

For Online Publication - Online Appendix

This document contains supplementary materials for the paper “(Breaking) Intergenerational Transmission of Mental Health” by Aline Bütikofer, Rita Ginja, Krzysztof Karbownik, and Fanny Landaud published in the Journal of Human Resources.

A Additional Tables and Figures

Table A.1: Classification of mental health conditions

Mental Health Condition Grouping	
Anxiety	P01 Feeling anxious/nervous/tense P02 Acute stress reaction P06 Sleep disturbance P74 Anxiety disorder/anxiety state
Depression	P03 Feeling depressed P76 Depressive disorder P77 Suicide/suicide attempt
Substance Use	P15 Chronic alcohol abuse P16 Acute alcohol abuse P17 Tobacco abuse P18 Medication abuse P19 Drug abuse
Hyperkinetic Disorders	P81 Hyperkinetic disorder
Eating Disorders	P11 Eating problem in child P86 Anorexia nervosa/bulimia
Other	P04 Feeling/behaving irritable/angry P07 Sexual desire reduced P08 Sexual fulfilment reduced P09 Sexual preference concern P10 Stammering/stuttering/tic P12 Bedwetting/enuresis P13 Encopresis/bowel training problem P20 Memory disturbance P22 Child behaviour symptom/complaint P23 Adolescent behav. Symptom/compl. P24 Specific learning problem P25 Phase of life problem adult P27 Fear of mental disorder P28 Limited function/disability (p) P29 Psychological symptom/compl ^t other P70 Dementia P71 Organic psychosis other P72 Schizophrenia P73 Affective psychosis P75 Somatization disorder P78 Neuraesthesia/surmenage P79 Phobia/compulsive disorder P80 Personality disorder P82 Post-traumatic stress disorder P85 Mental retardation P98 Psychosis NOS/other P99 Psychological disorders, other

NOTE: This table presents the grouping of mental health conditions based on the ICPC-02 codes.

Table A.2: Data sources

Data source	Main description	Variables	Years available
Control and Payment of Health Reimbursement (KUHR)	Individual primary care visits (to GPs or emergency rooms)	Dates (year) of visits, with related diagnoses and symptoms (ICPC2)	2006-2020
Norwegian Patient Registry (NPR)	Individual inpatient and outpatient visits in specialist care.	Entry & discharge dates (year), diagnoses (ICD10)	2008-2020
Mortality Records (DAR)	Individual death event	Date (year) & cause of death (ICD10)	up to 2020
Education Records	For parents	Highest completed degree	1970-2020
Education Records	For children	Middle schools GPA, Middle schools attended	2000-2020
Tax Authority Records	Annual information for eligible individuals (those formally employed).	Labor earnings and income from other sources	1993-2020
Population Records	Annual demographic information about all individuals	Marital status, municipality of residence, gender, age, nationality	1967-2020

NOTE: This tables presents the time frame of the administrative records used in the analysis as well as the variables and the years used.

Table A.3: Sample construction

	Observations
Children born in Norway who are 13-18 years old between 2006-2020	732,437
With information on municipality at birth	731,618
Matched with parents	730,478
<u>Sample in main analysis</u>	
Parents 30 or younger in 1992 and 25 or older in 2004	568,253
Have grandparents	568,244
Have great-grandparents	503,883
Have information on health at 25-30 for mother/father (i.e., missing if parents have not worked)	498,976
Have a relative in each generation (siblings, cousins)	447,141
Have spouses of siblings, spouses of cousins, and siblings of spouses of parents' siblings	370,498

NOTE: Restrictions imposed to construct the sample used in the main analysis.

