

## List of Supplemental Items

- eTable 1. PRISMA checklist
- eTable 2. Characteristics of studies included in the meta-analysis
- eTable 3. Univariate meta-regression models of risk factors for completed and attempted suicide in schizophrenia
- eTable 4. Multiple meta-regression correlating male gender and completed suicide in schizophrenia
- eTable 5. Leave-one-out model for history of tobacco use in the meta-analysis of suicide
- eTable 6. Leave-one-out model for history of alcohol use in the meta-analysis of suicide
- eTable 7. Leave-one-out model for worthlessness in the meta-analysis of suicide
- eTable 8. Leave-one-out model for being white in the meta-analysis of suicide
- eTable 9. Leave-one-out model for age in the meta-analysis of suicide
- eTable 10. Leave-one-out model for hopelessness in the meta-analysis of suicide attempt
- eTable 11. Leave-one-out model for living alone in the meta-analysis of suicide attempt
- eTable 12. Leave-one-out model for being male in the meta-analysis of suicide attempt
- eTable 13. Leave-one-out model for age of onset in the meta-analysis of suicide attempt
- eTable 14. Characteristics of cohort studies included in the meta-analysis
- eTable 15. Meta-analysis of cohort studies for risk factors of suicide in schizophrenia
- eTable 16. Meta-analysis of cohort studies for risk factors of suicide attempt in schizophrenia
- eFigure 1. Poor adherence to treatment was significant in the meta-analysis for suicide.
- eFigure 2. History of attempted suicide was significant in the meta-analysis for suicide.
- eFigure 3. Worthlessness was significant in the meta-analysis for suicide.
- eFigure 4. Hopelessness was significant in the meta-analysis for suicide.
- eFigure 5. Being white was significant in the meta-analysis for suicide.
- eFigure 6. Being male was significant in the meta-analysis for suicide.
- eFigure 7. History of tobacco use was significant in the meta-analysis for suicide.
- eFigure 8. History of alcohol use was significant in the meta-analysis for suicide.
- eFigure 9. Younger age was associated with suicide.
- eFigure 10. Higher IQ was associated with suicide.
- eFigure 11. Shorter illness length was associated with suicide.
- eFigure 12. Physical comorbidity was significant in the meta-analysis for suicide attempt.
- eFigure 13. History of depression was significant in the meta-analysis for suicide attempt.
- eFigure 14. Family history of psychiatric illness was significant in the meta-analysis for suicide attempt.
- eFigure 15. Family history of suicide was significant in the meta-analysis for suicide attempt.
- eFigure 16. History of attempted suicide was significant in the meta-analysis for suicide attempt.
- eFigure 17. Hopelessness was significant in the meta-analysis for suicide attempt.
- eFigure 18. History of alcohol use was significant in the meta-analysis for suicide attempt.
- eFigure 19. History of drug use was significant in the meta-analysis for suicide attempt.
- eFigure 20. History of tobacco use was significant in the meta-analysis for suicide attempt.
- eFigure 21. Being white was associated with suicide attempt.
- eFigure 22. Being male was a protective factor for suicide attempt.
- eFigure 23. Living alone was protective factor for suicide attempt.
- eFigure 24. Higher number of psychiatric hospitalizations was associated with suicide attempt.
- eFigure 25. Higher BDI scores were associated with suicide attempt.
- eFigure 26. Lower age of onset was associated with suicide attempt.
- eFigure 27. Higher HAM-D scores were associated with suicide ideation.
- eFigure 28. Higher PANSS general score were associated with suicide ideation.
- eFigure 29. History of attempted suicide was associated with suicide in the cohort study meta-analysis.
- eFigure 30. Being male was associated with suicide in the cohort study meta-analysis.
- eFigure 31. History of tobacco use was associated with suicide in the cohort study meta-analysis.
- eFigure 32. Shorter disease length was associated with suicide in the cohort study meta-analysis.
- eFigure 33. Younger age was associated with suicide in the cohort study meta-analysis.

eFigure 34. Younger age of onset was associated with suicide in the cohort study meta-analysis.

eFigure 35. History of attempted suicide was associated with suicide attempt in the cohort study meta-analysis.

eFigure 36. History of alcohol use was associated with suicide attempt in the cohort study meta-analysis.

eFigure 37. Family history of psychiatric illness was associated with suicide attempt in the cohort study meta-analysis.

eFigure 38. Younger age of onset was associated with suicide attempt in the cohort study meta-analysis.

**eTable1. PRISMA checklist**

<b>Section/topic</b>	<b>#</b>	<b>Checklist item</b>	<b>Reported on page #</b>
<b>TITLE</b>			
<b>Title</b>	1	Identify the report as a systematic review, meta-analysis, or both.	1
<b>ABSTRACT</b>			
<b>Structured summary</b>	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.	3
<b>INTRODUCTION</b>			
<b>Rationale</b>	3	Describe the rationale for the review in the context of what is already known.	5
<b>Objectives</b>	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
<b>METHODS</b>			
<b>Protocol and registration</b>	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.	7
<b>Eligibility criteria</b>	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.	8
<b>Information sources</b>	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.	9
<b>Search</b>	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	7,8
<b>Study selection</b>	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	8
<b>Data collection process</b>	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.	9
<b>Data items</b>	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	9
<b>Risk of bias in individual</b>	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether	10,11

<b>studies</b>		this was done at the study or outcome level), and how this information is to be used in any data synthesis.	
<b>Summary measures</b>	13	State the principal summary measures (e.g., risk ratio, difference in means).	10
<b>Synthesis of results</b>	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I <sup>2</sup> ) for each meta-analysis.	10,11
<b>Risk of bias across studies</b>	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	11
<b>Additional analyses</b>	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	11
<b>RESULTS</b>			
<b>Study selection</b>	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.	12
<b>Study characteristics</b>	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	12-17, Suppl. Materials
<b>Risk of bias within studies</b>	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	12-17, Suppl. Materials
<b>Results of individual studies</b>	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Supplemental Materials
<b>Synthesis of results</b>	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Tables 1-3, Suppl. Materials
<b>Risk of bias across studies</b>	22	Present results of any assessment of risk of bias across studies (see Item 15).	12-17, Suppl. Materials
<b>Additional analysis</b>	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	12-17, Suppl. Materials
<b>DISCUSSION</b>			
<b>Summary of evidence</b>	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	18-22
<b>Limitations</b>	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).	20-21
<b>Conclusions</b>	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	21-22
<b>FUNDING</b>			
<b>Funding</b>	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic	23

**eTable2. Characteristics of studies included in the meta-analysis**

	Outcome	Study design	Diagnostic Criteria	N (suicide, non-suicide)	Male (%)		Mean age in years (SD)		Disease length in months	
					suicidal	non-suicidal	suicidal	non-suicidal	suicidal	non-suicidal
<b>Aguilar 2003</b> <sup>1</sup>	SA	Cross-sectional	DSM	116(56,60)	77%	75%	NA	NA	NA	NA
<b>Albayrak 2012</b> <sup>2</sup>	SA	Cross-sectional	DSM	94(46,48)	54%	63%	35.4(6.4)	36(9.1)	NA	NA
<b>Altamura 2003</b> <sup>3</sup>	SA	Case control	DSM	103(22,81)	59%	68%	40.1(11.2)	38(11.7)	17.8(7.1)	19.2(8.1)
<b>Altamura 2007 (EEUR)</b> <sup>4</sup>	SA	cross-sectional	DSM	199(156,43)	47%	47%	39.1(10.7)	37(10.8)	NA	NA
<b>Altamura 2007 (EUR)</b> <sup>4</sup>	SA	cross-sectional	DSM	236(176,60)	57%	70%	36.9(10.8)	35.8(10.8)	NA	NA
<b>Altamura 2007 (NA)</b> <sup>4</sup>	SA	cross-sectional	DSM	414(371,43)	70%	70%	37.5(9)	36.9(10.9)	NA	NA
<b>Altamura 2007 (SA)</b> <sup>4</sup>	SA	cross-sectional	DSM	93(82,11)	59%	55%	34.1(11)	39.2(11.9)	NA	NA
<b>Altamura 2007 (SAf)</b> <sup>4</sup>	SA	cross-sectional	DSM	37(31,6)	65%	50%	31.2(9)	39.3(17.7)	NA	NA
<b>Artiles 2009</b> <sup>5</sup>	SA	case control	ICD	57(27,30)	78%	87%	NA	NA	NA	NA
<b>Bani-Fatemi 2013</b> <sup>6</sup>	SA	cross-sectional	DSM	566(192,374)	63%	71%	41.34(11.06)	38.23(11.52)	NA	NA
<b>Banwari 2013</b> <sup>7</sup>	SA	cross-sectional	DSM	50(17,33)	71%	52%	31.59(6.9)	36.61(7.33)	NA	NA
<b>Barak 2004a</b> <sup>8</sup>	SA	case control	ICD	756(378,378)					NA	NA
<b>Barak 2004b</b> <sup>9</sup>	SA	case control	ICD	90(30,60)	57%	38%			NA	NA
<b>Barak 2008</b> <sup>10</sup>	SA	case control	DSM	2188(1094, 1094)	65%	72%	39.6(12.86)	42.89(13.69)	NA	NA
<b>Barrett 2011</b> <sup>11</sup>	SA	cross-sectional	ICD	174(53,121)	42%	64%	32.3(10.2)	31.6(9.6)	9.1(8.6)	6.1(6.8)
<b>Bouhlei 2013</b> <sup>12</sup>	SA	cross-sectional	DSM	134(45,89)	49%	67%	39.5(11.8)	41.2(11.6)	NA	NA
<b>Brugnoli 2012</b> <sup>13</sup>	SA	cohort	DSM	8871(384,8487)	59%	58%	NA	NA	11.2(10.2)	11.4(11)
<b>Chang 2015</b> <sup>14</sup>	SA	cohort	ICD	700(70,630)	56%	51%	NA	NA	NA	NA
<b>Correa 2002</b> <sup>15</sup>	SA	cross-sectional	DSM	33(12,21)	42%	57%	NA	NA	NA	NA
<b>Evren 2004</b> <sup>16</sup>	SA	cross-sectional	DSM	60(27,33)	59%	42%	37.82(9.83)	40.27(10.28)	14.88(8.45)	15.82(9.78)
<b>Fleischhacker 2014</b> <sup>17</sup>	SA	cohort	DSM	18154(108, 18046)	48%	54%	36.6(10.6)	41.1(11.3)	10.6(9.8)	13.1(11.6)
<b>Gazdag 2015</b> <sup>18</sup>	SA	cohort	ICD	223(26,197)	69%	86%	NA	NA	NA	NA

<b>Grunebaum 2001</b> <sup>19</sup>	SA	cross-sectional	DSM	150(70,80)	53%	59%	32.5(9.6)	31.4(10.2)	NA	NA
<b>Gupta 1998</b> <sup>20</sup>	SA	cross-sectional	DSM	336(98,238)	NA	NA	NA	NA	NA	NA
<b>Harkavy-Friedman 2004</b> <sup>21</sup>	SA	cross-sectional	other	86(29,57)	52%	47%	33.8(11.2)	32.3(8.8)	NA	NA
<b>Hettige 2014</b> <sup>22</sup>	SA	cross-sectional	DSM	304(134,170)	60%	74%	43.02(11.48)	39.71(13.11)	20.75(11.36)	16.72(12.27)
<b>Hu 2014</b> <sup>23</sup>	SA	cross-sectional	DSM	234(51,183)	73%	71%	36.28(11.09)	37.26(11.18)	194.64(115.32)	193.8(127.2)
<b>Kao 2011</b> <sup>24</sup>	SA	cross-sectional	DSM	104(51,53)	51%	49%	38.92(9.65)	39.55(10.95)	186.6(94.32)	175.92(110.88)
<b>Kocaturk 2015</b> <sup>25</sup>	SA	cross-sectional	DSM	70(27,43)	78%	58%	38.11(8.39)	39.28(11.03)	NA	NA
<b>Luckhoff 2014</b> <sup>26</sup>	SA	cross-sectional	DSM	974(137,837)	84%	80%	NA	NA	NA	NA
<b>Lui 2009</b> <sup>27</sup>	SA	cohort	ICD	234(33,201)	58%	54%	21.1(4)	21.1(4)	NA	NA
<b>Margetic 2012</b> <sup>28</sup>	SI & SA	cross-sectional	DSM	120(29,91)	NA	NA	NA	NA	NA	NA
<b>Mauri 2013</b> <sup>29</sup>	SA	cross-sectional	DSM	106(35,71)	43%	37%	47.42(14.02)	48.66(12.04)	21.33(12.39)	21.94(9.68)
<b>McLean 2012</b> <sup>30</sup>	SA	cross-sectional	DSM	812(497,315)	72%	69%	NA	NA	16.4(1.1)	17.7(9.9)
<b>Pratt 2010</b> <sup>31</sup>	SA	cross-sectional	ICD	84(58,26)	67%	85%	42.22(10.6)	42.35(14.46)	17.72(9.68)	16.67(13.52)
<b>Ran 2005</b> <sup>32</sup>	SA	cross-sectional	ICD	510(38,472)	42%	47%	39.4(2.61)	45.17(15.63)	10.3(0.1)	12.7(1.4)
<b>Restifo 2009</b> <sup>33</sup>	SA	case control	DSM	164(59,105)	NA	NA	NA	NA	16.75(9.55)	15.12(10.98)
<b>Robinson 2010</b> <sup>34</sup>	SA	cohort	DSM	282(61,221)	75%	70%	21.8(3.2)	21.7(3.5)	NA	NA
<b>Schennach-Wolff 2010</b> <sup>35</sup>	SA	cross-sectional	DSM	339(75,264)	59%	57%	34.6(10.6)	34.6(11.3)	7.6(8.3)	7.02(9.4)
<b>Sevincok 2007</b> <sup>36</sup>	SA	cross-sectional	DSM	57(19,38)	42%	61%	36.9(9.1)	34.2(12)	13.6(7.2)	10.3(8.5)
<b>Shoval 2006</b> <sup>37</sup>	SA	cross-sectional	DSM	178(52,126)	NA	NA	17.6(1.7)	17.3(1.7)	NA	NA
<b>Spoletini 2011</b> <sup>38</sup>	SA	cross-sectional	DSM	50(14,36)	NA	NA	42.9(11.3)	39.8(11.4)	18.7(11.1)	12.4(9.7)
<b>Tarrier 2004</b> <sup>39</sup>	SI & SA	cross-sectional	DSM	56(26,30)	73%	77%	25.6(6.2)	28.5(8.7)	15.1(10.3)	8.6(9.9)
<b>Taylor 2010</b> <sup>40</sup>	SA	cross-sectional	ICD	60(40,20)	85%	70%	44.2(10.64)	41.85(12.96)	19.83(10.04)	16.32(12.57)
<b>Teraishi 2014</b> <sup>41</sup>	SA	cross-sectional	DSM	87(30,57)	47%	61%	39.1(11.3)	37.7(10.3)	NA	NA
<b>Uzun 2009</b> <sup>42</sup>	SA	cross-sectional	DSM	300(104,196)	63%	66%	37.1(12.5)	36.4(11.4)	13.2(9.9)	10(7.7)
<b>Yan 2013</b> <sup>43</sup>	SA	cross-sectional	DSM	540(65,475)	48%	50%	41.2(7)	43(9.1)	195(9)	206(11)

		sectional					.4)	)	9)	5)
<b>Yoo 2015</b> <sup>44</sup>	SA	cross-sectional	DSM	87(20,67)	55%	60%	NA	NA	NA	NA
<b>Zhang 2013</b> <sup>45</sup>	SA	cross-sectional	DSM	520(48,472)	63%	67%	45.9(1.8)	49.8(1.0.9)	22.2(1.1)	25.1(1.3)
<b>Zoghbi 2014</b> <sup>46</sup>	SA	cross-sectional	DSM	316(25,291)	68%	75%	49.32(6.73)	51.86(8.59)	NA	NA
<b>Allebeck 1987</b> <sup>47</sup>	Suicide	case control	ICD	96(32,64)	47%	48%	NA	NA	NA	NA
<b>Ayesa-Arriola 2016</b> <sup>48</sup>	Suicide	cohort	DSM	397(60,337)	70%	55%	28.35(8.56)	30.11(9.61)	NA	NA
<b>Bjorkenstam 2014</b> <sup>49</sup>	Suicide	cohort	ICD	458(18,440)	67%	65%	NA	NA	NA	NA
<b>Breier 1984</b> <sup>50</sup>	Suicide	Cross-sectional	DSM	101(20,81)	NA	NA	NA	NA	NA	NA
<b>Casadebaig 1999</b> <sup>51</sup>	Suicide	Cohort	ICD	3470(83,3387)	78%	63%	NA	NA	NA	NA
<b>Cheng 1990</b> <sup>52</sup>	Suicide	case control	DSM	148(74,74)	58%	58%	31.3(9.1)	30.9(9.3)	NA	NA
<b>Cohen 1964</b> <sup>53</sup>	Suicide	case control	ICD	80(40,40)	100%	100%	NA	NA	NA	NA
<b>Cohen 1990</b> <sup>54</sup>	Suicide	cohort	DSM	82(8,74)	100%	100%	NA	NA	NA	NA
<b>De Hert 2001</b> <sup>55</sup>	Suicide	case control	DSM	126(63,63)	NA	NA	24(3.8)	24.2(4)	NA	NA
<b>Dong 2005</b> <sup>56</sup>	Suicide	case control	ICD	184(92,92)	NA	NA	NA	NA	NA	NA
<b>Drake 1984</b> <sup>57</sup>	Suicide	case control	DSM	104(15,89)	60%	54%	NA	NA	8.4	7.2
<b>Fenton 2000</b> <sup>58</sup>	Suicide	cohort	DSM	252(17,235)	NA	NA	NA	NA	NA	NA
<b>Fleischhacker 2014</b> <sup>17</sup>	SA & Suicide	cohort	DSM	18154(35,18119)	54%	54%	40.6(10.7)	41(13)	7(7.2)	13.1(11.6)
<b>Funahashi 2000</b> <sup>59</sup>	Suicide	cross-sectional	DSM	160(80,80)	NA	NA	NA	NA	NA	NA
<b>Havaki-Kontaxaki 1994</b> <sup>60</sup>	Suicide	cohort	ICD	82 (22,60)	NA	NA	45.3(16.7)	40.8 (12.2)	NA	NA
<b>Hu 1991</b> <sup>61</sup>	Suicide	cross-sectional	DSM	126(42,84)	60%	60%	NA	NA	NA	NA
<b>Kasckow 2010</b> <sup>62</sup>	Suicide	cross-sectional	DSM	97(74,24)	70%	63%	44.4(14.6)	46.8(16.6)	10.9(12.2)	18.3(13.1)
<b>Kelly 2004</b> <sup>63</sup>	Suicide	cross-sectional	DSM	97(15,82)	80%	62%	33.5(9.5)	50.8(14)	NA	NA
<b>Krupinski 2000</b> <sup>64</sup>	Suicide	cross-sectional	ICD	5276(19,5257)	53%	39%	31.8(11.5)	35.2(11.9)	6.6(8.6)	8.2(7.6)
<b>Kuo 2005</b> <sup>65</sup>	Suicide	case control	DSM	156(78,78)	49%	49%	32.5(9.9)	32.9(10.4)	NA	NA
<b>Law 1986</b> <sup>66</sup>	Suicide	Case control	NA	46(23,23)	57%	57%	NA	NA	NA	NA
<b>Lee 2009</b> <sup>67</sup>	Suicide	case control	DSM	435(87,348)	62%	62%	39.3(9.9)	39.3(9.9)	NA	NA

