

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eTable 1. Descriptive Statistics of 457 Children With a Parent With Variant

	<i>PSEN1</i>		
Variable	Carriers, Mean, n=265	Non-Carriers, Mean, n=192	<i>p</i>-value
Sex (%)			
Male	124 (46.4%)	104 (54.2%)	0.12
Female	141 (53.6%)	88 (45.8%)	
Age in years (SD)			
Mean	11.60 (2.71)	12.02 (2.71)	0.10
Range	6-16	8-16	
Years of education (SD)			
Mean	5.35 (2.68)	5.62 (2.73)	0.30
Range	0-12	0-12	
Urbanity (%)			
Urban	184 (69.4%)	112 (58.3%)	0.01*
Rural	81 (30.6%)	80 (41.7%)	

SES (%)			
Lower-low	91 (34.3%)	60 (31.3%)	0.48
Low	120 (45.3%)	100 (52.1%)	
Upper-low	52 (19.6%)	30 (15.6%)	
Medium	0 (0%)	1 (0.5%)	
Medium-high	1 (0.4%)	0 (0.5%)	
High	1 (0.4%)	1 (0.5%)	

Abbreviations: PSEN1 =: Presenilin 1; SD = Standard deviation; SES =Socioeconomic status.

Note: P-value is calculated using Welch's two independent t-test to compare groups by age and education and Pearson's chi-squared test to compare groups by sex, urbanity, and SES.

p-values are calculated relative to males (Bonferroni correction)

*p<.05

eTable 2. Descriptive Statistics of 1354 Children in Full Sample by Sex

Variable	Males, n=659	Females, n=695	p-value
Carrier status (%)			
<i>PSENI</i> carrier	124 (54.4%)	141 (61.6%)	0.50
Non-carrier	535 (45.6%)	554 (38.4%)	
Age in years (SD)			
Mean	11.63 (2.66)	11.64 (2.62)	0.95
Range	6-16	7-16	
Years of education (SD)			
Mean	5.08 (2.66)	5.64 (2.65)	<.001***
Range	0-12	1-12	
Urbanity (%)			
Urban	450 (68.3%)	461 (66.3%)	0.44
Rural	209 (31.7%)	234 (33.7%)	
SES (%)			

Lower-low	210 (31.9%)	237 (34.1%)	0.24
Low	288 (43.7%)	313 (45.0%)	
Upper-low	141 (21.4%)	134 (19.3%)	
Medium	16 (2.4%)	8 (1.2%)	
Medium-high	2 (0.3%)	3 (0.4%)	
High	2 (0.3%)	0 (0%)	

Abbreviations: PSEN1 =: Presenilin 1; SD = Standard deviation; SES =Socioeconomic status.

Note: P-value is calculated using Welch's two independent t-test to compare groups by age and education and Pearson's chi-squared test to compare groups by carrier status, urbanity, and SES.

* $p < .05$
 ** $p < .01$
 *** $p < .001$

eTable 3. Descriptive Statistics of 457 Children With a Parent With Variant by Sex

Variable	Males, n=228	Females, n=229	p-value
Carrier status (%)			
<i>PSEN1</i> carrier	124 (54.4%)	141 (61.6%)	0.12
Non-carrier	104 (45.6%)	88 (38.4%)	
Age in years (SD)			
Mean	11.78 (2.71)	11.78 (2.72)	0.99
Range	6-16	8-16	
Years of education (SD)			
Mean	5.16 (2.70)	5.76 (2.68)	0.02*
Range	0-12	1-12	
Urbanity (%)			
Urban	150 (65.8%)	146 (63.8%)	0.65
Rural	78 (34.2%)	83 (36.2%)	
SES (%)			

Lower-low	71 (31.2%)	80 (34.9%)	0.45
Low	110 (48.2%)	110 (48.1%)	
Upper-low	43 (18.9%)	39 (17.0%)	
Medium	1 (0.4%)	0 (0%)	
Medium-high	1 (0.4%)	0 (0%)	
High	2 (0.9%)	0 (0%)	

Abbreviations: PSEN1 =: Presenilin 1; SD = Standard deviation; SES =Socioeconomic status.

Note: P-value is calculated using Welch's two independent t-test to compare groups by age and education and Pearson's chi-squared test to compare groups by carrier status, urbanity, and SES.

