

## **SUPPLEMENTARY MATERIALS**

### **METHODS**

#### **Study Sample**

Among participants of the GUTS2 2008 survey (N=7,112, in which parent-child relationship satisfaction and parenting styles were measured), 5,453 individuals remained in the cohort whereas 1,659 were lost to follow-up at the 2011 survey (the earliest wave in which the outcomes were measured). Participants who remained were higher percentage female and were healthier, compared to those who were lost to follow-up (Table S17). The analytic samples for relationship satisfaction and parenting styles were drawn from those who participated in both the 2008 and 2011 survey (n=5,453). In the sample, 559 individuals had missing data on relationship satisfaction or parenting styles, 1,834 had missing data on any covariates, and 45 to 1,279 individuals had missing data on outcomes, depending on the outcome. Multiple imputation was performed to impute missing data on all variables (5 imputed datasets).

Among participants of the GUTS 1997 survey (N=12,949, in which family dinner frequency was queried), 8,476 remained in the cohort whereas 4,473 were lost to follow-up at the 2007 survey (the earliest wave in which the outcomes were measured). Participants who remained were higher percentage female, had higher SES and were healthier, compared to those who were lost to follow-up (Table S1). The analytic sample for family dinner was drawn from those who responded to both the GUTS1 1997 and 2007 survey (n=8,476). In the sample, 17 individuals had missing data on family dinner, 3,207 had missing data on any covariates, and 228 to 1,564 individuals had missing data on outcomes, depending on the outcome. We performed multiple imputation to impute for missing data on all variables (5 imputed datasets). The outcome of abnormal Pap test results was available only among female participants (n=5,377).

## Measures

### Outcomes

#### Psychological Well-being

*Life satisfaction.* One item from the validated Rand Mental Health Inventory<sup>1</sup> (i.e., “Have you felt happy, satisfied or please with your personal life”) was used to measure life satisfaction over the past month (GUTS1, 2010). Response categories ranged from 1: none of the time to 6: all of the time. The response was considered as a continuous variable (mean=4.44, SD=1.01).

*Positive affect.* Positive affect over the past month (GUTS1, 2010) was measured with 10 items from the validated Rand Mental Health Inventory<sup>1</sup> (e.g., “Did you feel relaxed and free of tension”). Response categories ranged from 1 (none of the time) to 6 (all of the time). An overall score was calculated by summing responses across all items ( $\alpha = 0.94$ ), ranging from 10 to 60 (mean=40.00, SD=8.76).

*Self-esteem.* Self-esteem (GUTS1, 2010) was measured with the validated Rosenberg Self-esteem Scale<sup>2,3</sup> which assessed global self-worth. The scale included questions on both positive (e.g., “I feel that I have a number of good qualities”) and negative feelings (e.g., “I feel I do not have much to be proud of”) towards oneself. The response categories ranged from 1 (strongly agree) to 4 (strongly disagree). Responses on positive feelings were reverse coded so that higher scores reflected greater self-esteem. An overall score was calculated by summing responses across all items ( $\alpha = 0.91$ ), ranging from 10 to 40 (mean=33.75 SD=4.99).

*Emotional processing.* Emotional processing was measured with the 4-item emotional processing subscale from the validated Emotional Approach Coping Scale<sup>4</sup> (GUTS1, 2010; GUTS2, 2011). The extent to which participants acknowledge and understand their emotions in stressful situations were assessed (e.g., “I take time to figure out what I am really feeling”).

Response categories ranged from 1 (not at all) to 4 (a lot). An overall score was calculated by summing responses across all items ( $\alpha = 0.84$  in GUTS1 and 0.83 in GUTS2), ranging from 4 to 16 (mean=11.25, SD=2.75 in GUTS1; mean=9.96, SD=2.93 in GUTS2).

*Emotional expression.* Emotional expression was measured with the 4-item emotional expression subscale from the validated Emotional Approach Coping Scale<sup>4</sup> (GUTS1, 2010; GUTS2, 2011). The subscale assessed the extent to which participants express their emotions under stress (e.g, “I let my feelings come out freely”). Response categories ranged from 1: not at all to 4: a lot. An overall score was created by summing responses across all items ( $\alpha = 0.91$  in GUTS1 and 0.89 in GUTS2), ranging from 4 to 16 (mean=10.68, SD=3.00 in GUTS1; mean=9.63, SD=3.16 in GUTS2).

Virtue/Character strengths

*Frequency of volunteering.* Participants reported their frequency of volunteering in response to the question: “In an average month, how many hours do you spend on volunteer work, community service, or helping people outside of your home without getting paid”. Categorical response options ranged from 1 (0 hour) to 4 (10 or more hours). Frequency of volunteering was used as a continuous variable (mean=1.83, SD=0.87).

*Sense of mission.* Participants reported to what extent they agreed with the statement: “I have a sense of mission or calling in my own life”. Response ranged from 1 (strongly agree) to 4 (strongly disagree). The response was reverse coded so that higher scores reflected greater sense of mission. Sense of mission was used as a continuous variable (mean=3.06, SD=0.74).

*Forgiveness of others.* The extent to which participants forgive others was assessed with a single question: “Because of my spiritual or religious beliefs, I have forgiven those who hurt me”. Response categories ranged from 1 (always or almost always) to 4 (never). Responses were

reverse coded so that higher scores reflected higher levels of forgiveness of others. Forgiveness of others was used as a continuous variable (mean=2.94, SD=0.86).

*Registered to vote.* Participants reported whether they were currently registered to vote (yes, no) (wave 2007).

### Physical Health

*Number of physical health problems.* Participants reported whether they had ever been told by a health care provider that they had cancer, diabetes, high cholesterol (or high triglycerides or lipids), high blood pressure or asthma (GUTS1, 2010; GUTS2, 2013). Participants who responded affirmatively were considered as having that condition. A summary score was created as the total number of physical health problems reported (mean=0.37, SD=0.59, ranged from 0 to 4 in GUTS1; mean=0.22, SD=0.46, ranged from 0 to 3 in GUTS2).

*Overweight or obese.* Participants reported their height (in inches) and weight (in pounds) (GUTS1 2010; GUTS2, 2011), based on which their body mass index (BMI, kg/m<sup>2</sup>) was calculated. BMI $\geq$ 25 kg/m<sup>2</sup> was defined as overweight or obese<sup>5</sup>.

### Mental Health

*Depression.* Depressive symptoms (GUTS1, 2010; GUTS2, 2013) was measured with the validated 10-item Center for Epidemiologic Studies Depression Scale (CES-D)<sup>6</sup> which assessed participants' feelings over the past week (e.g., "I felt depressed"; "I was happy"). Response categories ranged from 0 (rarely or none of the time) to 3 (all of the time). Responses to the positive items were reverse coded so that a higher score indicated more depressive symptoms. An overall score was created by summing responses across all items ( $\alpha$  =0.81 in GUTS1 and 0.79 in GUTS2), ranging from 0 to 30 (mean=7.19, SD=4.62 in GUTS1; mean=6.81, SD=4.37 in GUTS2). In addition, participants also reported whether they had been told by a health care

provider that they had depression. Those who responded affirmatively were considered as having depression diagnosis (GUTS1 & GUTS2, 2013).

*Anxiety.* Anxiety symptoms (GUTS1, 2010) was measured with 9 items (e.g., “I worry a lot of the time”) from the Worry/Sensitivity Subscale of the Revised Children’s Manifest Anxiety Scale (RCMAS) which had been well-validated in youth<sup>7-9</sup>. Response categories ranged from 0 (none of the time) to 5 (all of the time). An overall score of anxiety symptoms was created by summing responses across all items ( $\alpha = 0.93$ ), ranging from 9 to 54 (mean=22.25, SD=8.38). In addition, participants also reported whether they had been told by a health care provider that they had anxiety disorder. Those who responded affirmatively were considered as having anxiety diagnosis (GUTS1 & GUTS2, 2013).

*Probable post-traumatic stress disorder (PTSD).* Lifetime PTSD symptoms (GUTS1, 2007) was assessed with Breslau’s 7-item short screening scale which had been validated in young adults<sup>10</sup>. Specifically, participants were asked to think about the most distressing event in their lifetime, and report symptoms of PTSD in reference to the event. The prevalence of probable PTSD was high in the GUTS cohort with 4 or more symptoms as the cutoff. We thus used a more conservative approach with 6 or more symptoms as the cutoff<sup>10,11</sup>.

#### Behavioral Health

*Overeating.* Participants reported their frequency of eating a very large amount of food during the past year (GUTS1 2010; GUTS2, 2011). Response categories ranged from 1 (never) to 5 (more than once a week). Those who reported at least weekly episodes were considered as overeating (yes, no)<sup>12</sup>.

*Eating disorder diagnosis.* Participants reported whether they have ever been told by a health care provider that they had the following conditions (GUTS1 & GUTS2, 2013): Anorexia,

nervosa, bulimia nervosa, binge eating disorder, and other eating disorder. Those who responded affirmatively to any of these conditions were considered as having eating disorder diagnosis.