<b>Li 2008</b> <sup>68</sup>	Suicide	case control	ICD	128(64,64)	58%	58%	NA	NA	NA	NA
<b>Lim 1991</b> <sup>69</sup>	Suicide	cohort	DSM	452(41,411)	54%	58%	23.3 (7.3)	27(10.6)	NA	NA
<b>Limosin 2007</b> <sup>70</sup>	Suicide	cohort	ICD	3434(141,3293)	79%	63%	35.9(11)	39.5(11.3)	10.6(9.8)	13(9.9)
<b>Loas 2009</b> <sup>71</sup>	Suicide	cohort	DSM	150(8,17)	75%	82%	36.5(13.1)	43.1(10.3)	11(8.3)	21.1(11.5)
<b>Lopez-Moringo 2016</b> <sup>72</sup>	Suicide	case control	ICD	426(71,355)	73%	57%	38.5(13.2)	63.2(17.6)	NA	NA
<b>McGirr 2006</b> <sup>73</sup>	Suicide	case control	DSM	81(45,36)	80%	72%	34.45(11.61)	34.45(11.61)	NA	NA
<b>Mitter 2013</b> <sup>74</sup>	Suicide	Cross-sectional	DSM	1397(26,1371)	58%	51%	NA	NA	NA	NA
<b>Modestin 1992</b> <sup>75</sup>	Suicide	case control	ICD	106(53,53)	74%	74%	NA	NA	NA	NA
<b>Neider 2016</b> <sup>76</sup>	Suicide	cohort	DSM	99(12,87)	75%	64%	NA	NA	NA	NA
<b>Neuner 2010</b> <sup>77</sup>	Suicide	case control	ICD	22(11,11)	NA	NA	NA	NA	NA	NA
<b>Peuskens 1997</b> <sup>78</sup>	Suicide	case control	DSM	502(27,27)	74%	85%	27.7(4.2)	28.1(4.5)	NA	NA
<b>Pompili 2009</b> <sup>79</sup>	Suicide	case control	DSM	40(20,20)	100%	90%	45.85(13.26)	40.1(14.06)	NA	NA
<b>Reutfors 2009</b> <sup>80</sup>	Suicide	case control	ICD	168(84,84)	54%	60%	NA	NA	NA	NA
<b>Roos 1992</b> <sup>81</sup>	Suicide	case control	DSM	66(33,33)	79%	61%	NA	NA	NA	NA
<b>Roy 1982a</b> <sup>82</sup>	Suicide	case control	DSM	60(30,30)	80%	80%	NA	NA	NA	NA
<b>Roy 1982b</b> <sup>83</sup>	Suicide	case control	DSM	41(30,11)	NA	NA	24.8(6.2)	30(10)	NA	NA
<b>Shaffer 1974</b> <sup>84</sup>	Suicide	case control	DSM	361(12,349)	50%	10%	NA	NA	NA	NA
<b>Sinclair 2004</b> <sup>85</sup>	Suicide	case control	ICD	133(51,82)	78%	78%	NA	NA	NA	NA
<b>Taiminen 2001</b> <sup>86</sup>	Suicide	case control	DSM	138(69,69)	70%	52%	39.8(11.3)	39.5(11.3)	NA	NA
<b>Wilkinson 1984</b> <sup>87</sup>	Suicide	Case control	DSM	90(45,45)	56%	56%	NA	NA	NA	NA
<b>Wolfersdorf 1989</b> <sup>88</sup>	Suicide	Case control	ICD	230(115,115)	63%	63%	NA	NA	NA	NA
<b>Woldersdorf 2003</b> <sup>89</sup>	Suicide	case control	ICD	160(80,80)	NA	NA	NA	NA	NA	NA
<b>Delaney 2012</b> <sup>90</sup>	SI	cross-sectional	DSM	283(111,172)	NA	NA	NA	NA	NA	NA
<b>Depp 2016</b> <sup>91</sup>	SI	cross-sectional	DSM	93(18,75)	67%	59%	NA	NA	NA	NA
<b>Haug 2012</b> <sup>92</sup>	SI	cross-sectional	DSM	49(34,15)	50%	60%	25.3(7.4)	26.9(8.7)	NA	NA
<b>Keshavan 1994</b> <sup>93</sup>	SI	case control	DSM	39(19,20)	63%	40%	32.32(8.55)	30.6(7.7)	NA	NA
<b>Kim 2003</b> <sup>94</sup>	SI	cross-	DSM	333(200,13	79%	77%	35(8.2	35.4(1	13.9(7	13.2(8.



		sectional		3)		)	1)	.2)	6)
<b>Misiak 2015</b> <sup>95</sup>	SI	cross-sectional	DSM	100(30,70)	63%	50%	NA	NA	NA
<b>Montross 2008</b> <sup>96</sup>	SI	cross-sectional	DSM	132(31,101)	90%	73%	51(7.05)	51.4(6.17)	NA
<b>Yan 2013</b> <sup>43</sup>	SI, SA	cross-sectional	DSM	540(114,426)	54	213	42.3(8.9)	42.9(8.9)	16.8(9.6)
									17.1(9.3)

**Abbreviations:** DSM, Diagnostic and Statistical Manual of Mental Disorders; ICD, International Classification of Diseases; NA, Not Available

In Altamura 2007 <sup>4</sup> the whole sample was divided into 5 sub-sample based on the geographical region of recruitment. We were able to use the region data of this study in our meta-regression analysis. Yan 2013 <sup>43</sup> reported both suicidal ideation and attempts, and Fleischhacker 2014 <sup>17</sup> reported both suicidal attempts and suicide. These data were extracted to respective categories. In Margetic 2012 <sup>28</sup> and TARRIER 2004 <sup>39</sup>, the sample was dichotomized by suicidal ideation for one analysis and by suicide attempts for another; we included both divisions. In Brugnoli and colleagues' 2012 article <sup>13</sup>, they combined baseline characteristics of 6366 patients of whom 384 attempted suicide and 27 suicide in a 3 year follow-up period; we used these combined data for suicide attempt analysis, as we do not have separate values specifically for attempted suicide or suicide, but we can consider both groups of patients having attempted suicide. Keshavan 1994 <sup>93</sup> dichotomized patients by presence or absence of suicidal behavior (ideation and suicide attempt) in 19 and 20 patients, respectively. Kim 2003 <sup>94</sup> also dichotomized patients by suicidality, combining suicide ideation, plans, threats or attempts; we used the data for suicide ideation as all patients with positive suicidality can be considered to have suicide ideation. The variables were extracted to respective categories.

We communicated with all the authors who provided with contact information and asked for additional data not included in the published articles, which might be useful to our meta-analysis. Francisco Acosta Artiles, Girish Banwari, Sidney Zisook, Mao-Sheng Ran, Wei-Fen Ma, and Johan Reutfors responded and provided further references or extra data. For original data, however, only those provided by Banwari were applicable. And we used the data on age, gender, residence (urban vs. rural), marital status, employment status, family history of suicide, family history of psychiatry illness, PANSS scores in schizophrenia patients comparing those with suicide attempt with those without.

**eTable 3 Univariate meta-regression models of risk factors for completed and attempted suicide in schizophrenia**

<b>COMPLETED SUICIDE</b>	<b>Test of moderators</b>			<b>Variance accounted for</b>	<b>Test for residual heterogeneity</b>			<b>Estimate (Index)</b>	<b>SE</b>	<b>95% CI</b>	<b>p-value</b>
	F statistic	df1, df2	p-value		Q <sub>e</sub> statistic	DF	p-value				
<b>Being Male</b>											
NOQAS	6.0078	1,33	0.0197	20.99%	41.4282	33	0.1490	-0.1294	0.0528	-0.2368 to -0.0220	0.0197
Region	3.1895	3,20	0.0378	52.39%	35.2301	30	0.2344				
North America*								-	-	-	-
Europe								-0.4001	0.2761	-0.9640 to 0.1637	0.1576
Asia								-0.7589	0.2878	-1.3466 to -0.1712	0.0131
Africa								0.0966	0.6288	-1.1876 to 1.3808	0.8790
Mean age of total sample	6.2218	1,14	0.0257	33.04%	15.2158	14	0.3636	0.0230	0.0092	0.0032 to 0.0428	0.0257
<b>ATTEMPTED SUICIDE</b>	<b>Test of moderators</b>			<b>Variance accounted for</b>	<b>Test for residual heterogeneity</b>			<b>Estimate (Index)</b>	<b>SE</b>	<b>95% CI</b>	<b>p-value</b>
F statistic	df1, df2	p-value	Q <sub>e</sub> statistic		DF	p-value					
<b>Physical Comorbidity</b>											
Mean age of total sample	179.3665	1,1	0.0474	100%	0.0141	1	0.9055	0.1977	0.0148	0.0101 to 0.3852	0.0474
<b>Family history of psychiatric disease</b>											
Region	6.3912	4,6	0.0236	100%	2.0472	6	0.9153				
North America*								-	-	-	-
Europe								-0.0246	0.1657	-0.4301 to 0.3810	0.8870
Asia								0.0605	0.1598	-0.3304 to 0.4515	0.7179
Africa								-0.8841	0.2397	-1.4705 to -0.2976	0.0102

Oceania								0.5017	0.2021	0.0070 to 0.9963	0.0477
<b>History of drug use</b>											
NOQAS	6.0249	1,19	0.0239	29.36%	58.7542	19	<0.0001	0.1271	0.0518	0.0187 to 0.2355	0.0239
<b>History of tobacco use</b>											
NOQAS	8.9182	1,9	0.0153	99.99%	6.3338	9	0.7061	0.1328	0.0445	0.0322 to 0.2335	0.0153
<b>Being male</b>											
Latitude	10.9667	1,34	0.0022	84.51%	38.2239	34	0.2835	-0.0074	0.0022	-0.0120 to -0.0029	0.0022

\*reference level

**eTable 4 Multiple meta-regression correlating male gender and completed suicide in schizophrenia**

COMPLETED SUICIDE	Test of moderators			Variance accounted for	Test for residual heterogeneity		
	Qm statistic	DF	p-value		Qe statistic	DF	p-value
Being Male	15.6286	4	0.0036	100%	4.3204	10	0.9317
<b>Model Results</b>	<b>Estimate (index)</b>	<b>SE</b>		<b>95% CI</b>		<b>p-value</b>	
NOQAS	0.0484	0.0761		-0.1006 to 0.1975		0.5242	
Region (North America*)	-	-		-		-	
Region (Europe)	-0.0187	0.4564		-0.9132 to 0.8757		0.9673	
Region (Asia)	-0.6900	0.5137		-1.6968 to 0.3167		0.1792	
Mean age of total sample	0.0182	0.0109		-0.0031 to 0.0396		0.0939	

\*reference level

**eTable 5. Leave-one-out model for history of tobacco use in the meta-analysis of suicide**

	odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
Reutfors 2009	1.388	2.0527	0.0401	1.0149 to 1.8983	0.1808 (0.6707)	0	0%
Fleischhacker 2014	1.4442	2.3662	0.018	1.0651 to 1.9582	0.0029 (0.9568)	0	0%
Limosin 2007	1.3499	1.2927	0.1961	0.8565 to 2.1276	0.1594 (0.6897)	0	0%

**eTable 6. Leave-one-out model for history of alcohol use in the meta-analysis of suicide**

	odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
Roos 1992	1.2988	2.1526	0.0313	1.0237 to 1.6478	12.9954	0.0052	3.5796
Allebeck 1987	1.2828	1.9437	0.0519	0.9979 to 1.6489	13.5322	0.0112	7.1917
Kuo 2005	1.2615	1.8989	0.0576	0.9926 to 1.6034	11.8985	0.0066	4.5658
Lopez-Moringo 2016	1.3055	1.8811	0.06	0.9889 to 1.7234	13.3196	0.021	11.3636
McGirr 2006	1.2953	2.0379	0.0416	1.0099 to 1.6613	13.3783	0.0096	6.249
Reutfors 2009	1.3617	2.5025	0.0123	1.0692 to 1.7342	11.7687	0	0.0001
Shaffer 1974	1.2216	1.7015	0.0889	0.9701 to 1.5383	5.3466	0	0
Sinclair 2004	1.2911	1.8628	0.0625	0.9868 to 1.6893	13.4715	0.0184	10.621
Ayes-Arriola 2016	1.3383	2.1304	0.0331	1.0236 to 1.7498	12.8442	0.0103	5.5602
Limosin 2007	1.1624	1.0309	0.3026	0.8732 to 1.5473	12.1797	0	0.0011

**eTable 7. Leave-one-out model for worthlessness in the meta-analysis of suicide**

	odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
Kasckow 2010	5.9949	3.8845	0.0001	2.4285 to 14.7983	0 (1)	0	0
Krupinski	10.7561	1.6272	0.1037	0.6152 to	0 (1)	0	0

2000	188.052
------	---------

**eTable 8. Leave-one-out model for being white in the meta-analysis of suicide**

	odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Kelly 2004</b>	6.0399	1.9756	0.0482	1.0143 to 35.9658	14.4299 (0.0024)	2.331 8	78.211 7
<b>Breier 1984</b>	5.8519	1.9478	0.0514	0.989 to 34.6248	13.8536 (0.0031)	2.303 9	77.700 6
<b>Shaffer 1974</b>	3.2951	2.0147	0.0439	1.0329 to 10.5116	9.5142 (0.0232)	0.821 2	63.607
<b>Drake 1984</b>	5.6501	2.1223	0.0338	1.1416 to 27.9636	16.183 (0.001)	1.983 4	80.880 6
<b>Lopez-Moringo 2016</b>	8.947	4.4876	<0.0001	3.4358 to 23.2986	2.9505 (0.3993)	0	0.0001

**eTable 9. Leave-one-out model for age in the meta-analysis of suicide**

	SMD	SE	z-value	p-value	95% CI	Heterogeneity		
						Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Kasckow 2010</b>	-0.2425	0.113 1	-2.143 3	0.032 1	-0.4642 to 0.0207	116.2654 (P-value)	0.183 1	85.853 5
<b>Kelly 2004</b>	-0.1904	0.100 9	-1.886 5	0.059 2	-0.3881 to 0.0074	104.3229	0.138 7	82.312 9
<b>Krupinski 2000</b>	-0.2356	0.113 2	-2.080 4	0.037 5	-0.4575 to 0.0136	116.4382	0.183 4	85.854 2
<b>Lim 1991</b>	-0.2309	0.113 8	-2.029 7	0.042 4	-0.4538 to 0.0079	116.0686	0.184	85.485 3
<b>Cheng 1990</b>	-0.2554	0.112 6	-2.267 9	0.023 3	-0.476 to 0.0347	112.8886	0.179 4	85.170 1
<b>De Hert 2001</b>	-0.2494	0.113 3	-2.201 1	0.027 7	-0.4714 to 0.0273	115.0324	0.182 4	85.505 1
<b>Havaki-Kontaxaki 1994</b>	-0.2671	0.108 8	-2.455 7	0.014 1	-0.4803 to 0.0539	110.8132	0.166 5	84.708 4
<b>Kuo 2005</b>	-0.2504	0.113 4	-2.209 1	0.027 2	-0.4726 to 0.0282	114.4641	0.182 3	85.330 3
<b>Lee 2009</b>	-0.2537	0.113 3	-2.239 4	0.025 1	-0.4758 to 0.0317	111.2531	0.181 3	84.580 9

<b>Lopez-Moringo 2016</b>	-0.142 8	0.061 3	-2.329 5	-0.019 8	-0.2629 to -0.0227	36.1602	0.027 8	46.412 2
<b>McGirr 2006</b>	-0.251 2	0.112 5	-2.232 1	-0.025 6	-0.4717 to -0.0306	115.0781	0.180 5	85.632 6
<b>Peuskens 1997</b>	-0.245 4	0.112 5	-2.181 3	-0.029 2	-0.466 to -0.0249	116.0665	0.181 6	85.853
<b>Pompili 2009</b>	-0.266 2	0.108 2	-2.460 5	-0.013 9	-0.4782 to -0.0542	111.9831	0.165 9	84.806 3
<b>Taiminen 2001</b>	-0.254 2	0.112 7	-2.254 8	-0.024 1	-0.4751 to -0.0332	113.5025	0.18	85.272 2
<b>Roy 1982</b>	-0.219 9	0.110 1	-1.997 7	-0.045 7	-0.4356 to -0.0042	114.9849	0.173 9	85.453 4
<b>Ayes-Arriola 2016</b>	-0.241 5	0.114 2	-2.114 4	-0.034 5	-0.4654 to -0.0176	116.1637	0.185 4	85.277 7
<b>Fleischhacker 2014</b>	-0.250 8	0.113 2	-2.214 7	-0.026 8	-0.4727 to -0.0288	114.5442	0.182	85.397 1
<b>Limosin 2007</b>	-0.232 7	0.114 6	-2.031 2	-0.042 2	-0.4573 to -0.0082	115.8219	0.185 8	83.648 2
<b>Loas 2009</b>	-0.227	0.110 4	-2.057 2	-0.039 7	-0.4434 to -0.0107	115.9425	0.176 5	85.694 2

**eTable 10. Leave-one-out model for hopelessness in the meta-analysis of suicide attempt**

	Odds ratio	z-value	p-value	95%CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Pratt 2010</b>	2.3996	3.9726	0.0001	1.5581 to 3.6956	0.3781 (0.5386)	0	0
<b>Restifo 2009</b>	2.0476	1.8847	0.0595	0.9718 to 4.3146	1.7456 (0.1864)	0.1355	42.712
<b>Robinson 2010</b>	1.778	2.0576	0.0396	1.0277 to 3.076	0.7125 (0.3986)	0	0

**eTable 11. Leave-one-out model for living alone in the meta-analysis of suicide attempt**

	Odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Mauri 2013</b>	0.7732	-1.83	0.0673	0.587 to 1.0184	0.0144 (0.9928)	0	0
<b>McLean</b>	0.6111	-1.378	0.1682	0.3033 to	0.217 (0.8972)	0	0

<b>2012</b>				1.2312			
<b>Tarrier</b>	0.7515	-	0.038	0.5737 to	0.6013 (0.7403)	0	0
<b>2004</b>				0.9844			
<b>Zoghbi</b>	0.7513	-	0.0374	0.574 to	0.6019 (0.7401)	0	0
<b>2014</b>				0.9835			

**eTable 12. Leave-one-out model for being male in the meta-analysis of suicide attempt**

	Odds ratio	z-value	p-value	95% CI	Heterogeneity		
					Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Banwari 2013</b>	0.8817	-	0.0306	0.7865 to 0.9883	60.3513 (0.033)	0.0338	29.4194
<b>Barrett 2011</b>	0.9043	-	0.076	0.8091 to 1.0106	56.7335 (0.0641)	0.0277	25.2147
<b>Yoo 2016</b>	0.889	-	0.0459	0.7919 to 0.9979	62.5524 (0.0214)	0.0357	30.5683
<b>Altamura 2007 (SAf)</b>	0.8855	-	0.0375	0.7897 to 0.993	61.9098 (0.0243)	0.0347	30.0463
<b>Altamura 2007 (EUR)</b>	0.8978	-	0.0667	0.8001 to 1.0074	60.8209 (0.0301)	0.0338	29.1666
<b>Altamura 2007 (EEUR)</b>	0.8856	-	0.0414	0.7881 to 0.9953	62.397 (0.0221)	0.0366	30.8591
<b>Altamura 2007 (NA)</b>	0.8861	-	0.0423	0.7885 to 0.9958	62.4497 (0.0219)	0.0366	30.8959
<b>Altamura 2007 (SA)</b>	0.8863	-	0.0396	0.79 to 0.9943	62.3611 (0.0223)	0.0352	30.2892
<b>Aguilar 2003</b>	0.8852	-	0.0391	0.7884 to 0.9939	62.2905 (0.0226)	0.0358	30.5158
<b>Albayrak 2012</b>	0.8914	-1.943	0.052	0.7938 to 1.001	62.3233 (0.0224)	0.0359	30.5976
<b>Altamura 2003</b>	0.8911	-	0.0504	0.7939 to 1.0002	62.3069 (0.0225)	0.0356	30.4566
<b>Artiles 2009</b>	0.891	-	0.0488	0.7943 to 0.9994	62.0899 (0.0235)	0.035	30.1877
<b>Bani-Fatemi 2013</b>	0.9011	-	0.0797	0.802 to 1.0124	60.3369 (0.0331)	0.0335	28.193
<b>Barak 2004b</b>	0.8772	-	0.0234	0.7833 to 0.9824	58.8343 (0.0439)	0.0317	28.0084
<b>Barak 2008</b>	0.9049	-	0.0962	0.8044 to 1.018	56.5264 (0.0664)	0.0323	24.5307
<b>Bouhlef 2002</b>	0.8979	-	0.0654	0.8008 to 1.0069	60.3598 (0.0329)	0.0332	28.8827
<b>Brugnoli 2012</b>	0.8763	-	0.0304	0.7775 to 0.9876	58.9883 (0.0427)	0.0362	27.5119
<b>Chang 2015</b>	0.8784	-	0.0285	0.7821 to 0.9865	60.9133 (0.0296)	0.0344	29.2254
<b>Correa 2002</b>	0.8908	-	0.0484	0.7942 to 0.9992	62.1113 (0.0234)	0.035	30.1853
<b>Evren 2004</b>	0.8803	-	0.0286	0.7854 to	60.187	0.0334	29.136

