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Data supplement

Detailed statistics including *post hoc* analyses

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ADHD traits

Table DS1. Associations between self-rated ADHD traits and self-reported generalised joint hypermobility in a non-clinical adult population for different age groups and genders

Population	ASRS*-subscale	Hypermobile [a]	Mean (SD)	t	df	p **
Women 18-45 years						
	Inattention	No (n=217)	13.3 (4.75)	1.44	331	p = 0.15
		Yes (n=116)	14.0 (4.77)			
	Hyperactivity and impulsivity	No (n=217)	12.4 (4.67)	2.87	331	p = 0.004
		Yes (n=116)	14.0 (4.71)			
	Total score, ASRS	No (n=217)	25.7 (8.21)	2.47	331	p = 0.014
		Yes (n=116)	28.0 (8.26)			
Women 46-65 years						
	Inattention	No (n=263)	13.0 (4.34)	-1.06	395	p = 0.29
		Yes (n=134)	12.5 (4.60)			
	Hyperactivity and impulsivity	No (n=263)	11.9 (4.70)	-0.85	395	p = 0.40
		Yes (n=134)	11.5 (4.13)			
	Total score, ASRS	No (n=263)	24.9 (7.64)	-1.12	395	p = 0.27
		Yes (n=134)	24.0 (7.71)			
Men 18-45 years						
	Inattention	No (n=59)	13.6 (4.56)	0.65	73	p = 0.52
		Yes (n=16)	14.5 (5.10)			
	Hyperactivity and impulsivity	No (n=59)	11.8 (4.94)	0.65	73	p = 0.52
		Yes (n=16)	12.7 (4.96)			
	Total score, ASRS	No (n=59)	25.4 (8.28)	0.73	73	p = 0.47
		Yes (n=16)	27.1 (9.51)			
Men 46-65 years						
	Inattention	No (n=59)	12.2 (4.60)	0.29	75	p = 0.77
		Yes (n=18)	12.6 (4.56)			
	Hyperactivity and impulsivity	No (n=59)	10.0 (4.06)	0.66	75	p = 0.51
		Yes (n=18)	10.8 (5.73)			
	Total score, ASRS	No (n=59)	22.3 (7.69)	0.53	75	p = 0.60
		Yes (n=18)	23.4 (9.12)			

[a] cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised hypermobility (5PQ)
*ASRS, Adult ADHD Self Report Scale, continuous scoring method
**p values have not been adjusted for multiple testing

Table DS2. Associations between self-rated ADHD traits and self-reported generalised joint hypermobility in a non-clinical female adult population for different cut-off scores on the 5PQ

Women 18-65 years					
ASRS*-subscale	**Level of hypermobility**	**Mean (SD)**	**t**	**df**	***p*** **
	Hypermobile [a]				
Inattention	No (n=480)	13.1 (4.53)	0.28	728	p = 0.78
	Yes (n=250)	13.2 (4.73)			
Hyperactivity and impulsivity	No (n=480)	12.2 (4.69)	1.40	728	p = 0.16
	Yes (n=250)	12.7 (4.56)			
Total score, ASRS	No (n=480)	25.3 (7.90)	0.97	728	p = 0.33
	Yes (n=250)	25.9 (8.20)			
	Hypermobile+ [b]				
Inattention	No (n=597)	13.1 (4.58)	0.09	710	p = 0.93
	Yes (n=115)	13.1 (4.65)			
Hyperactivity and impulsivity	No (n=597)	12.2 (4.59)	1.25	710	p = 0.21
	Yes (n=115)	12.8 (4.62)			
Total score, ASRS	No (n=597)	25.2 (7.92)	0.78	710	p = 0.44
	Yes (n=115)	25.9 (7.91)			
	Hypermobile++ [c]				
Inattention	No (n=656)	13.0 (4.57)	1.44	704	p = 0.15
	Yes (n=50)	14.0 (4.92)			
Hyperactivity and impulsivity	No (n=656)	12.1 (4.59)	2.59	704	p = 0.01
	Yes (n=50)	13.9 (4.52)			
Total score, ASRS	No (n=656)	25.1 (7.89)	2.34	704	p = 0.02
	Yes (n=50)	27.8 (8.13)			
	Hypermobile+++ [d]				
Inattention	No (n=695)	13.0 (4.54)	3.59	703	p < 0.001
	Yes (n=10)	18.2 (5.82)			
Hyperactivity and impulsivity	No (n=695)	12.2 (4.62)	1.49	703	p = 0.14
	Yes (n=10)	14.4 (3.66)			
Total score, ASRS	No (n=695)	25.2 (7.88)	2.94	703	p = 0.003
	Yes (n=10)	32.6 (8.81)			

