

## Supplementary Material

Table A. Quality assessment tool.

Criteria/Rate	0	1	2	Rate
1. <b>Design</b>	Cross-sectional	Case-control	Prospective, Randomized Controlled Trials.	
2. <b>Was the number of participants calculated in advance for statistical power?</b>	No	Yes	–	
3. <b>Statistical Power</b>	No mention of a power calculation	Power calculation reported, but sufficient power not achieved	Power achieved	
4. <b>Suicidal Ideation/Behavior Assessment</b>	Non-validated scale; Self-report; Single question.	Hospital admission for suicide attempt; items from validated diagnostic / rating scale	Clinical interview; full validated scale (e.g. ISAS, SITBI, DSHI)	
5. <b>Sample Suicidal Ideation/Behavior</b>	Mixed group of suicidal and non-suicidal self-harming participants	Homogenous groups of either suicidal individuals	–	
6. <b>Attachment Assessment</b>	Non-validated scale; Self-report; Single question	Validated scale/instrument	–	
7. <b>Appropriate Choice of Comparison Group</b>	No group free from self-harm. <i>E.g. includes self-harm ideation, those who have previously self-harmed or no comparison group.</i>	One case group with no personal history of suicidal thoughts or behaviors.	–	
8. <b>Confounding Variables</b> <i>(Will require some judgement on behalf of the rater as studies will have done this to differing degrees)</i>	No attempt to control for confounding factors in recruitment or analyses.	Accounts for basic confounding variables either during recruitment or analysis. E.g. age, gender.	Accounts for basic and additional confounding variables either during recruitment or analysis. [e.g. medication use/substance abuse, physical health, comorbid psychiatric conditions (depression, etc.)].	
9. <b>Can the results be generalized outside the study context?</b>	No	Yes	–	
<b>Total:</b>				

Table B. Checklist of items to include when reporting a systematic review or meta-analysis

Section/topic	#	Checklist item	Reported on page #
<b>TITLE</b>			
<i>Title</i>	1	Identify the report as a systematic review, meta-analysis, or both.	1
<b>ABSTRACT</b>			
<i>Structured summary</i>	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2
<b>INTRODUCTION</b>			
<i>Rationale</i>	3	Describe the rationale for the review in the context of what is already known.	3–6
<i>Objectives</i>	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	6
<b>METHODS</b>			
<i>Protocol and registration</i>	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	No
<i>Eligibility criteria</i>	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	6-7
<i>Information sources</i>	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6
<i>Search</i>	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6
<i>Study selection</i>	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	9 (Figure 1)
<i>Data collection process</i>	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	7
<i>Data items</i>	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	7
<i>Risk of bias in individual studies</i>	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	7
<i>Summary measures</i>	13	State the principal summary measures (e.g., risk ratio, difference in means).	N/A
<i>Synthesis of results</i>	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	N/A
<i>Risk of bias across studies</i>	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	Not reported. See limitations.
<i>Additional analyses</i>	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A

(cont.)

Table B (cont.). Checklist of items to include when reporting a systematic review or meta-analysis

<b>RESULTS</b>			
<i>Study selection</i>	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	8-9 (Figure 1)
<i>Study characteristics</i>	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	43-55 (Tables 2-4)
<i>Risk of bias within studies</i>	19	Present data on risk of bias of each study and, if available, any outcome-level assessment (see Item 12).	43-55 (Tables 2-4, Quality score)
<i>Results of individual studies</i>	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group and (b) effect estimates and confidence intervals, ideally with a forest plot.	N/A
<i>Synthesis of results</i>	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	N/A
<i>Risk of bias across studies</i>	22	Present results of any assessment of risk of bias across studies (see Item 15).	43-54 (Tables 2-4)
<i>Additional analysis</i>	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
<b>DISCUSSION</b>			
<i>Summary of evidence</i>	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., health care providers, users, and policy makers).	8-20
<i>Limitations</i>	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias).	20-27
<i>Conclusions</i>	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	20-27
<b>FUNDING</b>			
<i>Funding</i>	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	27