		2.1892		0.9867	(0.0341)		
<b>Fleischhacker 2014</b>	0.8931	- 1.8552	0.0636	0.7926 to 1.0064	62.3057 (0.0225)	0.0387	31.287
<b>Gazdag 2015</b>	0.8986	- 1.8473	0.0647	0.8022 to 1.0065	58.922 (0.0432)	0.0321	28.2913
<b>Grunebaum 2001</b>	0.8909	- 1.9361	0.0529	0.7926 to 1.0014	62.4559 (0.0218)	0.0369	30.9822
<b>Harkavy-Friedman 2004</b>	0.8845	- 2.0823	0.0373	0.788 to 0.9928	62.119 (0.0234)	0.0354	30.3453
<b>Hettige 2014</b>	0.9052	- 1.7434	0.0813	0.8094 to 1.0124	57.8969 (0.0521)	0.0277	24.9507
<b>Hu 2014</b>	0.8845	- 2.0665	0.0388	0.7873 to 0.9937	62.2275 (0.0229)	0.0362	30.6531
<b>Kao 2011</b>	0.885	- 2.0618	0.0392	0.788 to 0.994	62.2857 (0.0226)	0.036	30.6063
<b>Kocaturk 2015</b>	0.8789	- 2.2286	0.0258	0.7846 to 0.9846	58.9594 (0.0429)	0.0324	28.576
<b>Luckhoff 2014</b>	0.8756	- 2.2674	0.0234	0.7806 to 0.9821	59.9662 (0.0355)	0.0322	27.9042
<b>Lui 2009</b>	0.8838	- 2.0866	0.0369	0.787 to 0.9925	62.0707 (0.0236)	0.0358	30.4331
<b>Mauri 2013</b>	0.8827	- 2.1198	0.034	0.7865 to 0.9906	61.697 (0.0254)	0.035	30.0488
<b>McLean 2012</b>	0.8709	- 2.3658	0.018	0.7766 to 0.9766	58.2355 (0.049)	0.0295	25.24
<b>Pratt 2010</b>	0.8945	- 1.9099	0.0561	0.7979 to 1.0029	60.5992 (0.0315)	0.034	29.5908
<b>Ran 2005</b>	0.8901	- 1.9519	0.0509	0.792 to 1.0005	62.514 (0.0216)	0.0368	31.0032
<b>Robinson 2010</b>	0.8794	- 2.1847	0.0289	0.7837 to 0.9869	60.9477 (0.0294)	0.034	29.3159
<b>Schennach-Wolff 2010</b>	0.8825	- 2.0884	0.0368	0.7848 to 0.9923	61.9505 (0.0242)	0.0366	30.6065
<b>Sevincok 2007</b>	0.8934	- 1.9242	0.0543	0.7966 to 1.0021	61.3976 (0.0269)	0.0346	29.9216
<b>Tarrier 2004</b>	0.8887	- 2.0077	0.0447	0.792 to 0.9972	62.5574 (0.0214)	0.0354	30.4205
<b>Taylor 2010</b>	0.8816	- 2.1648	0.0304	0.7865 to 0.9881	60.1738 (0.0341)	0.0337	29.3804
<b>Teraishi 2014</b>	0.8942	- 1.9033	0.057	0.7969 to 1.0033	61.5059 (0.0264)	0.0348	29.9505
<b>Uzun 2009</b>	0.8899	- 1.9316	0.0534	0.7906 to 1.0017	62.5451 (0.0214)	0.0382	31.4408
<b>Yan 2013</b>	0.8872	- 1.9864	0.047	0.7884 to 0.9984	62.5302 (0.0215)	0.0379	31.3734
<b>Zhang 2013</b>	0.8901	- 1.9462	0.0516	0.7916 to 1.0008	62.5235 (0.0215)	0.0372	31.1255
<b>Zoghbi 2014</b>	0.8913	- 1.9479	0.0514	0.7939 to 1.0007	62.3066 (0.0225)	0.0358	30.5278

Abbreviations: CI, confidence interval; SMD, standardized mean difference; SE, standard error



**eTable 13. Leave-one-out model for age of onset in the meta-analysis of suicide attempt**

	SMD	SE	z-value	p-value	95% CI	Heterogeneity		
						Q Statistic (P-value)	I <sup>2</sup>	I <sup>2</sup>
<b>Altamura 2007 (EEUR)</b>	-0.1426	0.0686	-2.0788	0.0376	-0.2770 to -0.0081	431.8833	0.0872	82.565
<b>Altamura 2007 (EUR)</b>	-0.1398	0.0689	-2.0289	0.0425	-0.2748 to -0.0047	432.4569	0.0879	82.5627
<b>Altamura 2007 (NA)</b>	-0.1377	0.0689	-1.9981	0.0457	-0.2727 to -0.0026	434.1754	0.0881	82.6584
<b>Altamura 2007 (SAf)</b>	-0.1427	0.0672	-2.1229	0.0338	-0.2744 to -0.0109	435.0878	0.0853	82.5884
<b>Bani-Fatemi 2013</b>	-0.141	0.0692	-2.0364	0.0417	-0.2766 to -0.0053	422.3348	0.0882	81.6669
<b>Bouhlei 2002</b>	-0.141	0.0686	-2.0554	0.0398	-0.2755 to -0.0065	433.2082	0.0874	82.6493
<b>Evren 2004</b>	-0.1364	0.0683	-1.9982	0.0457	-0.2702 to -0.0026	436.1259	0.0872	82.7992
<b>Gupta 1998</b>	-0.1296	0.069	-1.8778	0.0604	-0.2648 to 0.0057	436.393	0.0879	82.2785
<b>Harkavy-Friedman 2004</b>	-0.1324	0.0684	-1.9361	0.0529	-0.2665 to 0.0016	436.6755	0.0873	82.7657
<b>Hu 2014</b>	-0.1383	0.0689	-2.008	0.0446	-0.2734 to -0.0033	433.7277	0.088	82.6367
<b>Kao 2011</b>	-0.1386	0.0686	-2.0195	0.0434	-0.2731 to -0.0041	434.6922	0.0876	82.7356
<b>Mauri 2013</b>	-0.1381	0.0686	-2.0137	0.044	-0.2725 to -0.0037	435.0778	0.0876	82.7579
<b>McLean 2012</b>	-0.1451	0.069	-2.1044	0.0353	-0.2803 to -0.01	401.6654	0.0872	80.7567
<b>Pratt 2010</b>	-0.14	0.0683	-2.0494	0.0404	-0.2739 to -0.0061	434.8326	0.0871	82.7395
<b>Ran 2005</b>	-0.1245	0.0682	-1.8264	0.0678	-0.2581 to 0.0091	436.7384	0.0857	82.31
<b>Shoval 2006</b>	-0.1471	0.0682	-2.1566	0.031	-0.2807 to -0.0134	428.1517	0.0858	82.3017
<b>Teraishi 2014</b>	-0.139	0.0684	-2.0319	0.0422	-0.2731 to -0.0049	435.0376	0.0873	82.7572
<b>Uzun 2009</b>	-0.1365	0.0692	-1.9736	0.0484	-0.2721 to -0.0009	432.9154	0.0885	82.3902
<b>Yan 2013</b>	-0.1406	0.069	-2.0378	0.0416	-0.2757 to -0.0054	430.6612	0.0879	82.4226
<b>Zhang 2013</b>	-0.1395	0.0689	-2.0253	0.0428	-0.2746 to -0.0045	432.7233	0.0879	82.5795
<b>Zoghbi 2014</b>	-0.1368	0.0686	-1.994	0.0462	-0.2712 to -0.0023	435.5506	0.0877	82.775

<b>Altamura 2003</b>	-0.1479	0.0676	-2.1877	0.0287	-0.2804 to -0.0154	431.149	0.0848	82.3674
<b>Restifo 2009</b>	-0.1366	0.0689	-1.982	0.0475	-0.2716 to -0.0015	434.7395	0.0881	82.6761
<b>Brugnoli 2012</b>	-0.067	0.0297	-2.2515	0.0244	-0.1253 to -0.0087	15.0343	0	0
<b>Chang 2015</b>	-0.1367	0.0692	-1.9776	0.048	-0.2723 to -0.0012	433.0758	0.0884	82.4381
<b>Robinson 2010</b>	-0.1423	0.0688	-2.0689	0.0386	-0.2771 to -0.0075	430.3157	0.0875	82.4524

**eTable 14. Characteristics of cohort studies included in the meta-analysis**

	Outcome	Diagnostic Criteria	N (suicide, non-suicide)	Male (%)		Age (years)		Disease length	
				suicidal	non-suicidal	suicidal	non-suicidal	suicidal	non-suicidal
<b>Brugnoli 2012 (6)</b>	Attempts	DSM	8871(384,8487)	59%	58%	NA	NA	11.2(10.2)	11.4(11)
<b>Chang 2015 (20)</b>	Attempts	ICD	700(70,630)	56%	51%	NA	NA	NA	NA
<b>Fleischhacker 2014 (17)</b>	Attempts	DSM	18154(108,18046)	48%	54%	36.6(10.6)	41.1(13)	10.6(9.8)	13.1(1.6)
<b>Gazdag 2015 (23)</b>	Attempts	ICD	223(26,197)	69%	86%	NA	NA	NA	NA
<b>Lui 2009 (32)</b>	Attempts	ICD	234(33,201)	58%	54%	21.1(4)	21.1(4)	NA	NA
<b>Robinson 2010 (38)</b>	Attempts	DSM	282(61,221)	75%	70%	21.8(3.2)	21.7(3.5)	NA	NA
<b>Ayesa-Arriola 2016 <sup>48</sup></b>	Suicide	DSM	397(60,337)	70%	55%	28.35(8.56)	30.11(9.61)	NA	NA
<b>Bjorkenstam 2014 <sup>49</sup></b>	Suicide	ICD	458(18,440)	67%	65%	NA	NA	NA	NA
<b>Casadebaig 1999 <sup>51</sup></b>	Suicide	ICD	3470(83,3387)	78%	63%	NA	NA	NA	NA
<b>Cohen 1990 <sup>54</sup></b>	Suicide	DSM	82(8,74)	100%	100%	NA	NA	NA	NA
<b>Fenton 2000 <sup>58</sup></b>	Suicide	DSM	252(17,235)	NA	NA	NA	NA	NA	NA
<b>Fleischhacker 2014 <sup>17</sup></b>	Suicide	DSM	18154(35,18119)	54%	54%	40.6(10.7)	41(13)	7(7.2)	13.1(1.6)
<b>Limosin 2007 <sup>70</sup></b>	Suicide	ICD	3434(141,3293)	79%	63%	35.9(11)	39.5(11.3)	10.6(9.8)	13(9.9)
<b>Loas 2009 <sup>71</sup></b>	Suicide	DSM	150(8,17)	75%	82%	36.5(13.1)	43.1(10.3)	11(8.3)	21.1(1.5)
<b>Neider 2016 <sup>76</sup></b>	Suicide	DSM	99(12,87)	75%	64%	NA	NA	NA	NA

**Abbreviations:** DSM, Diagnostic and Statistical Manual of Mental Disorders; ICD, International Classification of Diseases; NA, Not Available

**eTable 15. Meta-analysis of cohort studies for risk factors of suicide in schizophrenia**

Risk Factors	suicide, n	Not suicide, n	Effect size (95% CI)	p-value	Heterogeneity			Egger's test: Z statistic (p-value)
					Q statistic (DF; p value)	I <sup>2</sup>	I <sup>2</sup>	

<b>Male<sup>a</sup></b>	365	25754	1.71 [1.28, 2.29]	0.00 03	8.2161 (7; p=0.313 9)	0.02 87	16.5 6%	-2.2009 (p=0.0277)
<b>History of attempted suicide<sup>a</sup></b>	193	21647	3.52 [1.52, 8.18]	0.00 34	6.9428 (2; p= 0.0311)	0.41 78	79.2 0%	2.4571 (p=0.0140)
<b>History of tobacco use<sup>a</sup></b>	176	21412	1.39 (1.01, 1.90)	0.04 01	0.1808 (1; p=0.670 7)	0	0.00 %	NA
<b>History of drug use<sup>a</sup></b>	302	7457	1.00 [0.23, 4.25]	0.99 49	80.9980 (3; p<0.000 1)	2.04 06	95.4 7%	0.1078 (p= 0.9141)
<b>Illness length<sup>b</sup></b>	184	21429	-0.41 (- 0.70, - 0.12)	0.00 58	4.0823 (2; p= 0.1299)	0.03 24	50.7 6%	-1.9249 (p=0.0542)
<b>History of alcohol use<sup>a</sup></b>	201	3630	1.34 (0.92, 1.93)	0.12 26	1.3173 (1; p=0.251 1)	0.01 84	24.0 8%	NA
<b>Age<sup>b</sup></b>	244	21766	-0.24 (- 0.39, - 0.09)	0.00 14	3.0618 (3; p= 0.3822)	0.00 31	11.6 5%	-0.0765 (p=0.9390)
<b>Age of onset<sup>b</sup></b>	68	411	-1.83 (- 3.58, - 0.08)	0.04 04	15.5423 (1; p<0.000 1)	1.49 99	93.5 7%	NA
<b>Married<sup>a</sup></b>	201	3630	1.07 (0.75, 1.53)	0.71 11	0.7993 (1; p= 0.3713)	0	0.00 %	
<b>Living alone<sup>a</sup></b>	201	3630	0.81 (0.23, 2.79)	0.73 26	5.1532 (1; p=0.023 2)	0.66 52	80.5 9%	NA
<b>Family history of schizophrenia<sup>a</sup></b>	78	777	1.05 (0.57, 1.96)	0.87 14	0.0731 (1; p=0.786 9)	0	0.00 %	NA

**eTable 16. Meta-analysis of cohort studies for risk factors of suicide attempt in schizophrenia**

Risk Factors	suicide, n	Not suicide, n	Effect size (95% CI)	p-value	Heterogeneity			Egger's test: Z statistic (p-
					Q statistic	I <sup>2</sup>	I <sup>2</sup>	

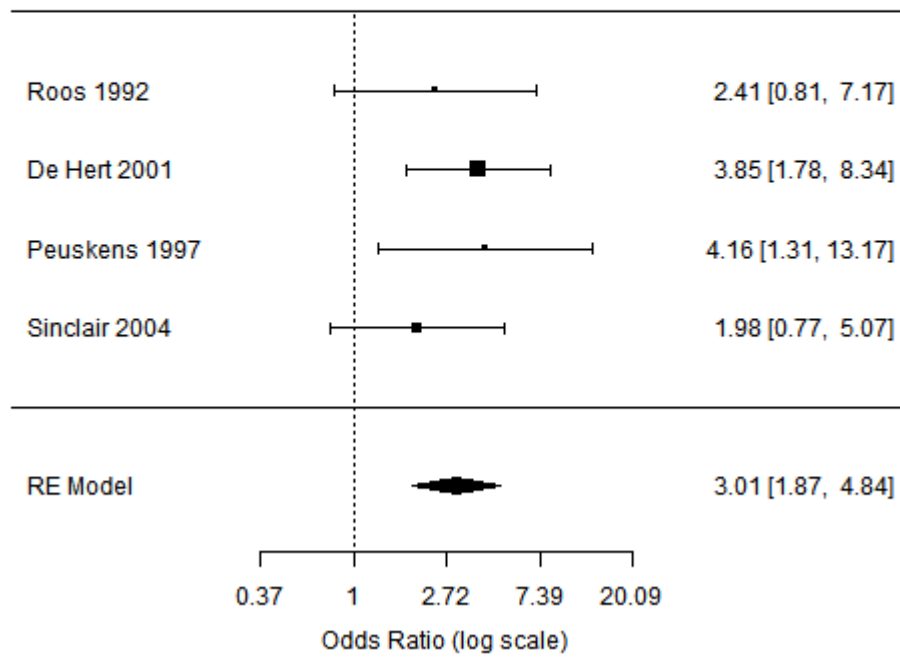
					(DF; p value)				value)
<b>History of suicide attempt<sup>a</sup></b>	588	27360	3.87 [2.32, 6.44]	<0.001	10.7575 (3; p=0.0131)	0.19	79.3	3%	-2.5916, p = 0.0096
<b>Male<sup>a</sup></b>	682	27782	1.00 (0.85, 1.18)	0.9811	7.8278 (5; p=0.1660)	0.00	2.76	15 %	-0.7329 (p=0.4636)
<b>Illness length<sup>b</sup></b>	492	26533	0.17 (-0.70, 1.04)	0.7367	185.9258 (1; p<0.0001)	1.11	99.4	88 6 %	NA
<b>History of alcohol use<sup>a</sup></b>	94	422	2.13 (1.25, 3.62)	0.0052	0.7022 (1; p=0.4021)	0	0.00	%	NA
<b>Age<sup>b</sup></b>	202	18468	-0.13 (-0.40, 0.13)	0.3180	5.9392 (2; p=0.0513)	0.03	63.9	42 5%	1.9848 (p=0.0472)
<b>History of drug use<sup>a</sup></b>	190	1249	1.40 (0.75, 2.61)	0.2869	8.0262 (3; p=0.0455)	0.25	65.2	96 0%	-0.5141 (p=0.6072)
<b>Age of onset<sup>b</sup></b>	515	9338	-0.13 (-0.21, -0.04)	0.0063	0.9389 (2; p=0.6253)	0	0%		0.4068 (p=0.6841)
<b>Unemployed<sup>a</sup></b>	410	8684	0.76 (0.27, 2.17)	0.6073	5.5037 (1; p=0.0190)	0.47	81.8	99 3%	NA
<b>Family history of Suicide<sup>a</sup></b>	120	619	1.62 (0.85, 3.09)	0.1409	1.1318 (2; p=0.5678)	0	0.00	%	-0.8308 (p=0.4061)
<b>Family history of psychiatric illness<sup>a</sup></b>	87	418	2.37 (1.44, 3.91)	0.0007	0.7975 (1; p=0.3718)	0	0.00	%	NA

a The effect size used was odds ratio

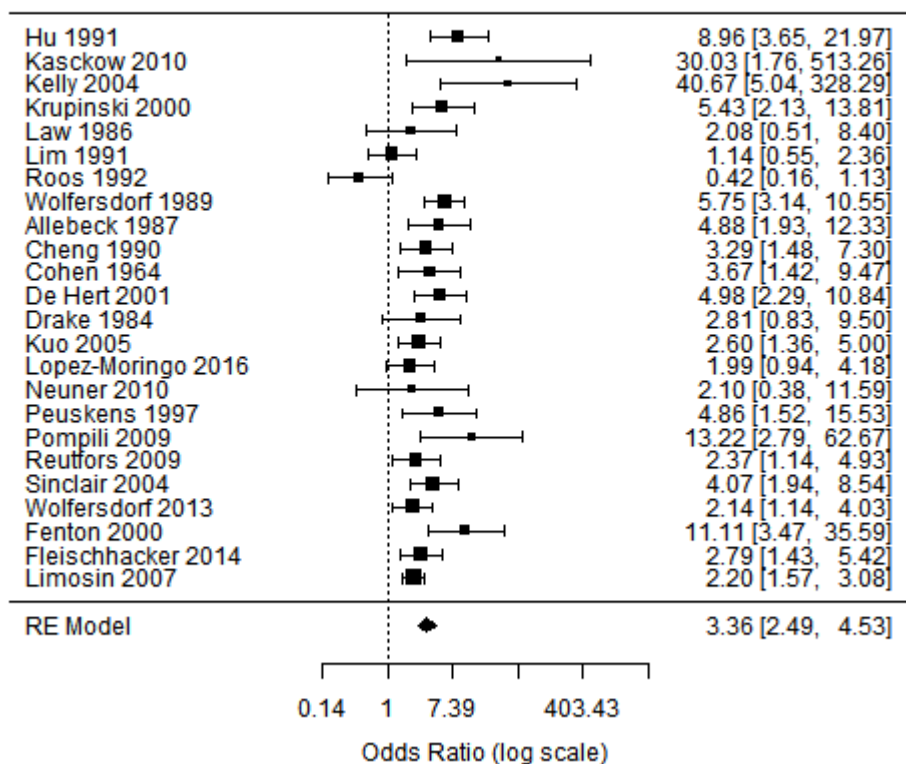
b The effect size used was standardized mean difference

Abbreviations: SCZ=schizophrenia. DF=degrees of freedom.