[a] cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ); [b] cut-off at ≥ 3 5PQ; [c] cut-off at ≥ 4 points on the 5PQ; [d] cut-off at = 5 points on the 5PQ

*ASRS, Adult ADHD Self Report Scale, continuous scoring method

**p values have not been adjusted for multiple testing

Table DS3. Associations between self-rated ADHD traits and self-reported generalised joint hypermobility in a non-clinical male adult population for different cut-off scores on the 5PQ

Men 18-65 years					
ASRS*-subscale	**Level of hypermobility**	**Mean (SD)**	**t**	**df**	**p ****
	Hypermobile[a]				
Inattention	No (n=118)	12.9 (4.61)	0.61	150	p = 0.55
	Yes (n=34)	13.5 (4.84)			
Hyperactivity and impulsivity	No (n=118)	10.9 (4.59)	0.86	150	p = 0.39
	Yes (n=34)	11.7 (5.39)			
Total score, ASRS	No (n=118)	23.8 (8.11)	0.82	150	p = 0.41
	Yes (n=34)	25.2 (9.36)			
	Hypermobile+[b]				
Inattention	No (n=140)	13.1 (4.66)	-0.65	149	p = 0.52
	Yes (n=11)	12.2 (4.51)			
Hyperactivity and impulsivity	No (n=140)	11.2 (4.82)	-0.94	149	p = 0.35
	Yes (n=11)	9.82 (3.95)			
Total score, ASRS	No (n=140)	24.4 (8.41)	-0.89	149	p = 0.37
	Yes (n=11)	22.0 (7.85)			
	Hypermobile++[c]				
Inattention	No (n=147)	13.2 (4.59)	-1.88	149	p = 0.06
	Yes (n=4)	8.81 (5.35)			
Hyperactivity and impulsivity	No (n=147)	11.2 (4.76)	-1.33	149	p = 0.19
	Yes (n=4)	8.00 (4.69)			
Total score, ASRS	No (n=147)	24.4 (8.27)	-1.80	149	p = 0.07
	Yes (n=4)	16.8 (9.96)			
	Hypermobile+++[d]				
Inattention	No (n=149)	The low number of males attaining this level, Hypermobile+++ (n=2), precluded meaningful statistics			
	Yes (n=2)				
Hyperactivity and impulsivity	No (n=149)				
	Yes (n=2)				
Total score, ASRS	No (n=149)				
	Yes (n=2)				

[a] cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ); [b] cut-off at ≥ 3 5PQ; [c] cut-off at ≥ 4 points on the 5PQ; [d] cut-off at = 5 points on the 5PQ

*ASRS, Adult ADHD Self Report Scale, continuous scoring method

**p values have not been adjusted for multiple testing

Autistic traits

Table DS4. Associations between self-rated autistic traits and self-reported generalised joint hypermobility in a non-clinical adult population including post hoc analyses for different cut-off scores on the 5PQ

Population	**Level of hypermobility**	**AQ-10 score* Mean (SD)**	**t**	**df**	***p*** **
	Hypermobile [a]				
Women 18-65 years	No (n=461)	8.47 (3.35)	-0.04	699	p = 0.97
	Yes (n=240)	8.46 (3.31)			
Men 18-65 years	No (n=113)	9.14 (3.35)	1.46	142	p = 0.15
	Yes (n=31)	10.2 (3.89)			
	Hypermobile+[b]				
Women 18-65 years	No (n=572)	8.42 (3.35)	0.30	681	p = 0.76
	Yes (n=111)	8.52 (3.31)			
Men 18-65 years	No (n=132)	9.31 (3.50)	0.80	141	p = 0.43
	Yes (n=11)	10.2 (3.40)			
	Hypermobile++[c]				
Women 18-65 years	No (n=629)	8.43 (3.34)	0.01	677	p = 0.99
	Yes (n=50)	8.44 (3.39)			
Men 18-65 years	No (n=139)	9.32 (3.49)	1.09	141	p = 0.28
	Yes (n=4)	11.3 (3.30)			
	Hypermobile+++[d]				
Women 18-65 years	No (n=668)	8.43 (3.35)	0.73	676	p = 0.47
	Yes (n=10)	9.20 (2.74)			
Men 18-65 years	No (n=141)	The low number of individuals attaining this level, Hypermobile+++ (n=2), precluded meaningful statistics			
	Yes (n=2)				

[a] cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ); [b] cut-off at ≥ 3 points on the 5PQ; [c] cut-off at ≥ 4 points on the 5PQ; [d] cut-off at = 5 points on the 5PQ

