Supporting Information

Appendix S1. Mid-life outcomes

Education and socioeconomic. (1) Highest educational qualification (university or higher degree, professional qualification, 'A' level or equivalent, 'O' level or equivalent, below 'O' level or equivalent, and no formal qualification); (2) socioeconomic status at mid-life (based on the Registrar General's classification of occupations (OPCS, 1980), ranging from social class I (professional) to social classes V (unskilled) and VI (out of labour force); (3) time in current job (in years); (4) number of times unemployed since age 30 (never, once, and twice or more); (5) currently unemployed; (6) not changed jobs since age 30 for better pay or promotion; (7) current housing tenure (owner occupied vs all other tenures); (8) whether in a pension scheme.

Relationships and social participation. Mid-life self-reported relationship and social participation histories were reported as (1) never married or cohabited for at least one month; (2) number of marital/partnership breakdowns (none, one, two, three, four or more) and (3) living alone at follow-up (i.e., not living with partner, husband/wife, children, parents, or others). Participants were also asked whether they had friends/family members they could rely on to (4) listen to their problems and/or (5) provide help if needed (scale from 0 - "not at all" to 4 - "a lot"). (6) We created an index of social participation (scored 0 to 10) from reports of any current participation (occasionally, monthly, weekly, or more often) in a range of organizations or voluntary activities (sports/social clubs; political parties; trade union; evening classes; charity/voluntary organizations; women's/men's groups; parents/school organization; tenants/residents association; other local activities; and church/religious groups). As a social exclusion indicator, participants were also asked (7) if they voted in the last General Election (3 years prior to the mid-life follow-up).

Health. Study members at mid-life reported on (1) their current general health (good/excellent vs fair/poor); (2) any long-standing illness or disability; (3) ever registered disabled; (4) past week hazardous alcohol consumption defined as ≥ 21 units for males and ≥ 14 for females (Department

of Health, 1995). (5) alcohol problems: scores of ≥ 2 on the 4-item CAGE alcohol problems screen (Mayfield, McLeod, & Hall, 1974); (6) current smoker; (7) psychological distress, using a sum score of the 15 'psychological' items from the Malaise Inventory (Rutter, Tizard, & Whitmore, 1970), a widely used measure with good psychometric properties (Rodgers, Pickles, Power, Collishaw, & Maughan, 1999).

Personality. (1) Neuroticism, (2) extroversion) and (3) psychoticism personality traits were assessed using the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991). These traits were assessed by asking yes/no questions such as "Would you call yourself a nervous person?" (neuroticism) and "Can you easily get some life into a rather dull party?" (extroversion) and reverse-coded items such as "Does it worry you if you know there are mistakes in your work?" (psychoticism). Questions were scored 0 or 1 and there were 12 items for each trait. Internal consistency measured with Cronbach's α was acceptable for neuroticism (α=.92), extroversion (α=.94) and psychoticism (α=.75).

Social exclusion. We created an index of social exclusion from counts of: unemployed at follow-up; not owner-occupier; no occupational/private pension; living alone at follow-up; no support from family or friends; no participation in social groups; did not vote in last General Election; and registered disabled. We contrasted study members reporting 3 or more of these difficulties with those reporting 0-2.

Appendix S2. Model-based reliability indices

We used six indices to evaluate the bifactor model (Rodriguez, Reise, & Haviland, 2016): 1) Reliability index omega (ω), a model-based reliability estimate, analogous to the alpha coefficient, but appropriate for tests that have varying factor loadings; 2) hierarchical omega (ωH), the proportion of total variance attributed to the general or specific factors (ω and ωH coefficients vary between 0 and 1, where higher scores indicate greater reliability); 3) factor determinacy (FD): the correlation between the factor scores and the estimated factor (factor score reliability), which indicates that factor scores should be used if FD is at least .9; 4) H: a measure

of construct replicability that quantifies how well each latent factor is represented by the items loading on it (H > .7 represents a well-defined latent variable) (Hancock, G. R & Mueller, R. O., 2001); 5) Explained common variance (ECV): the proportion of the total variance explained by the general factor; 6) Percent uncontaminated correlations (PUC): the percent of all correlations among symptoms attributable the general factor. When ωH is > .8 and ECV and PUC are >.7, the construct can be interpreted as unidimensional.

Appendix S3. Measurement invariance

We also tested measurement invariance using multigroup CFA for models of parent and teacher reports. We tested if parent and teacher models are structurally similar (configural invariance), if items are equally correlated with the latent factors (metric invariance, tested by constraining the factor loadings to be equal across informants) and if items capture symptom severity at an equivalent level (scalar invariance, tested by additionality constraining item threshold to be equal across informants). ΔCFI < .01 and ΔRMSEA < .015 between nested models with increasing levels of constraints indicate that mean level differences between teachers and parents are due to differences in the latent trait (i.e., psychopathology) and not due to other sources of variation and they are, therefore, invariant (Chen, 2007; Svetina, Rutkowski, & Rutkowski, 2020). Of note, for the hyperactivity factor, we only used two items for equivalence testing (restless and fidgety).

Measurement invariance results are presented in Table S3. None of the increasing levels of model constraint (configural, metric and scalar) modified model fit beyond threshold levels of ΔRMSEA < .015 and ΔCFI < .01, revealing that differences found between parent and teacher report are not due to differences in the structure, correlation among items and the latent factors or differences in the ability of each item to capture symptomatic severity across informants and, therefore, that mean levels of parent and teacher ratings on the Rutter scale can be compared.