*Cigarette smoking.* In GUTS1 2010 wave, a single question was used to assess participants' smoking over the past year (yes, no): "In the past 12 months, have you smoked a cigarette". In GUTS2 2013 wave, participants were also asked to report their frequency of smoking in response to the question: "In the past 12 months, how often did you smoke cigarettes". The response categories ranged from 1 (never) to 5 (daily). The responses were dichotomized as ever (2: less than once a month to 5: daily) or never smoking (1: never).

*Frequent binge drinking.* Binge drinking over the past 12 months was assessed with a single question (GUTS1 2010; GUTS2, 2013): "In the past 12 months, how many times did you drink 5 (for male)/4(for female) or more alcoholic drinks over a few hours". Categorical response options ranged from 1 (never) to 10 (37 or more times). Participants who reported at least 12 episodes of binge drinking (7: 12 to 15 times to 10: 37 or more times) were considered as frequent binge drinkers<sup>13</sup>.

*Marijuana use.* Participants were asked to report their marijuana use in response to the question (GUTS1 2010; GUTS2, 2013): "In the past 12 months, how many times did you use marijuana". Response categories ranged from 1 (never) to 6 (6 or more times/week). The responses were dichotomized as ever (2: once a month or less to 6: six or more times per week) or never (1: never) used marijuana.

*Illicit drug use other than marijuana.* Participants reported their frequency of use of the following drugs in the past 12 months: cocaine or crack, heroin, ecstasy, LSD/mushrooms or any other hallucinogen, crystal meth, or other amphetamines (GUTS1 2010). Categorical response options ranged from 1 (not in the past 12 months) to 6 (16 or more times). Responses were

dichotomized as never (1: not in the past 12 months) or ever use (2: 1 time to 6: 16 or more times) for each drug separately. Those who reported use of any of these drugs were considered as having illegal drug use other than marijuana over the past 12 months.

*Prescription drug misuse.* Participants reported use of the following drugs without a doctor's prescription over the past 12 months: tranquilizers, pain killers, sleeping pills and stimulants (GUTS1 2010). Response options ranged from 1 (not in the past 12 months) to 6 (16 or more times). Responses were dichotomized as never (1: not in the past 12 months) or ever use (2: 1 time to 6: 16 or more times) for each drug separately. Those who reported use of any of these drugs were considered as having prescription drug misuse in the past 12 months.

*Number of lifetime sexual partners.* Participants were first asked whether they ever had sexual intercourse (yes, no, not sure). Those who answered "yes" or "not sure" were further asked to report the number of their lifetime sexual partners: "During your life, with how many people have you had sexual intercourse" (GUTS1 2007). Response options ranged from 1 (1 person) to 8 (21 or more people). Those who reported never had sexual intercourse were coded as having 0 sexual partners. The variable was used as a continuous score (mean=3.17, SD=2.59).

*Early sexual initiation.* A question was used to assess the age of sexual initiation: "How old were you when you had sexual intercourse for the first time" (GUTS1 2007). Categorical response options ranged from 1 (13 years or younger) to 9 (21 years or older). Those who had first sex at 15 years of age or younger were considered as having early sexual initiation<sup>14</sup>.

*Sexually transmitted infections (STIs).* Participants reported whether they had been told by a health care provider that they had chlamydia, HPV, genital warts or any STIs (GUTS1 & GUTS2, 2013). Those who responded affirmatively were considered as having STIs diagnosis.

*Teen pregnancy.* Participants who were ever pregnant (for female) or ever impregnated a woman (for male) reported the calendar year in which their/their partner's first pregnancy ended (GUTS1, 2010). The age of first pregnancy was calculated by subtracting their/their partner's birth year from the year of their first pregnancy. Pregnancy before age 20 was considered as teen pregnancy<sup>15</sup>.

*Abnormal Pap test result.* Female participants reported whether they ever had a Pap test (no, yes, not sure) (GUTS1, 2007). Those who reported "yes" or "not sure" were prompted to answer a second question "Have you been told by a doctor or other health care provider that you had an abnormal Pap test". Response options included "yes", "no" or "not sure". Participants who reported "yes" were considered as having abnormal Pap test results, whereas those reporting "no" and those who never had a Pap test were considered as not having abnormal Pap test result.



## SUPPLEMENTARY TABLES

**Supplementary Table S1. Participant characteristics in the full analytic sample for parent-child relationship satisfaction and parenting styles (Growing Up Today Study 2 [GUTS2], N=5,453)**

	Questionnaire wave	Mean (SD) or %
<b>Sociodemographic covariates</b>		
Baseline age, in years (range: 12-22)	2008	17.75 (1.90)
Gender (boy), %	2008	40.58
Race/ethnicity (Non-Hispanic White ), %	2008	92.86
Geographic region	2008	
West, %		16.76
Midwest, %		36.53
South, %		15.10
Northeast, %		31.61
Prior puberty development (range: 1-5)	2006	4.32 (0.95)
Mother's baseline age, in years (range: 43-61)	2008	49.14 (3.65)
Mother's race (white), %	1989	97.85
Mother married, %	2005	92.16
Mother's subjective SES in the US (range: 1-10)	2001	7.23 (1.30)
Mother's subjective SES in the community (range: 1-10)	2001	7.12 (1.51)
Pretax household income	2001	
<\$50,000, %		11.85
\$50,000-\$74,999, %		25.18
\$75,000-\$99,999, %		22.31
≥\$100,000, %		40.66
Census tract-level college education rate (range: 3.94%-84.71%)	2001	34.44% (16.31%)
Census tract-level median income	2001	
<\$50,000, %		18.71
\$50,000-\$74,999, %		48.51
\$75,000-\$99,999, %		24.52
≥\$100,000, %		8.27
<b>Maternal health covariates</b>		
Maternal lifetime history of depression diagnosis, %	2007	9.46
Maternal current smoking, %	2007	3.14
<b>Prior health behavioral or health status covariates</b>		
Prior overweight or obesity, %	2006	18.94
Prior cigarette smoking, %	2008	14.95
Prior history of sexual intercourse, %	2008	29.77
<b>Parent-child relationship satisfaction</b> (range: 9-45)	2008	36.06 (6.34)
<b>Psychological health outcomes</b>		
Emotional processing (range: 4-16)	2011	9.96 (2.93)
Emotional expression (range: 4-16)	2011	9.63 (3.16)

**Physical health outcomes**

Number of diagnosed physical health conditions (range: 0-3)	2013	0.22 (0.46)
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**Mental health outcomes**

Depressive symptoms over the past week (range: 0-28.89)	2013	6.81 (4.37)
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History of anxiety diagnosis, %	2013	11.34
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History of depression diagnosis, %	2013	13.86
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**Health behavioral outcomes**

Overweight or obesity, %	2011	25.60
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Overeating over the past year, %	2011	3.89
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History of eating disorder diagnosis, %	2013	2.88
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Ever cigarette smoking over the past 12 months, %	2013	16.73
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Frequent binge drinking over the past 12 months, %	2013	24.38
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Marijuana use over the past 12 months, %	2013	24.68
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History of STIs, %	2013	4.56
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**Supplementary Table S2. Participant characteristics in the sample for analyses on family dinner frequency (Growing Up Today Study 1 [GUTS1], N=8,476)**

	Questionnaire wave	Mean (SD) or %
<b>Sociodemographic covariates</b>		
Age, in years (range: 10-17)	1997	12.78 (1.69)
Gender (boy), %	1996	36.56
Race/ethnicity (Non-Hispanic White ), %	1996	93.49
Geographic region	1996	
West, %		15.71
Midwest, %		35.56
South, %		14.28
Northeast, %		34.46
Prior puberty development, mean (SD)	1996	2.81 (1.37)
Mother's age, in years (range: 33-51)	1997	42.18 (3.58)
Mother's race (white), %	1989	97.38
Mother married, %	1997	93.73
Mother's subjective SES in the US (range: 1-10)	2001	7.18 (1.29)
Mother's subjective SES in the community (range: 1-10)	2001	7.05 (1.54)
Pretax household income	2001	
<\$50,000, %		12.03
\$50,000-\$74,999, %		23.25
\$75,000-\$99,999, %		22.68
≥\$100,000, %		42.04
Census tract college education rate (range: 0%-88%)	2001	31.71% (16.53%)
Census tract median income	2001	
<\$50,000, %		26.44
\$50,000-\$74,999, %		47.36
\$75,000-\$99,999, %		19.06
≥\$100,000, %		7.14
Lived with both biological parents, %	1996	88.58
<b>Maternal health covariates</b>		
Maternal probable depression over the past 4 weeks, %	1997	9.50
Maternal current smoking, %	1997	6.50
<b>Prior health behavioral and health status covariates</b>		
Prior overweight or obesity, %	1996	19.44
Prior cigarette smoking, %	1996	8.61
Prior drinking, %	1997	37.94
<b>Prior frequency of family dinner (covariate)</b>		
	1996	
Never or some days, %		15.93
Most days, %		39.05
Every day, %		45.01
<b>Frequency of family dinner (exposure)</b>		
	1997	
Never or some days, %		19.12