*AQ-10; Autism quotient abridged 10 item version, continuous scoring method

**p values have not been adjusted for multiple testing

Table DS5. Associations between self-rated autistic traits and self-reported generalised joint hypermobility in a non-clinical adult population for different age groups and genders

Population	**Hypermobile[a]**	**AQ-10 score* Mean (SD)**	**t**	**df**	***p*** **
Women 18-45 years	No (n=209)	8.10 (3.18)	0.93	318	p = 0.35
	Yes (n=111)	8.46 (3.47)			
Women 46-65 years	No (n=252)	8.77 (3.45)	-0.87	379	p = 0.39
	Yes (n=129)	8.46 (3.19)			
Men 18-45 years	No (n=57)	8.82 (3.55)	1.27	71	p = 0.21
	Yes (n=16)	10.1 (3.93)			
Men 46-65 years	No (n=56)	9.45 (3.13)	0.77	69	p = 0.44
	Yes (n=15)	10.2 (3.97)			

[a] cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ)
*AQ-10; Autism quotient abridged 10 item version, continuous scoring method
**p values have not been adjusted for multiple testing

Clumsiness

Table DS6. Association between self-reported clumsiness at the age of 12 and self-reported generalised joint hypermobility in a non-clinical female adult population for different cut-off scores on the 5PQ

Level of hypermobility		**Hypermobile[a]**		**Total**	**c^2**	**df**	***p*****
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	83.0 (n=390)	86.2 (n=213)	84.1 (n=603)	1.28	1	0.26
	Yes (% within hypermobile yes/no)	17.0 (n=80)	13.8 (n=34)	15.9 (n=114)			
Total		100 (n=470)	100 (n=247)	100 (n=717)			
Level of hypermobility		Hypermobile+[b]					
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	83.3 (n=490)	88.5 (n=100)	84.2 (n=590)	1.90	1	0.17
	Yes (% within hypermobile yes/no)	16.7 (n=98)	11.5 (n=13)	15.8 (n=111)			
Total		100 (n=588)	100 (n=113)	100 (n=701)			
Level of hypermobility		Hypermobile++[c]					
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	84.1 (n=544)	83.7 (n=41)	84.1 (n=585)	0.06	1	0.94
	Yes (% within hypermobile yes/no)	15.9 (n=103)	16.3 (n=8)	15.9 (n=111)			
Total		100 (n=647)	100 (n=49)	100 (n=696)			
Level of hypermobility		Hypermobile+++[d]					
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	83.9 (n=575)	90.0 (n=9)	84.0 (n=584)	0.27	1	0.60
	Yes (% within hypermobile yes/no)	16.1 (n=110)	10.0 (n=1)	16.0 (n=111)			
Total		100 (n=685)	100 (n=10)	100 (n=695)			

[a]cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ); [b]cut-off at ≥ 3 points on the 5PQ; [c]cut-off at ≥ 4 points on the 5PQ; [d]cut-off at = 5 points on the 5PQ

*Defined as reported performance below average in physical education in school at age 12 years ("In elementary school (when you were about 12 years), did you perform worse than average in physical education (i.e. ball games, coordination, agility)")

**p values have not been adjusted for multiple testing

Table DS7. Associations between self-reported clumsiness at the age of 12 and self-reported generalised joint hypermobility in a non-clinical male adult population for different cut-off scores on the 5PQ

Level of hypermobility		**Hypermobile[a]**		**Total**	**c^2**	**df**	***p*****
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	94.1 (n=112)	90.9 (n=30)	93.4 (n=142)	0.43	1	0.51
	Yes (% within hypermobile yes/no)	5.9 (n=7)	9.1 (n=3)	6.9 (n=110)			
Total		100 (n=119)	100 (n=33)	100 (n=152)			
Level of hypermobility		Hypermobile+[b]					
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	94.3 (n=132)	81.8 (n=9)	93.4 (n=141)	2.56	1	0.11
	Yes (% within hypermobile yes/no)	5.7 (n=8)	18.2 (n=2)	6.6 (n=10)			
Total		100 (n=140)	100 (n=11)	100 (n=151)			
Level of hypermobility		Hypermobile++[c]					
		No	Yes				
Clumsiness*	No (% within hypermobile yes/no)	93.9 (n=138)	75.0 (n=3)	93.4 (n=141)	2.24	1	0.13
	Yes (% within hypermobile yes/no)	6.1 (n=9)	25.0 (n=1)	6.6 (n=10)			
Total		100 (n=147)	100 (n=4))	100 (n=151)			
Level of hypermobility		Hypermobile+++[d]					
		No	Yes				
Clumsiness*	The low number of individuals attaining this level, Hypermobile+++ (n=2), precluded meaningful statistics						
Total							