Appendix S4. Descriptive table of baseline variables and outcomes

Table S1 describes all predictors collected at ages 9 to 10 and 14 to 15 years, and Table S2 describes the mid-life outcomes, defined above, and shows the inverse probability weights for response at follow-up and parent response.

Appendix S5. Correlation among baseline covariates and main predictors

Correlations among sum scores of the Rutter questionnaire items for parents (A) and teachers (B), as well as total sum scores, along with factor scores derived from questionnaires A and B can be seen in Table S4. Correlations among baseline social class, gender, IQ and all factors derived from the bifactor models are depicted in Table S5.

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Table S1 – Descriptive data for child and adolescent predictors in Isle of Wight cohort, and inverse probability weights

Predictors	Total sample (n=2,275)		Male (n=1,148)		Female (n=1,127)	
Rutter total score (Parent)						
Mean (SD)	2.56	(3.27)	2.76	(3.58)	2.36	(2.90)
Median [Min, Max]	2.00	[0, 26.0]	2.00	[0, 26.0]	2.00	[0, 21.0]
Conduct subscale (Parent)						
Mean (SD)	.94	(1.61)	1.07	(1.89)	.80	(1.27)
Median [Min, Max]	0	[0, 14.0]	0	[0, 14.0]	0	[0, 11.0]
Hyperactivity subscale (Parent)						
Mean (SD)	.49	(.98)	.61	(1.06)	.37	(.88)
Median [Min, Max]	0	[0, 6.00]	0	[0, 6.00]	0	[0, 6.00]
Emotional subscale (Parent)						
Mean (SD)	1.13	(1.60)	1.07	(1.61)	1.18	(1.60)
Median [Min, Max]	1.00	[0, 11.0]	0	[0, 11.0]	1.00	[0, 11.0]
Rutter total score (Teacher)						
Mean (SD)	1.52	(2.95)	1.67	(3.07)	1.37	(2.81)
Median [Min, Max]	0	[0, 26.0]	0	[0, 26.0]	0	[0, 22.0]
Conduct subscale (Teacher)						
Mean (SD)	.52	(1.54)	.59	(1.65)	.44	(1.41)
Median [Min, Max]	0	[0, 16.0]	0	[0, 16.0]	0	[0, 14.0]
Hyperactivity subscale (Teacher)						
Mean (SD)	.35	(.93)	.43	(1.05)	.26	(.78)
Median [Min, Max]	0	[0, 6.00]	0	[0, 6.00]	0	[0, 6.00]
Emotional subscale (Teacher)						
Mean (SD)	.66	(1.37)	.64	(1.35)	.67	(1.40)
Median [Min, Max]	0	[0, 12.0]	0	[0, 12.0]	0	[0, 11.0]
Family social class						
I, II	393	19.5%	198	19.6%	195	19.5%
III	1103	54.8%	573	56.6%	530	53.1%
IV, V	515	25.6%	241	23.8%	274	27.4%
IQ (z-score)						
Mean (SD)	-.02	(1.01)	-.07	(1.03)	.03	(.99)
Median [Min, Max]	.14	[-3.79, 1.77]	.09	[-3.79, 1.52]	.20	[-3.40, 1.77]
Inverse Probability weight (final)						
Mean (SD)	1.98	(.40)	2.11	(.41)	1.85	(.34)
Median [Min, Max]	1.88	[1.46, 3.66]	1.99	[1.57, 3.66]	1.76	[1.46, 3.66]

Inverse Probability weight (baseline parent Rutter scale response)							
	Mean (SD)	1.22	(.18)	1.22	(.21)	1.21	(.15)
	Median [Min, Max]	1.16	[1.16, 4.90]	1.18	[1.16, 4.90]	1.16	[1.16, 2.98]
Inverse Probability weight (response at follow-up)							
	Mean (SD)	1.63	(.26)	1.74	(.28)	1.53	(.19)
	Median [Min, Max]	1.57	[1.26, 3.47]	1.67	[1.36, 3.47]	1.49	[1.26, 2.68]

Table S2. Descriptive data for mid-life outcomes in Isle of Wight cohort

Outcomes		Total sample (n=2,275)		Male (n=1,148)		Female (n=1,127)	
Response at follow-up (age 44)							
	No	852	37.4%	472	41.1%	380	33.7%
	Yes	1423	62.6%	676	58.9%	747	66.3%
Educational and socioeconomic							
Educational qualifications							
	Higher	52	3.5%	32	4.3%	20	2.6%
	Degree equivalent	257	17.1%	119	16.4%	138	17.9%
	A level equivalent	273	19.3%	128	18.6%	145	2.0%
	O level equivalent	440	32.4%	233	35.9%	207	29.6%
	less than O level	81	6.0%	31	4.8%	50	7.5%
	None	252	21.6%	116	21.0%	136	22.4%
Social class (mid-life)							
	I, II	556	38.0%	303	43.4%	253	32.4%
	III NM	231	16.0%	57	8.8%	174	23.3%
	III M	228	18.1%	180	29.0%	48	7.0%
	IV, V	205	15.3%	60	9.7%	145	2.9%
	OLF	135	1.3%	34	6.1%	101	14.5%
	Unemployed	31	2.4%	18	3.0%	13	1.8%
Time in current job (in years)							
	Mean (SD)	9.58	(8.70)	11.67	(9.06)	7.28	(6.92)
	Median [Min, Max]	7.00	[0, 32.0]	1.0	[0, 32.0]	5.00	[0, 29.0]
Left job for better opportunity							
	Yes	996	74.0%	459	71.3%	537	76.8%
	No	359	26.0%	189	28.7%	170	23.2%
Times unemployed since 30 years old							
	Never	984	74.2%	439	68.1%	545	8.9%
	Once	184	14.5%	100	16.1%	84	12.7%
	Twice or more	137	11.3%	96	15.8%	41	6.4%
Currently unemployed							
	No	1251	87.4%	621	9.8%	630	83.8%
	Yes	169	12.6%	54	9.2%	115	16.2%
Owner-occupier							
	Yes	1186	82.5%	557	81.8%	629	83.1%
	No	230	17.5%	116	18.2%	114	16.9%
In a pension scheme							