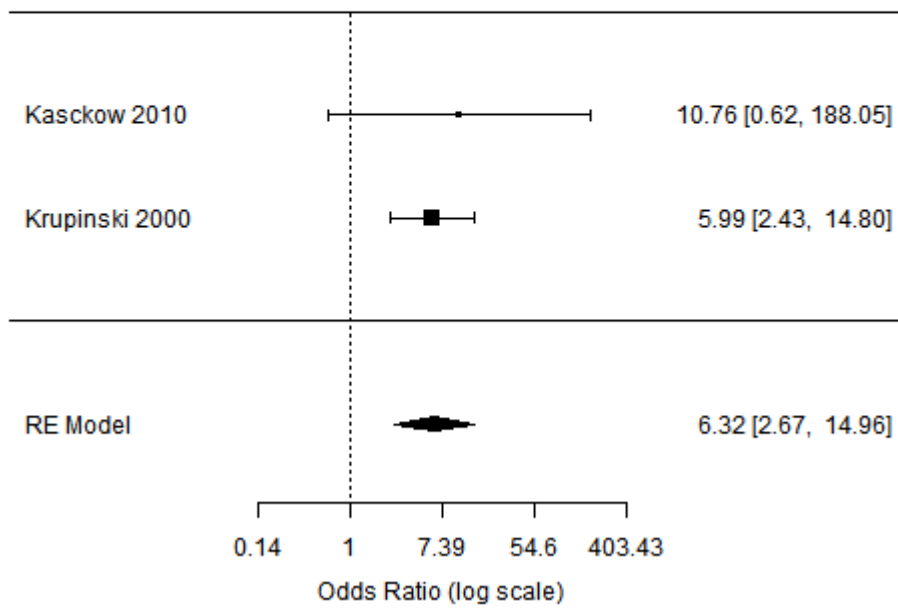
**eFigure 1. Poor adherence to treatment was significant in the meta-analysis for suicide.**



**eFigure 2. History of attempted suicide was significant in the meta-analysis for suicide.**

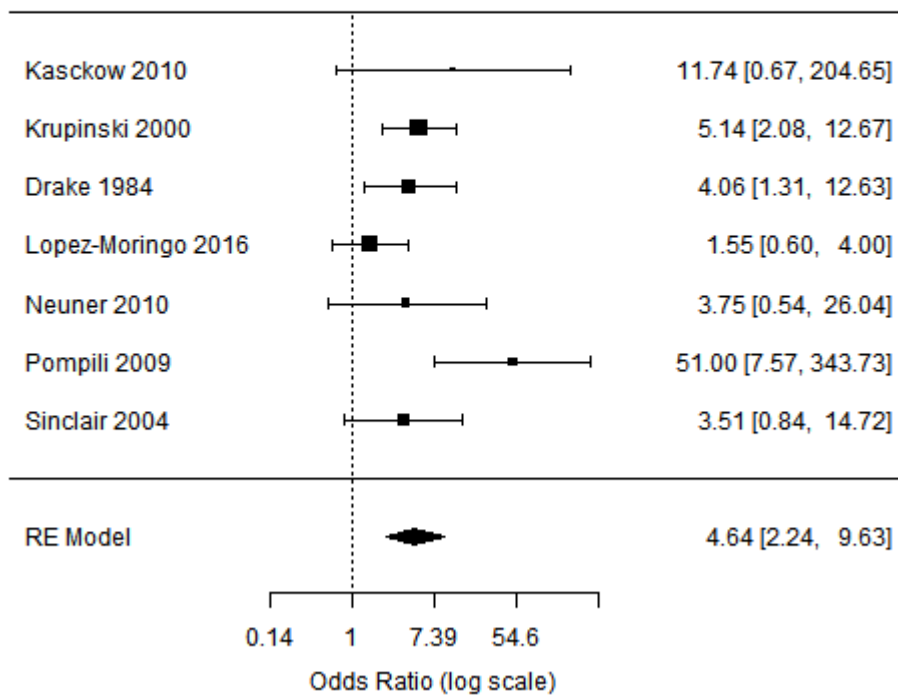


**eFigure 3. Worthlessness was significant in the meta-analysis for suicide.**

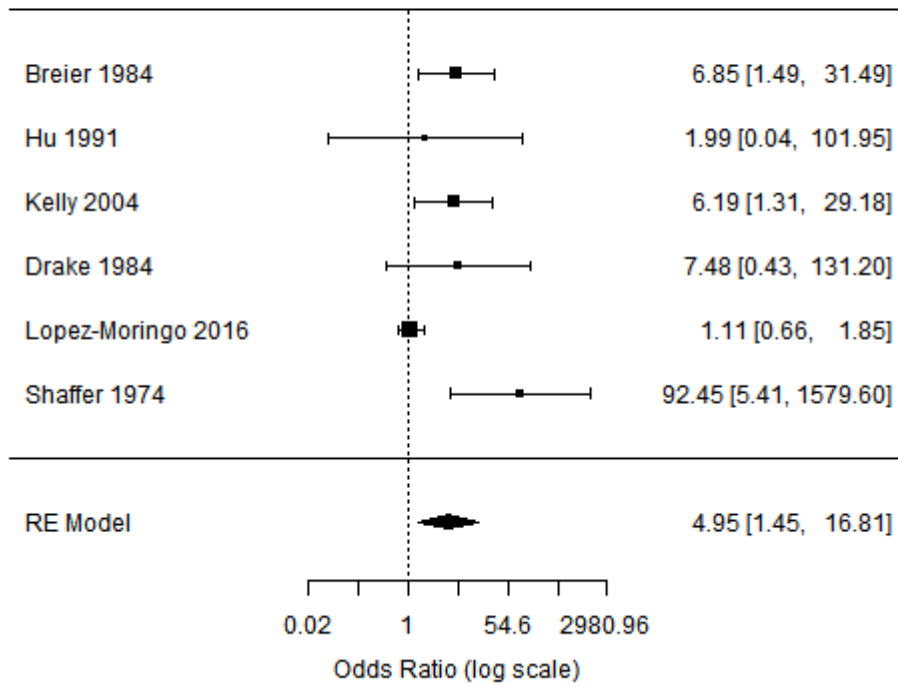




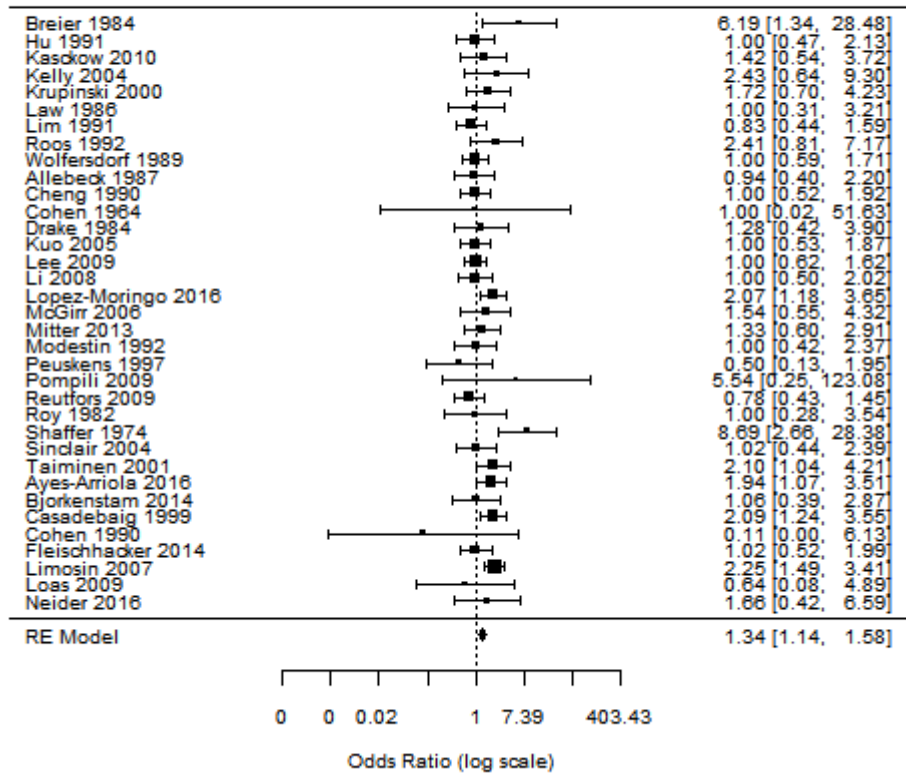
**eFigure 4. Hopelessness was significant in the meta-analysis for suicide.**



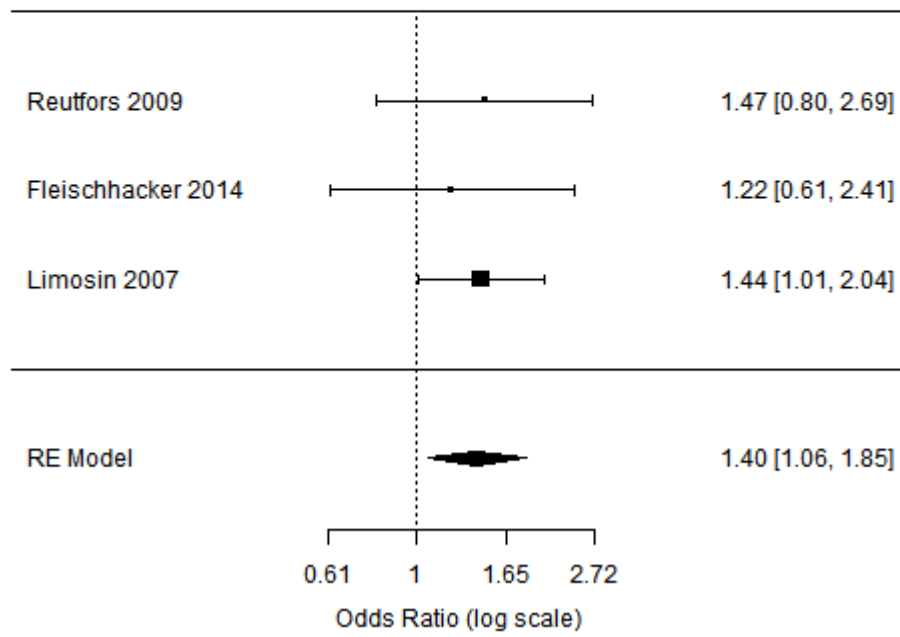
**eFigure 5. Being white was significant in the meta-analysis for suicide.**



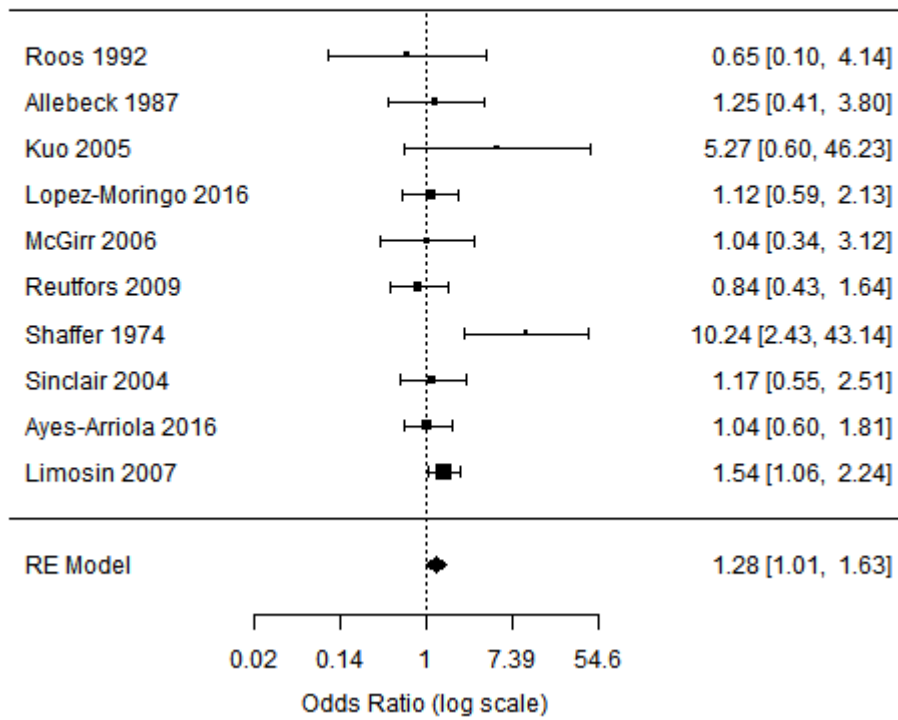
eFigure 6. Being male was significant in the meta-analysis for suicide.



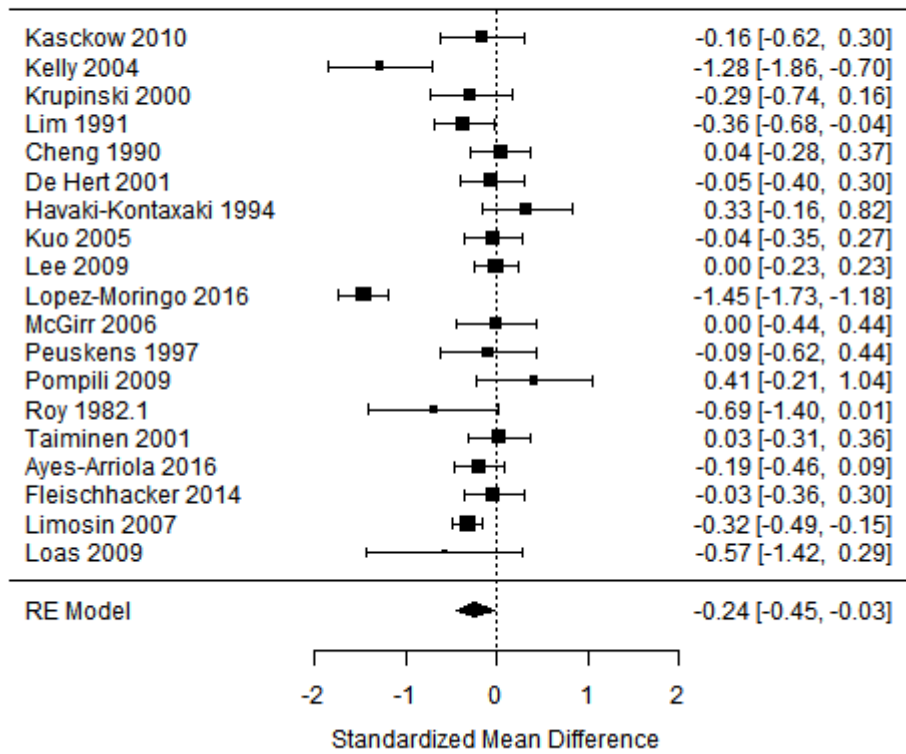
**eFigure 7. History of tobacco use was significant in the meta-analysis for suicide.**



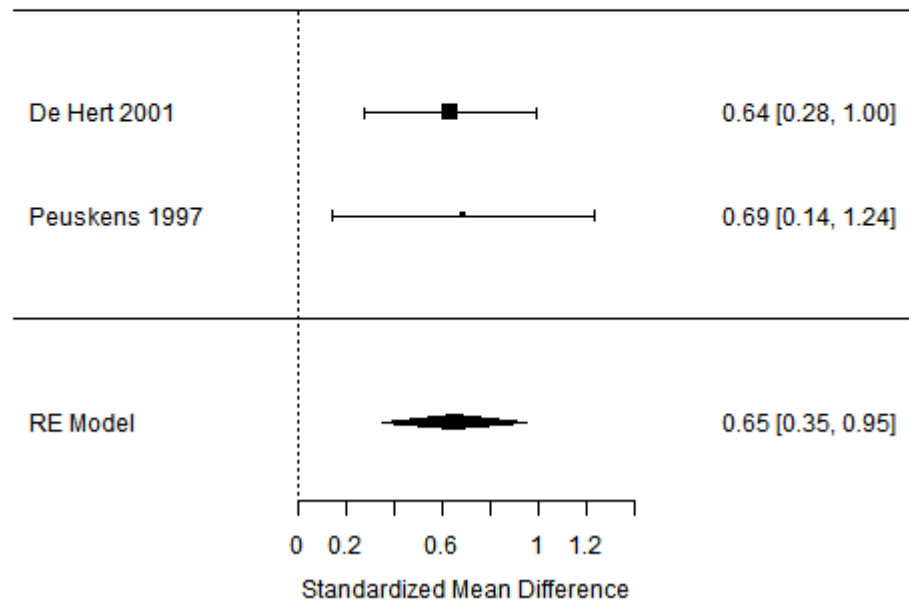
**eFigure 8. History of alcohol use was significant in the meta-analysis for suicide.**



**eFigure 9. Younger age was associated with suicide.**

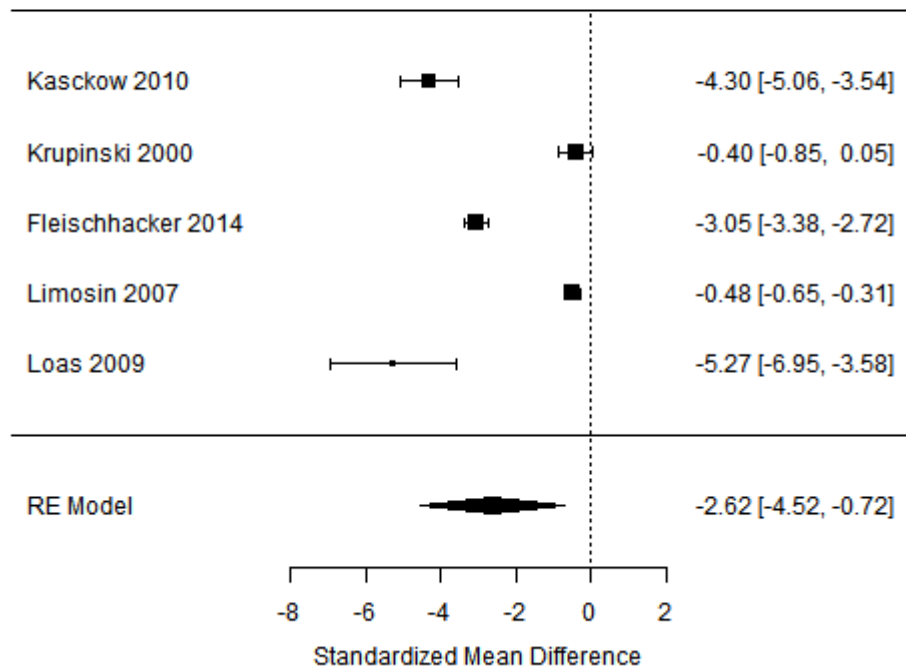


**eFigure 10. Higher IQ was associated with**



**suicide.**

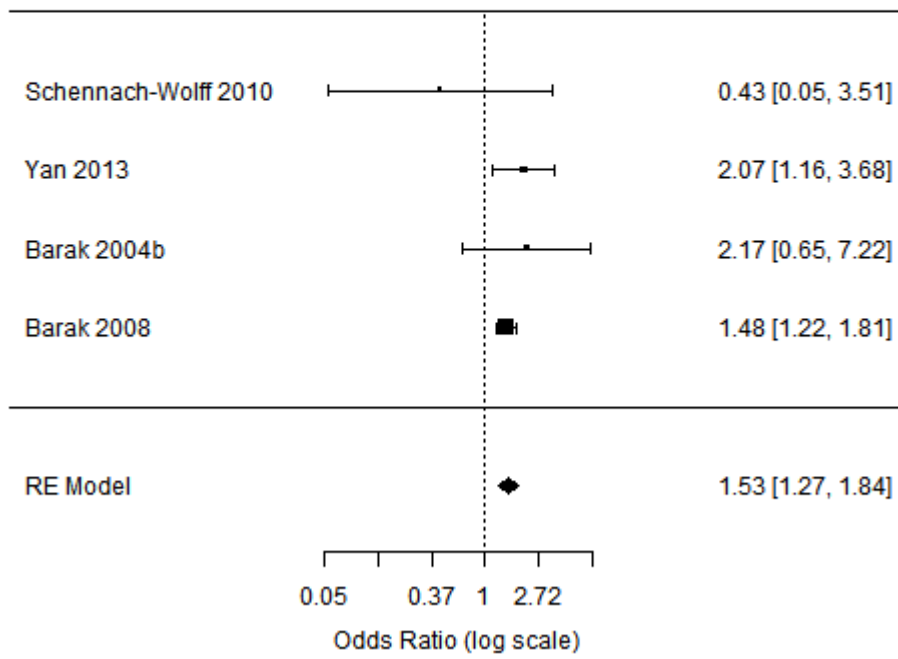
**eFigure 11. Shorter illness length was associated with**