Most days, %		41.92
Every day, %		38.96
<b>Psychological health outcomes</b>		
Life satisfaction (range: 1-6)	2010	4.44 (1.01)
Positive affect (range: 10-60)	2010	40.00 (8.76)
Self-esteem (range: 10-40)	2010	33.75 (4.99)
Emotional processing (range: 4-16)	2010	11.25 (2.75)
Emotional expression (range: 4-16)	2010	10.68 (3.00)
<b>Virtue/Character strength</b>		
Frequency of volunteering (range: 1-4)	2007	1.83 (0.87)
Sense of mission (range: 1-4)	2007	3.06 (0.74)
Forgiveness of others (range: 1-4)	2007	2.94 (0.86)
Registered to vote, %	2007	89.50
<b>Physical health outcomes</b>		
Number of physical health problems (range: 0-4)(range: 0-4)	2010	0.37 (0.59)
Overweight or obesity, %	2010	36.29
<b>Mental health outcomes</b>		
Depressive symptoms over the past week (range: 0-30)	2010	7.19 (4.62)
History of depression diagnosis, %	2013	17.52
Anxiety symptoms over the past week (range: 9-54)	2010	22.25 (8.38)
History of anxiety diagnosis, %	2013	14.27
Probable PTSD, %	2007	7.70
<b>Health Behavioral outcomes</b>		
Overeating over the past year, %	2010	2.26
History of eating disorder diagnosis, %	2013	2.38
Ever cigarette smoking over the past 12 months, %	2010	24.18
Frequent binge drinking over the past 12 months, %	2010	30.61
Marijuana use over the past 12 months, %	2010	25.20
Any other illicit drug use over the past 12 months, %	2010	8.55
Any prescription drug misuse over the past 12 months, %	2010	12.65
Number of lifetime sexual partners (range: 0-8)	2007	3.17 (2.59)
Early sexual initiation, %	2007	11.50
History of STIs, %	2013	13.02
Teen pregnancy, %	2010	2.12
Lifetime history of abnormal Pap test (among females), %	2007	25.40

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**Supplementary Table S3. Participant characteristics across levels of family dinner frequency at study baseline (Growing Up Today Study 1997 questionnaire wave, N=8,459)**

Participant characteristics	Family dinner frequency <sup>a</sup>			<i>p</i> -value
	Never/some days (n=1,617)	Most days (n=3,546)	Every day (n=3,296)	
<i>Sociodemographic factors</i>				
Age, in years, mean (SD) <sup>b</sup>	13.18 (1.67)	12.82 (1.69)	12.54 (1.65)	<.001
Gender (boy), %	30.86	36.86	38.96	<.001
Race/ethnicity (Non-Hispanic White), %	91.81	94.06	93.82	.007
Geographic region				<.001
West, %	13.37	15.18	17.47	
Midwest, %	41.42	36.35	31.68	
South, %	14.74	14.95	13.34	
Northeast, %	30.46	33.52	37.52	
Puberty development, mean (SD)	3.10 (1.39)	2.84 (1.37)	2.63 (1.34)	<.001
Mother's age, in years, mean (SD) <sup>b</sup>	42.60 (3.50)	42.18 (3.53)	41.97 (3.66)	<.001
Mother's race (white), %	96.16	97.69	97.66	.003
Mother married, %	90.60	93.75	95.27	<.001
Mother's subjective SES in the US, mean (SD) <sup>b</sup>	7.06 (1.32)	7.19 (1.28)	7.22 (1.30)	<.001
Mother's subjective SES in the community, mean (SD) <sup>b</sup>	6.90 (1.57)	7.09 (1.53)	7.08 (1.53)	<.001
Pretax household income				<.001
<\$50,000, %	13.77	11.72	11.50	
\$50,000-\$74,999, %	25.65	20.78	24.54	
\$75,000-\$99,999, %	22.32	22.25	23.41	
≥\$100,000, %	38.26	45.25	40.56	
Census tract college education rate, mean (SD) <sup>b</sup>	31.10% (17.14%)	32.05% (16.56%)	31.63% (16.18%)	.15
Census tract median income				.05
<\$50,000, %	28.71	26.28	25.56	
\$50,000-\$74,999, %	45.17	46.90	48.88	
\$75,000-\$99,999, %	18.94	19.01	19.19	
≥\$100,000, %	7.18	7.81	6.38	

Lived with both biological parents, %	83.36	89.00	90.72	<.001
<i>Prior family dinner frequency</i>				<.001
Never or some days, %	57.23	9.72	2.39	
Most days, %	34.38	56.34	22.74	
Everyday, %	8.39	33.93	74.87	
<i>Maternal health</i>				
Maternal depression diagnosis, %	12.47	8.96	8.68	<.001
Maternal current smoking, %	9.30	5.81	5.84	<.001
<i>Prior Health behaviors</i>				
Prior overweight or obesity, %	22.98	19.05	18.15	<.001
Prior cigarette smoking, %	15.24	9.02	4.94	<.001
Prior drinking, %	46.99	40.51	30.75	<.001

Abbreviations: SD, standard deviation; SES, socioeconomic status.

<sup>a</sup> ANOVA or chi-square tests were used to examine the mean levels (SD) of the characteristic or proportion of individuals within each family dinner frequency category with that characteristic. Family dinner frequency was assessed in the 1997 questionnaire wave, and other covariates were assessed either in or prior to the 1997 questionnaire wave.

<sup>b</sup> Range of the following participant characteristics were age (range: 10-17 years), mother's age (range: 33-52 year), mother's subjective SES in the US (range: 1-10), mother's subjective SES in the community (range: 1-10), census tract college education rate (range: 0%-88%), and puberty development (range: 1-5)

**Supplementary Table S4. Parent-child relationship satisfaction and offspring subsequent health and well-being in young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Relationship Satisfaction							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.11	0.04, 0.18	<.0038 <sup>d</sup>		0.28	0.20, 0.35	<.0038 <sup>d</sup>
Emotional expression		0.14	0.06, 0.22	<.0038 <sup>d</sup>		0.33	0.25, 0.41	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.12	-0.19, -0.04	<.0038 <sup>d</sup>		-0.07	-0.14, 0.00	
Overweight/obesity	0.94		0.85, 1.04		0.86		0.77, 0.95	<.0038 <sup>d</sup>
<b>Mental Health</b>								
Depressive symptoms		-0.33	-0.42, -0.24	<.0038 <sup>d</sup>		-0.54	-0.62, -0.45	<.0038 <sup>d</sup>
Depression diagnosis	0.71		0.59, 0.85	<.0038 <sup>d</sup>	0.54		0.44, 0.67	<.0038 <sup>d</sup>
Anxiety diagnosis	0.76		0.60, 0.95	<.05	0.61		0.47, 0.78	<.0038 <sup>d</sup>
<b>Health Behaviors</b>								
Overeating	0.52		0.38, 0.72	<.0038 <sup>d</sup>	0.25		0.16, 0.40	<.0038 <sup>d</sup>
Eating disorder	0.56		0.35, 0.88	<.05	0.42		0.26, 0.68	<.0038 <sup>d</sup>
Cigarette smoking	0.89		0.77, 1.02		0.70		0.54, 0.90	<.01
Frequent binge drinking	1.01		0.90, 1.13		1.01		0.88, 1.15	
Marijuana use	0.90		0.81, 0.99	<.05	0.78		0.69, 0.88	<.0038 <sup>d</sup>
History of STIs	0.71		0.49, 1.04		0.69		0.46, 1.02	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S5. Sensitivity analyses on parenting and offspring subsequent health and well-being young, adjusting for subsequent depressive symptoms and subsequent religious service attendance (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=4,345; Growing Up Today Study 1 [GUTS1] 1997 to 2007, 2010 or 2013 questionnaires, N=8,476<sup>a</sup>)**

