

Supplementary Online Content

Brent DA, Melhem NM, Oquendo M, et al. Familial pathways to early-onset suicide attempt: a 5.6-year prospective study. *JAMA Psychiatry*. Published online December 31, 2014. doi: 10.1001/jamapsychiatry.2014.2141.

eTable 1. Interview and Self-report Measures

eTable 2. Demographic and Clinical Characteristics of Offspring and Proband and Mood at Prior Time Point

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

eTable 1. Interview and Self-Report Measures

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
Socioeconomic Status	Hollingshead Socioeconomic Status	Current	Hollingshead A. Four factor index of social status. New Haven, CT: Yale University; 1975. Cirino PT, Chin CE, Sevcik RA, Wolf M, Lovett M, Morris RD: Measuring Socioeconomic Status: Reliability and Preliminary Validity for Different Approaches. Assessment 2002 9: 145
Current and Lifetime Axis I Disorders (DSM-IV)	Structured Clinical Interview for DSM-IV	Lifetime at baseline, since the last assessment thereafter	Spitzer R, Williams J, Gibbon M, First M. Structured Clinical Interview for DSM-IV (SCID). New York: Biometrics Research Department, New York State Psychiatric Institute; 1995.
	Schedule for Affective Disorders and Schizophrenia for School-Age Children, Present and Lifetime Version	Lifetime at baseline, since the last assessment thereafter	Kaufman J, Birmaher B, Brent D, et al. Schedule for affective disorders and schizophrenia for school-age children-present and lifetime version (K-SADS-PL): Initial reliability and validity data. J Am Acad Child Adolesc Psychiatry. 1997;36(7):980-988
Current and Lifetime Axis II Disorders (DSM-IV)	Structured Clinical Interview for the DSM-IV Diagnosis of Personality Disorders	Lifetime at baseline, since the last assessment thereafter	First M, Spitzer R, Gibbon M, Williams J, Benjamin L. Structured clinical interview for DSM-IV Axis II personality disorders (SCID-II), (Version 2.0). New York:

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
			Biometrics Research Department, New York Psychiatric Institute; 1996.
History of Suicidal Behavior	Columbia University Suicide History Form and Medical Damage Lethality Scale	Lifetime at baseline, since the last assessment thereafter	<p>Oquendo MA, Halberstam B, Mann JJ. Risk factors for suicidal behavior: The utility and limitations of research instruments. In: First MB ed. <i>Standardized evaluation in clinical practice</i>. Washington, DC: American Psychiatric Publishing; 2003:103-129.</p> <p>Posner K, Brown GK, Stanley B, et al. The Columbia-Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. <i>Am J Psychiatry</i>. 2011;168(12):1266-1277.</p> <p>Mann JJ, McBride PA, Brown RP, et al. Relationship between central and peripheral serotonin indexes in depressed and suicidal psychiatric inpatients. <i>Arch Gen Psychiatry</i>. 1992;49(6):442-446.</p>
Suicidal Ideation	Scale for Suicidal Ideation	Worst in the past two weeks	Beck AT, Kovacs M, Weissman A. Assessment of suicidal intention: The Scale for Suicide Ideation. <i>J Consult Clin Psychol</i> . 1979;47(2):343-352

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
			<p>Kazdin AE, French NH, Unis AS, Esveldt-Dawson K, Sherick RB. Hopelessness, depression, and suicidal intent among psychiatrically disturbed inpatient children. <i>J Consult Clin Psychol.</i> 1983;51(4):504-510.</p> <p>Holi MM, Pelkonen M, Karlsson L, Kiviruusu O, Ruutu T, Heilä H, Tuisku V, Marttunen M: Psychometric properties and clinical utility of the Scale for Suicidal Ideation (SSI) in adolescents. <i>BMC Psychiatry</i> 2005, 5:8</p>
Non-Suicidal Self-Injury	Self-Injurious Behavior Scale	Lifetime at baseline, since the last assessment thereafter	Posner K, Oquendo MA, Gould M, Stanley B, Davies M. Columbia Classification Algorithm of Suicide Assessment (C-CASA): Classification of suicidal events in the FDA's pediatric suicidal risk analysis of antidepressants. <i>Am J Psychiatry.</i> 2007;164(7):1035-1043.
Self-Reported Depressive Symptoms	Beck Depression Inventory	Past two weeks	<p>Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. <i>Arch Gen Psychiatry.</i> 1961;4:561-571.</p> <p>Beck AT, Steer RA, Garbin MG. Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. <i>Clinical Psychology Review.</i> 1988;8:77-100</p>