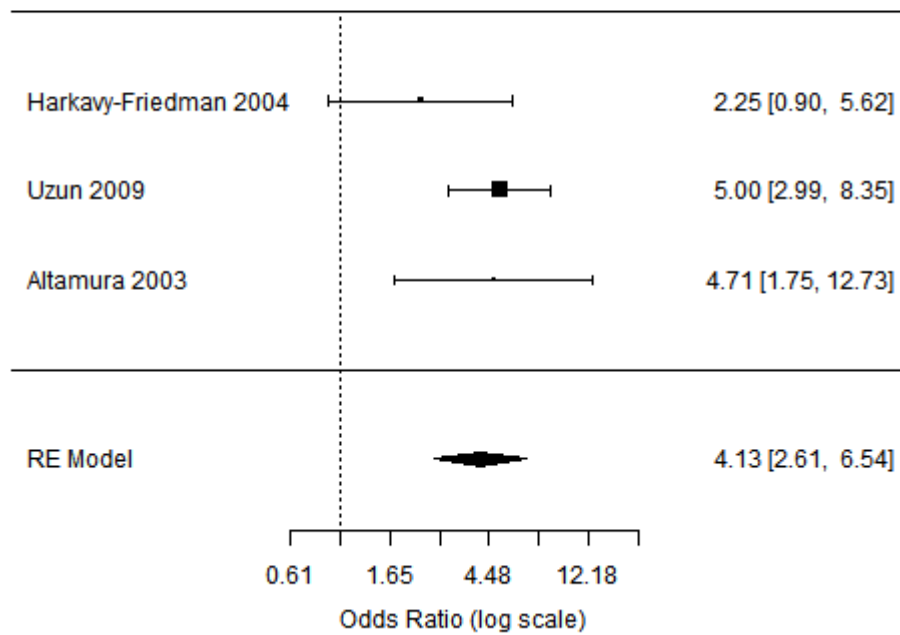
**suicide.**



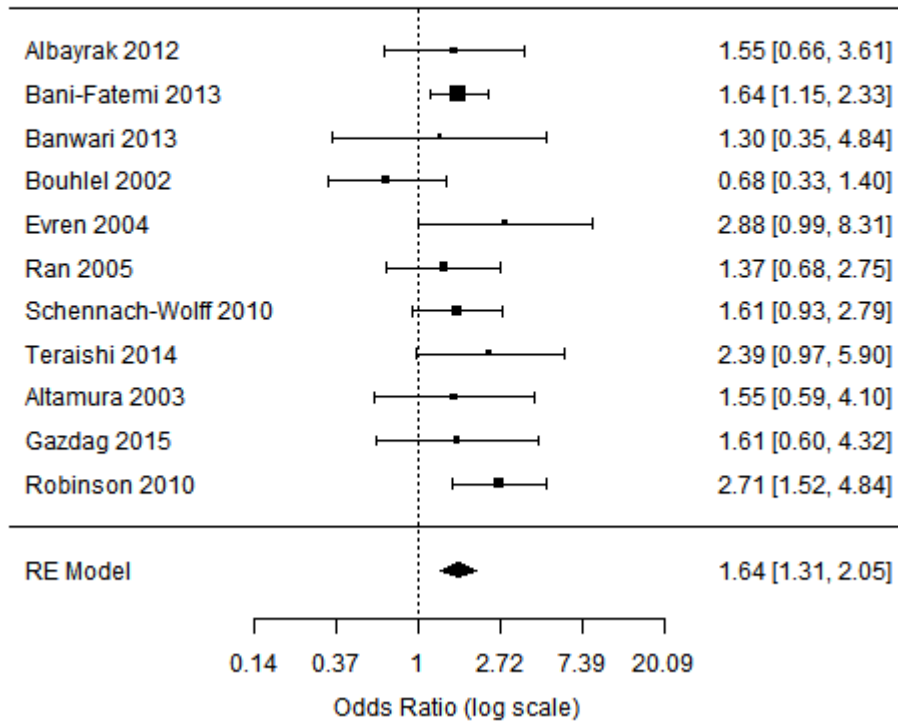
**eFigure 12. Physical comorbidity was significant in the meta-analysis for suicide attempt.**



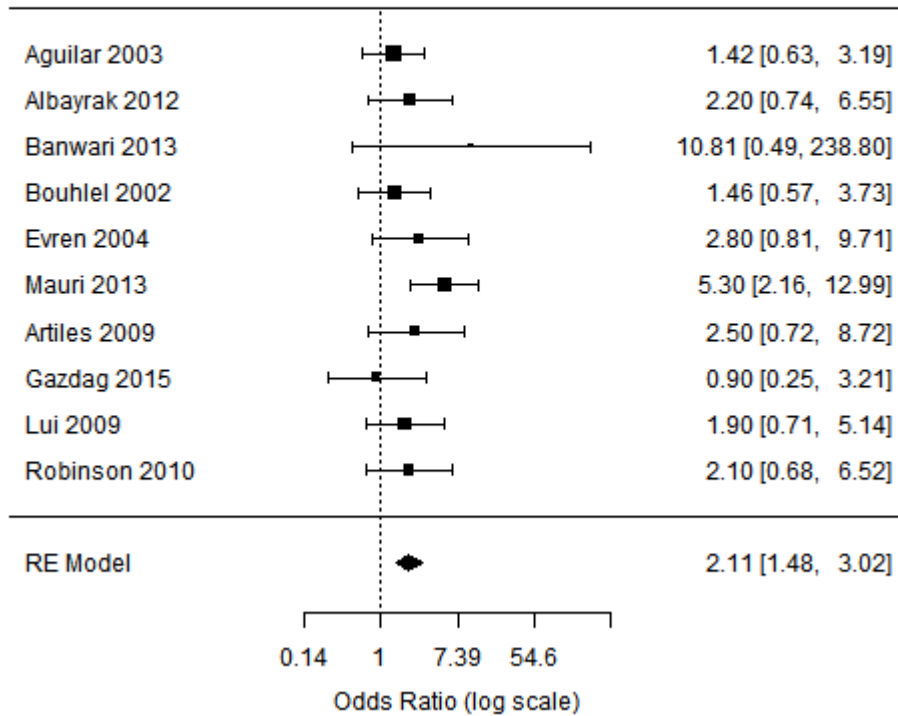
**eFigure 13. History of depression was significant in the meta-analysis for suicide attempt.**



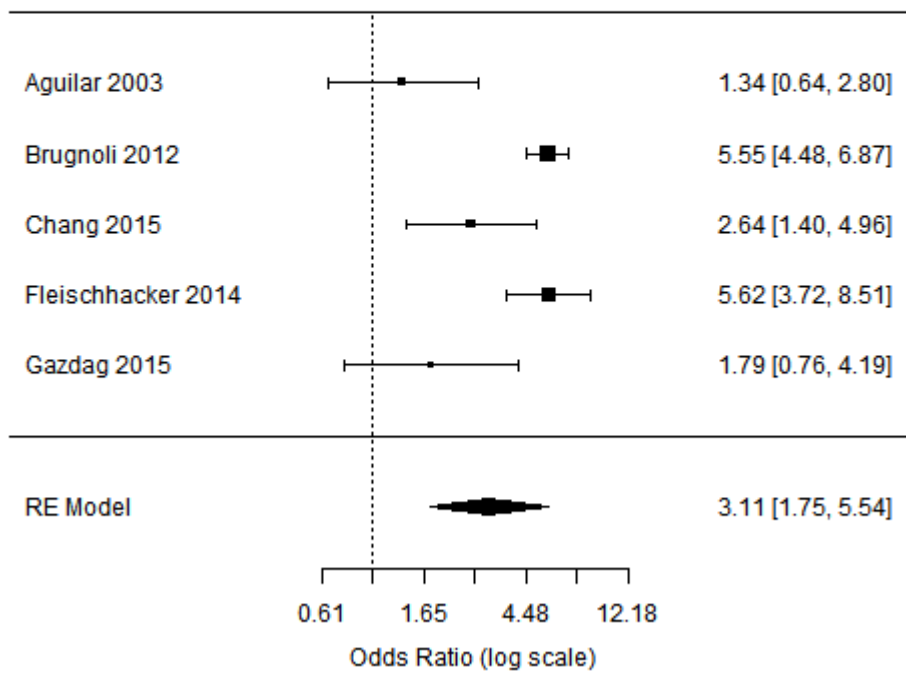
**eFigure 14. Family history of psychiatric illness was significant in the meta-analysis for suicide attempt.**



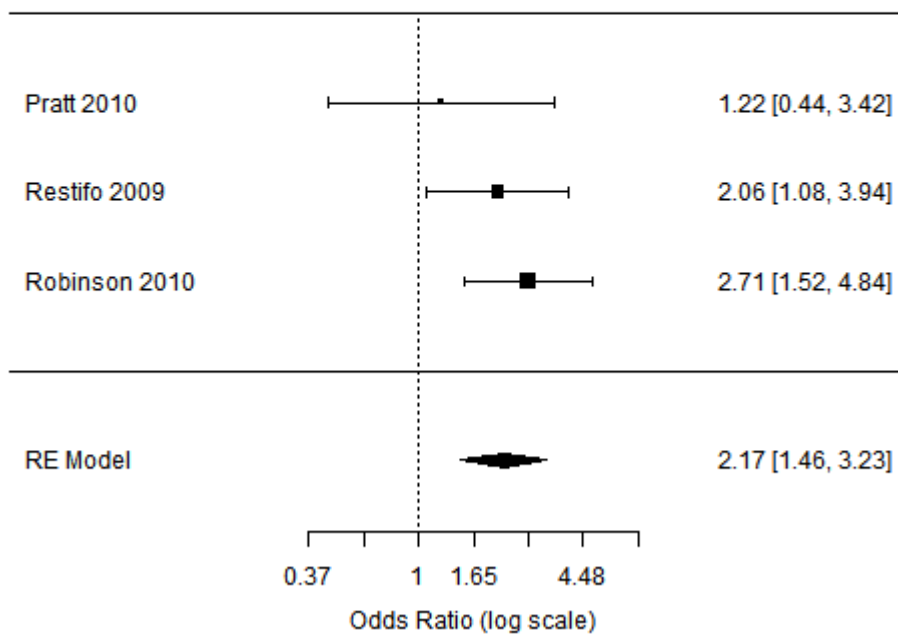
**eFigure 15. Family history of suicide was significant in the meta-analysis for suicide attempt.**



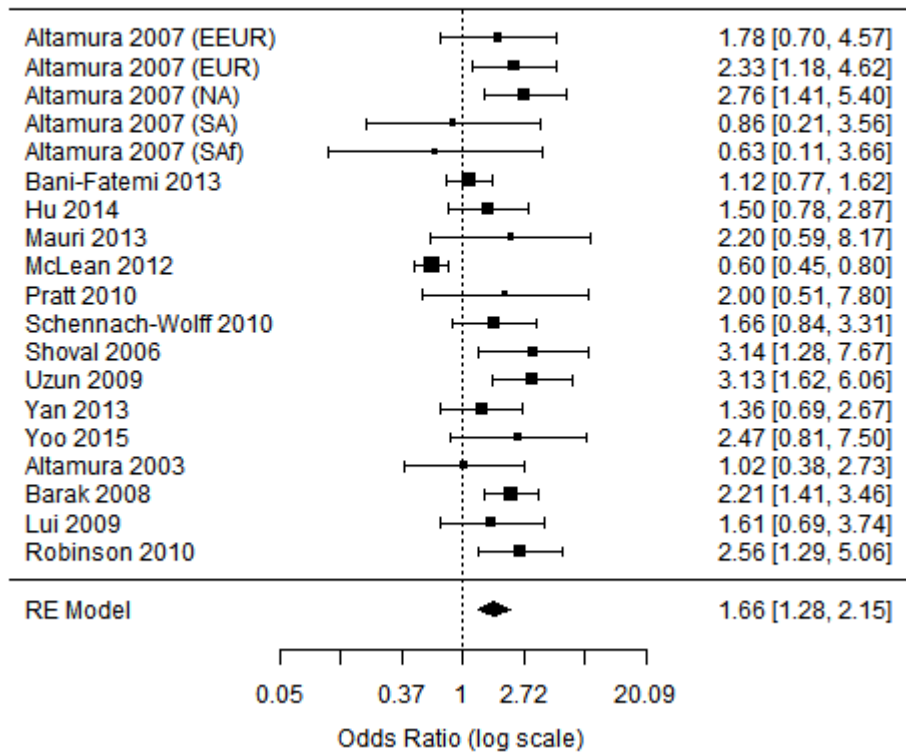
**eFigure 16. History of attempted suicide was significant in the meta-analysis for suicide attempt.**



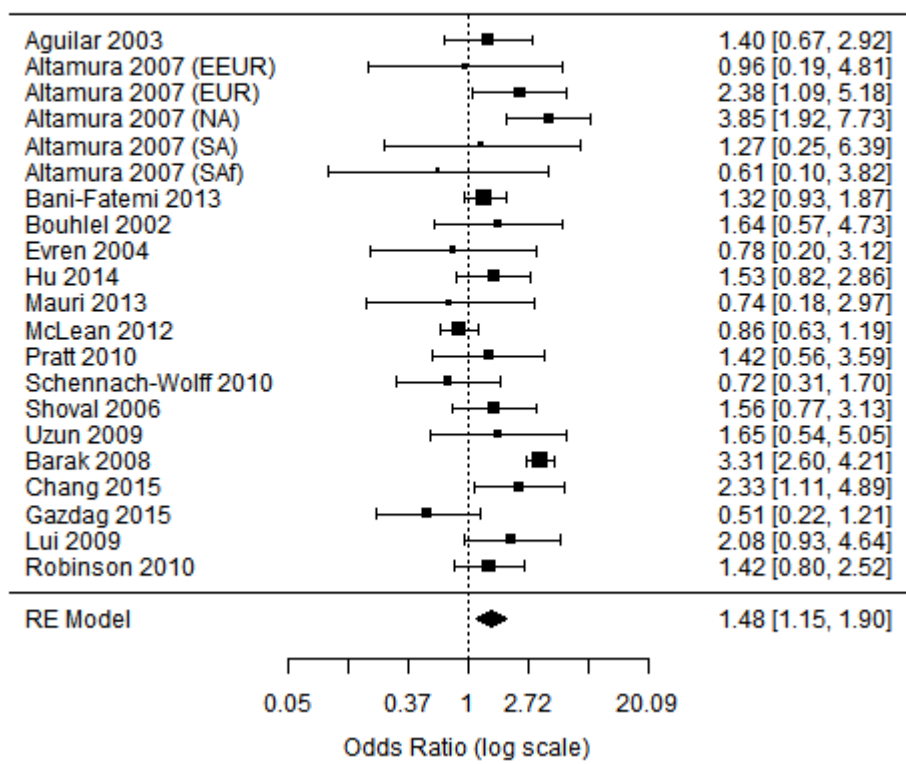
**eFigure 17. Hopelessness was significant in the meta-analysis for suicide attempt.**