Health and well-being outcomes	Relationship satisfaction <sup>b</sup> Top vs. Bottom tertile				Parental authoritativeness <sup>b</sup> Top vs. Bottom tertile				Family dinner frequency <sup>c</sup> Everyday vs. Never/some days			
	RR <sup>d</sup>	$\beta^e$	95% CI	<i>P</i> value Threshold	RR <sup>d</sup>	$\beta^e$	95% CI	<i>P</i> value Threshold	RR <sup>d</sup>	$\beta^e$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>												
Life satisfaction			----- <sup>f</sup>				----- <sup>f</sup>		0.07		-0.01, 0.15	
Positive affect			----- <sup>f</sup>				----- <sup>f</sup>		0.02		-0.05, 0.10	
Self-esteem			----- <sup>f</sup>				----- <sup>f</sup>		0.05		-0.03, 0.13	
Emotional processing		0.21	0.13, 0.28	<.0038 <sup>g</sup>		0.23	0.13, 0.33	<.0038 <sup>g</sup>		0.08	0.01, 0.16	<.05
Emotional expression		0.22	0.14, 0.30	<.0038 <sup>g</sup>		0.26	0.18, 0.33	<.0038 <sup>g</sup>		0.07	-0.03, 0.18	
<b>Physical Health</b>												
No. of physical health problems		-0.05	-0.13, 0.02			-0.07	-0.15, 0.01			-0.01	-0.08, 0.07	
Overweight/obesity	0.88		0.79, 0.99	<.05	0.90		0.82, 0.98	<.05	0.96		0.87, 1.06	
<b>Mental Health</b>												
Depressive symptoms		-0.26	-0.34, -0.17	<.0038 <sup>g</sup>		-0.12	-0.20, -0.05	<.0038 <sup>g</sup>		-0.06	-0.14, 0.01	
Depression diagnosis	0.72		0.59, 0.89	<.0038 <sup>g</sup>	0.97		0.80, 1.19		0.82		0.65, 1.02	
Anxiety symptoms			----- <sup>f</sup>				----- <sup>f</sup>			-0.01	-0.09, 0.07	
Anxiety diagnosis	0.78		0.61, 1.01		1.17		0.91, 1.51		0.93		0.73, 1.19	
Probable PTSD			----- <sup>f</sup>				----- <sup>f</sup>		0.79		0.59, 1.06	
<b>Health Behaviors</b>												
Overeating	0.32		0.20, 0.52	<.0038 <sup>g</sup>	0.52		0.37, 0.75	<.0038 <sup>g</sup>	0.83		0.48, 1.43	
Eating disorder	0.54		0.33, 0.89	<.05	1.16		0.73, 1.86		0.90		0.51, 1.59	
Cigarette smoking	0.75		0.58, 0.98	<.05	0.94		0.75, 1.17		0.93		0.79, 1.11	
Frequent binge drinking	1.00		0.86, 1.17		0.92		0.82, 1.03		0.88		0.78, 1.00	<.05
Marijuana use	0.83		0.73, 0.94	<.0038 <sup>g</sup>	0.98		0.88, 1.10		0.85		0.72, 1.01	
Any other illicit drug use			----- <sup>f</sup>				----- <sup>f</sup>		0.80		0.59, 1.09	
Prescription drug misuse			----- <sup>f</sup>				----- <sup>f</sup>		0.78		0.64, 0.94	<.05
No. of sexual partners			----- <sup>f</sup>				----- <sup>f</sup>			-0.14	-0.21, -0.07	<.0018 <sup>g</sup>
Early sexual initiation			----- <sup>f</sup>				----- <sup>f</sup>		0.69		0.56, 0.84	<.0018 <sup>g</sup>
History of STIs	0.72		0.48, 1.09		0.77		0.54, 1.11		0.73		0.59, 0.89	<.01



Teen pregnancy	----- <sup>f</sup>	----- <sup>f</sup>	0.97	0.48, 1.95	
Abnormal Pap test	----- <sup>f</sup>	----- <sup>f</sup>	0.73	0.62, 0.87	<.0018 <sup>g</sup>
<b>Character and Virtue</b>					
Frequency of volunteering	----- <sup>f</sup>	----- <sup>f</sup>		0.01	-0.07, 0.08
Sense of mission	----- <sup>f</sup>	----- <sup>f</sup>		0.05	-0.03, 0.13
Forgiveness of others	----- <sup>f</sup>	----- <sup>f</sup>		0.07	-0.01, 0.14
Registered to vote	----- <sup>f</sup>	----- <sup>f</sup>	0.99	0.96, 1.02	

Abbreviations: CI, confidence interval; OR, odds ratio; PTSD, posttraumatic stress disorder; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> For analyses on relationship satisfaction and parental authoritativeness, the analytic sample was restricted to those who responded to the GUTS2 2008 (in which the exposure was measured) and 2011 questionnaire (the earliest wave in which the outcomes were measured). For analyses on family dinner frequency, the analytic sample was restricted to those who had responded to the GUTS1 1997 (in which the exposure was measured) and 2007 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and covariates for all analyses.

<sup>b</sup> The analyses on parental relationship satisfaction and parental authoritativeness controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract college education rate, and census tract median income), maternal depression, maternal smoking, participants' prior weight status, prior cigarette smoking, prior history of sexual intercourse, and subsequent depressive symptoms (this was measured in the GUTS2 2011 questionnaire).

<sup>c</sup> The analyses on frequency of family dinner controlled for participants' age, race, sex, geographic region, puberty development, their mother's age, race/ethnicity, marital status, SES (subjective SES, household income, census tract college education rate, and census tract median income), family structure, maternal depression, maternal smoking, participants' prior family dinner frequency, prior weight status, prior cigarette smoking, prior drinking, and subsequent depressive symptoms and subsequent religious service attendance (both measured in the GUTS1 1999 questionnaire). The outcome of abnormal Pap test was only available among female participants (n=5,377).

<sup>d</sup> The effect estimates for the outcomes of over eating, eating disorder, STIs [GUTS2 only], PTSD, other illicit drug use, and teen pregnancy were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>e</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>f</sup> "—" indicates data not available in that cohort. The analyses on relationship satisfaction and parental authoritativeness used data from GUTS2, and the analyses on family dinner frequency used data from GUTS1. Some outcomes were only assessed in GUTS1 but not in GUTS2.

<sup>g</sup>  $P < 0.05$  after Bonferroni correction (the p value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038 for analyses on relationship satisfaction and parental authoritativeness; the p value cutoff for Bonferroni correction=0.05/28 outcomes =0.0018 for analyses on family dinner frequency).

**Supplementary Table S6. Parent-child relationship satisfaction and offspring subsequent health and well-being in young adulthood, stratified by age (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Relationship satisfaction (Top vs. bottom tertile)							
	Less than 18 years of age (n=2,441)				18 years of age or older (n=3,012)			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.27	0.17, 0.38	<.0038 <sup>d</sup>		0.28	0.17, 0.38	<.0038 <sup>d</sup>
Emotional expression		0.36	0.25, 0.47	<.0038 <sup>d</sup>		0.31	0.19, 0.44	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.08	-0.19, 0.03			-0.07	-0.18, 0.05	
Overweight/obesity	0.89		0.75, 1.07		0.84		0.74, 0.96	<.01
<b>Mental Health</b>								
Depressive symptoms		-0.60	-0.71, -0.49	<.0038 <sup>d</sup>		-0.48	-0.60, -0.37	<.0038 <sup>d</sup>
Depression diagnosis	0.53		0.34, 0.83	<.01	0.54		0.42, 0.69	<.0038 <sup>d</sup>
Anxiety diagnosis	0.57		0.39, 0.85	<.01	0.64		0.49, 0.85	<.0038 <sup>d</sup>
<b>Health Behaviors</b>								
Overeating	0.27		0.13, 0.57	<.0038 <sup>d</sup>	0.24		0.13, 0.42	<.0038 <sup>d</sup>
Cigarette smoking	0.60		0.45, 0.80	<.0038 <sup>d</sup>	0.79		0.59, 1.05	
Frequent binge drinking	0.89		0.71, 1.11		1.10		0.94, 1.29	
Marijuana use	0.75		0.63, 0.89	<.0038 <sup>d</sup>	0.81		0.68, 0.97	<.05

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup>The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup>The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup>All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup>*P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038; the models examining the outcomes of eating disorder and STIs did not converge due to the small case number).

**Supplementary Table S7. Mother-child relationship satisfaction and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,430<sup>a</sup>)**

Health and well-being outcomes	Mother-child relationship satisfaction							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.14	0.07, 0.21	<.0038 <sup>d</sup>		0.29	0.22, 0.36	<.0038 <sup>d</sup>
Emotional expression		0.16	0.08, 0.24	<.0038 <sup>d</sup>		0.34	0.26, 0.42	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.06	-0.13, 0.01			-0.03	-0.11, 0.04	
Overweight/obesity	0.92		0.82, 1.03		0.87		0.79, 0.96	<.01
<b>Mental Health</b>								
Depressive symptoms		-0.29	-0.36, -0.21	<.0038 <sup>d</sup>		-0.47	-0.55, -0.40	<.0038 <sup>d</sup>
Depression diagnosis	0.75		0.64, 0.89	<.0038 <sup>d</sup>	0.60		0.49, 0.73	<.0038 <sup>d</sup>
Anxiety diagnosis	0.82		0.65, 1.03		0.64		0.49, 0.84	<.0038 <sup>d</sup>
<b>Health Behaviors</b>								
Overeating	0.54		0.38, 0.76	<.0038 <sup>d</sup>	0.27		0.18, 0.43	<.0038 <sup>d</sup>
Eating disorder	0.70		0.44, 1.12		0.57		0.35, 0.92	<.05
Cigarette smoking	0.86		0.75, 1.00		0.69		0.55, 0.87	<.01
Frequent binge drinking	0.98		0.86, 1.12		0.98		0.87, 1.10	
Marijuana use	0.88		0.80, 0.98	<.05	0.78		0.69, 0.88	<.0038 <sup>d</sup>
History of STIs	0.74		0.51, 1.07		0.81		0.55, 1.19	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S8. Father-child relationship satisfaction and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,252<sup>a</sup>)**