	Yes	1188	83.3%	581	85.1%	607	81.4%
	No	228	16.7%	92	14.9%	136	18.6%
Relationships and social participation							
Ever married/cohabited							
	Yes	1350	95.3%	626	93.0%	724	97.8%
	No	63	4.7%	46	7.0%	17	2.2%
Divorces, separations, breakdowns							
	0	769	56.1%	367	57.6%	402	54.6%
	1	508	37.4%	229	36.3%	279	38.6%
	2	57	4.1%	19	3.2%	38	5.0%
	3	12	1.0%	8	1.3%	4	.7%
	4 or more	18	1.4%	9	1.6%	9	1.3%
Currently living alone							
	No	1318	92.3%	606	89.2%	712	95.4%
	Yes	103	7.7%	69	1.8%	34	4.6%
Have friends/family to help if needed							
	A lot	530	37.1%	175	26.2%	355	48.4%
	A lot-moderately	288	21.3%	157	23.5%	131	19.1%
	Moderately	399	29.0%	207	31.8%	192	26.1%
	Moderately-none	79	6.1%	51	8.1%	28	4.1%
	None	78	6.4%	61	1.4%	17	2.4%
Have friends/family to listen if needed							
	A lot	466	32.2%	135	2.2%	331	44.5%
	A lot-moderately	245	18.5%	129	2.0%	116	17.0%
	Moderately	457	33.0%	220	33.4%	237	32.5%
	Moderately-none	101	7.9%	82	12.9%	19	2.8%
	None	106	8.5%	83	13.5%	23	3.3%
Social participation (0-9 scale)							
	Mean (SD)	2.25	(1.95)	2.07	(1.84)	2.45	(2.04)
	Median [Min, Max]	2.00	[0, 9.00]	2.00	[0, 9.00]	2.00	[0, 9.00]
Voted in last general election							
	Yes	1118	81.7%	525	8.7%	593	82.7%
	No	236	18.3%	115	19.3%	121	17.3%
Health							
General health							
	Good or excellent	1216	85.4%	581	85.9%	635	84.9%
	Fair or poor	199	14.6%	90	14.1%	109	15.1%

Registered disabled							
	No	1358	95.7%	638	94.5%	720	97.0%
	Yes	52	4.3%	32	5.5%	20	3.0%
Longstanding illness or disability							
	No	1017	71.2%	489	71.5%	528	7.9%
	Yes	402	28.8%	186	28.5%	216	29.1%
Alcohol problems (lifetime CAGE>=2)							
	Low risk	1196	86.3%	543	81.5%	653	91.5%
	High risk	186	13.7%	123	18.5%	63	8.5%
Hazardous drinking (past week)							
	Low risk	1226	87.7%	553	83.7%	673	91.7%
	Hazardous to harmful	176	12.3%	112	16.3%	64	8.3%
Current smoker							
	No	1077	76.4%	501	73.7%	576	77.2%
	Yes	332	24.6%	169	26.3%	163	22.8%
Psychological distress (sum score)							
	Mean (SD)	2.65	(2.65)	2.36	(2.57)	2.94	(2.73)
	Median [Min, Max]	2.00	[0, 14.0]	2.00	[0, 14.0]	2.00	[0, 14.0]
Personality							
Neuroticism (sum score)							
	Mean (SD)	4.81	(3.31)	4.35	(3.29)	5.29	(3.26)
	Median [Min, Max]	4.00	[0, 12.0]	4.00	[0, 12.0]	5.00	[0, 12.0]
Extroversion (sum score)							
	Mean (SD)	6.83	(3.70)	6.53	(3.57)	7.14	(3.80)
	Median [Min, Max]	7.00	[0, 12.0]	7.00	[0, 12.0]	7.00	[0, 12.0]
Psychoticism (sum score)							
	Mean (SD)	2.16	(1.74)	2.57	(1.78)	1.73	(1.59)
	Median [Min, Max]	2.00	[0, 1.0]	2.00	[0, 9.00]	1.00	[0, 1.0]
Social exclusion							
	No	1264	88.7%	591	87.0%	673	9.6%
	Yes	138	11.3%	76	13.0%	62	9.4%

Notes: Variable definitions can be found above in the text. Ns unweighted, means/percentages weighted.