## References of the measures used by the 52 studies of the Systematic Review

- Achenbach, T. M. (1991). *Manual for the Youth Self Report and 1991 Profile*. Burlington VT. Burlington: University of Vermont.
- Adam, K. S. (1973). Childhood parental loss, suicidal ideation and suicidal behavior. In E. J. Anthony (Ed.), *The Child in His Family: The Impact of Disease and Death* (pp. 275–297). New York: Wiley.
- Addis, M., & Linehan, M. M. (1989). Predicting Suicidal Behavior: Psychometric Properties of the Suicidal Behaviors Questionnaire. In *Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy*. Washington, DC.
- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (Vol. 1). Washington, DC: American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890423349>
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16(5), 427–454. <https://doi.org/10.1007/BF02202939>
- Bartholomew, K. (1990). Avoidance of Intimacy: An Attachment Perspective. *Journal of Social and Personal Relationships*, 7(2), 147–178. <https://doi.org/10.1177/0265407590072001>
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment Styles Among Young Adults: A Test of a Four-category Model. *Journal of Personality and Social Psychology*, 61(2), 226–244. <https://doi.org/10.1037/0022-3514.61.2.226>
- Bayam, G., Dilbaz, N., Bitlis, V., Holat, H., & Tuizer, T. (1995). İntihar davranışı ile depresyon, ümitsizlik, intihar düşüncesi ilişkisi: İntihar Davranış Ölçeği geçerlik, güvenilirlik çalışması. *Kriz Dergisi*, 3, 223–225.
- Beck, A. T., Beck, R., & Kovacs, M. (1975). Classification of suicidal behaviors: I. Quantifying intent and medical lethality. *American Journal of Psychiatry*, 132(3), 285–287. <https://doi.org/10.1176/ajp.132.3.285>
- Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, 47(2), 343–52. <https://doi.org/10.1037/0022-006X.47.2.343>
- Beck, A. T., Schuyler, D., & Herman, I. (1974). Development of suicidal intent scales. In A. T. Beck, H. L. Resnik, & D. J. Lettieri (Eds.), *The Prediction of Suicide* (pp. 45–56). Charles Press.
- Beck, A. T., & Steer, R. A. (1991). *Manual for Beck Scale for Suicide Ideation*. New York: Psychological Corporation.
- Beck, A. T., & Steer, R. A. (1993). *Beck Scale for Suicide Ideation Manual*. San Antonio, TX: Psychological Corporation / Harcourt Brace & Company.

- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.
- Beck, A. T., Steer, R. A., & Ranieri, W. F. (1988). Scale for Suicide Ideation: Psychometric properties of a self-report version. *Journal of Clinical Psychology*, *44*(4), 499–505. [https://doi.org/10.1002/1097-4679\(198807\)44:4<499::AID-JCLP2270440404>3.0.CO;2-6](https://doi.org/10.1002/1097-4679(198807)44:4<499::AID-JCLP2270440404>3.0.CO;2-6)
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An Inventory for Measuring Depression. *Archives of General Psychiatry*, *4*(6), 561–571. <https://doi.org/10.1001/archpsyc.1961.01710120031004>
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report Measurement of Adult Attachment: An Integrative Overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment Theory and Close Relationships* (pp. 46–76). New York: Guilford Press.
- Brennan, K. A., & Shaver, P. R. (1998). Attachment styles and personality disorders: Their connections to each other and to parental divorce, parental death, and perceptions of parental caregiving. *Journal of Personality*, *66*(5), 835–878. <https://doi.org/10.1111/1467-6494.00034>
- Buelow, G., McClain, M., & McIntosh, I. (1996). A new measure for an important construct: The attachment and object relations inventory. *Journal of Personality Assessment*, *66*(3), 604–23. [https://doi.org/10.1207/s15327752jpa6603\\_9](https://doi.org/10.1207/s15327752jpa6603_9)
- Canavarro, M. C., Dias, P., & Lima, V. (2006). A avaliação da vinculação do adulto: Uma revisão crítica a propósito da aplicação da Adult Attachment Scale-R (AAS-R) na população portuguesa. *Psicologia*, *20*, 155–186. <https://doi.org/10.1007/s13398-014-0173-7.2>
- Cloninger, C. R. (1992). The temperament and character inventory. (Available from C. R. Cloninger, Washington University School of Medicine, Department of Psychiatry, PO Box 8134, St. Louis, MO, 63110).
- Cull, J. G., & Gill, W. S. (1982). *Suicide Probability Scale Manual*. Los Angeles: Western Psychological Services.
- Dilbaz, N., Holat, H., Bayam, G., & Tüzer, T. (1995). Intihar düşüncesi ölçeğinin geçerlilik ve güvenilirliği. *Ulusal Psikiyatri Bilimler Kongresi Bilimsel Çalışma Kitabı*, *31*, 40–41.
- Feeney, J. A., Noller, P., & Hanrahan, M. (1994). Assessing adult attachment. In M. B. Sperling & W. H. Berman (Eds.), *Attachment in adults: Clinical and developmental perspectives* (1st ed., pp. 128–152). New York: Guilford Press.
- Ferreira, J., & Castela, M. (1999). Questionário de Ideação Suicida (Q.I.S.). In M. R. Simões, M. M. Gonçalves, & L. S. Almeida (Eds.), *Testes e Provas Psicológicas em Portugal - Vol II* (pp. 123–130). Braga: APPORT/SOHO.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*(2), 350–365. <https://doi.org/10.1037/0022-3514.78.2.350>