Table A.4: Descriptive statistics: Characteristics of the extended family

	(1)	(2)	(3)	(4)
	All children age 13-18		Analysis sample	
	Mean	SD	Mean	SD
	Proportion of diagnoses among parents and relatives			
Parents' MH 25-30	0.08	0.28	0.10	0.30
Parents' siblings MH 25-30	0.11	0.32	0.14	0.35
Spouses of parents' siblings MH 25-30	0.07	0.26	0.08	0.28
Parents' cousins MH 25-30	0.18	0.38	0.28	0.45
Spouses of parents' cousins MH 25-30	0.11	0.31	0.16	0.37
Siblings of spouses of parents' siblings MH 25-30	0.12	0.33	0.14	0.34
Parents' OH 25-30	0.55	0.50	0.60	0.49
Parents' siblings OH 25-30	0.54	0.50	0.63	0.48
Spouses of parents' siblings OH 25-30	0.45	0.50	0.50	0.50
Parents' cousins OH 25-30	0.51	0.50	0.77	0.42
Spouses of parents' cousins OH 25-30	0.45	0.50	0.66	0.47
Siblings of spouses of parents' siblings OH 25-30	0.53	0.50	0.57	0.49
	Years of education among parents and relatives			
Parents	13.50	2.47	13.37	2.37
Parents' siblings	13.69	1.99	13.60	1.91
Spouses of parents' siblings	13.90	2.17	13.83	2.15
Parents' cousins	13.34	1.72	13.36	1.63
Spouses of parents' cousins	13.81	1.85	13.81	1.83
Siblings of spouses of parents' siblings	13.58	1.89	13.52	1.89
	Observations per child			
Parents	2.00	0.01	2.00	0.01
Parents' siblings	4.41	2.13	4.48	2.07
Spouses of parents' siblings	2.78	1.81	2.80	1.62
Parents' cousins	7.52	7.69	11.39	7.30
Spouses of parents' cousins	3.38	3.92	5.18	3.84
Siblings of spouses of parents' siblings	2.51	1.71	2.59	1.53
Has grandparents	1.00	0.00	1.00	0.00
Has great-grandparents	0.84	0.37	1.00	0.00
N	730,478		370,498	

NOTE: The table uses the same samples as Table 2. For each sample, the table shows the means (and standard deviations) of variables describing the characteristics of the child's extended family. Parents' health as well as the health of the extended family members are measured between ages 25 and 30.

Table A.5: Correlation matrix for mental health: parental generation outcomes

	Parent's	Parents' siblings	Spouses of parent' siblings	Parents' cousins	Spouses of parents' cousins	Siblings of spouses of parents' siblings
Parent's	1					
Parents' siblings MH	0.0341	1				
Spouses of parents' siblings MH	0.0163	0.0319	1			
Parents' cousins MH	0.0188	0.0120	0.0062	1		
Spouses of parents' cousins MH	0.0048	0.0014	-0.0026	0.0252	1	
Siblings of spouses of parents' siblings MH	0.0068	0.0133	0.0190	0.0042	-0.0028	1

NOTE: Correlation matrix for the (standardized number of) mental health diagnoses/symptoms across categories of relatives. Health is measured between ages 25 and 30 years and it is based on the Sick Leave Registration from the Social Security Records. The sample size is 370,498 observations.

Table A.6: Correlation matrix: specific health conditions

	Depression	Anxiety	Children Other psychological	Musculoskeletal
Parents				
Depression	0.0408	0.0452	0.0500	0.0198
Anxiety	0.0210	0.0274	0.0240	0.0134
Other psychological	0.0229	0.0239	0.0263	0.0073
Musculoskeletal	0.0160	0.0244	0.0254	0.0324

NOTE: Correlation matrix for the prevalence of specific health diagnoses/symptoms between parents and children. A child's health is measured between ages 13 and 18 years old and it is based on the data on visits to general practitioners (GPs) and emergency rooms (ERs) from the Control and Payment of Health Refunds registry (KUHR). Parental health is measured between ages 25 and 30 years and it is based on the Sick Leave Registration from the Social Security Records. The sample size is 370,498 observations.