Table S3. Measurement invariance of Rutter scale parent and teacher bifactor models

Constrain	Sample in each group (Informant)	χ2	*df*	RMSEA	CFI	TLI	Model comparison	Δ RMSEA	Δ CFI	Decision
Configural	Parents = 1,890; Teachers = 2,275	691,275	208	.033	.979	.972				
Metric		691,465	236	.030	.980	.977	Configural	.003	.001	Invariant
Scalar		1,082,117	249	.040	.963	.960	Metric	.010	.017	Invariant

Note: Decision is based on ΔCFI < .01 and ΔRMSEA < .015, which indicate model invariance. χ2, Chi square test; df, degree of freedom; RMSEA, Root Mean Square Error of Approximation; CFI, Comparative Fit Index; TLI, Tucker-Lewis Index; SRMR, Standardized Root Mean-square Residual; Δ, differences between fit indices.

Table S4. Correlations among Rutter scales (parent and teacher) sum scores and factors derived from the bifactor models

		Total score			Factor score (bifactor models)							
					Rutter A scale				Rutter B scale			
		A scale	B scale	A+B scales	General	Conduct	Hyperactivity	Emotional	General	Conduct	Hyperactivity	Emotional
Total score	A scale	-										
	B scales	.25 ***	-									
	A+B scales	.76 ***	.75 ***	-								
Factor scores (A)	General	.83***	.24***	.73***	-							
	Conduct	.14***	.21***	.25***	.14***	-						
	Hyperactivity	.22***	.06**	.19***	.12***	-.08**	-					
	Emotional	.49	.02	.25***	.22***	-.09**	.02					
Factor scores (B)	General	.21***	.84***	.67***	.24***	.20***	.04	-.03	-			
	Conduct	.10**	.23***	.23***	.09**	.15***	.00	-.01	.16***	-		
	Hyperactivity	.06*	.26***	.23***	.06*	.06*	.06*	-.01	.26***	-.03	-	
	Emotional	.09**	.37***	.20***	.05*	-.03	.00	.12	.17***	-.09**	-.01	

Notes: A, parent-report Rutter scale; B, teacher-report Rutter scale; *, $p < .05$; **, $p < .01$; ***, $p < .001$.

Table S5. Correlation among baseline covariates and factors derived from the trifactor model

	Social class (baseline)	IQ	Female
Social class (baseline)			
IQ	-.21***	-	
Female	.02	.04*	-
General (A)	.03	-.15***	-.08**
Conduct (A)	.02	-.05*	-.10***
Hyperactivity (A)	.04	-.10*	-.15***
Emotional (A)	-.02	-.03	.07**
General (B)	.10***	-.21***	-.10***
Conduct (B)	.05	-.12***	-.06**
Hyperactivity (B)	-.02	-.06*	-.12***
Emotional (B)	.04*	-.11***	.04*

Notes: A, parent-report Rutter scale; B, teacher-report Rutter scale; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table S6. Results from the regression models of parent or teacher reports (separate models) predicting mid-life outcomes

Outcomes	Informant	Rutter scale factor scores (derived from bifactor model)								Covariates					
		General factor		Conduct		Emotional		Inattention/ hyperactivity		IQ (z-score)		Male		Low family soci class	
		RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI	RR	95% CI
Education and socioeconomic															
Low educational qualification	Parent	1.06**	[1.02,1.10]	1.09**	[1.03,1.15]	.98	[.94,1.02]	1.02	[.96,1.07]	.80***	[.78,.82]	.92**	[.87,.97]	1.14***	[1.09,1.1
	Teacher	1.07***	[1.03,1.10]	1.13***	[1.06,1.22]	1.03	[1.00,1.07]	1.01	[.98,1.03]	.83***	[.81,.85]	.92***	[.88,.97]	1.13***	[1.09,1.1
Low social class	Parent	1.07**	[1.02,1.12]	1.06	[.99,1.14]	.97	[.93,1.02]	1.02	[.95,1.08]	.83***	[.80,.85]	.80***	[.75,.86]	1.15***	[1.09,1.2
	Teacher	1.04	[.99,1.08]	1.25***	[1.14,1.37]	1.06	[1.01,1.10]	.98	[.95,1.01]	.85***	[.83,.87]	.84***	[.80,.89]	1.13***	[1.07,1.1
Years in current job	Parent	.93	[.85,1.01]	.86	[.75,1.00]	1.01	[.93,1.10]	1.02	[.90,1.15]	1.04	[.97,1.11]	1.62***	[1.45,1.81]	.99	[.91,1.08
	Teacher	.89	[.79,1.00]	.94	[.75,1.18]	.98	[.89,1.07]	1.01	[.96,1.07]	1.03	[.97,1.09]	1.61***	[1.46,1.79]	1.02	[.95,1.11
Not left job for better opportunity	Parent	1.00	[.95,1.05]	1.00	[.93,1.09]	1.06*	[1.00,1.12]	.97	[.89,1.05]	.95**	[.92,.98]	.91**	[.84,.97]	1.02	[.97,1.08
	Teacher	1.00	[.95,1.05]	1.05	[.95,1.17]	1.07**	[1.03,1.12]	1.01	[.98,1.04]	.97*	[.93,1.00]	.92*	[.87,.99]	1.03	[.98,1.08
Times unemployed since age 30	Parent	1.27**	[1.09,1.47]	1.20	[.94,1.52]	1.03	[.86,1.23]	1.13	[.93,1.38]	.92	[.81,1.05]	1.68***	[1.31,2.15]	1.33**	[1.11,1.5
	Teacher	1.26**	[1.11,1.44]	1.56**	[1.22,2.00]	.99	[.86,1.13]	.96	[.88,1.05]	.88*	[.79,.98]	1.74***	[1.40,2.16]	1.18	[1.00,1.3
Currently unemployed	Parent	1.32*	[1.10,1.59]	1.33	[.99,1.80]	.92	[.74,1.16]	1.02	[.73,1.41]	.75***	[.65,.87]	.34***	[.24,.49]	1.70***	[1.30,2.2
	Teacher	1.31**	[1.10,1.56]	1.82**	[1.29,2.59]	1.31*	[1.10,1.56]	.94	[.81,1.08]	.76***	[.68,.86]	.48***	[.36,.64]	1.43**	[1.12,1.8
Not owner-occupier	Parent	1.18	[.99,1.41]	1.03	[.77,1.38]	1.11	[.91,1.35]	.83	[.63,1.09]	.72***	[.64,.82]	.97	[.74,1.27]	1.35**	[1.08,1.6
	Teacher	1.24*	[1.07,1.45]	1.70***	[1.32,2.19]	1.04	[.89,1.21]	1.05	[.96,1.16]	.79***	[.71,.88]	.92	[.72,1.17]	1.27*	[1.05,1.5
Not in a pension scheme	Parent	1.23*	[1.03,1.47]	1.38	[1.07,1.78]	1.01	[.82,1.25]	1.04	[.78,1.40]	.81**	[.71,.93]	.59***	[.44,.80]	1.26*	[1.02,1.5
	Teacher	1.29**	[1.11,1.51]	1.65**	[1.22,2.22]	.91	[.77,1.08]	1.02	[.91,1.14]	.86*	[.77,.97]	.69**	[.54,.88]	1.24*	[1.03,1.4
Relationships															
Never married/cohabited	Parent	.69	[.40,1.20]	1.01	[.47,2.18]	1.61	[1.04,2.50]	1.16	[.71,1.89]	1.04	[.73,1.48]	3.18***	[1.69,5.96]	.91	[.57,1.46