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
	Children's Depression Inventory	Past two weeks	<p>Kovacs M. The Children's Depression Inventory (CDI). <i>Psychopharmacol Bull.</i> 1985;21(4):995-998.</p> <p>Smucker, M. R., Craighead, W. E., Craighead, L. W., & Green, B. J. (1986). Normative and reliability data for the Children's Depression Inventory. <i>Journal of abnormal child psychology</i>, 14(1), 25-39.</p>
Hopelessness	Beck Hopelessness Scale	Past week	<p>Beck AT, Weissman A, Lester D, Trexler L. The measurement of pessimism: The hopelessness scale. <i>J Consult Clin Psychol.</i> 1974;42(6):861-865.</p> <p>Bouvard, M, Charles S, Guerin J, Aimard G, Cottraux J: Study of Beck's hopelessness scale. Validation and factor analysis. <i>L'Encephale</i> 18, no. 3 (1991): 237-240.</p>
	Children's Hopelessness Scale	Past week	Kazdin AE, Rodgers A, Colbus D: The hopeless scale for children: Psychometric characteristics and concurrent validity. <i>J Consult Clin Psychol.</i> 1986;54:241-245.
Impulsive Aggression	Buss-Durkee Hostility Inventory	Since the last assessment	Buss AH, Durkee A. An inventory for assessing different kinds of hostility. <i>J</i>

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			Consult Psychol. 1957;21(4):343-349. Vassar M1, Hale W.: Reliability reporting across studies using the Buss Durkee Hostility Inventory. J Interpers Violence. 2009 Jan;24(1):20-37
	Children's Hostility Inventory	Since the last assessment	Kazdin AE, Rodgers A, Colbus D, Siegel T. Children's hostility inventory: Measurement of aggression and hostility in psychiatric inpatient children. J Clin Child Psychol. 1987;16(4):320-328.
Impulsivity	Barratt Impulsivity Scale	Since the last assessment	Barratt ES: Factor analysis of some psychometric measures of impulsiveness and anxiety. Psychol Rep. 1965;16:547-554.
	Conners' Teacher Rating Scale	Since the last assessment	Pelham Jr WE, Milich R, Murphy DA, Murphy HA: Normative data on the IOWA Conners teacher rating scale. J Clin Child Psychol. 1989;18(3):259-262.
Aggression	Brown-Goodwin Lifetime History of Aggression	Lifetime at baseline, past year thereafter	Brown GL, Goodwin FK. Human aggression and suicide. Suicide Life Threat Behav. 1986;16(2):223-243.
Negative Life Events	Social Readjustment Rating Scale	Past year	Lewinsohn PM, Rohde P, Seeley JR, Fischer SA. Age and depression: Unique and shared effects. Psychol Aging. 1991;6(2):247-260.

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
	Life Events Checklist	Past year	Brand AH, Johnson JH: Note on reliability of the Life Events Checklist. <i>Psychol Rep.</i> 1982;50:1274.
Social Support	Survey of Children's Social Support	Since the last assessment	Dubow E, Ullman D. Assessing social support in elementary school children: The survey of children's social support. <i>J Clin Child Psychol.</i> 1989;18:52-64.
	Multidimensional Scale of Perceived Social Support	Since the last assessment	Zimet G, Dahlem N, Zimet S, Farley G. The Multidimensional Scale of Perceived Social Support. <i>J Pers Assess.</i> 1988;52:30-41. Zimet GD, Powell SS, Farley GK, Werkman S, Berkoff KA. Psychometric characteristics of the multidimensional scale of perceived social support. <i>J Per Assess.</i> 1990;55(3-4):610-617.
Reasons for Staying Alive	Reasons for Living Inventory	Since the last assessment	Ivanoff A, Jang S, Smyth N, Linehan M. Fewer reasons for staying alive when you are thinking of killing yourself: The Brief Reasons for Living Inventory. <i>J Psychopathol Behav Assess.</i> 1994;16:1-13.
	Adolescent Reasons for Living	Since the last assessment	Osman A, Downs WR, Kopper BA, et al. The Reasons for Living Inventory for

Domain	Instrument	Time frame covered	Reference/Psychometric Properties
	Inventory		Adolescents (RFL-A): Development and psychometric properties. J Clin Psychol. 1998;54(8):1063-1078.
Family Climate	Family Assessment of Cohesion Evaluation Scale - II	Since the last assessment	Olsen D, Portner J, Bell R. Family Adaptability and Cohesion Evaluation Scales (FACES-II). St. Paul, MN: Family Social Science, University of Minnesota; 1982.
History of Physical and Sexual Abuse	Childhood Trauma Questionnaire	Ever	Bernstein DP, Fink L, Handelsman L, Foote J: Initial reliability and validity of a new retrospective measure of child abuse and neglect. Am J Psychiatry. 1994;151:1132-1136.
	Abuse Dimensions Inventory		Chaffin M, Wherry J, Newlin C, Crutchfield A, Dykman R. The Abuse Dimensions Inventory: Initial data on a research measure of abuse severity. J Interpers Violence. 1997;12:569-589.