Table A.7: Correlation matrix: specific health conditions

	Children					
	Any MH	Depression	Anxiety	Other Ps.	Asthma/allergies	Fractures
Parents						
Any MH	0.1420	0.0237	0.0400	0.1230	0.0079	0.0218
Depression	0.1230	0.0229	0.0271	0.1070	0.0060	0.0210
Anxiety	0.0889	0.0171	0.0297	0.0777	0.0015	0.0158
Other Ps.	0.0991	0.0241	0.0252	0.0887	0.0066	0.0106
Asthma/allergies	0.0302	-0.0011	0.0070	0.0248	0.0644	0.0090
Fractures	0.0357	-0.0036	0.0009	0.0292	0.0027	0.0338

NOTE: Correlation matrix for the prevalence of specific health diagnoses/symptoms between parents and children. These correlations are computed based on the data on visits to general practitioners (GPs) and emergency rooms (ERs) from the Control and Payment of Health Refunds registry (acronym KUHR in Norwegian). All individuals are drawn from our main analysis sample (see Table 2). For parents the measures are taken between 2006 and 2012, restricting them to be at most 30 years old. For children the measures are taken between 2014 and 2020, restricting them to be between 13 and 18 years old. The sample size is 66,337 observations.

Table A.8: Sickness leave eligibility and uptake: Characteristics of individual

	(1) Male	(2) Age	(3) Visits to GP	(4) Income	(5) Foreigner	(6) College
Panel A: Sickness leave eligibility						
Not Eligible to SL	-0.031*** (0.002)	-0.105*** (0.007)	-1.410*** (0.026)	-3.298*** (0.003)	0.426*** (0.002)	-0.096*** (0.002)
Mean	0.512	27.500	3.910	3.290	0.220	0.282
% Not Eligible	0.059					
N	1,038,521	1,038,521	1,038,521	980,258	1,038,520	1,038,521
Panel B: Sickness leave uptake						
SL if <i>ICPC2</i> – <i>P</i> by GP	-0.054*** (0.004)	0.133*** (0.012)	1.420*** (0.064)	0.714*** (0.010)	-0.012*** (0.003)	0.043*** (0.003)
Mean	0.423	27.600	10.300	2.760	0.174	0.178
% SL if <i>ICPC2</i> – <i>P</i> by GP	0.232					
N	122,381	122,381	122,381	122,381	122,381	122,381

NOTE: Controls included in the regressions but excluded from the table include year fixed effects. Individuals ages 25 to 30 years old in 2006-2008. Data are for the three years when both the primary health care (KUHR) and sickness leave data overlap, 2006-2008. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.9: Mental health and fertility

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Male	Year of Birth	Any SL - P	Any SL	Income	Not Eligible	Foreign	College
Not Parent	0.130*** (0.001)	1.247*** (0.011)	-0.002*** (0.001)	-0.125*** (0.001)	-37232.662*** (577.360)	0.065*** (0.001)	0.083*** (0.001)	-0.046*** (0.001)
Mean	0.511	1970	0.058	0.345	324026	0.065	0.163	0.360
Mean - not parent	0.289							
N	1,197,517							

Note: The independent variable is an indicator that takes value if the individual is not the mother/father of the child born after 1985. The sample includes all individuals that could potentially be included in the parental generation; those 35 or younger in 1992 and 25 or older in 2004 (there is one observation per adult in the table). Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.10: Dynastic correlations: Interaction between physical and mental health of parents (extensive margin)

	(1)	(2)
Parent's MH 25-30	9.532* * * (0.255)	9.426* * * (0.488)
Parent's OH 25-30	1.843* * * (0.140)	1.832* * * (0.144)
Parent's MH × OH 25-30		0.144 (0.571)
R^2	0.052	0.052
N	370,498	370,498

NOTE: Sample and outcome are based on Table 3. The independent variables take value 1 if either parent has had a sick leave due to mental health (MH) or non-mental health (OH) symptoms or diagnoses, and 0 otherwise. The third row includes an interaction term between these two variables. Child health is measured at ages 13-18 while parental health is measured at ages 25-30. One observation per parent-child pair in all regressions. Controls included in the regressions but excluded from the table are indicators for the number of maternal and paternal siblings, siblings' spouses, cousins, spouses of cousins, and siblings of spouses of parents' siblings, gender of the child, fixed effects for the year of birth and for the year when the child is first observed in the primary health care data (KHUR), and indicators for whether it is possible to identify in the data each grandparent and great-grandparent. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.11: Main results: Robustness to controlling for grand-parental health proxy