	Teacher	.70	[.45,1.08]	1.84	[.96,3.53]	1.74*	[1.26,2.41]	.94	[.72,1.24]	.94	[.68,1.28]	3.18***	[1.83,5.53]	.90	[.59,1.38
Number of divorces, separations, breakdowns	Parent	1.11	[1.00,1.24]	.98	[.81,1.18]	1.04	[.92,1.18]	1.01	[.86,1.19]	.98	[.89,1.08]	.94	[.80,1.12]	.98	[.86,1.13
	Teacher	1.14*	[1.03,1.25]	1.28	[1.00,1.63]	.97	[.86,1.10]	1.07	[.99,1.15]	1.02	[.94,1.11]	.91	[.77,1.06]	1.04	[.92,1.17
Living alone	Parent	1.13	[.83,1.54]	.97	[.61,1.53]	1.28	[.93,1.77]	1.15	[.79,1.67]	.89	[.71,1.11]	2.31***	[1.49,3.58]	1.13	[.79,1.61
	Teacher	1.14	[.83,1.56]	1.30	[.85,1.97]	.94	[.69,1.28]	1.04	[.88,1.23]	.92	[.74,1.14]	2.22***	[1.47,3.37]	1.10	[.80,1.51
No friends/family to help	Parent	1.10*	[1.02,1.19]	1.08	[.95,1.22]	1.02	[.93,1.12]	.96	[.86,1.07]	.89***	[.84,.95]	1.58***	[1.40,1.78]	1.02	[.93,1.11
	Teacher	1.07	[.99,1.14]	1.13	[.97,1.31]	1.01	[.93,1.09]	.99	[.94,1.03]	.89***	[.85,.94]	1.60***	[1.43,1.78]	1.02	[.94,1.11
No friends/family to listen	Parent	1.09*	[1.02,1.17]	1.06	[.95,1.18]	1.03	[.95,1.12]	1.01	[.92,1.11]	.94*	[.89,.99]	1.69***	[1.52,1.88]	1.03	[.95,1.12
	Teacher	1.03	[.96,1.10]	1.13	[.99,1.30]	1.06	[.99,1.13]	.97	[.93,1.02]	.93***	[.89,.97]	1.71***	[1.55,1.89]	1.04	[.97,1.12
Low social participation	Parent	1.04**	[1.01,1.06]	1.04	[1.00,1.07]	1.00	[.97,1.03]	1.03	[1.00,1.07]	.93***	[.92,.95]	1.04*	[1.00,1.07]	1.03*	[1.00,1.0
	Teacher	1.07***	[1.05,1.09]	1.00	[.96,1.04]	1.00	[.98,1.02]	.99	[.98,1.01]	.94***	[.93,.96]	1.04**	[1.01,1.07]	1.02	[1.00,1.0
Did not vote in last general election	Parent	1.24*	[1.04,1.49]	1.07	[.82,1.40]	.80*	[.64,.99]	1.07	[.83,1.39]	.84*	[.74,.96]	.92	[.70,1.20]	1.07	[.88,1.30
	Teacher	1.31***	[1.14,1.50]	1.35*	[1.01,1.80]	.85	[.71,1.03]	.92	[.82,1.03]	.84***	[.75,.94]	1.00	[.79,1.26]	1.06	[.89,1.26
Health															
Poor general health	Parent	1.35**	[1.12,1.63]	1.10	[.81,1.50]	.98	[.79,1.22]	1.33	[1.03,1.72]	.90	[.78,1.03]	.83	[.62,1.12]	1.32*	[1.05,1.6
	Teacher	1.09	[.89,1.32]	1.67*	[1.18,2.36]	1.22	[1.01,1.47]	.95	[.84,1.07]	.85*	[.75,.96]	.86	[.66,1.12]	1.33**	[1.08,1.6
Registered disabled	Parent	1.23	[.83,1.84]	1.78	[1.02,3.08]	.86	[.53,1.39]	.79	[.40,1.56]	.84	[.61,1.14]	1.27	[.66,2.43]	1.06	[.69,1.64
	Teacher	1.67**	[1.23,2.28]	1.59	[.84,3.00]	1.27	[.91,1.78]	1.01	[.83,1.24]	.80	[.60,1.06]	1.58	[.90,2.80]	.94	[.61,1.43
Long-standing illness/disability	Parent	1.17*	[1.02,1.33]	1.13	[.92,1.38]	1.05	[.91,1.20]	.99	[.82,1.20]	.91	[.83,1.01]	.90	[.75,1.09]	1.06	[.91,1.23
	Teacher	1.13	[1.00,1.28]	1.31*	[1.05,1.63]	1.17*	[1.05,1.32]	.95	[.87,1.03]	.93	[.85,1.01]	.94	[.79,1.11]	1.09	[.95,1.25
Alcohol problems	Parent	1.12	[.90,1.41]	1.00	[.72,1.39]	.95	[.76,1.19]	1.26	[.96,1.65]	1.11	[.95,1.31]	1.96***	[1.44,2.67]	.89	[.71,1.13
	Teacher	1.17	[.95,1.43]	1.11	[.75,1.64]	.93	[.75,1.15]	1.08	[.97,1.20]	1.06	[.91,1.22]	2.11***	[1.57,2.85]	.87	[.70,1.07
Hazardous drinking	Parent	.97	[.77,1.21]	.88	[.56,1.38]	.83	[.63,1.08]	1.19	[.86,1.64]	1.37**	[1.12,1.67]	1.97***	[1.42,2.73]	.93	[.72,1.18
	Teacher	1.10	[.87,1.40]	1.09	[.75,1.59]	.80	[.62,1.03]	1.25**	[1.12,1.39]	1.33***	[1.12,1.59]	1.82***	[1.35,2.46]	.88	[.70,1.10