**eFigure 18. History of alcohol use was significant in the meta-analysis for suicide attempt.**

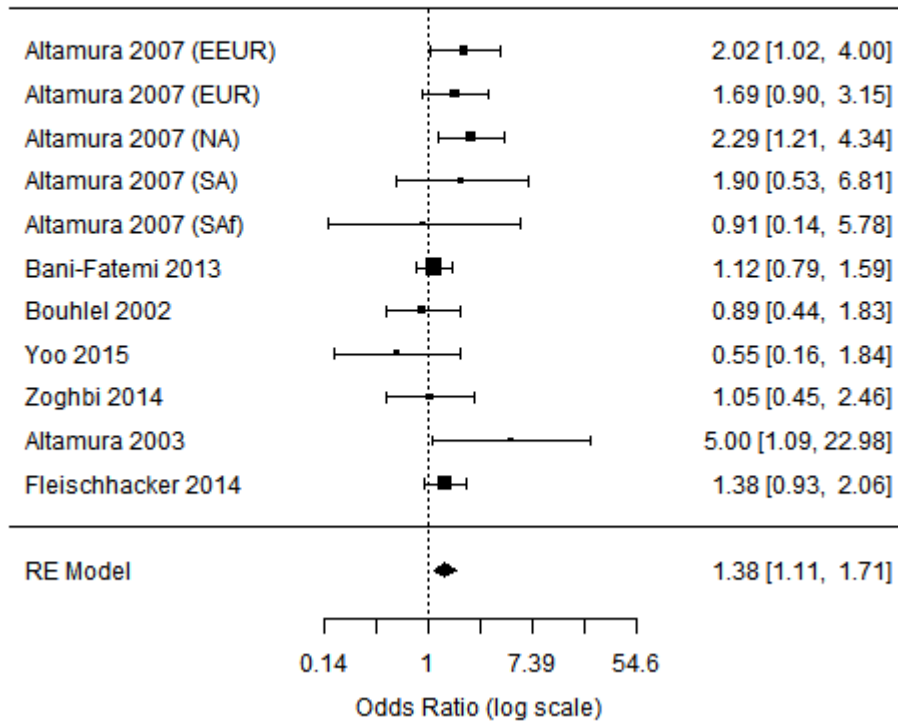


**eFigure 19. History of drug use was significant in the meta-analysis for suicide attempt.**

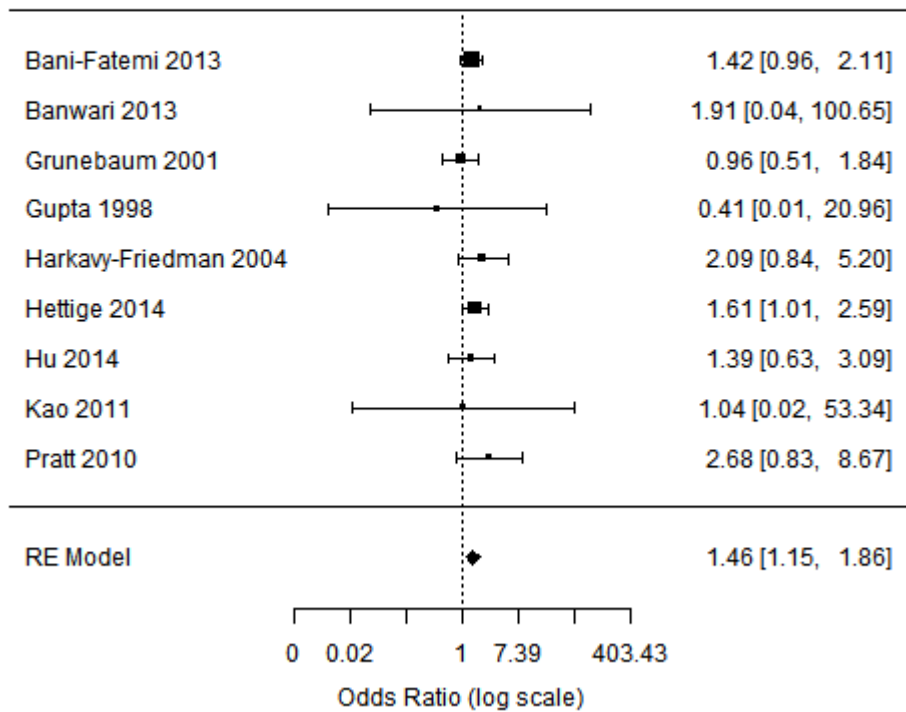




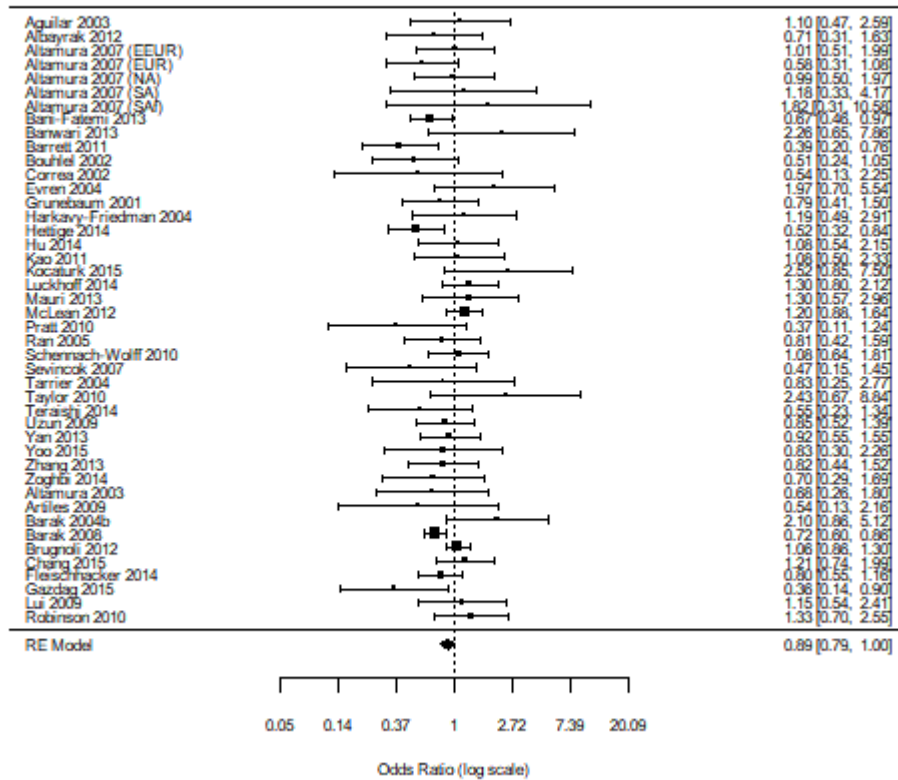
**eFigure 20. History of tobacco use was significant in the meta-analysis for suicide attempt.**



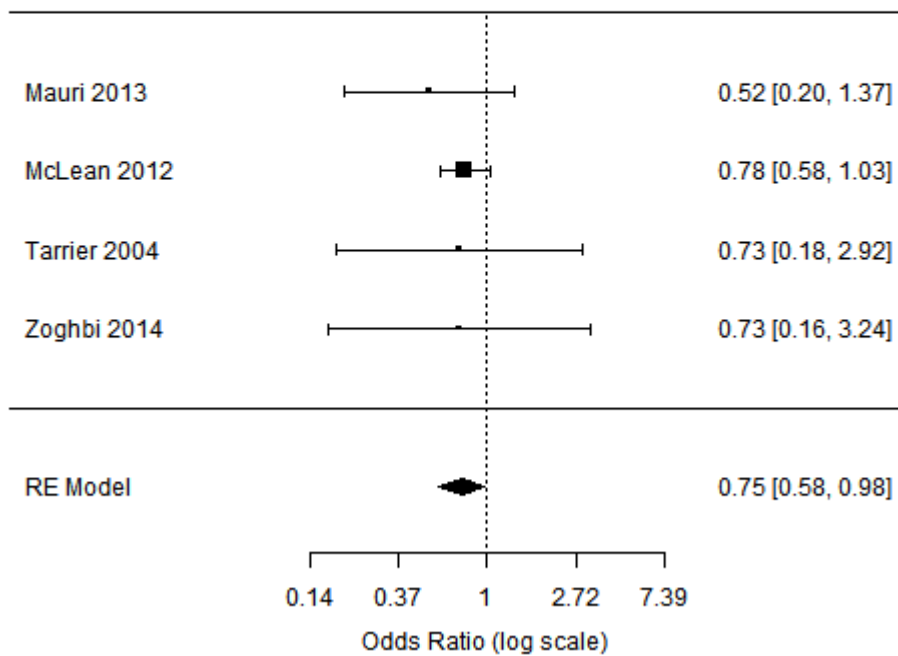
**eFigure 21. Being white was associated with suicide attempt.**



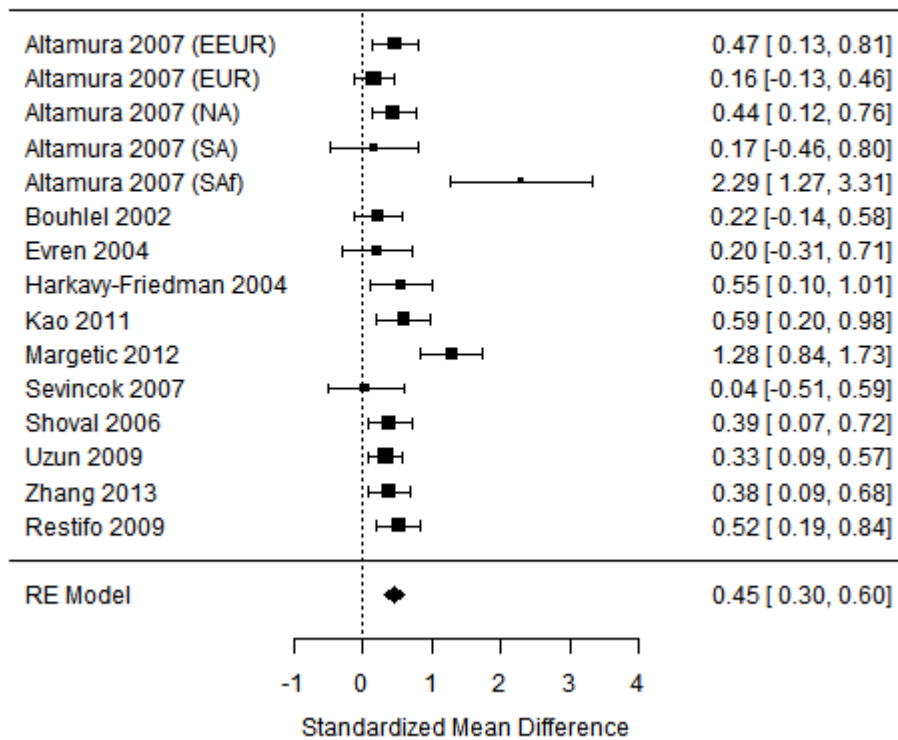
eFigure 22. Being male was a protective factor for suicide attempt.



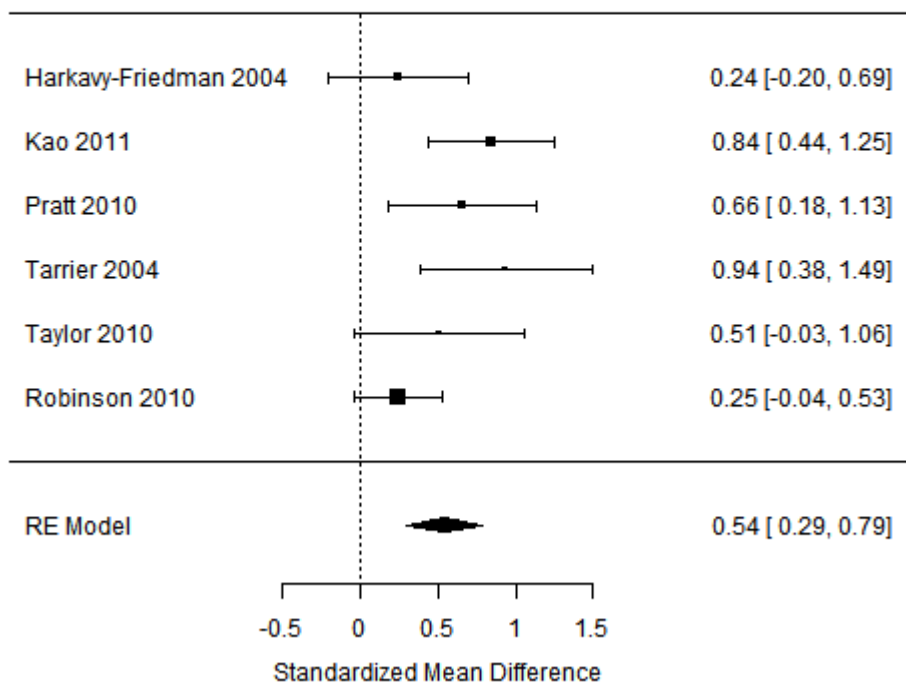
eFigure 23. Living alone was protective factor for suicide attempt.



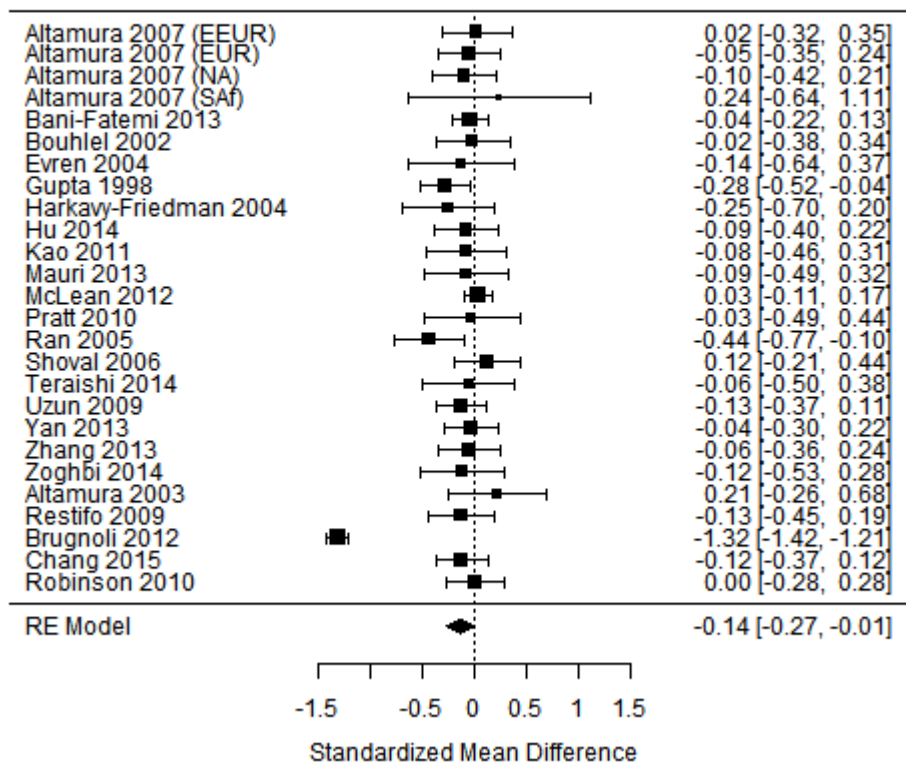
**eFigure 24. Higher number of psychiatric hospitalizations was associated with suicide attempt.**



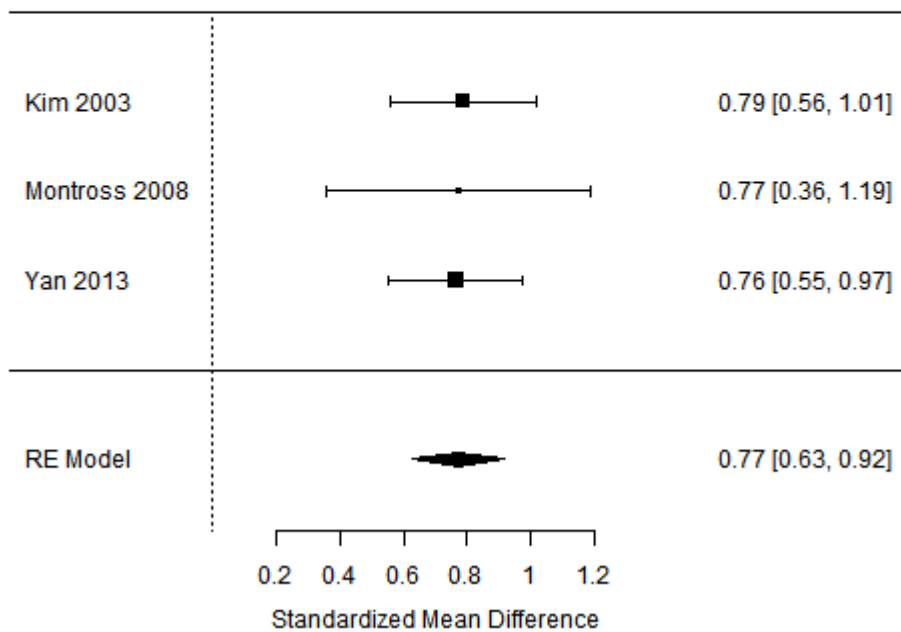
**eFigure 25. Higher BDI scores were associated with suicide attempt.**



**eFigure 26. Lower age of onset was associated with suicide attempt.**

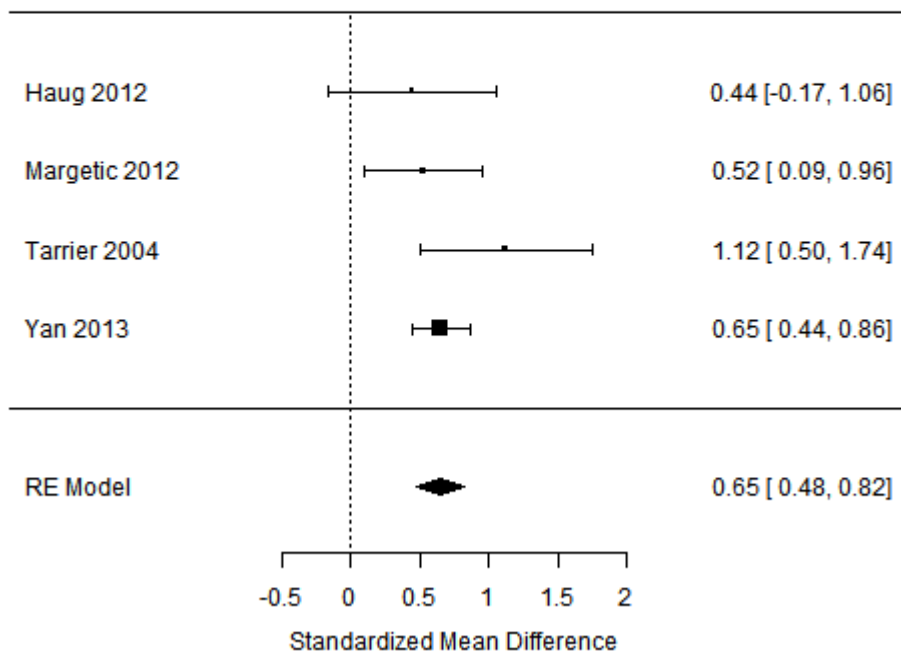


**eFigure 27.** Higher HAM-D scores were associated with suicide ideation.

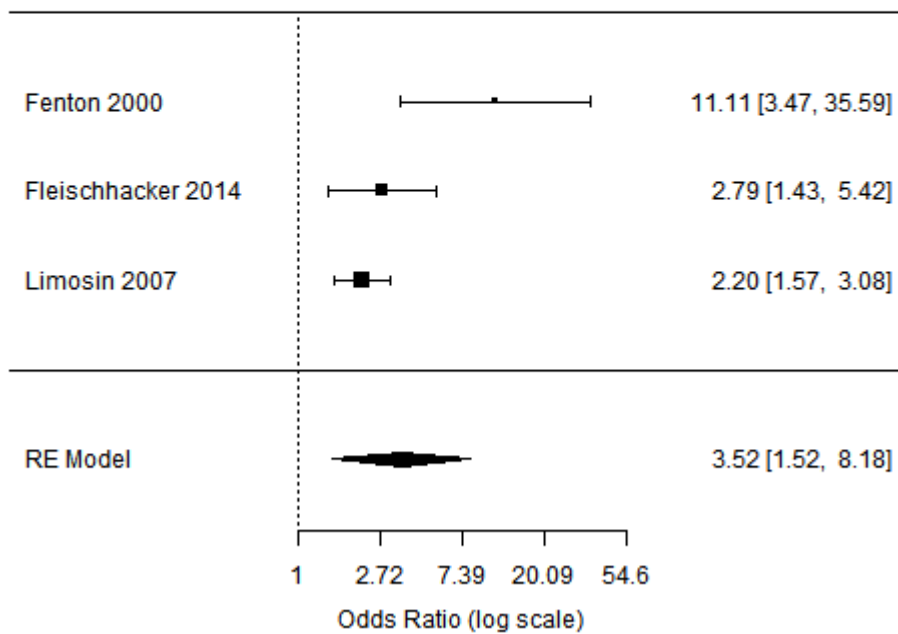


**eFigure 28. Higher PANSS general score were associated with suicide ideation.**

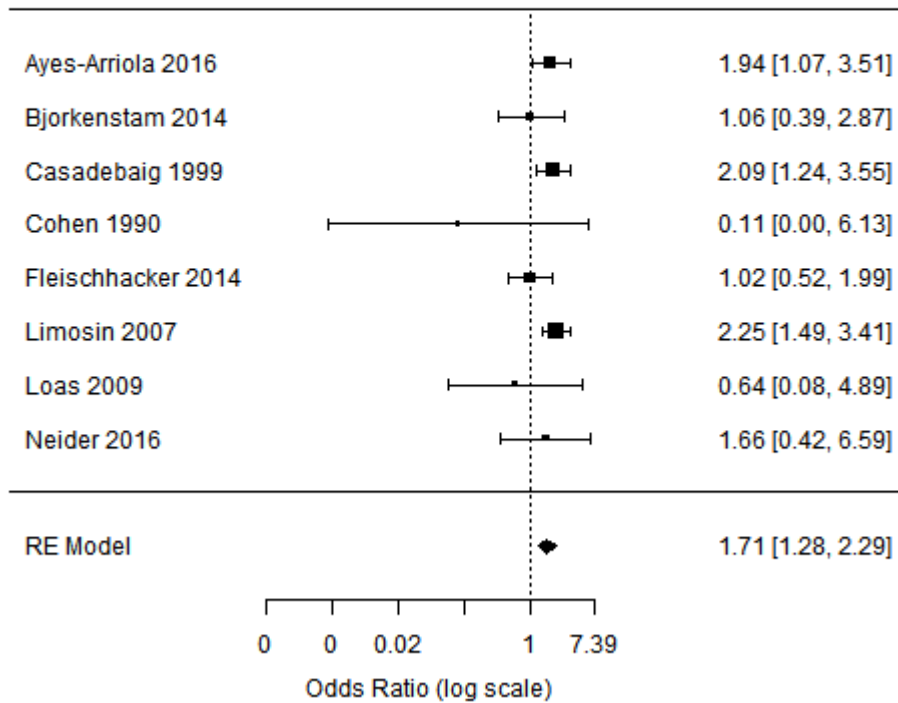




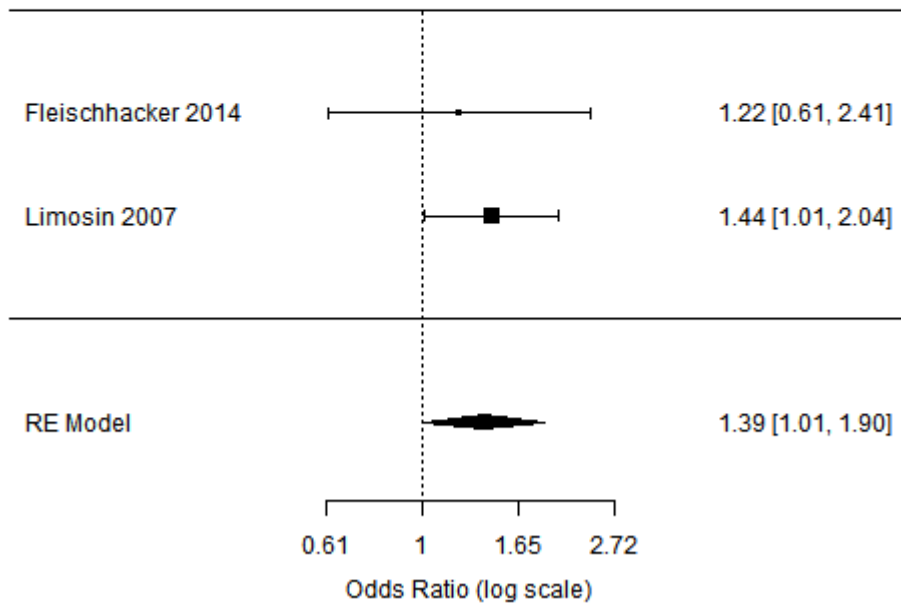
**eFigure 29. History of attempted suicide was associated with suicide in the cohort study meta-analysis.**