	(1)	(2)
Parents' MH	9.569*** (0.254)	9.457*** (0.255)
Parents' siblings MH	2.848*** (0.208)	2.759*** (0.208)
Spouses of parents' siblings MH	1.417*** (0.256)	1.406*** (0.256)
Parents' cousins MH	1.654*** (0.163)	1.633*** (0.163)
Spouses of parents' cousins MH	0.676*** (0.195)	0.658*** (0.195)
Siblings of spouses of parents' siblings MH	1.025*** (0.206)	1.011*** (0.206)
At least one grandparent died before age 60		2.172*** (0.168)
Sum of coefficients	17.2	16.9
S.E.	0.5	0.5
R^2	0.053	0.053
N	370,498	370,498

NOTE: Sample and outcome are based on Table 3. Column 1 replicates the analysis from Column 6 of Table 3 while Column 2 additionally controls for an indicator variable taking the value of 1 if at least one grandparent died before age 60 (and 0 otherwise). MH denotes mental health. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.12: Within family correlations: Child's generation

	(1)	(2)	(3)	(4)
		<u>Siblings</u>		<u>Cousins</u>
		Twins	Full-siblings	
	Same gender	Diff gender		
Panel A: Mental health events				
Correlation (ICC)	0.369*** (0.018)	0.250*** (0.013)	0.185*** (0.003)	0.149*** (0.003)
Observations	3244	4947	120948	113319
Panel B: Non-mental health events				
Correlation (ICC)	0.514*** (0.016)	0.473*** (0.013)	0.273*** (0.003)	0.238*** (0.003)
Observations	3244	4947	120948	113319

NOTE: This table presents intra-class correlations (ICCs) in the (standardized) number of visits to primary health care services associated with mental health events (Panel A) and non-mental health (Panel B) between different family members. Measures are taken between ages 13 and 18 based on children from our main analysis sample (see Table 2). Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.13: Robustness of the extensive margin estimates: Child's health measured between ages 6 and 18

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Parents' MH	10.933*** (0.267)	10.768*** (0.268)	10.741*** (0.268)	10.689*** (0.268)	10.683*** (0.268)	10.670*** (0.268)	10.290*** (0.269)
Parents' siblings MH		3.516*** (0.221)	3.443*** (0.222)	3.394*** (0.222)	3.389*** (0.222)	3.366*** (0.222)	3.045*** (0.223)
Spouses of parents' siblings MH			1.696*** (0.273)	1.658*** (0.273)	1.653*** (0.273)	1.607*** (0.273)	1.364*** (0.275)
Parents' cousins MH				1.701*** (0.174)	1.662*** (0.175)	1.651*** (0.175)	1.466*** (0.176)
Spouses of parents' cousins MH					0.719*** (0.209)	0.716*** (0.209)	0.590*** (0.210)
Siblings of spouses of parents' siblings MH						0.997*** (0.219)	0.838*** (0.222)
Control for OH	No	No	No	No	No	No	Yes
Mean	28.3						
Sum of coefficients		14.3	15.9	17.4	18.1	19.0	17.6
S.E.		0.340	0.426	.455	0.493	0.531	0.542
R ²		0.043	0.044	.0444	0.044	0.045	0.045
N	370,498	370,498	370,498	370,498	370,498	370,498	370,498

Note: This table replicates the analysis from Table 3 but it measures child's health at ages 6-18 (rather than at ages 13-18). Parental health is measured at ages 25-30. MH denotes mental health while OH denotes non-mental health events. Eicker-White standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.14: Robustness of the extensive margin estimates: Child's health measured at ages 6-18 and parental health measured at ages 30-35