Current smoker	Parent	1.30**	[1.14,1.49]	1.37*	[1.12,1.68]	.97	[.82,1.14]	1.15	[.94,1.41]	.91	[.81,1.01]	1.05	[.84,1.30]	.99	[.85,1.16
	Teacher	1.16	[1.01,1.34]	1.42*	[1.11,1.82]	.85	[.73,.99]	1.11*	[1.02,1.20]	.87**	[.79,.96]	1.04	[.86,1.26]	1.01	[.87,1.16
Psychological distress	Parent	1.09	[1.00,1.19]	.91	[.80,1.03]	1.17**	[1.07,1.27]	1.00	[.89,1.13]	.90***	[.85,.96]	.81***	[.72,.91]	1.00	[.91,1.09
	Teacher	1.04	[.96,1.13]	.97	[.79,1.18]	1.07	[.98,1.17]	1.06	[1.00,1.12]	.88***	[.84,.93]	.78***	[.70,.86]	1.01	[.93,1.10
Personality															
Neuroticism	Parent	1.00	[.93,1.06]	.90	[.82,.98]	1.20***	[1.13,1.27]	1.01	[.92,1.10]	.95*	[.91,1.00]	.83***	[.77,.91]	.98	[.92,1.05
	Teacher	.97	[.92,1.03]	.90	[.78,1.04]	1.08*	[1.02,1.15]	1.02	[.98,1.06]	.94***	[.91,.98]	.82***	[.76,.89]	.98	[.92,1.04
Extroversion	Parent	1.06*	[1.01,1.11]	.96	[.88,1.05]	.86***	[.82,.91]	1.03	[.97,1.10]	.95**	[.92,.99]	.89***	[.83,.95]	.99	[.94,1.04
	Teacher	1.08***	[1.04,1.13]	.99	[.92,1.08]	.91**	[.87,.96]	1.04	[1.01,1.07]	.96**	[.93,.99]	.90***	[.84,.95]	1.00	[.95,1.05
Psychoticism	Parent	1.12**	[1.05,1.19]	1.13	[1.02,1.25]	.92	[.85,.99]	1.05	[.95,1.15]	.95*	[.90,.99]	1.42***	[1.30,1.56]	1.03	[.95,1.11
	Teacher	1.16***	[1.08,1.24]	1.16*	[1.04,1.29]	.91*	[.85,.97]	1.00	[.96,1.04]	.94*	[.90,.99]	1.44***	[1.32,1.57]	1.00	[.94,1.07
Social Exclusion															
	Parent	1.60***	[1.29,1.98]	1.07	[.77,1.49]	.92	[.70,1.22]	.96	[.69,1.33]	.59***	[.49,.70]	1.05	[.71,1.54]	1.49**	[1.11,2.0
	Teacher	1.42***	[1.19,1.69]	1.96**	[1.39,2.77]	.97	[.79,1.19]	.97	[.85,1.11]	.66***	[.57,.75]	1.08	[.77,1.49]	1.29	[1.00,1.6
Count of outcomes predicted by parents only		6		0		2		0							
Count of outcomes predicted by teachers only		3		10		4		2							
Count of outcomes predicted by both informants		9		2		3		0							

Note: All regression models used inverse probability weight for a) baseline parent response based on teacher-rated Rutter scale; and b) attrition in follow-up based on gender, baseline family social class, assessment type (interview or postal questionnaire), intelligence and reading ability. Models were adjusted for intelligence, parental social class and gender. All p-values were adjusted for multiple comparison using false discovery rate. RR, relative risk; 95% CI, 95% confidence intervals in brackets; * $p < .05$, ** $p < .01$, *** $p < .001$.