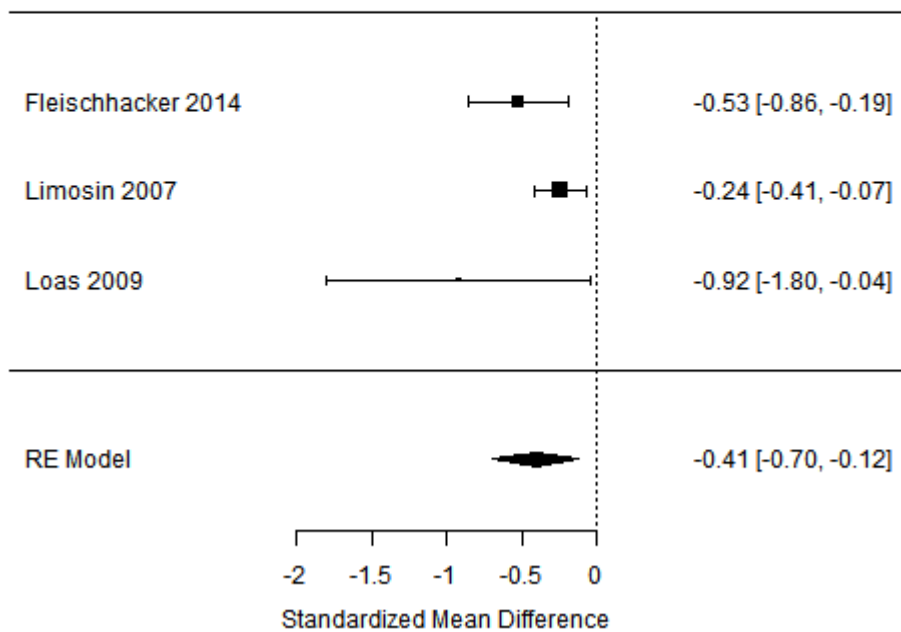
**eFigure 30. Being male was associated with suicide in the cohort study meta-analysis.**



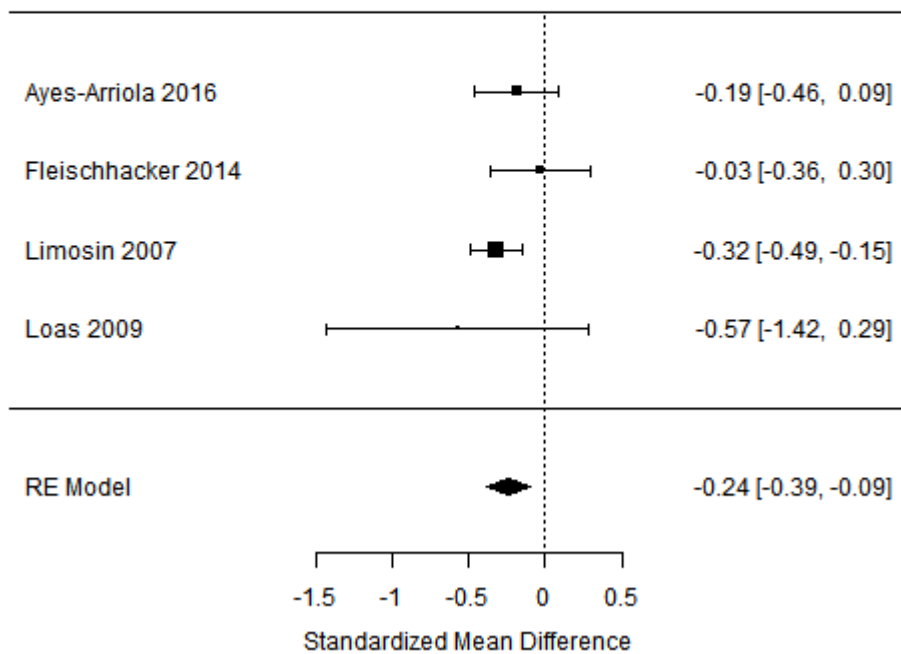
**eFigure 31. History of tobacco use was associated with suicide in the cohort study meta-analysis.**



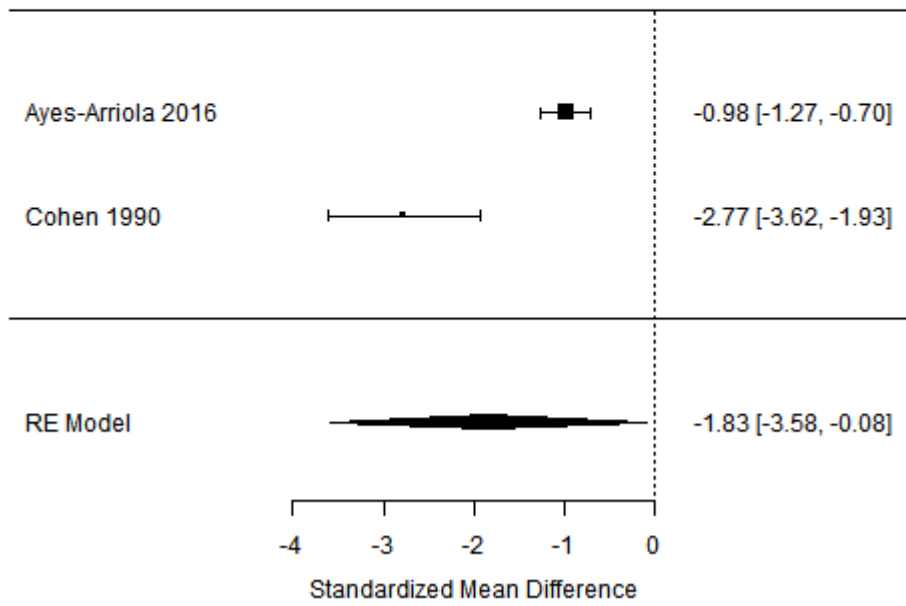
**eFigure 32. Shorter disease length was associated with suicide in the cohort study meta-analysis.**



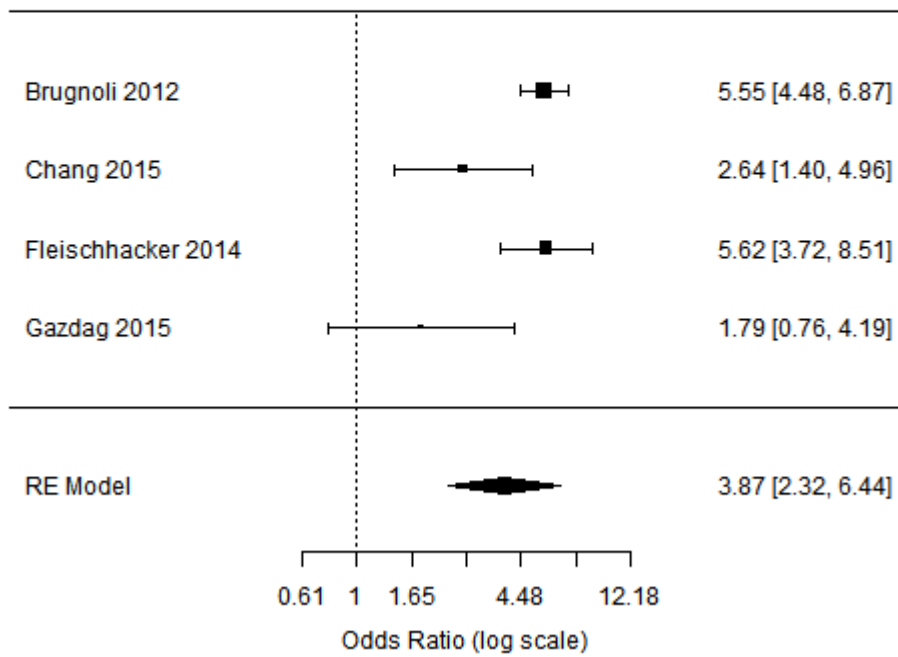
**eFigure 33. Younger age was associated with suicide in the cohort study meta-analysis.**



**eFigure 34. Younger age of onset was associated with suicide in the cohort study meta-analysis.**

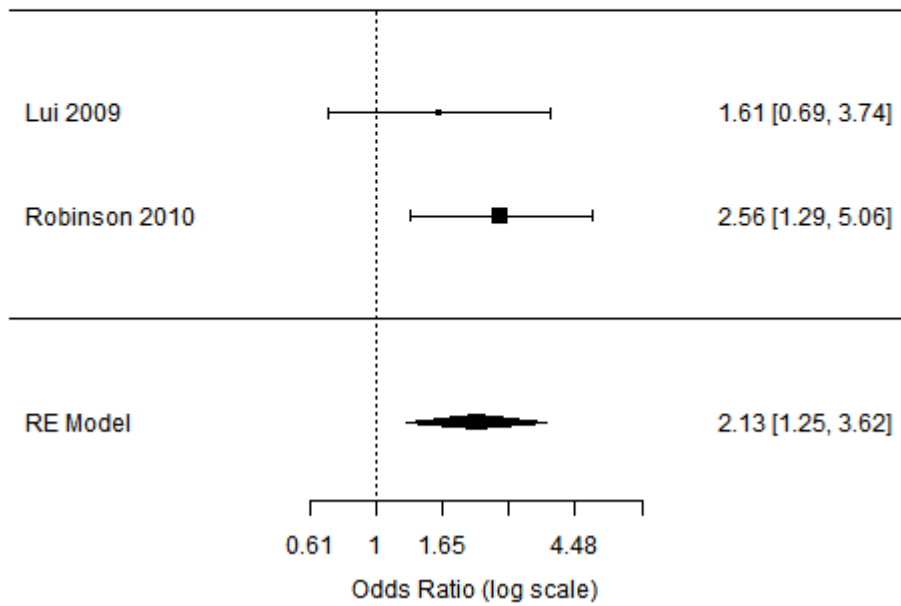


**eFigure 35. History of attempted suicide was associated with suicide attempt in the cohort study meta-analysis.**

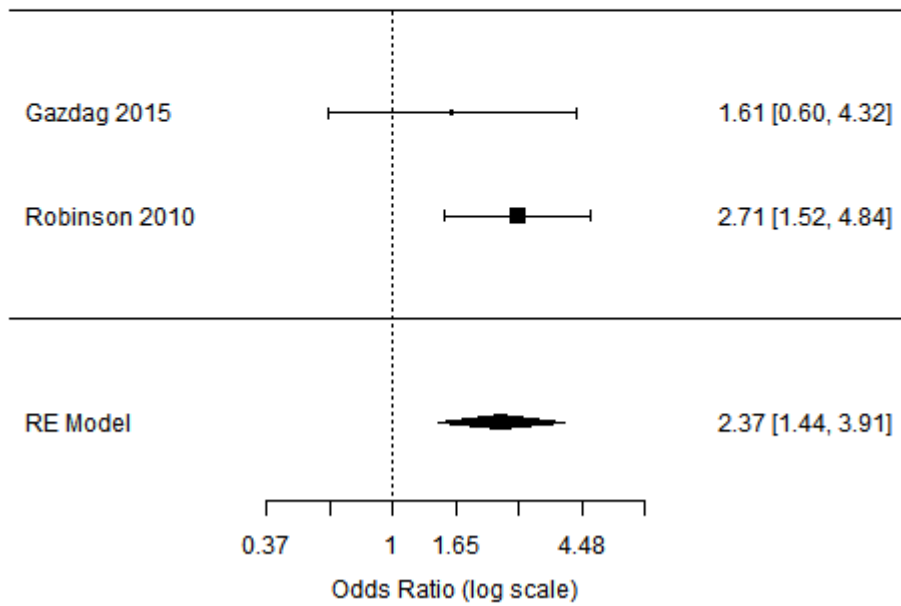


**eFigure 36. History of alcohol use was associated with suicide attempt in the cohort study meta-analysis.**

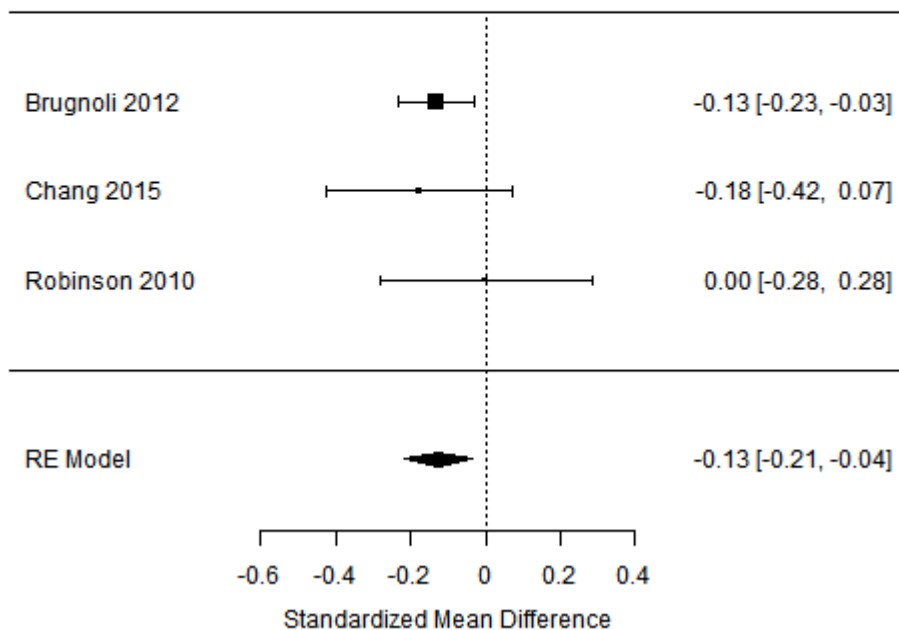




**eFigure 37. Family history of psychiatric illness was associated with suicide attempt in the cohort study meta-analysis.**



**eFigure 38. Younger age of onset was associated with suicide attempt in the cohort study meta-analysis.**



## REFERENCES FOR THE SUPPLEMENTAL MATERIAL

1. Aguilar EJ, Leal C, Acosta FJ, Cejas MR, Fernández L, Gracia R. A psychopathological study of a group of schizophrenic patients after attempting suicide. Are there two different clinical subtypes? *Eur Psychiatry*. 2003;18(4):190-192. doi:10.1016/S0924-9338(03)00047-6.
2. Albayrak Y, Ekinci O, Çayköylü A. Temperament and character personality profile in relation to suicide attempts in patients with schizophrenia. *Compr Psychiatry*. 2012;53(8):1130-1136. doi:10.1016/j.comppsy.2012.04.007.
3. Altamura a. C, Bassetti R, Bignotti S, Pioli R, Mundo E. Clinical variables related to suicide attempts in schizophrenic patients: a retrospective study. *Schizophr Res*. 2003;60(1):47-55. doi:10.1016/S0920-9964(02)00164-0.
4. Altamura AC, Mundo E, Bassetti R, et al. Transcultural differences in suicide attempters: Analysis on a high-risk population of patients with schizophrenia or

- schizoaffective disorder. *Schizophr Res.* 2007;89(1-3):140-146.  
doi:10.1016/j.schres.2006.08.023.
5. Artiles F, Garcia-Iturrospe E, Mendez M, Marco R, Hidalgo A, Siris S. A prospective study of the psychopathological variables associated with suicidality among schizophrenic patients. *Actas Españolas Psiquiatr.* 2009;37(1):42-48.
  6. Bani-Fatemi A, Polsinelli G, Kennedy JL, De Luca V. Ethnicity and suicide attempt: analysis in bipolar disorder and schizophrenia. *BMC Psychiatry.* 2013;13(1):252. doi:10.1186/1471-244X-13-252.
  7. Banwari GH, Vankar GK, Parikh MN. Comparison of suicide attempts in schizophrenia and major depressive disorder: An exploratory study. *Asia-Pacific Psychiatry.* 2013;5(4):309-315. doi:10.1111/j.1758-5872.2012.00188.x.
  8. Barak Y, Mirecki I, Knobler HY, Natan Z, Aizenberg D. Suicidality and second generation antipsychotics in schizophrenia patients: A case-controlled retrospective study during a 5-year period. *Psychopharmacology (Berl).* 2004;175(2):215-219. doi:10.1007/s00213-004-1801-2.
  9. Barak Y, Knobler CY, Aizenberg D. Suicide attempts amongst elderly schizophrenia patients: A 10-year case-control study. *Schizophr Res.* 2004;71(1):77-81. doi:10.1016/j.schres.2003.12.001.
  10. Barak Y, Baruch Y, Achiron A, Aizenberg D. Suicide attempts of schizophrenia patients: A case-controlled study in tertiary care. *J Psychiatr Res.* 2008;42(10):822-826. doi:10.1016/j.jpsychires.2007.09.002.
  11. Barrett EA, Sundet K, Simonsen C, et al. Neurocognitive functioning and suicidality in schizophrenia spectrum disorders. *Compr Psychiatry.* 2011;52(2):156-163. doi:10.1016/j.comppsy.2010.06.001.
  12. Bouhlef S, M'Solly M, Benhawala S, Jones Y, El-Hechmi Z. Les facteurs liés aux tentatives de suicide dans une population tunisienne de patients atteints de schizophrénie. *Encephale.* 2013;39(1):6-12. doi:10.1016/j.encep.2012.06.003.
  13. Brugnoli R, Novick D, Haro JM, et al. Risk factors for suicide behaviors in the observational schizophrenia outpatient health outcomes (SOHO) study. *BMC Psychiatry.* 2012;12(1):83. doi:10.1186/1471-244X-12-83.
  14. Chang WC, Chen ESM, Hui CLM, Chan SKW, Lee EHM, Chen EYH. Prevalence and risk factors for suicidal behavior in young people presenting with first-episode psychosis in Hong Kong: a 3-year follow-up study. *Soc Psychiatry Psychiatr Epidemiol.* 2015;50(2):219-226. doi:10.1007/s00127-014-0946-5.
  15. Corrêa H, Duval F, Mokrani M-C, et al. Serotonergic function and suicidal behavior in personality disorders. *Schizophr Res.* 2002;56:75-85.  
<http://www.ncbi.nlm.nih.gov/pubmed/2436531>.
  16. Evren C. Characteristics of schizophrenic patients with a history of suicide attempt. *Int J Psychiatry Clin Pract.* 2004;8:227-234. doi:10.1080/13651500410005658.
  17. Fleischhacker WW, Kane JM, Geier J, et al. Completed and attempted suicides