* $p < .05$

eTable 4. Performance on *Wechsler Intelligence Scale for Children, Fourth Edition* Indices by Sex in Full Sample

WISC-IV Index	Males WISC-IV Index Standard Score, Mean (95% CI), n=659	Females WISC- IV Index Standard Score, Mean (95% CI), n=695
Verbal Comprehension	88.69 (87.54- 89.84)	90.81 (89.73- 91.90), <i>p</i> =.009**
Perceptual Reasoning	91.56 (90.47- 92.65)	93.27 (92.23- 94.30), <i>p</i> =.03*
Working Memory	90.27 (89.21- 91.34)	92.99 (91.98- 93.99), <i>p</i> <.001***
Processing Speed	86.94 (85.20- 88.06)	87.88 (86.82-88.94)

p-values are calculated relative to males (Bonferroni correction)

**p*<.05

***p*<.01

****p*<.001

Abbreviations: WISC-IV = Wechsler Intelligence Scale for Children, Fourth Edition; CI = Confidence Interval

Note: Data are reported as the mean (95% CI) based on modified marginal means for the model with the co-variates, *p*-value for the univariate general linear model (GLM).

^a Calculated using GLM with urbanity, education, and socioeconomic status entered as covariates, and PSEN1 carrier status, sex, and the interaction of carrier status and sex entered as fixed factors.

eTable 5. Performance on *Wechsler Intelligence Scale for Children, Fourth Edition* Indices by Sex When a Parent Has Variant

WISC-IV Index	Males WISC-IV Index Standard Score, Mean (95% CI), n=228	Females WISC-IV Index Standard Score, Mean (95% CI), n=229
Verbal Comprehension	89.84 (88.24-91.44)	91.69 (90.05-93.32)
Perceptual Reasoning	91.37 (89.93-92.81)	93.62 (92.15-95.09), <i>p</i> =.03*
Working Memory	90.26 (88.92-91.60)	93.75 (92.38-95.11), <i>p</i> <.001***
Processing Speed	86.72 (85.22-88.20)	88.04 (86.51-89.57)

p-values are calculated relative to males (Bonferroni correction)

**p*<.05

***p*<.01

****p*<.001

Abbreviations: WISC-IV = Wechsler Intelligence Scale for Children, Fourth Edition; CI = Confidence Interval; PSEN=Preseini1

Note: Data are reported as the mean (95% CI) based on modified marginal means for the model with the co-variates, *p*-value for the univariate general linear model (GLM).

^a Calculated using GLM with urbanity, education, and socioeconomic status entered as covariates, and PSEN1 carrier status, sex, and the interaction of carrier status and sex entered as fixed factors.

eTable 6. Performance on *Wechsler Intelligence Scale for Children, Fourth Edition* Indices by Sex and Genetic Status When a Parent Has Variant

WISC-IV Index	<i>PSEN1</i> Male Carriers, WISC-IV Index Standard Score, Mean (95% CI), n=124	<i>PSEN1</i> Female Carriers, WISC-IV Index Standard Score, Mean (95% CI), n=141	Male Non- Carriers WISC-IV Index Standard Score, Mean (95% CI), n=535	Female Non- Carriers, WISC- IV Index Standard Score, Mean (95% CI), n=554
Verbal Comprehension	88.51 (86.34- 90.68)	91.48 (89.46-93.51)	91.16 (88.81- 93.52)	91.89 (89.32-94.45)
Perceptual Reasoning	91.30 (89.35- 93.26)	93.89 (92.07-95.71)	91.44 (89.32- 93.55)	93.35 (91.05-95.66)
Working Memory	88.69 (86.87- 90.50)	93.71 (92.01- 95.40), <i>p</i> =.001**	91.83 (89.86- 93.80)	93.79 (91.64- 95.93), <i>p</i> =.003**
Processing Speed	85.53 (83.50- 87.56)	88.22 (86.33-90.12)	87.91 (85.71- 90.11)	87.85 (85.45-90.26)

p-values are calculated relative to male *PSEN1* E280A carriers with Bonferroni correction

***p*<.01

Abbreviations: WISC-IV = Wechsler Intelligence Scale for Children, Fourth Edition; *PSEN1* = Presenilin1; CI = Confidence Interval

Note: Data are reported as the mean (95% CI) based on modified marginal means for the model with the co-variates, *p*-value for the univariate general linear model (GLM).

^a Calculated using GLM with urbanity, education, and socioeconomic status entered as covariates, and *PSEN1* carrier status, sex, and the interaction of carrier status and sex entered as fixed factors.