Table S7. P-values from the regression models of parent or teacher reports (separate models) predicting mid-life outcomes

Predictor	Outcome	Parent report predictors p-values		Teacher report predictors p-values	
		Raw	FDR-adjusted	Raw	FDR-adjusted
General factor	Low education	.001991	.007244	.000071	.000614
	Low social class	.002229	.007244	.088522	.135386
	Years in current job	.093212	.127554	.058382	.101196
	Not left job for better opportunity	.973865	.973865	.905222	.905222
	Times unemployed	.001600	.007244	.000411	.001527
	Unemployed	.003602	.010404	.002644	.006873
	Not owner-occupier	.072015	.104022	.004918	.011625
	No pension scheme	.021386	.037068	.000999	.003248
	Never married	.188323	.244820	.105423	.152278
	Divorces	.053634	.082028	.007734	.016757
	Living alone	.443783	.501667	.414091	.447168
	None to help	.011064	.023973	.076147	.123739
	None to listen	.009796	.023153	.420757	.447168
	Low social participation	.001759	.007244	.000000	.000000
	Did not vote	.015381	.030762	.000195	.000845
	Poor health	.001623	.007244	.414914	.447168
	Disabled	.299132	.370354	.001185	.003424
	Illness/disability	.020745	.037068	.042714	.079327
	Alcohol problems	.314735	.371959	.143112	.195837
	Hazardous drinking	.771923	.836250	.429970	.447168
	Current smoker	.000162	.002105	.032580	.065160
	Psychological distress	.038297	.062233	.371927	.447168
	Neuroticism	.895725	.931554	.363656	.447168
	Extroversion	.008963	.023153	.000180	.000845
	Psychoticism	.000672	.005821	.000020	.000254
	Social exclusion	.000022	.000561	.000104	.000676
Conduct	Low education	.002300	.029901	.000327	.001944
	Low social class	.099806	.259495	.000002	.000048
	Years in current job	.055713	.168364	.578138	.711081
	Not left job for better opportunity	.946429	.986640	.352671	.458473
	Times unemployed	.138519	.300124	.000374	.001944

	Unemployed	.056647	.168364	.000733	.003175
	Not owner-occupier	.822117	.971593	.000041	.000530
	No pension scheme	.014685	.107039	.000978	.003634
	Never married	.973538	.986640	.065417	.113389
	Divorces	.796816	.971593	.048423	.096846
	Living alone	.889748	.986640	.224532	.307254
	None to help	.237937	.463510	.109567	.178047
	None to listen	.326612	.536055	.062816	.113389
	Low social participation	.058280	.168364	.912196	.912196
	Did not vote	.606162	.829485	.042332	.091719
	Poor health	.528421	.808173	.004014	.013046
	Disabled	.040905	.168364	.150589	.230313
	Illness/disability	.249582	.463510	.017932	.042385
	Alcohol problems	.986640	.986640	.601684	.711081
	Hazardous drinking	.580874	.829485	.658317	.744184
	Current smoker	.002165	.029901	.004860	.014039
	Psychological distress	.121418	.286988	.746328	.808522
	Neuroticism	.020584	.107039	.167702	.242237
	Extroversion	.329880	.536055	.892040	.912196
	Psychoticism	.020160	.107039	.008895	.023127
	Social exclusion	.687153	.893299	.000136	.001178
Inattention/ hyperactivity	Low education	.552875	.966239	.504227	.771171
	Low social class	.640263	.966239	.250058	.591046
	Years in current job	.737840	.966239	.710022	.800891
	Not left job for better opportunity	.405117	.966239	.648798	.793457
	Times unemployed	.215965	.935850	.387331	.629413
	Unemployed	.929076	.966239	.374651	.629413
	Not owner-occupier	.183724	.935850	.274018	.593706
	No pension scheme	.790382	.966239	.739284	.800891
	Never married	.566242	.966239	.671387	.793457
	Divorces	.897551	.966239	.095477	.496480
	Living alone	.458039	.966239	.642087	.793457
	None to help	.491378	.966239	.540381	.780550
	None to listen	.847248	.966239	.200395	.578920
	Low social participation	.088202	.846038	.243788	.591046
	Did not vote	.605608	.966239	.147597	.578920