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Parents' MH	9.914*** (0.226)	9.765*** (0.226)	9.751*** (0.226)	9.730*** (0.226)	9.726*** (0.226)	9.718*** (0.226)	9.424*** (0.227)
Parents' siblings MH		2.789*** (0.190)	2.741*** (0.190)	2.713*** (0.190)	2.704*** (0.190)	2.687*** (0.190)	2.523*** (0.192)
Spouses of parents' siblings MH			1.019*** (0.229)	1.004*** (0.229)	0.995*** (0.229)	0.960*** (0.229)	0.833*** (0.230)
Parents' cousins MH				1.147*** (0.171)	1.087*** (0.172)	1.083*** (0.172)	0.993*** (0.174)
Spouses of parents' cousins MH					1.106*** (0.198)	1.105*** (0.198)	1.044*** (0.200)
Siblings of spouses of parents' siblings MH						0.720*** (0.182)	0.737*** (0.184)
Control for OH	No	No	No	No	No	No	Yes
Mean	25.2						
Sum of coefficients		12.6	13.5	14.6	15.6	16.3	15.6
S.E.		0.288	0.358	0.393	0.434	0.464	0.473
R ²	0.048	0.049	0.049	0.049	0.049	0.049	0.050
N	356,425	356,425	356,425	356,425	356,425	356,425	356,425

Note: This table replicates the analysis from Table 3 but it measures child's health at ages 13-18) and parental health at ages 30-35 (rather than at ages 25-30). MH denotes mental health while OH denotes non-mental health events. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.15: Heterogeneity analysis: Extensive margin estimates by child's gender and parental education

	(1) Gender: Male	(2) Parental Education: College
Parents' MH \times ...	0.117 (0.507)	-1.705*** (0.585)
Parents' siblings MH \times ...	-0.223 (0.412)	-0.363 (0.451)
Spouses of parents' siblings MH \times ...	0.446 (0.509)	0.372 (0.550)
Parents' cousins MH \times ...	-0.084 (0.312)	-0.074 (0.333)
Spouses of parents' cousins MH \times ...	-0.856** (0.377)	0.338 (0.402)
Siblings of spouses of parents' siblings MH \times ...	-0.232 (0.403)	-0.126 (0.429)
N	370,498	370,498

NOTE: These results are based on the analysis from Column 6 of Table 3 where we interact the extended family indicators with an indicator for child being a male (Column 1) or an indicator for at least one of the parents having college education (Column 2). The regressions include both level (stratification variable and extended family indicators) effects and the table displays the interaction terms between these variables. MH denotes mental health. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.16: Extensive margin estimates: The role of maternal and paternal lineages

	(1)	(2)	(3)	(4)	(5)	(6)
Mother's MH	8.217*** (0.304)	7.990*** (0.345)	7.612*** (0.382)	7.601*** (0.404)	7.701*** (0.420)	8.070*** (0.592)
Father's MH	10.780*** (0.436)	10.539*** (0.495)	10.451*** (0.549)	10.398*** (0.583)	10.121*** (0.607)	10.669*** (0.857)
Mother's siblings MH		2.702*** (0.309)	2.922*** (0.343)	3.006*** (0.360)	2.997*** (0.373)	2.692*** (0.505)
Father's siblings MH		2.635*** (0.319)	2.672*** (0.352)	2.626*** (0.371)	2.473*** (0.383)	2.640*** (0.527)
Spouses of mother's siblings MH			1.581*** (0.431)	1.353*** (0.452)	1.391*** (0.469)	1.766*** (0.571)
Spouses of father's siblings MH			1.317*** (0.420)	1.464*** (0.444)	1.645*** (0.462)	1.305** (0.571)
Mother's cousins MH				1.227*** (0.273)	1.123*** (0.282)	0.849** (0.384)
Father's cousins MH				1.581*** (0.290)	1.698*** (0.300)	1.802*** (0.411)
Spouses of mother's cousins MH					0.604* (0.345)	0.985** (0.467)
Spouses of father's cousins MH					0.968*** (0.369)	1.618*** (0.501)
Siblings of spouses of mother's siblings MH						1.300*** (0.450)
Siblings of spouses of father's siblings MH						0.623 (0.446)
Observations	332,794	253,398	204,126	183,967	170,099	90,144