[a]cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ); [b]cut-off at ≥ 3 points on the 5PQ; [c]cut-off at ≥ 4 points on the 5PQ; [d]cut-off at = 5 points on the 5PQ

* Defined as reported performance below average in physical education in school at age 12 years ("In elementary school (when you were about 12 years), did you perform worse than average in physical education (i.e. ball games, coordination, agility)")

**p values have not been adjusted for multiple testing

Table DS8. Associations between self-reported clumsiness at the age of 12 and self-reported generalised joint hypermobility in a non-clinical adult population for different age groups

		Hypermobile[a]		**Total**	**c^2**	**df**	***p*****
		No	Yes				
Women 18-45 years							
Clumsiness*	No (% within hypermobile yes/no)	82.9 (n=175)	82.8 (n=96)	82.9 (n=271)	0.02	1	0.97
	Yes (% within hypermobile yes/no)	17.1 (n=36)	17.2 (n=20)	17.1 (n=56)			
Total		100 (n=211)	100 (n=116)	100 (n=327)			
Women 46-65 years							
Clumsiness*	No (% within hypermobile yes/no)	83.0 (n=215)	89.3 (n=117)	85.1 (n=332)	2.73	1	0.01
	Yes (% within hypermobile yes/no)	17.0 (n=44)	10.7 (n=14)	14.9 (n=58)			
Total		100 (n=259)	100 (n=131)	100 (n=390)			
Men 18-45 years							
Clumsiness*	No (% within hypermobile yes/no)	96.7 (n=58)	93.3 (n=14)	96.0 (n=72)	0.35	1	0.56
	Yes (% within hypermobile yes/no)	3.3 (n=2)	6.7 (n=1)	4.0 (n=3)			
Total		100 (n=60)	100 (n=15)	100 (n=75)			
Men 46-65 years							
Clumsiness*	No (% within hypermobile yes/no)	91.5 (n=54)	88.9 (n=16)	90.9 (n=70)	0.12	1	0.73
	Yes (% within hypermobile yes/no)	8.5 (n=5)	11.1 (n=2)	9.1 (n=7)			
Total		100 (n=59)	100 (n=18)	100 (n=77)			

[a]cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ)
*Defined as reported performance below average in physical education in school at age 12 years ("In elementary school (when you were about 12 years), did you perform worse than average in physical education (i.e. ball games, coordination, agility)")
**p values have not been adjusted for multiple testing

Anxiety

Table DS9. Associations between self-reported diagnosis of anxiety and self-reported generalised joint hypermobility in a non-clinical adult population

		Hypermobile[a]		**Total**	**c^2**	**df**	***P*****
		No	Yes				
Women 18-65 years							
Anxiety*	No (% within hypermobile yes/no)	98.6 (n=292)	94.8 (n=127)	97.4 (n=419)	5.55	1	0.02
	Yes (% within hypermobile yes/no)	1.4 (n=4)	5.2 (n=7)	2.6 (n=11)			
Total		100 (n=296)	100 (n=134)	100 (n=430)			
Men 18-65 years							
	The low number of individuals reporting diagnosis of anxiety disorder (n=1) precluded meaningful statistics						

[a]cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ)
*Self-reported diagnosis of anxiety disorder ("Have you been diagnosed with any other psychiatric disorder? If yes which disorder?")
**p values have not been adjusted for multiple testing

Depression

Table DS10. Association between self-reported diagnosis of depression and self-reported generalised joint hypermobility in a healthy adult population

		Hypermobile[a]		**Total**	**c^2**	**df**	***p*****
		No	Yes				
Women 18-65 years							
Depression*	No (% within hypermobile yes/no)	80.3 (n=382)	80.6 (n=203)	80.4 (n=585)	0.10	1	0.92
	Yes (% within hypermobile yes/no)	19.7 (n=94)	19.4 (n=49)	19.6 (n=143)			
Total		100 (n=476)	100 (n=252)	100 (n=728)			
Men 18-65 years							
Depression*	No (% within hypermobile yes/no)	89.9 (n=107)	94.1 (n=32)	90.8 (n=139)	0.56	1	0.45
	Yes (% within hypermobile yes/no)	10.1 (n=12)	5.9 (n=2)	9.2 (n=14)			
Total		100 (n=119)	100 (n=34)	100 (n=153)			

[a]cut-off at ≥ 2 points on the five-part Hakim-Grahame questionnaire on generalised joint hypermobility (5PQ)
*Self-reported diagnosis of depression ("Have you been diagnosed with depression?")
**p values have not been adjusted for multiple testing