	Poor health	.026956	.700855	.382492	.629413
	Disabled	.500384	.966239	.908368	.944703
	Illness/disability	.905302	.966239	.183047	.578920
	Alcohol problems	.097620	.846038	.166885	.578920
	Hazardous drinking	.289353	.966239	.000048	.001249
	Current smoker	.181828	.935850	.011401	.036739
	Psychological distress	.995241	.995241	.037739	.245305
	Neuroticism	.867631	.966239	.307828	.615655
	Extroversion	.337430	.966239	.008821	.098811
	Psychoticism	.351164	.966239	.950612	.950612
	Social exclusion	.788132	.966239	.651591	.793457
Emotional	Low education	.319888	.693091	.076045	.179743
	Low social class	.274589	.693091	.021719	.070587
	Years in current job	.776975	.878319	.591672	.803281
	Not left job for better opportunity	.040183	.156613	.001775	.015381
	Times unemployed	.752016	.878319	.837703	.858479
	Unemployed	.504909	.817421	.002787	.018113
	Not owner-occupier	.316918	.693091	.635305	.803281
	No pension scheme	.911831	.911831	.289260	.442397
	Never married	.033595	.156613	.000857	.011145
	Divorces	.534468	.817421	.672098	.803281
	Living alone	.136752	.444442	.679699	.803281
	None to help	.621806	.850892	.858479	.858479
	None to listen	.453862	.817421	.102979	.191247
	Low social participation	.870640	.905465	.834175	.858479
	Did not vote	.042165	.156613	.101624	.191247
	Poor health	.866380	.905465	.037547	.097623
	Disabled	.531054	.817421	.158157	.257005
	Illness/disability	.524639	.817421	.005281	.023313
	Alcohol problems	.670018	.865804	.501115	.723833
	Hazardous drinking	.163431	.472134	.085688	.185658
	Current smoker	.699304	.865804	.033047	.095470
	Psychological distress	.000466	.004035	.121617	.210803
	Neuroticism	.000000	.000000	.009435	.035046
	Extroversion	.000000	.000006	.000143	.003714
	Psychoticism	.022777	.148049	.005380	.023313

Social exclusion	.582396	.841238	.759544	.858479

Note: All regression models used inverse probability weight for a) baseline parent response based on teacher-rated Rutter scale; and b) attrition in follow-up based on gender, baseline family social class, assessment type (interview or postal questionnaire), intelligence and reading ability. Models were adjusted for intelligence, parental social class and gender. FDR, false-discovery rate including all p-values from a given psychopathology factor (predictor) from a given informant (parent or teacher).

Table S8. Comparison between independent associations of parent- and teacher-reported psychopathology factor scores and mid-life outcomes

Outcomes	Informant	General factor			Conduct			Emotional		
		RR	95% CI	Wald test	RR	95% CI	Wald test	RR	95% CI	Wald test
Low educational qualification	Parent	1.05*	[1.01,1.09]	(χ2 (1, n=1,143)=.00; p=.970	1.07*	[1.01,1.13]	(χ2 (1, n=1,143)=.00; p=.951			
	Teacher	1.05*	[1.01,1.09]		1.10*	[1.01,1.20]				
Not left job for better opportunity	Parent							1.05	[.99,1.11]	(χ2 (1, n=1,153)=
	Teacher							1.07*	[1.01,1.12]	p=.737
Times unemployed since age 30	Parent	1.18*	[1.01,1.38]	(χ2 (1, n=1,112)=.00; p=.995						
	Teacher	1.23**	[1.05,1.43]							
Currently unemployed	Parent	1.26*	[1.04,1.52]	(χ2 (1, n=1,199)=.29; p=.589						
	Teacher	1.19	[.97,1.47]							
Not in a pension scheme	Parent	1.18	[.98,1.41]	(χ2 (1, n=1,192)=.01; p=.589						
	Teacher	1.22*	[1.00,1.49]							
Low social participation	Parent	1.02*	[1.00,1.05]	(χ2 (1, n=1,155)=3.15; p=.076						
	Teacher	1.06***	[1.04,1.08]							
Did not vote in last general election	Parent	1.18	[.98,1.40]	(χ2 (1, n=1,138)=.18; p=.669						
	Teacher	1.30**	[1.08,1.55]							
Current smoker	Parent				1.27*	[1.02,1.58]	(χ2 (1, n=1,186)=.28; p=.280			
	Teacher				1.28	[.94,1.73]				
Neuroticism	Parent							1.20***	[1.13,1.27]	(χ2 (1, n=1,143)=7
	Teacher							1.04	[.97,1.12]	p=.005
Extroversion	Parent	1.05*	[1.00,1.10]	(χ2 (1, n=1,122)=.29; p=.590				.88***	[.83,.93]	(χ2 (1, n=1,122)=1
	Teacher	1.07**	[1.03,1.12]					.92**	[.87,.97]	p=.178
Psychoticism	Parent	1.10**	[1.03,1.17]	(χ2 (1, n=1,144)=.17; p=.681						
	Teacher	1.08*	[1.00,1.17]							
Social Exclusion	Parent	1.47***	[1.17,1.84]	(χ2 (1, n=1,182)=1.14; p=.286						
	Teacher	1.25	[.99,1.58]							

Note: Models included psychopathology factors from parents and teachers if both factors predicted outcomes in separated regression models. All regression models used inverse probability weight for a) bas parent response based on teacher-rated Rutter scale; b) attrition in follow-up based on gender, baseline family social class, assessment type (interview or postal questionnaire), intelligence and reading abilit Models were adjusted for intelligence, parental social class and gender and included psychopathology factors from both informants. RR, relative risk; 95% CI, 95% confidence intervals in brackets; * p < .0 p < .01, *** p < .001.