013		14-18)				
3	Khor	31	14.5 (1.8;	16.1	Time ^d	NR	Fixed
3	2014		12.0-19.0)				
3	Stinson	76	13.4 (2.5;	77.6	Time ^d	NR	N/A
4	2008a		9-18)				
3	Stinson	36	12.6 (2.4;	66.7	Time ^d	NR	N/A
5	2008b		8-17)				
3	Dennis	29	16.6 (NR;	31.0	Time ^d	NR	Incremental ^e
6	2014		NR)				
3	Dunton	20	14.6 (1.7;	45.0	Mixed ^g	Acceleromete	Fixed ^f
7	2015		12-17)			r Propeller sensor	
3	Rhee	84	15.0 (1.4;	61.0	Time ^d	NR	Fixed ^f
9	2015		13-17)				
4	Bromberg	59	13.3 (2.78;	74.6	Time ^d	NR	Incremental ^e
1	2015		8-18)				

^aSD: standard deviation.

^bEMA: ecological momentary assessment.

^cNR: not reported.

^dTime-based EMA design studies that prompt study participant to self-report according to a schedule based on time. Time-based designs include prompting participants at random time points, fixed time points, a stratified time block, and so on.

^eIncremental incentive: Participants were given an incremental amount of monetary incentive based on completion rate of EMA prompts during the monitoring period.

^fFixed incentive: Participants were given a fixed amount of monetary incentive after completion of each EMA monitoring period.

^gMixed EMA design studies uses a combination of both time-based and event-based schedule, based on the study objectives.

^hN/A: not applicable.

ⁱOther: The study reported using an incentive strategy other than a fixed or an incremental incentive structure. Detailed information about the incentive strategies used in these studies can be found in Supplemental Table S1: Detailed information about the incentive strategies used..

^jEvent-based EMA designs are studies that require participant to initiate self-report or with assessment triggered by the occurrence of a predefined event of interest.

^kADHD: attention deficient/hyperactivity disorder.