- among 18,154 subjects with schizophrenia included in a large simple trial. *J Clin Psychiatry*. 2014;75(3):184-190. doi:10.4088/JCP.13mO8563.
18. Gazdag G, Belán E, Szabó FA, Ungvari GS, Czobor P, Baran B. Predictors of suicide attempts after violent offences in schizophrenia spectrum disorders. *Psychiatry Res*. 2015;230(2):728-731. doi:10.1016/j.psychres.2015.10.027.
  19. Grunebaum MF, Oquendo MA, Harkavy-Friedman JM, et al. Delusions and suicidality. *Am J Psychiatry*. 2001;158(5):742-747. doi:10.1176/appi.ajp.158.5.742.
  20. Gupta S, Black DW, Arndt S, Hubbard WC, Andreasen NC. Factors Associated With Suicide Attempts Among Patients With Schizophrenia. *Psychiatric Serv*. 1998;49:1353-1355.
  21. Harkavy-Friedman JM, Nelson EA, Venarde DF, Mann JJ. Suicidal behavior in schizophrenia and schizoaffective disorder: Examining the role of depression. *Suicide Life-Threatening Behav*. 2004;34(1):66-76. doi:10.1521/suli.34.1.66.27770.
  22. Hettige NC, Kennedy JL, De Luca V. Does a history of suicide attempt predict higher antipsychotic dosage in schizophrenia? *Psychopharmacology (Berl)*. 2014;231(12):2507-2513. doi:10.1007/s00213-013-3419-8.
  23. Hu J, Chan LF, Souza RP, et al. The role of tyrosine hydroxylase gene variants in suicide attempt in schizophrenia. *Neurosci Lett*. 2014;559:39-43. doi:10.1016/j.neulet.2013.11.025.
  24. Kao Y-C, Liu Y-P. Suicidal behavior and insight into illness among patients with schizophrenia spectrum disorders. *Psychiatr Q*. 2011;82(3):207-220. doi:10.1007/s11126-010-9161-z.
  25. Kocatürk BK, Eşsizoğlu A, Aksaray G, Akarsu FÖ, Musmul A. Relationship suicide, cognitive functions, and depression in patients with schizophrenia. *Noropsikiyatri Ars*. 2015;52(2):169-173. doi:10.5152/npa.2015.7506.
  26. Lückhoff M, Koen L, Jordaan E, Niehaus D. Attempted suicide in a Xhosa schizophrenia and schizoaffective disorder population. *Suicide Life-Threatening Behav*. 2014;44(2):167-174. doi:10.1111/sltb.12066.
  27. Lui S. completed suicide in young Chinese people with. 2009.
  28. Margetić BA, Jakovljević M, Ivanec D, Marčinko D, Margetić B, Jakšić N. Current suicidality and previous suicidal attempts in patients with schizophrenia are associated with different dimensions of temperament and character. *Psychiatry Res*. 2012;200(2-3):120-125. doi:10.1016/j.psychres.2012.04.016.
  29. Mauri MC, Paletta S, Maffini M, Moliterno D, Altamura AC. Suicide attempts in schizophrenic patients: Clinical variables. *Asian J Psychiatr*. 2013;6(5):421-427. doi:10.1016/j.ajp.2013.07.001.
  30. McLean D, Gladman B, Mowry B. Significant relationship between lifetime alcohol use disorders and suicide attempts in an Australian schizophrenia sample. *Aust N Z J Psychiatry*. 2012;46(2):132-140. doi:Doi 10.1177/0004867411433211.
  31. Pratt D, Gooding P, Johnson J, Taylor P, TARRIER N. Suicide schemas in non-affective

- psychosis: An empirical investigation. *Behav Res Ther.* 2010;48(12):1211-1220. doi:10.1016/j.brat.2010.08.005.
32. Ran M-S, Xiang M-Z, Mao W-J, et al. Characteristics of suicide attempters and nonattempters with schizophrenia in a rural community. *Suicide Life Threat Behav.* 2005;35(6):694-701. doi:http://dx.doi.org/10.1521/suli.2005.35.6.694.
  33. Restifo K, Harkavy-Friedman JM, Shrout PE. Suicidal Behavior in Schizophrenia. *J Nerv Ment Dis.* 2009;197(3):147-153. doi:10.1097/NMD.0b013e318199f452.
  34. Robinson J, Harris MG, Harrigan SM, et al. Suicide attempt in first-episode psychosis: A 7.4 year follow-up study. *Schizophr Res.* 2010;116(1):1-8. doi:10.1016/j.schres.2009.10.009.
  35. Schennach-Wolff R, Jäger M, Seemüller F, et al. Outcome of suicidal patients with schizophrenia: Results from a naturalistic study. *Acta Psychiatr Scand.* 2010;121(5):359-370. doi:10.1111/j.1600-0447.2009.01484.x.
  36. Sevincok L, Akoglu A, Kokcu F. Suicidality in schizophrenic patients with and without obsessive-compulsive disorder. *Schizophr Res.* 2007;90(1-3):198-202. doi:10.1016/j.schres.2006.09.023.
  37. Shoval G, Sever J, Sher L, et al. Substance Use, Suicidality, and Adolescent-Onset Schizophrenia: An Israeli 10-Year Retrospective Study. 2006;16(6):767-775.
  38. Spoletini I, Piras F, Fagioli S, et al. Suicidal attempts and increased right amygdala volume in schizophrenia. *Schizophr Res.* 2011;125(1):30-40. doi:10.1016/j.schres.2010.08.023.
  39. TARRIER N, Barrowclough C, Andrews B, Gregg L. Risk of non-fatal suicide ideation and behaviour in recent onset schizophrenia. The influence of clinical, social, self-esteem and demographic factors. *Soc Psychiatry Psychiatr Epidemiol.* 2004;39(11):927-937. doi:10.1007/s00127-004-0828-3.
  40. Taylor PJ, Gooding PA, Wood AM, TARRIER N. Memory specificity as a risk factor for suicidality in non-affective psychosis: The ability to recall specific autobiographical memories is related to greater suicidality. *Behav Res Ther.* 2010;48(10):1047-1052. doi:10.1016/j.brat.2010.06.001.
  41. Teraishi T, Hori H, Sasayama D, et al. Relationship between lifetime suicide attempts and schizotypal traits in patients with schizophrenia. *PLoS One.* 2014;9(9). doi:10.1371/journal.pone.0107739.
  42. Uzun Ö, Tamam L, Özcüler T, Doruk A, Ünal M. Specific characteristics of Suicide attempts in patients with schizophrenia in Turkey. *Isr J Psychiatry Relat Sci.* 2009;46(3):189-194.
  43. Yan F, Xiang YT, Hou YZ, et al. Suicide attempt and suicidal ideation and their associations with demographic and clinical correlates and quality of life in Chinese schizophrenia patients. *Soc Psychiatry Psychiatr Epidemiol.* 2013;48(3):447-454. doi:10.1007/s00127-012-0555-0.
  44. Yoo T, Kim SW, Kim SY, et al. Relationship between suicidality and low self-esteem in

- patients with schizophrenia. *Clin Psychopharmacol Neurosci*. 2015;13(3):296-301. doi:10.9758/cpn.2015.13.3.296.
45. Zhang XY, Al Jurdi RK, Zoghbi AW, et al. Prevalence, demographic and clinical correlates of suicide attempts in Chinese medicated chronic inpatients with schizophrenia. *J Psychiatr Res*. 2013;47(10):1370-1375. doi:10.1016/j.jpsychires.2013.05.024.
  46. Zoghbi AW, Al Jurdi RK, Deshmukh PR, et al. Cognitive function and suicide risk in Han Chinese inpatients with schizophrenia. *Psychiatry Res*. 2014;220(1-2):188-192. doi:10.1016/j.psychres.2014.07.046.
  47. Allebeck P, Varla A KE and WB. Risk factors for suicide among patients with schizophrenia. *Acta psychiatr scand* 1987;76(4):414-419.
  48. Rosa Ayesa-Arriola, Elisa García Alcaraz B, Vicente Hernández, Rocío Pérez-Iglesias J, David López Moríñigo, Rina Duta AS, David, Rafael Tabares-Seisdedos B, Crespo-Facorro. Suicidal behaviour in first-episode nonaffective psychosis: Specific risk periods and stage-related factors. *Eur Neuropsychopharmacol*. 2016;25(12):2278-2288. <http://dx.doi.org/10.1016/j.euroneuro.2015.09.008>.
  49. Björkenstam C, Björkenstam E, Hjern A, Bodén R, Reutfors J. Suicide in first episode psychosis: A nationwide cohort study. *Schizophr Res*. 2014;157(1-3):1-7. doi:10.1016/j.schres.2014.05.010.
  50. Breier A, Astrachan BM. Characterization of schizophrenic patients who commit suicide. *Am J Psychiatry*. 1984;141(2):206-209. doi:10.1176/ajp.141.2.206.
  51. Casadebaig F, Philippe A. Mortalité par suicide dans une cohorte de patients schizophrènes. *Ann Med Psychol*. 1999;544-551.
  52. Cheng KK, Leung CM, Lo WH, Lam TH. Risk factors of suicide among schizophrenics. *Acta Psychiatr Scand*. 1990;81(3):220-224. doi:10.1111/j.1600-0447.1990.tb06484.x.
  53. Cohen S, Leonard C V, Farberow NL, Shneidman ES. Tranquilizers and Suicide in the Schizophrenic Patient. *Arch Gen Psychiatry*. 1964;11:312-321.
  54. Cohen LJ, Test MA, Brown RL. Suicide and schizophrenia: data from a prospective community treatment study [published erratum appears in Am J Psychiatry 1990 Aug;147(8):1110]. *Am J Psychiatry*. 1990;147(5):602-607. doi:10.1176/ajp.147.5.602.
  55. De Hert M, McKenzie K, Peuskens J. Risk factors for suicide in young people suffering from schizophrenia: a long-term follow-up study. *Schizophr Res*. 2001;47(2-3):127-134.
  56. Dong JYS, Ho TP, Kan CK. A case-control study of 92 cases of in-patient suicides. *J Affect Disord*. 2005;87(1):91-99. doi:10.1016/j.jad.2005.03.015.
  57. Drake RE, Gates C, Cotton PG, Whitaker A. Suicide among Schizophrenics: Who is at Risk? *J Nerv Ment Dis*. 1984;172(10):613-617.
  58. Fenton WS. Depression , Suicide and Suicide Prevention in Schizophrenia. *Suicide Life Threat Behav*. 2000;30(1):34-49.
  59. Funahashi T, Ibuki Y, Domon Y, Nishimura T, Akehashi D, Sugiura H. A clinical study

- on suicide among schizophrenics. *Psychiatry Clin Neurosci*. 2000;54(2):173-179.  
<http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed5&NEWS=N&AN=2000166356>.
60. Havaki-Kontaxaki B, Kontaxakis V, Protopappa V, Christodoulou G. Suicides in a large psychiatric hospital: risk factors for schizophrenic patients. *Bibl Psychiatr*. 1994;165:63-71.
  61. Hu WH, Sun CM, Lee CT, Peng SL, Lin SK, Shen WW. A clinical study of schizophrenic suicides. 42 cases in Taiwan. *Schizophr Res*. 1991;5(1):43-50.  
doi:10.1016/0920-9964(91)90052-S.
  62. Kascow J, Liu N, Haas GL, Phillips MR. Case-control study of the relationship of depressive symptoms to suicide in a community-based sample of individuals with schizophrenia in China. *Schizophr Res*. 2010;122(1-3):226-231.  
doi:10.1016/j.schres.2010.02.1056.
  63. Kelly DL, Shim JC, Feldman SM, Yu Y, Conley RR. Lifetime psychiatric symptoms in persons with schizophrenia who died by suicide compared to other means of death. *J Psychiatr Res*. 2004;38(5):531-536. doi:10.1016/j.jpsychires.2004.02.001.
  64. Krupinski M, Fischer A, Grohmann R, Engel R, Hollweg M, Möller H-J. Schizophrene Psychosen und Kliniksuizid. *Nervenarzt*. 2000;71:906-911.
  65. Kuo C-J, Tsai S-Y, Lo C-H, Wang Y-P, Chen C-C. Risk Factors for Completed Suicide in Schizophrenia. *J Clin Psychiatry*. 2005;66:579-585.  
<http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=med4&AN=12088157>.
  66. Law S. Suicide- Some International and Hong Kong Findings. *Ment Heal Hong Kong*. 1986:266-278.
  67. Lee HC, Lin HC. Are psychiatrist characteristics associated with postdischarge suicide of schizophrenia patients? *Schizophr Bull*. 2009;35(4):760-765.  
doi:10.1093/schbul/sbn007.
  68. Li J, Ran M-S, Hao Y, et al. Inpatient suicide in a Chinese psychiatric hospital. *Suicide Life Threat Behav*. 2008;38(4):449-455. doi:10.1521/suli.2008.38.4.449.
  69. Lim L, Tsoi W. Suicide and Schizophrenia in Singapore - A Fifteen Year Follow-up study. *Ann Acad Med Singapore*. 1991;20(2):201-203.
  70. Limosin F, Loze J-Y, Philippe A, Casadebaig F, Rouillon F. Ten-year prospective follow-up study of the mortality by suicide in schizophrenic patients. *Schizophr Res*. 2007;94(1-3):23-28. doi:10.1016/j.schres.2007.04.031.
  71. Loas G, Azi A, Noisette C, Legrand A, Yon V. Fourteen-year prospective follow-up study of positive and negative symptoms in chronic schizophrenic patients dying from suicide compared to other causes of death. *Psychopathology*. 2009;42(3):185-189.  
doi:10.1159/000209331.
  72. Lopez-Morinigo JD, Ayesa-Arriola R, Torres-Romano B, et al. Risk assessment and suicide by patients with schizophrenia in secondary mental healthcare: A case-control



- study. *BMJ Open*. 2016;6:1-10. doi:10.1136/bmjopen-2016-011929.
73. McGirr A, Tousignant M, Routhier D, et al. Risk factors for completed suicide in schizophrenia and other chronic psychotic disorders: A case-control study. *Schizophr Res*. 2006;84(1):132-143. doi:10.1016/j.schres.2006.02.025.
  74. Mitter N, Subramaniam M, Abdin E, Poon LY, Verma S. Predictors of suicide in Asian patients with first episode psychosis. *Schizophr Res*. 2013;151(1-3):274-278. doi:10.1016/j.schres.2013.10.006.
  75. Modestin J, Zarro I, Waldvogel D. A Study of Suicide in Schizophrenic In-patients. *Br J Psychiatry*. 1992;160:398-401. doi:10.1111/j.1365-2559.1987.tb02625.x.
  76. Neider D, Lindström L, Boden R. Risk factors for suicide among patients with schizophrenia: a cohort study focused on cerebrospinal fluid levels of homovanillic acid and 5-hydroxyindoleacetic acid. *Neuropsychiatr Dis Treat*. 2016;Volume 12:1711-1714. doi:10.2147/NDT.S107178.
  77. Neuner T, Mehlsteibl D, Hübner-Liebermann B, et al. Risikoprofile für den Kliniksuzid schizophrener und depressiver Patienten – eine psychologische Autopsiestudie. *Psychiatr Prax*. 2010;37(3):119-126. doi:10.1055/s-0029-1223349.
  78. Peuskens J, De Hert M, Cosyns P, Pieters G, Theys P, Vermote R. Suicide in Young Schizophrenic Patients During and After Inpatient Treatment. *Int J Ment Heal*. 1997;25(4):39-44.
  79. Pompili M, Lester D, Grispini A, et al. Completed suicide in schizophrenia: Evidence from a case-control study. *Psychiatry Res*. 2009;167(3):251-257. doi:10.1016/j.psychres.2008.03.018.
  80. Reutfors J, Brandt L, Jönsson EG, Ekblom A, Sparén P, Ösby U. Risk factors for suicide in schizophrenia: Findings from a Swedish population-based case-control study. *Schizophr Res*. 2009;108(1-3):231-237. doi:10.1016/j.schres.2008.12.023.
  81. Roos J, Boraine H, Bodemer W. Suicide in schizophrenic patients. *South African Med J*. 1992;81(7):365-369.
  82. Roy A. Suicide in chronic schizophrenia. *Br J Psychiatry*. 1982;141:171-177. doi:10.1192/bjp.141.2.171.
  83. Roy A. Risk Factors for Suicide in Psychiatric Patients. *Arch Gen Psychiatry*. 1982;39(9):1089-1095. doi:10.1001/archpsyc.1982.04290090081014.
  84. Shaffer JW, Perlin S, W SC, Stephens JH. The Prediction of Suicide in Schizophrenia. *J Nerv Ment Dis*. 1974;159(5):349-355.
  85. Sinclair JM a, Mullee M a, King E a, Baldwin DS. Suicide in schizophrenia: a retrospective case-control study of 51 suicides. *Schizophr Bull*. 2004;30(4):803-811. <http://www.ncbi.nlm.nih.gov/pubmed/15954192>.
  86. Taiminen T, Huttunen J, Heilä H, et al. The Schizophrenia Suicide Risk Scale (SSRS): Development and initial validation. *Schizophr Res*. 2001;47(2-3):199-213. doi:10.1016/S0920-9964(00)00126-2.
  87. Wilkinson G, Bacon NA. a clinical and epidemiological survey of parasuicide and

- suicide in Edinburgh schizophrenics. *Psychol Med.* 1984;14(4):899-912.  
doi:10.1177/0269215510367974.
88. Wolfersdorf M, Barth P, Steiner B, et al. Schizophrenia and suicide in psychiatric in-patients. *Curr Res suicide parasuicide Sel Proc Second Eur Symp Suicidal Behav.* 1989:67-77.
  89. Wolfersdorf M, Neher F. Schizophrenia and Suicide--Results of a Control Group Comparison of Schizophrenic Inpatient Suicides with Schizophrenic Inpatients without Suicide. *Psychiatr Prax.* 2003;30(5):272-278. doi:10.1055/s-2003-40776.
  90. Delaney C, McGrane J, Cummings E, et al. Preserved cognitive function is associated with suicidal ideation and single suicide attempts in schizophrenia. *Schizophr Res.* 2012;140(1-3):232-236. doi:10.1016/j.schres.2012.06.017.
  91. Depp CA, Moore RC, Perivoliotis D, Holden JL, Swendsen J, Granholm EL. Social behavior, interaction appraisals, and suicidal ideation in schizophrenia: The dangers of being alone. *Schizophr Bull.* 2016;172:195-200.  
doi:10.1161/CIRCRESAHA.116.303790.The.
  92. Haug E, Melle I, Andreassen OA, et al. The association between anomalous self-experience and suicidality in first-episode schizophrenia seems mediated by depression. *Compr Psychiatry.* 2012;53(5):456-460.  
doi:10.1016/j.comppsy.2011.07.005.
  93. Keshavan MS, Reynolds CF, Montrose D, Miewald J, Downs C, Sabo EM. Sleep and suicidality in psychotic patients. *Acta Psychiatr Scand.* 1994;89(2):122-125.  
doi:10.1111/j.1600-0447.1994.tb01498.x.
  94. Kim CH, Jayathilake K, Meltzer HY. Hopelessness, neurocognitive function, and insight in schizophrenia: Relationship to suicidal behavior. *Schizophr Res.* 2003;60(1):71-80. doi:10.1016/S0920-9964(02)00310-9.
  95. Misiak B, Kiejna A, Frydecka D. Higher total cholesterol level is associated with suicidal ideation in first-episode schizophrenia females. *Psychiatry Res.* 2015;226(December):383-388. doi:10.1016/j.psychres.2014.12.030.
  96. Montross LP, Kasckow J, Golshan S, Solorzano E, Lehman D, Zisook S. Suicidal ideation and suicide attempts among middle-aged and older patients with schizophrenia spectrum disorders and concurrent subsyndromal depression. *J Nerv Ment Dis.* 2008;196(12):884-890. doi:10.1097/NMD.0b013e31818ec823.