Health and well-being outcomes	Father-child relationship satisfaction							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.08	0.02, 0.15	<.01		0.26	0.18, 0.34	<.0038 <sup>d</sup>
Emotional expression		0.13	0.06, 0.20	<.0038 <sup>d</sup>		0.31	0.23, 0.40	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.10	-0.20, -0.01	<.05		-0.08	-0.15, -0.01	<.05
Overweight/obesity	0.92		0.83, 1.02		0.85		0.77, 0.94	<.0038 <sup>d</sup>
<b>Mental Health</b>								
Depressive symptoms		-0.27	-0.38, -0.16	<.0038 <sup>d</sup>		-0.51	-0.59, -0.43	<.0038 <sup>d</sup>
Depression diagnosis	0.78		0.62, 0.98	<.05	0.55		0.44, 0.68	<.0038 <sup>d</sup>
Anxiety diagnosis	0.82		0.64, 1.05		0.63		0.49, 0.81	<.0038 <sup>d</sup>
<b>Health Behaviors</b>								
Overeating	0.43		0.30, 0.60	<.0038 <sup>d</sup>	0.27		0.17, 0.42	<.0038 <sup>d</sup>
Eating disorder	0.54		0.34, 0.87	<.05	0.39		0.23, 0.67	<.0038 <sup>d</sup>
Cigarette smoking	0.87		0.76, 1.00		0.71		0.57, 0.88	<.0038 <sup>d</sup>
Frequent binge drinking	0.99		0.88, 1.10		1.00		0.88, 1.13	
Marijuana use	0.87		0.78, 0.98	<.05	0.79		0.69, 0.90	<.0038 <sup>d</sup>
History of STIs	0.71		0.47, 1.05		0.67		0.44, 1.01	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S9. Simultaneous mother- and father-child relationship satisfaction, and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,246<sup>a</sup>)**

Health and well-being outcomes	Maternal relationship satisfaction Top vs. Bottom tertile				Paternal relationship satisfaction Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.22	0.11, 0.33	<.0038 <sup>d</sup>		0.11	-0.01, 0.22	
Emotional expression		0.24	0.14, 0.34	<.0038 <sup>d</sup>		0.16	0.05, 0.26	<.01
<b>Physical Health</b>								
No. of physical health problems		0.03	-0.09, 0.15			-0.11	-0.22, 0.00	
Overweight/obesity	0.96		0.83, 1.11		0.88		0.77, 1.00	
<b>Mental Health</b>								
Depressive symptoms		-0.22	-0.33, -0.11	<.0038 <sup>d</sup>		-0.36	-0.48, -0.25	<.0038 <sup>d</sup>
Depression diagnosis	0.84		0.65, 1.07		0.61		0.46, 0.81	<.0038 <sup>d</sup>
Anxiety diagnosis	0.80		0.56, 1.14		0.73		0.52, 1.03	
<b>Health Behaviors</b>								
Overeating	0.51		0.28, 0.92	<.05	0.43		0.23, 0.78	<.01
Eating disorder	1.27		0.65, 2.46		0.33		0.16, 0.69	<.0038 <sup>d</sup>
Cigarette smoking	0.79		0.61, 1.03		0.83		0.64, 1.08	
Frequent binge drinking	0.97		0.81, 1.17		1.02		0.83, 1.24	
Marijuana use	0.84		0.69, 1.03		0.89		0.71, 1.11	
History of STIs	1.03		0.51, 2.10		0.65		0.31, 1.33	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposures were measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposures, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S10. Parental authoritative and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Parental authoritative							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.14	0.05, 0.24	<.01		0.28	0.18, 0.38	<.0038 <sup>d</sup>
Emotional expression		0.19	0.10, 0.27	<.0038 <sup>d</sup>		0.33	0.25, 0.40	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.06	-0.14, 0.02			-0.08	-0.16, -0.01	<.05
Overweight/obesity	0.90		0.81, 1.00	<.05	0.88		0.80, 0.96	<.01
<b>Mental Health</b>								
Depressive symptoms		-0.20	-0.27, -0.12	<.0038 <sup>d</sup>		-0.31	-0.38, -0.24	<.0038 <sup>d</sup>
Depression diagnosis	0.87		0.73, 1.05		0.80		0.64, 1.00	<.05
Anxiety diagnosis	0.94		0.69, 1.28		0.98		0.75, 1.29	
<b>Health Behaviors</b>								
Overeating	0.55		0.38, 0.81	<.0038 <sup>d</sup>	0.45		0.32, 0.64	<.0038 <sup>d</sup>
Eating disorder	0.70		0.40, 1.24		0.93		0.59, 1.48	
Cigarette smoking	0.89		0.74, 1.06		0.89		0.73, 1.09	
Frequent binge drinking	0.99		0.88, 1.12		0.92		0.82, 1.03	
Marijuana use	0.92		0.78, 1.08		0.95		0.85, 1.06	
History of STIs	0.90		0.56, 1.44		0.74		0.52, 1.06	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S11. Parental authoritative and offspring subsequent health and well-being from adolescence to young adulthood, stratified by age (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Parental authoritative (Top vs. Bottom tertile)							
	Less than 18 years of age (n=2,441)				18 years of age or older (n=3,012)			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.24	0.10, 0.37		0.31	0.21, 0.41		<.0038 <sup>d</sup>
Emotional expression		0.32	0.21, 0.43		0.34	0.23, 0.44		<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.09	-0.18, 0.01		-0.08	-0.19, 0.03		
Overweight/obesity	0.89		0.76, 1.05		0.87		0.78, 0.97	<.05
<b>Mental Health</b>								
Depressive symptoms		-0.38	-0.50, -0.26		-0.25	-0.34, -0.16		<.0038 <sup>d</sup>
Depression diagnosis	0.88		0.62, 1.25		0.75		0.58, 0.98	<.05
Anxiety diagnosis	0.95		0.65, 1.40		1.01		0.76, 1.34	
<b>Health Behaviors</b>								
Overeating	0.47		0.27, 0.82	<.01	0.43		0.28, 0.67	<.0038 <sup>d</sup>
Cigarette smoking	0.71		0.52, 0.96	<.05	1.02		0.81, 1.29	
Frequent binge drinking	0.89		0.74, 1.07		0.94		0.82, 1.08	
Marijuana use	0.84		0.71, 0.99	<.05	1.03		0.87, 1.21	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038; the models examining the outcomes of eating disorder and STIs did not converge due to the small case number).

**Supplementary Table S12. Parental authoritarianism and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Parental authoritarianism							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		-0.13	-0.20, -0.06	<.0038 <sup>d</sup>		-0.26	-0.35, -0.17	<.0038 <sup>d</sup>
Emotional expression		-0.11	-0.18, -0.04	<.0038 <sup>d</sup>		-0.25	-0.33, -0.16	<.0038 <sup>d</sup>
<b>Physical Health</b>								
No. of physical health problems		-0.03	-0.10, 0.05			0.04	-0.04, 0.13	
Overweight/obesity	0.98		0.89, 1.08		1.08		0.98, 1.19	
<b>Mental Health</b>								
Depressive symptoms		0.02	-0.05, 0.09			0.12	0.05, 0.20	<.0038 <sup>d</sup>
Depression diagnosis	1.04		0.88, 1.24		1.08		0.87, 1.33	
Anxiety diagnosis	0.87		0.65, 1.15		0.82		0.61, 1.09	
<b>Health Behaviors</b>								
Overeating	0.76		0.50, 1.17		1.42		0.99, 2.03	
Eating disorder	0.87		0.54, 1.41		0.86		0.54, 1.37	
Cigarette smoking	0.99		0.82, 1.20		1.01		0.86, 1.19	
Frequent binge drinking	0.98		0.87, 1.11		0.98		0.87, 1.09	
Marijuana use	0.95		0.84, 1.07		0.95		0.83, 1.07	
History of STIs	1.06		0.71, 1.58		1.14		0.76, 1.73	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).



**Supplementary Table S13. Parental permissiveness and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 questionnaire wave, N=5,453<sup>a</sup>)**

Health and well-being outcomes	Parental permissiveness							
	Middle vs. Bottom tertile				Top vs. Bottom tertile			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value threshold
<b>Psychological Well-being</b>								
Emotional processing		0.00	-0.08, 0.08		0.05	-0.03, 0.13		
Emotional expression		0.01	-0.08, 0.11		0.08	0.01, 0.16		<.05
<b>Physical Health</b>								
No. of physical health problems		-0.04	-0.13, 0.05		-0.10	-0.19, -0.01		<.05
Overweight/obesity	0.97		0.87, 1.09		0.95		0.85, 1.07	
<b>Mental Health</b>								
Depressive symptoms		-0.07	-0.20, 0.06		-0.12	-0.23, -0.01		<.05
Depression diagnosis	0.90		0.72, 1.12		0.87		0.72, 1.05	
Anxiety diagnosis	0.77		0.62, 0.96	<.05	0.85		0.70, 1.04	
<b>Health Behaviors</b>								
Overeating	0.69		0.47, 1.02		0.83		0.59, 1.17	
Eating disorder	0.95		0.57, 1.58		1.08		0.66, 1.77	
Cigarette smoking	1.00		0.83, 1.20		0.97		0.78, 1.21	
Frequent binge drinking	1.09		0.96, 1.23		1.07		0.93, 1.23	
Marijuana use	1.14		1.01, 1.28	<.05	1.17		1.04, 1.31	<.01
History of STIs	0.97		0.51, 1.85		0.89		0.60, 1.31	

Abbreviations: CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder and STIs were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup> *P* <0.05 after Bonferroni correction (the *p* value cutoff for Bonferroni correction=0.05/13 outcomes=0.0038).