NOTE: These results are based on the analyses from Columns 1 to 6 in Table 3 but where we consider maternal and paternal lineages when it comes to coding the independent input variables (rather than pooling across mothers and fathers). For example, the mother's cousins MH takes value 1 if any of the mother's cousins have had a sick leave due to mental health symptoms or diagnoses, and 0 otherwise; while the father's cousins MH takes the value 1 if any of the father's cousins have had a sick leave due to mental health symptoms or diagnoses, and 0 otherwise. MH denotes mental health. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.17: Heterogeneity analysis: The role of relatives working in the healthcare sector

	(1) Doc or Nurse	(2) Doc	(3) No Doc or Nurse
Parents' MH	9.787*** (0.469)	9.022*** (0.833)	9.080*** (0.321)
Parents' siblings MH	2.996*** (0.363)	3.099*** (0.650)	2.643*** (0.271)
Spouses of parents' siblings MH	1.204*** (0.440)	3.434*** (0.807)	1.363*** (0.336)
Parents' cousins MH	1.689*** (0.277)	1.415*** (0.480)	1.450*** (0.214)
Spouses of parents' cousins MH	0.558* (0.322)	0.854 (0.569)	0.572** (0.260)
Siblings of spouses of parents' siblings MH	0.491 (0.343)	0.651 (0.610)	1.439*** (0.276)
Sum of coefficients	16.7	18.5	16.5
S.E.	0.873	1.570	0.654
N	118,062	39,338	216,885

NOTE: This table replicates the analysis from Column 6 of Table 3 separately for families where there is either a doctor or a nurse in the extended family (Column 1), for families where there is a doctor in the extended family (Column 2), and for families where there is neither a doctor nor a nurse in the extended family (Column 3). We define an individual as being a health professional if he/she worked as a nurse or doctor between 2003 and 2014 for at least five years. MH denotes mental health. Eicker-White robust standard errors in parentheses. Significance levels: *** 1% level, ** 5% level, * 10% level.

Table A.18: Characteristics of municipalities included and excluded from the pilot program

	(1) Treated	(2) Not treated All	(3) Not treated Matched	(4) <i>t</i> -stat (1) vs.(2)	(5) <i>t</i> -stat (1) vs. (3)
Land Area (km^2)	0.643	0.722	0.572	-0.456	0.330
Municipality income	253.723	89.448	150.607	2.570	1.316
Share with university degree	0.150	0.121	0.139	3.933	0.806
Share with high school	0.458	0.445	0.460	0.828	-0.095
Share with compulsory education	0.388	0.418	0.408	-1.679	-0.650
Doctors in munic. per 1,000 inhab.	0.868	1.169	0.887	-3.423	-0.504
Man-years in child welfare	3.168	3.260	3.151	-0.260	0.084

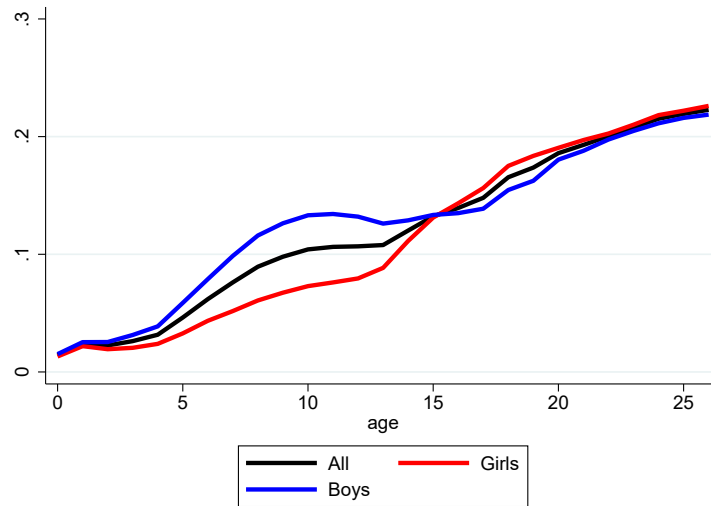
NOTE: The table shows the characteristics of the Norwegian municipalities included and excluded from the 2007 pilot program. Column 1 shows the characteristics of the pilot municipalities, Column 2 shows the characteristics of all other Norwegian municipalities, and Column 3 focuses on the subsample of untreated municipalities chosen as control municipalities based on the matching procedure. Column 4 presents *t*-statistics for differences in mean characteristics between the 26 treated municipalities and all untreated municipalities. Column 5 shows similar *t*-statistics for the comparisons of the 26 treated municipalities vs. 22 matched-control municipalities.