- Garrison, C. Z., McKeown, R. E., Valois, R. F., & Vincent, M. L. (1993). Aggression, substance use, and suicidal behaviors in high school students. *American Journal of Public Health, 83*(2), 179–184. <https://doi.org/10.2105/AJPH.83.2.179>
- Genuis, M., Violato, C., Oddone-Paolucci, E., Robitaille, S., & McBride, D. (2000). Pilot study of the psychometric properties of the Adolescent Attachment Survey (AAS). In C. Violato, E. Oddone-Paolucci, & M. Genuis (Eds.), *The changing family and child development*. Aldershot, UK: Ashgate Publishing Limited.
- George, C., Kaplan, N., & Main, M. (1985a). Attachment Interview for Adults. Berkeley: Unpublished manuscript, University of California.
- George, C., Kaplan, N., & Main, M. (1985b). The Berkeley Adult Attachment Interview. Berkeley: Unpublished manuscript, University of California.
- George, C., West, M., & Pettem, O. (1997). The adult attachment projective. Unpublished attachment measure and coding manual. Oakland: Mills College.
- Griffin, D. W., & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*(3), 430–445. <https://doi.org/10.1037/0022-3514.67.3.430>
- Hawton, K., Rodham, K., Evans, E., & Weatherall, R. (2002). Deliberate self harm in adolescents: Self report survey in schools in England. *British Medical Journal, 325*(7374), 1207–1211. <https://doi.org/10.1136/bmj.325.7374.1207>
- Hazan, C., & Shaver, P. (1987). Romantic Love Conceptualized as an Attachment Process. *Journal of Personality and Social Psychology, 52*(3), 511–524. <https://doi.org/10.1037/0022-3514.52.3.511>
- Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology, 59*(2), 270–280. <https://doi.org/10.1037/0022-3514.59.2.270>
- Heydari, A., Teymoori, A., & Nasiri, H. (2014). Development of Suicidality within Socioeconomic Context: Mediation Effect of Parental Control and Anomie. *Omega -Journal of Death and Dying, 68*(1), 63–76. <https://doi.org/10.2190/OM.68.1.d>
- Hudson, W. W. (1990). *The MPSI technical manual*. Tempe, AZ: Walmer Publishing Company.
- Kerns, K. A., Schlegelmilch, A., Morgan, T. A., & Abraham, M. M. (2005). Assessing Attachment in Middle Childhood. In K. A. Kerns & R. A. Richardson (Eds.), *Attachment in Middle Childhood* (1st ed., pp. 46–71). New York: Guilford Press. Retrieved from [http://books.google.com/books?hl=en&lr=&id=XX0\\_qY31iTUC&pgis=1](http://books.google.com/books?hl=en&lr=&id=XX0_qY31iTUC&pgis=1)
- Kessler, R. C., Borges, G., & Walters, E. E. (1999). Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Archives of General Psychiatry, 56*(7), 617–626. <https://doi.org/10.1001/archpsyc.56.7.617>
- Kobak, R. (1989). The Attachment Interview Q-Set. Unpublished manuscript, University of

Delaware.

- Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A New Depression Diagnostic and Severity Measure. *Psychiatric Annals*, *32*(9), 509–515. <https://doi.org/10.3928/0048-5713-20020901-06>
- Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1996). Adolescent suicidal ideation and attempts: Prevalence, risk factors, and clinical implications. *Clinical Psychology: Science and Practice*, *3*(1), 25–46. <https://doi.org/10.1111/j.1468-2850.1996.tb00056.x>
- Linehan, M. M., Comtois, K. A., Brown, M. Z., Heard, H. L., & Wagner, A. (2006). Suicide Attempt Self-Injury Interview (SASII): Development, reliability, and validity of a scale to assess suicide attempts and intentional self-injury. *Psychological Assessment*, *18*(3), 303–312. <https://doi.org/10.1037/1040-3590.18.3.303>
- Linehan, M. M., & Nielsen, S. L. (1981). Assessment of suicide ideation and parasuicide: Hopelessness and social desirability. *Journal of Consulting and Clinical Psychology*, *49*(5), 773–775. <https://doi.org/10.1037/0022-006X.49.5.773>
- Livesley, W. J., Jang, K. L., & Vernon, P. A. (1998). Phenotypic and genetic structure of traits delineating personality disorder. *Archives of General Psychiatry*, *55*(10), 941–948. <https://doi.org/10.1001/archpsyc.55.10.941>
- Main, M., Goldwyn, R., & Hesse, E. (2002). Adult attachment scoring and classification system. Berkeley: Unpublished manuscript, University of California.
- Mann, J. J., McBride, P. A., Brown, R. P., Linnoila, M., Leon, A. C., DeMeo, M., ... Stanley, M. (1992). Relationship between central and peripheral serotonin indexes in depressed and suicidal psychiatric inpatients. *Archives of General Psychiatry*, *49*(6), 442–446. <https://doi.org/10.1001/archpsyc.1992.01820060022003>
- Matos, P. M., Barbosa, S., & Costa, M. E. (2001). Avaliação da vinculação amorosa em adolescentes e jovens adultos: Construção de um instrumento e estudos de validação [The Romantic Attachment Questionnaire: Development and validation studies]. *Revista Oficial de La Asociación Iberoamericana de Diagnóstico Y Evaluación Psicológica*, *11*, 93–109.
- Matos, P. M., & Costa, M. E. (2001). Questionário de vinculação ao pai e à mãe. Manuscrito não publicado [The father and mother attachment questionnaire]. Porto: Faculty of Psychology and Educational Sciences.
- Muris, P., Mayer, B., & Meesters, C. (2000). Self-Reported Attachment Style, Anxiety, and Depression in Children. *Social Behavior and Personality*, *28*(2), 157–162. <https://doi.org/10.2224/sbp.2000.28.2.157>
- Offord, D. R., Boyle, M. H., Szatmari, P., Rae Grant, N. I., Links, P. S., Cadman, D. T., ... Woodward, C. A. (1987). Ontario Child Health Study II: Six-Month Prevalence of Disorder and Rates of Service Utilization. *Archives of General Psychiatry*, *44*(9), 832–836. <https://doi.org/10.1001/archpsyc.1987.01800210084013>