**Supplementary Table S14. Simultaneous parent-child relationship satisfaction, parental authoritarianism, parental authoritarianism and parental permissiveness, and offspring subsequent health and well-being (Growing Up Today Study 2 [GUTS2] 2008 to 2011 or 2013 wave, N=5,453<sup>a</sup>)**

	Ref	Relationship satisfaction (top vs. bottom tertile) OR/RR/ $\beta$ (95% CI)	Parental authoritarianism (top vs. bottom tertile) OR/RR/ $\beta$ (95% CI)	Parental authoritarianism (top vs. bottom tertile) OR/RR/ $\beta$ (95% CI)	Parental permissiveness (top vs. bottom tertile) OR/RR/ $\beta$ (95% CI)
<b>Psychological Well-being</b>					
Emotional processing	0.00	0.19 (0.10, 0.28)***	0.16 (0.06, 0.27)**	-0.17 (-0.26, -0.08)***	-0.03 (-0.11, 0.05)
Emotional expression	0.00	0.23 (0.14, 0.31)***	0.21 (0.13, 0.29)***	-0.13 (-0.22, -0.05)**	-0.01 (-0.10, 0.07)
<b>Physical health</b>					
No. of physical health problems	0.00	-0.04 (-0.12, 0.04)	-0.04 (-0.12, 0.04)	0.02 (-0.07, 0.10)	-0.08 (-0.17, 0.01)
Overweight/obesity	1.00	0.89 (0.79, 1.00)	0.92 (0.83, 1.03)	1.03 (0.92, 1.15)	0.99 (0.88, 1.13)
<b>Mental health</b>					
Depressive symptoms	0.00	-0.49 (-0.59, -0.39)***	-0.13 (-0.22, -0.05)***	-0.01 (-0.09, 0.06)	0.01 (-0.10, 0.11)
Depression diagnosis	0.00	0.53 (0.43, 0.66)***	1.00 (0.79, 1.27)	0.95 (0.76, 1.18)	0.98 (0.79, 1.21)
Anxiety diagnosis	1.00	0.55 (0.42, 0.72)***	1.14 (0.81, 1.61)	0.76 (0.55, 1.04)	0.91 (0.74, 1.11)
<b>Health Behaviors</b>					
Overeating	0.00	0.27 (0.16, 0.45)***	0.66 (0.44, 1.01)	0.97 (0.65, 1.44)	1.20 (0.83, 1.72)
Eating disorder	1.00	0.33 (0.19, 0.56)***	1.23 (0.71, 2.13)	0.73 (0.44, 1.21)	1.26 (0.76, 2.10)
Cigarettes smoking	1.00	0.69 (0.53, 0.90)*	0.98 (0.76, 1.26)	0.94 (0.75, 1.18)	1.05 (0.86, 1.27)
Frequent binge drinking	1.00	1.04 (0.88, 1.22)	0.87 (0.75, 1.01)	0.94 (0.84, 1.06)	1.09 (0.94, 1.27)
Marijuana use	1.00	0.75 (0.65, 0.85)***	0.97 (0.85, 1.10)	0.89 (0.78, 1.02)	1.24 (1.09, 1.41)***
History of STIs	1.00	0.74 (0.46, 1.20)	0.85 (0.55, 1.31)	1.00 (0.64, 1.57)	0.98 (0.66, 1.48)

CI, confidence interval; OR, odds ratio; RR, risk ratio; STIs, sexually transmitted infections.

\*p < 0.05 before Bonferroni correction; \*\*p < 0.01 before Bonferroni correction; \*\*\*p < 0.05 after Bonferroni correction (the p value cutoff for Bonferroni correction = 0.05/13 outcomes = 0.0038)

The analytic sample was restricted to those who responded to the 2008 (in which the exposure was measured) and the 2011 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and the covariates. All models controlled for participants' age, race/ethnicity, sex, geographic region, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract-level college education rate, and tract-level median income), maternal depression, maternal smoking, and prior values of the outcome variables wherever data were available (participants' prior weight status, prior cigarette smoking, and prior history of sexual intercourse).

The effect estimates were OR (binomial distribution, rare outcome defined as the prevalence < 10%), RR (Poisson distribution, common outcome defined as prevalence  $\geq$  10%), or  $\beta$  (standardized effect size for continuous outcomes). If the reference value was "0", this indicates the outcome was a continuous variable, and the effect estimate was  $\beta$ ; if the reference value was "1", this indicates the outcome was a binary variable, and the effect estimate was either OR or RR, depending on the distribution of the outcome variable.

**Supplementary Table S15. Family dinner frequency and offspring subsequent health and well-being from adolescence to young adulthood (Growing Up Today Study 1 1997 to 2007, 2010 or 2013 questionnaire wave, N=8,476 <sup>a</sup>)**

Health and well-being outcomes	Family dinner frequency							
	Most days vs. Never/some days				Everyday vs. Never/some days			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value Threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value Threshold
<b>Psychological Well-being</b>								
Life satisfaction		0.06	-0.01, 0.14			0.12	0.04, 0.20	<0.01
Positive affect		0.06	-0.01, 0.13			0.09	0.01, 0.16	<0.05
Self-esteem		0.04	-0.03, 0.11			0.12	0.04, 0.19	<0.01
Emotional processing		0.06	-0.01, 0.13			0.09	0.01, 0.17	<0.05
Emotional expression		0.08	-0.01, 0.16			0.08	-0.02, 0.19	
<b>Physical Health</b>								
No. of physical health problems		0.02	-0.05, 0.09			-0.02	-0.10, 0.06	
Overweight/obesity	0.98		0.89, 1.08		0.95		0.86, 1.05	
<b>Mental Health</b>								
Depressive symptoms		-0.09	-0.16, -0.01	<0.05		-0.13	-0.21, -0.05	<0.0018 <sup>d</sup>
Depression diagnosis	0.85		0.71, 1.01		0.76		0.60, 0.95	<0.05
Anxiety symptoms		-0.02	-0.09, 0.06			-0.06	-0.15, 0.02	
Anxiety diagnosis	0.91		0.75, 1.10		0.87		0.68, 1.10	
Probable PTSD	0.81		0.63, 1.04		0.71		0.53, 0.95	<0.05
<b>Health Behaviors</b>								
Overeating	0.62		0.38, 1.03		0.74		0.43, 1.28	
Eating disorder	0.92		0.58, 1.48		0.85		0.48, 1.48	
Cigarette smoking	0.91		0.79, 1.03		0.89		0.75, 1.06	
Frequent binge drinking	0.95		0.85, 1.05		0.87		0.77, 0.98	<0.05
Marijuana use	0.96		0.84, 1.09		0.82		0.70, 0.97	<0.05
Any other illicit drug use	0.85		0.66, 1.09		0.76		0.56, 1.03	
Prescription drug misuse	0.82		0.69, 0.98	<0.05	0.74		0.61, 0.90	<0.01
No. of sexual partners		-0.10	-0.17, -0.04	<0.01		-0.17	-0.24, -0.10	<0.0018 <sup>d</sup>
Early sexual initiation	0.73		0.62, 0.87	<0.0018 <sup>d</sup>	0.64		0.53, 0.78	<0.0018 <sup>d</sup>
History of STIs	0.80		0.68, 0.94	<0.01	0.71		0.58, 0.87	<0.0018 <sup>d</sup>
Teen pregnancy	1.15		0.65, 2.04		0.89		0.44, 1.78	
Abnormal Pap test	0.83		0.72, 0.96	<0.05	0.72		0.61, 0.84	<0.0018 <sup>d</sup>
<b>Character and Virtue</b>								
Frequency of volunteering		0.03	-0.04, 0.10			0.02	-0.06, 0.10	
Sense of mission		0.03	-0.04, 0.11			0.08	-0.01, 0.16	
Forgiveness of others		0.04	-0.03, 0.11			0.11	0.03, 0.18	<0.01
Registered to vote	1.00		0.98, 1.03		0.99		0.96, 1.02	

Abbreviations: CI, confidence interval; OR, odds ratio; PTSD, posttraumatic stress disorder; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who had responded to the GUTS1 1997 (in which the exposure was measured) and 2007 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and covariates for all analyses. The outcome of abnormal Pap test was only available among female participants (n=5,377). All models controlled for participants' age, race/ethnicity, sex, geographic region, family structure, puberty development, their mother's age, race, marital status, SES (subjective SES, household income, census tract college education rate, and census tract median income), maternal depression, maternal smoking, participants' prior family dinner frequency, prior weight status, prior cigarette smoking, and prior drinking.