Table A.19: Placebo analysis: Effects of the pilot program on birth outcomes and select non-mental health conditions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Birth weight	Low Birth weight	Birth outcomes Gestational Length (in weeks)	APGAR 5min	APGAR 1min	Asthma or Allergies	Fractures	Other outcomes 13-18 Unspecified and General Complaints	Respiratory Conditions	Musculoskeletal Conditions
1[Parental MH]	-42.765*** (8.235)	0.011*** (0.003)	-0.112*** (0.025)	-0.003 (0.007)	-0.018* (0.011)	0.015*** (0.005)	0.008* (0.004)	0.059*** (0.013)	0.037*** (0.011)	0.020 (0.012)
1[Parental MH]×(Age 2007 ≤ 6)×Pilot	-31.845 (24.221)	0.011 (0.009)	-0.035 (0.088)	-0.004 (0.020)	0.006 (0.025)	-0.008 (0.015)	0.010 (0.012)	0.009 (0.029)	0.006 (0.023)	-0.041 (0.025)
mean	3575	0.045	39,400	9,370	8,660	0.141	0.113	0.495	0.524	0.528
N	129,683	129,683	125,711	129,324	129,327	129,749	129,749	129,749	129,749	129,749

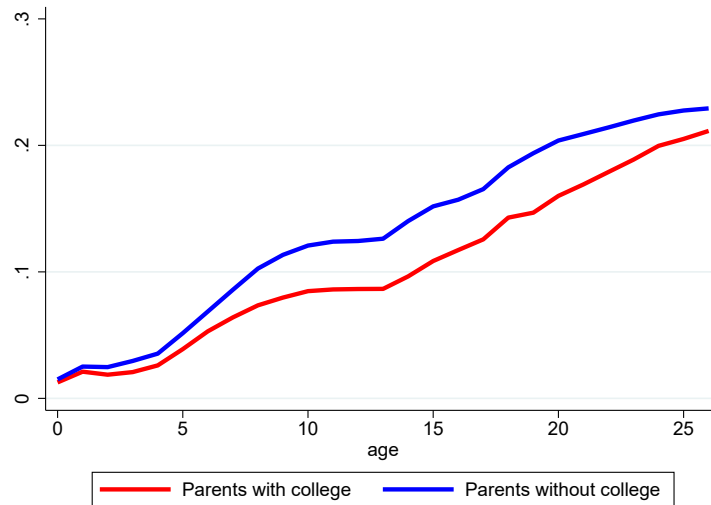
NOTE: This table replicates analysis from Column 1 of Panel A of Table 9 while changing the dependent variable of interest. Each column presents results from a separate regression with dependent variables listed in headers. Outcomes in Columns 1 to 5 are based on birth certificates and measured at birth. Outcomes in Columns 6 to 10 are measured at ages 13-18. Standard errors are clustered by children's municipality of birth. Significance levels: *** 1% level, ** 5% level, * 10% level.