eTable 2. Demographic and Clinical Characteristics of Offspring and Proband and Offspring Mood at Prior Time Point[§]

	Baseline		Intermediate Time Points	
	OR (95% CI)	P	OR (95% CI)	P
OFFSPRING				
Age	1.01 (0.99-1.03)	.47		
Sex	1.56 (1.06-2.30)	.02		
Caucasian	0.75 (0.49-1.15)	.19		
Hispanic	1.97 (1.03-3.76)	.04		
Site [†]	0.84 (0.54-1.28)	.42		
Mood disorder	6.59 (4.44-9.78)	<.001 ^a	28.92 (16.07-52.05)	<.001 ^a
ADHD	1.42 (0.78-2.60)	.26	1.12 (0.63-1.98)	.71
PTSD	3.45 (1.80-6.63)	<.001 ^a	7.20 (3.65-14.20)	<.001 ^a
Anxiety disorder	2.76 (1.82-4.16)	<.001 ^a	6.23 (4.08-9.53)	<.001 ^a
Eating disorder	9.82 (2.58-37.44)	.001 ^c		
Alcohol/substance abuse	1.69 (1.02-2.80)	.04	3.31 (2.02-5.42)	<.001 ^a
Behavioral/antisocial	2.59 (1.56-4.27)	<.001 ^a	1.45 (0.86-2.42)	.16
Depression - self report			2.75 (2.11-3.60)	<.001 ^a
Hopelessness			2.10 (1.68-2.63)	<.001 ^a
Impulsivity	1.78 (1.43-2.21)	<.001 ^a	1.78 (1.38-2.29)	<.001 ^a
Impulsive aggression	1.70 (1.37-2.12)	<.001 ^a	2.49 (1.91-3.24)	<.001 ^a
Aggression	1.61 (1.34-1.94)	<.001 ^a	1.63 (1.30-2.03)	<.001 ^a
Negative life events			1.55 (1.22-1.97)	<.001 ^a
Reasons for living			0.96 (0.75-1.23)	.74
Social support			0.77 (0.60-0.98)	.03
Family adaptability/cohesion			0.95 (0.92-0.98)	.002 ^c
Non-suicidal self-injurious behavior	2.14 (1.06-4.30)	.03	2.89 (1.36-6.14)	.006 ^c
Lifetime history of physical/sexual abuse	2.96 (1.86, 4.71)	<.001 ^a		
History of suicide attempt*	5.34 (2.49-11.45)	<.001 ^a		

	Baseline		Intermediate Time Points	
	OR (95% CI)	P	OR (95% CI)	P
History of other suicidal events*	3.74 (1.46-9.59)	.006		
Suicidal ideation	1.03 (0.93-1.13)	.58	1.26 (1.13-1.40)	<.001 ^a
OFFSPRING				
Suicide related behavior			4.84 (2.32-10.12)	<.001 ^a
PROBAND				
Mood disorder	2.51 (1.07-5.91)	.04	3.35 (1.71-6.55)	<.001 ^a
Alcohol/substance abuse	1.29 (0.85-1.97)	.23	1.41 (0.88-2.27)	.15
Post Traumatic Stress Disorder	1.61 (1.05-2.47)	.03	2.14 (1.39-3.30)	.001 ^b
Anxiety disorder	1.63 (1.03-2.58)	.04	2.29 (1.45-3.62)	<.001 ^a
Cluster-B personality disorder	2.04 (1.25-3.34)	.004 ^c		
Lifetime history of physical/sexual abuse	1.60 (0.92, 2.75)	.09		
Impulsivity	1.02 (1.01-1.03)	.001 ^b	1.02 (1.01-1.03)	.002 ^c
Impulsive aggression	1.01 (0.99-1.03)	.30	1.02 (1.00-1.04)	.02
Aggression	1.11 (0.91-1.35)	.30	1.23 (0.95-1.58)	.12

[§]Time point immediately prior to the onset of an actual attempt or maximum time point for non-attempters. †NY is the reference site (=0). * compared to "No event".

^aq-value<.001. ^bq-value<.01. ^cq-value<.05

OR: odds ratio. CI: confidence interval.