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder, PTSD, other illicit drug use, and teen pregnancy were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup>  $P < 0.05$  after Bonferroni correction (the p value cutoff for Bonferroni correction =  $0.05/28$  outcomes = 0.0018 for analyses on family dinner frequency).

**Supplementary Table S16. Family dinner frequency and offspring subsequent health and well-being from adolescence to young adulthood, stratified by age (Growing Up Today Study 1 1997 to 2007, 2010 or 2013 questionnaire wave, N=8,476 <sup>a</sup>)**

Health and well-being outcomes	Family dinner frequency (Everyday vs. Never/some days)							
	Less than 13 years of age (n=3,946)				13 years of age or older (n=4,530)			
	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value Threshold	RR <sup>b</sup>	$\beta^c$	95% CI	<i>P</i> value Threshold
<b>Psychological Well-being</b>								
Life satisfaction		0.14	0.01, 0.27	<.05		0.10	0.00, 0.21	
Positive affect		0.09	-0.02, 0.21			0.07	-0.03, 0.17	
Self-esteem		0.12	-0.01, 0.24			0.12	0.01, 0.22	<.05
Emotional processing		0.13	0.01, 0.25	<.05		0.08	-0.03, 0.18	
Emotional expression		0.08	-0.06, 0.22			0.09	-0.04, 0.22	
<b>Physical Health</b>								
No. of physical health problems		0.00	-0.12, 0.11			-0.02	-0.13, 0.09	
Overweight/obesity	0.98		0.79, 1.21		0.94		0.83, 1.05	
<b>Mental Health</b>								
Depressive symptoms		-0.07	-0.20, 0.07			-0.17	-0.28, -0.05	<.01
Depression diagnosis	0.88		0.64, 1.20		0.68		0.53, 0.88	<.01
Anxiety symptoms		-0.04	-0.17, 0.08			-0.07	-0.19, 0.04	
Anxiety diagnosis	1.08		0.78, 1.48		0.71		0.54, 0.94	<.05
Probable PTSD	0.62		0.41, 0.94	<.05	0.83		0.56, 1.24	
<b>Health Behaviors</b>								
Overeating	0.63		0.30, 1.33		0.83		0.38, 1.80	
Cigarette smoking	0.86		0.69, 1.07		0.92		0.74, 1.15	
Frequent binge drinking	0.89		0.74, 1.08		0.82		0.69, 0.96	<.05
Marijuana use	0.86		0.70, 1.06		0.77		0.63, 0.96	<.05
Any other illicit drug use	0.81		0.53, 1.26		0.69		0.45, 1.06	
Prescription drug misuse	0.79		0.60, 1.05		0.68		0.52, 0.89	
No. of sexual partners		-0.22	-0.32, -0.11	<.0018 <sup>d</sup>		-0.14	-0.23, -0.04	<.01
Early sexual initiation	0.65		0.49, 0.88	<.01	0.62		0.48, 0.81	<.0018 <sup>d</sup>
History of STIs	0.57		0.43, 0.76	<.0018 <sup>d</sup>	0.86		0.63, 1.16	
Teen pregnancy	0.50		0.19, 1.27		1.32		0.48, 3.64	
Abnormal Pap test	0.69		0.52, 0.93	<.05	0.74		0.60, 0.91	<.01
<b>Character and Virtue</b>								
Frequency of volunteering		0.03	-0.09, 0.15			0.02	-0.09, 0.12	
Sense of mission		0.09	-0.03, 0.21			0.07	-0.04, 0.18	
Forgiveness of others		0.11	-0.01, 0.23			0.12	0.02, 0.22	<.05
Registered to vote	1.01		0.96, 1.06		0.98		0.95, 1.01	

Abbreviations: CI, confidence interval; OR, odds ratio; PTSD, posttraumatic stress disorder; RR, risk ratio; STIs, sexually transmitted infections.

<sup>a</sup> The analytic sample was restricted to those who had responded to the GUTS1 1997 (in which the exposure was measured) and 2007 questionnaire (the earliest wave in which the outcomes were measured). Multiple imputation was performed to impute missing data on the exposure, outcomes and covariates for all analyses. The outcome of abnormal Pap test was only available among female participants (n=5,377). All models controlled for age, race/ethnicity, sex, geographic region, family structure, puberty development, mother's age, race, marital status, SES (subjective SES, household income, census tract college education rate, and census tract median income), maternal depression, maternal smoking, participants' prior family dinner frequency, prior weight status, prior cigarette smoking, and prior drinking.

<sup>b</sup> The effect estimates for the outcomes of over eating, eating disorder, PTSD, other illicit drug use, and teen pregnancy were odds ratio (examined with Binomial distribution, logit link; these outcomes were rare [prevalence<10%], so the odds ratio would approximate RR). The effect estimates for other dichotomized outcomes were RR (examined with Poisson distribution, log link).

<sup>c</sup> All continuous outcomes were standardized (mean=0, standard deviation=1), and  $\beta$  was the standardized effect size.

<sup>d</sup>  $P < 0.05$  after Bonferroni correction (the p value cutoff for Bonferroni correction =  $0.05/28$  outcomes = 0.0018 for analyses on family dinner frequency; the model examining the outcome of eating disorder did not converge due to the small case number).

**Supplementary Table S17. Baseline characteristics of the participants remaining in the cohort and participants lost to follow-up (Growing Up Today Study 2 [GUTS2] 2008 to 2011 questionnaire wave, N=7,112; Growing Up Today Study 1 [GUTS1] 1997 to 2007 questionnaire wave, N=12,949)**

Baseline characteristics	GUTS1			GUTS2		
	Retained N=8,476	Lost N=4,473	<i>P</i> -value	Retained N=5,453	Lost N=1,659	<i>P</i> -value
Age, mean (SD) <sup>b</sup>	12.78 (1.69)	12.81 (1.66)	.44	17.75 (1.90)	17.79 (1.85)	<.46
Gender (boy), %	36.56	57.10	<.001	40.58	48.28	<.001
Race/ethnicity (Non-Hispanic White ), %	93.49	93.92	.34	92.86	93.03	.81
Geographic region			<.001			.05
West, %	15.71	11.65		16.76	14.89	
Midwest, %	35.56	35.66		36.53	36.56	
South, %	14.28	14.74		15.10	13.80	
Northeast, %	34.46	37.95		31.61	34.75	
Mother's age, mean (SD) <sup>b</sup>	42.18(3.58)	41.88 (3.50)	<.001	49.14 (3.65)	49.07 (3.57)	.50
Mother's race (white), %	97.38	97.37	.99	97.85	98.07	.59
Mother married, %	93.73	92.77	.04	92.16	90.66	.05
Mother's subjective SES (US), mean (SD) <sup>b</sup>	7.18 (1.29)	7.02 (1.33)	<.001	7.23 (1.30)	7.17 (1.36)	.10
Mother's subjective SES (community), mean (SD) <sup>b</sup>	7.05 (1.54)	6.91 (1.56)	<.001	7.12 (1.51)	7.10 (1.54)	.71
Pretax household income (≥\$100,000), %	42.04	37.06	<.001	40.66	38.60	.41
Census tract college education rate, mean (SD) <sup>b</sup>	31.71 (16.53)	29.50 (15.70)		34.44 (16.31)	32.75 (15.76)	<.001
Census tract median income (≥\$100,000), %	7.14	5.62	<.001	8.27	7.29	.13
Maternal depression diagnosis, %	9.50	12.06	<.001	9.46	11.15	.04
Maternal smoking, %	6.50	7.96	.002	3.14	4.26	.03
Overweight or obesity, %	19.44	22.19	<.001	18.94	20.46	.20
Cigarette smoking, %	8.61	11.76	<.001	14.95	18.45	.001
Puberty development, mean (SD)	2.81 (1.37)	2.70 (1.33)	<.001	4.32 (0.95)	4.22 (0.99)	.001

Note: ANOVA or chi-square tests were used to examine the mean levels (SD) of the characteristic or proportion of individuals within each follow-up category with that characteristic.

**Supplementary Table S18. Individual items of the parent-child relationship satisfaction scale and the parenting styles scale**

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***The parent-child relationship satisfaction scale***

I am satisfied with

1. The love and affection my mother/father shows me.
2. The support my mother/father and I give each other.
3. How many things my mother/father and I have in common.
4. The way my mother/father and I resolve conflicts.
5. The respect my mother/father shows me.
6. The fun my mother/father and I have together
7. The way my mother/father and I communicate with each other.
8. My relationship with my mother/father in general.
9. The amount of time my mother/father and I spend together.

Response options ranged from 1 (strongly disagree) to 5 (strongly agree).

$\alpha$  maternal relationship satisfaction=0.92;  $\alpha$  paternal relationship satisfaction=0.93.

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***The parenting styles scale***

As I was growing up, my mother/father...

1. Allowed me to decide most things for myself without a lot of direction.
2. Expected me to do as I was told immediately without asking any questions.
3. Allowed me to discuss with them their expectations when I felt they were unreasonable.
4. Encouraged verbal give-and-take whenever I felt that family rules and restrictions were unreasonable.
5. Did not allow me to question any decision they had made.
6. Did what the children in the family wanted when making family decisions.