Figure A.1: Prevalence of mental health events by age and gender



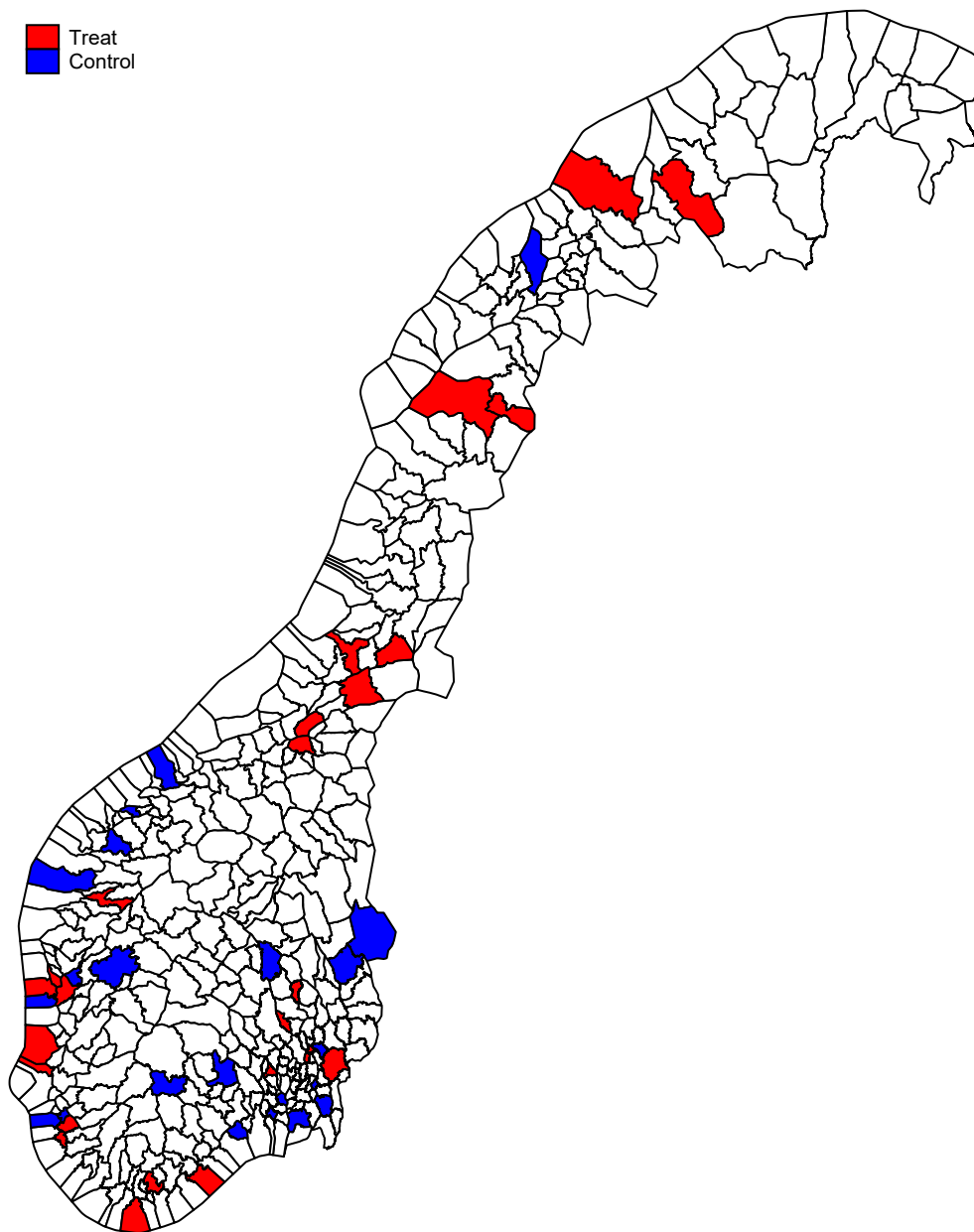
NOTE: This figure presents the proportion (0 to 1 scale) of individuals of a given age that were assessed with mental health diagnoses or symptoms (based on the ICPC-02 diagnoses starting with letter "P") by the primary health care services between 2006 and 2020 in Norway. Overall prevalence is presented as black line as well as separately for girls (red line) and boys (blue line).

Figure A.2: Prevalence of mental health events by age and parental education



NOTE: This figure presents the proportion (0 to 1 scale) of individuals of a given age that were assessed with mental health diagnoses or symptoms (based on the ICPC-02 diagnoses starting with the letter "P") by the primary health care services between 2006 and 2020 in Norway. Prevalence is presented separately for individuals whose parents do not have a college degree (blue line) and for whom at least one parent has a college degree (red line).

Figure A.3: Treated and matched-control municipalities



NOTE: This figure shows the geographic location of the 26 treated municipalities and of the 22 matched-control municipalities.