- Oquendo, M. A., Halberstam, B., & Mann, J. J. (2003). Risk Factors for Suicidal Behavior: The Utility and Limitations of Research Instruments. In M. B. First (Ed.), *Standardized Evaluation in Clinical Practice* (pp. 103–130). Washington, DC: American Psychiatric Publishing.
- Oquendo, M. A., Halberstam, B., & Mann, J. J. (2003). Risk Factors for Suicidal Behavior: The Utility and Limitations of Research Instruments. In M. B. First (Ed.), *Standardized Evaluation in Clinical Practice* (pp. 103–130). Arlington, VA: American Psychiatric Publishing.
- Orbach, I., Milstein, I., Har-Even, D., Apter, A., Tiano, S., & Elizur, A. (1991). A Multi-Attitude Suicide Tendency Scale for Adolescents. *Psychological Assessment*, 3(3), 398–404. <https://doi.org/10.1037/1040-3590.3.3.398>
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. a, & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with Clinical and Nonclinical Samples. *Assessment*, 8(4), 443–454. <https://doi.org/10.1177/107319110100800409>
- Ozbay, O., & Ozcan, Y. Z. (2006). A Test of Hirschi's Social Bonding Theory: Juvenile Delinquency in the High Schools of Ankara, Turkey. *International Journal of Offender Therapy and Comparative Criminology*, 50(6), 711–726. <https://doi.org/10.1177/0306624X05283525>
- Pfeffer, C. R. (1986). *The Suicidal Child* (1st ed.). New York: The Guildford Press.
- Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., ... Mann, J. J. (2011). The Columbia-suicide severity rating scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *American Journal of Psychiatry*, 168(12), 1266–1277. <https://doi.org/10.1176/appi.ajp.2011.10111704>
- Reich, W., Shayka, J. J., & Taibleson, C. (1991). *Manual to Accompany the Diagnostic Interview for Children and Adolescents—Revised*. St. Louis, MI: Washington University Press.
- Reynolds, W. M. (1991). Psychometric Characteristics of the Adult Suicidal Ideation Questionnaire in College Students. *Journal of Personality Assessment*, 56(2), 289–307. [https://doi.org/10.1207/s15327752jpa5602\\_9](https://doi.org/10.1207/s15327752jpa5602_9)
- Richard, M. H., Fonagy, P., Smith, P. K., Wright, J. C., & Binney, V. (1998). The Adolescent Separation Anxiety Interview. Unpublished interview protocol, Goldsmiths College, University of London.
- Ross, C. A., Heber, S., Norton, G. R., Anderson, D., Anderson, G., & Barchet, P. (1989). The dissociative disorders interview schedule: A structured interview. *Dissociation*, 2(3), 169–189.
- Rosotto, E., Yager, J., & Rorty, M. (1994). Impulsive and self-harm behaviors among women with bulimia nervosa. In *6th Annual International Conference on Eating Disorders*. New York.
- Scharfe, E., & Bartholomew, K. (1998). Do you remember?: Recollections of adult attachment patterns. *Personal Relationships*, 5(2), 219–234. <https://doi.org/10.1111/j.1475-6811.1998.tb00169.x>
- Schotte, D. E., & Clum, G. A. (1982). Suicide Ideation in a College Population: A Test of a



- Model. *Journal of Consulting and Clinical Psychology*, 50(5), 690–696.
- Simpson, J. A. (1990). Influence of Attachment Styles on Romantic Relationships. *Journal of Personality and Social Psychology*, 59(5), 971–980. <https://doi.org/10.1037/0022-3514.59.5.971>
- Target, M., Fonagy, P., & Shmueli-Goetz, Y. (2003). Attachment representations in school-age children: The development of the Child Attachment Interview (CAI). *Journal of Child Psychotherapy*, 29, 171–186. <https://doi.org/10.1080/0075417031000138433>
- Vrouva, I., Fonagy, P., Fearon, P. R. M., & Roussow, T. (2010). The risk-taking and self-harm inventory for adolescents: Development and psychometric evaluation. *Psychological Assessment*, 22(4), 852–865. <https://doi.org/10.1037/a0020583>
- West, M., Rose, M. S., Spreng, S., Sheldon-Keller, A., & Adam, K. (1998). Adolescent attachment questionnaire: A brief assessment of attachment in adolescence. *Journal of Youth and Adolescence*, 27(5), 661–673. <https://doi.org/10.1023/A:1022891225542>
- Yaseen, Z. S., Briggs, J., Kopeykina, I., Orchard, K. M., Silberlicht, J., Bhingradia, H., & Galynker, I. I. (2013). Distinctive emotional responses of clinicians to suicide-attempting patients - A comparative study. *BMC Psychiatry*, 13(1), 230. <https://doi.org/10.1186/1471-244X-13-230>