Response options ranged from 1 (strongly disagree) to 5 (strongly agree).

Authoritativeness is assessed in Questions 3 and 4 ( $\alpha$  both maternal and paternal authoritativeness=0.78);

Authoritarianism is assessed in Questions 2 and 5 ( $\alpha$  both maternal and paternal authoritarianism=0.52);

Permissiveness is assessed in Questions 1 and 6 ( $\alpha$  maternal permissive=0.81;  $\alpha$  paternal permissive=0.36);

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**Supplementary Table S19. Timing of variable assessment in this study**

<b>GUTS1 (offspring assessment)</b>						
	1996	1997	1999	2007	2010	2013
<b>Exposure</b>						
Family dinner frequency		√				
<b>Outcomes</b>						
Life satisfaction					√	
Positive affect					√	
Self-esteem					√	
Emotional processing					√	
Emotional expression					√	
Frequency of volunteering				√		
Sense of mission				√		
Forgiveness of others				√		
Registered to vote				√		
Number of physical problems					√	
Depressive symptoms					√	
Depression diagnosis						√
Anxiety symptoms					√	
Anxiety diagnosis						√
Probable PTSD				√		
Overweight/obesity					√	
Overeating					√	
Eating disorder						√
Cigarettes smoking					√	
Frequent binge drinking					√	
Marijuana use					√	
Other illicit drug use					√	
Non-medical prescription drug use					√	
Number of lifetime sexual partners				√		
Early sexual initiation				√		
History of STIs						√
Teen pregnancy					√	
Abnormal Pap test				√		
<b>Covariates</b>						
Prior family dinner frequency	√					
Age		√				
Sex	√					
Race/ethnicity	√					
Geographic region	√					

Family structure	√					
Prior weight status	√					
Prior smoking	√					
Prior drinking	√					
Prior puberty development	√					
Subsequent religious service attendance (for sensitivity analysis)			√			
Subsequent depressive symptoms (for sensitivity analysis)			√			

<b>GUTS2 (offspring assessment)</b>						
	2004	2006	2008	2011	2013	
<b>Exposures</b>						
Parent-child relationship satisfaction			√			
Parental authoritativeness			√			
Parental authoritarianism			√			
Parental permissiveness			√			
<b>Outcomes</b>						
Emotional processing				√		
Emotional expression				√		
Number of physical health problems						√
Depressive symptoms						√
Depression diagnosis						√
Anxiety diagnosis						√
Overweight/obesity						√
Overeating				√		
Eating disorder						√
Cigarettes smoking						√
Frequent binge drinking						√
Marijuana use						√
History of STIs						√
<b>Covariates</b>						
Age			√			
Sex	√					
Race/ethnicity	√					
Geographic region	√					
Prior weight status		√				
Prior smoking			√			
Prior history of sexual intercourse			√			
Prior puberty development		√				
Subsequent depressive symptoms				√		

(for sensitivity analysis)					
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<b>NHSII (maternal assessment)</b>						
	1989	1997	2001	2005	2007	2008
Age		√				√
Race	√					
Marital status		√		√		
Subjective SES			√			
Household income			√			
Tract-level median income			√			
Tract-level college education rate			√			
Maternal probable depression		√				
Maternal depression diagnosis					√	
Maternal current smoking		√			√	

**Supplementary Table S20. Assessment of all outcome variables in this study**

<b>Outcome variable</b>	<b>Cohort and questionnaire wave</b>	<b>Measurement</b>	<b>Range or categories</b>
Life satisfaction	GUTS1 2010	One item from the Rand Mental Health Inventory “Have you felt happy, satisfied or please with your personal life”	Range: 1 (none of the time) to 6 (all of the time)
Positive affect	GUTS1 2010	Ten items from the Rand Mental Health Inventory	Range: 10 to 60
Self-esteem	GUTS1 2010	Rosenberg Self-esteem Scale	Range: 10 to 60
Emotional processing	GUTS1 2010 & 2 2013	Emotional processing subscale from the Emotional Approach Coping Scale	Range: 4 to 16
Emotional expression	GUTS1 2010 & 2 2013	Emotional expression subscale from the Emotional Approach Coping Scale	Range: 4 to 16
Frequency of volunteering	GUTS1 2010	One item “In an average month, how many hours do you spend on volunteer work, community service, or helping people outside of your home without getting paid”	Range: 1 (0 hour) to 4 (10 or more hours)
Sense of mission	GUTS1 2007	One item “I have a sense of mission or calling in my own life”	Range: 1 (strongly agree) to 4 (strongly disagree)
Forgiveness of others	GUTS1 2007	One item “Because of my spiritual or religious beliefs, I have forgiven those who hurt me”	Range: 1 (always or almost always) to 4 (never)
Registered to vote	GUTS1 2007	One item: ”Are you currently registered to vote”	Yes, no
Number of physical health problems	GUTS1 2010 & 2 2013	Total number of the following conditions reported: had ever been told by a health care provider that they had cancer, diabetes, high cholesterol, high blood pressure or asthma	Ranged from 0 to 4 in GUTS1 and 0-3 in GUTS2
Depressive symptoms	GUTS1 2010 & 2 2013	Center for Epidemiologic Studies Depression Scale	Ranged: 10 to 30
Depression diagnosis	GUTS1 & 2 2013	Ever been told by a healthcare provider that they had depression	Yes, no
Anxiety symptoms	GUTS1 2010	9 items from the Worry/Sensitivity Subscale of the Revised Children’s Manifest Anxiety Scale	9 to 54
Anxiety diagnosis	GUTS1 & 2 2013	Ever been told by a healthcare provider they had anxiety	Yes, no
Probable PTSD	GUTS1 2007	A 7-item short screening scale, with 6 or more symptoms as the cutoff to define probable PTSD	Yes, no
Overweight/obesity	GUTS1 2010 & 2 2011	BMI $\geq$ 25 as kg/m <sup>2</sup> as overweight or obese	Yes, no

Overeating	GUTS1 2010 & 2 2011	One item: “How often did you eat a very large amount of food during the past year”, with at least weekly episodes as the cutoff to define overeating	Yes, no
Eating disorder	GUTS1 & 2 2013	One item: “Have you ever been told by a health care provider that you had the following conditions: Anorexia, nervosa, bulimia nervosa, binge eating disorder, and other eating disorder. Those who reported any of the conditions were considered as having eating disorder diagnosis	Yes, no
Cigarettes smoking	GUTS1 2010 & 2 2013	One item: “In the past 12 months, have you smoked a cigarette”	Yes, no
Frequent binge drinking	GUTS1 2010 & 2 2013	One item: “In the past 12 months, how many times did you drink 5 (for male)/4(for female) or more alcoholic drinks over a few hours”, with at least 12 episodes of binge drinking as the cutoff to define frequent binge drinking	Yes, no
Marijuana use	GUTS1 2010 & 2 2013	One item: “In the past 12 months, how many times did you use marijuana”. Responses were dichotomized as never or ever.	Yes, no
Other illicit drug use	GUTS1 2010	Participants reported frequency of use of the following drugs in the past 12 months: cocaine or crack, heroin, ecstasy, LSD/mushrooms or any other hallucinogen, crystal meth, or other amphetamines. Those who reported use of any of the drugs were considered as having other illicit drug use.	Yes, no
Non-medical prescription drug use	GUTS1 2010	Participants reported their frequency of use of the following drugs without a doctor’s prescription over the past 12 months: tranquilizers, pain killers, sleeping pills and stimulants. Those who reported use of any of the drugs were considered as having non-medical prescription drug use.	Yes, no
Number of lifetime sexual partners	GUTS1 2007	Participants were asked to report whether they ever had sexual intercourse (yes, no, not sure). Those who answered “yes” or “not sure” were further asked to report the number of their lifetime sexual partners: “During your life, with how many people have you had sexual intercourse”.	Range: 0 (0 person) to 8 (21 or more people)
Early sexual initiation	GUTS1 2007	Age of sexual initiation was assessed with one item “How old were you when you had sexual intercourse for the first time”. Age 15 years or younger was considered as early initiation	Yes, no

History of STIs	GUTS1 & 2 2013	Participants reported whether they had been told by a health care provider that they had chlamydia, HPV, genital warts or any STIs. Those who reported any of the conditions were considered as having STIs diagnosis	Yes, no
Teen pregnancy	GUTS1 2010	Participants who were ever pregnant (for female) or ever impregnated a woman (for male) reported the calendar year in which their/their partner's first pregnancy ended. The age of first pregnancy was calculated by subtracting their/their partner's birth year from the year of their first pregnancy. Pregnancy before age 20 was considered as teen pregnancy.	Yes, no
Abnormal Pap test	GUTS1 2007	Female participants reported whether they ever had a Pap test (no, yes, not sure). Those who reported "yes" or "not sure" were prompted to respond to a second question "Have you been told by a doctor or other health care provider that you had an abnormal Pap test" (yes, no, not sure). Those who reported "yes" were considered as having abnormal Pap test, whereas those who reported "no" or never had a Pap test were considered as not having abnormal Pap test	Yes, no

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