Supplementary Online Content

A systematic review and meta-analysis on the association between specific childhood adversities and symptom dimensions in psychosis.

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Table S1. PRISMA statement and checklist

Section/topic	#	Checklist item	Page
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	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.	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	2,3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	3
METHODS			
Protocol and registration	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.	4
Eligibility criteria	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.	4-5
Information sources	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.	4
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6, SM 23-26
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	4,7
Data collection process	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.	6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	6
Risk of bias in individual studies	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.	6, SM 26
Summary measures	13	State the principal summary measures	6,7
Risk of bias across studies	15	Specify any assessment of risk of bias (i.e. Newcastle-Ottawa Scale (NOS), that may affect the cumulative evidence.	7, 8
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	8
RESULTS			

Study selection	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, SM 20
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	SM 5-15
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment.	13, SM 24-26
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study a summary data for each intervention group.	SM; 5-15
Synthesis of results	21	Present results of study analysed.	10-13, SM; 17, 18
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies	13, SM; 17,18, 42, 43
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression	13, 14, SM 43-56
DISCUSSION			
Summary of evidence	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).	15-20
Limitations	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).	15,16
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	20
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support; role of funders for the systematic review.	N/A

Table S2. Moose checklist

Criteria		Brief description of how the criteria were handled in the meta-analysis
Reporting of background should include		
√	Problem definition	No meta-analysis has been conducted to examine the association between childhood adversities and the five relevant symptom dimensions within psychosis together
√	Hypothesis statement	We hypothesized that exposure to experiences of childhood adversities may exacerbate the various symptom dimensions within psychosis patients.
√	Description of study outcomes	The severity of the following symptom dimensions; positive, negative, depressive, disorganised and manic symptoms.
√	Type of exposure or intervention used	Exposure to overall childhood adversity and/or its subtypes; sexual, physical and emotional abuse and; emotional and physical neglect.
√	Type of study designs used	Both cross sectional and longitudinal studies were included. Design detailed in the methods section.
√	Study population	Psychotic patients with the following diagnoses: schizophrenia, schizophreniform/brief psychotic episode, bipolar disorder with psychotic features, schizoaffective disorder, major depression with psychotic features, psychosis not otherwise specified.
Reporting of search strategy should include		
√	Qualifications of searchers	The credentials of the investigators are indicated in the author list.
√	Search strategy, including time period included in the synthesis and keywords	A literature search was conducted up to May 2019. We searched Medical Subjects Headings (MeSH) and keywords related to: (1) psychosis; (2) childhood adversity (3) clinical dimensions, using the Boolean operator 'AND' (full list of search terms provided in Online Supplementary Material – Search Terms).
√	Databases and registries searched	Three OVID databases; MEDLINE, EMBASE and PsycINFO, and on Cochrane Libraries.
√	Use of hand searching	Included studies of relevant systematic reviews/ meta-analyses and the references from the included studies were manually screened and searched.
√	List of citations located and those excluded, including justifications	Details of the literature search process are outlined in the results section and PRISMA flowchart.
√	Method of addressing articles published in languages other than English	Only articles in the English language were selected.
√	Method of handling abstracts and unpublished studies	Only original individual studies that were fully accessible were included in our study.
√	Description of any contact with authors	Authors were contacted in the case of missing data or for further information, through email. If no response was given, there was one further attempt at contact.
Reporting of methods should include		
√	Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested	Detailed inclusion and exclusion criteria are described in the methods section.
√	Rationale for the selection and coding of data	Data extracted from each of the studies are relevant to the population characteristics, study design and study outcomes.
√	Assessment of confounding	We did not investigate confounding factors

√	Assessment of study quality and stratification or regression on possible predictors of study results	We evaluated the quality of the included studies using the Newcastle-Ottawa Scale. Meta-regression and sensitivity analyses were also performed to assess the influence of potential covariates; female participants, mean age, use of PANSS/CTQ and NOS quality score
√	Assessment of heterogeneity	Heterogeneity was assessed with the I^2 index.
√	Description of statistical methods in sufficient detail to be replicated	A random-effects meta-analysis was used. Heterogeneity among study point estimates was assessed using Q statistics. The proportion of the total variability in the effect size estimates was evaluated with the I^2 index.
√	Provision of appropriate tables and graphics	Figures are included to reflect the literature search process and forest plots of the meta-analyses conducted. Tables are also provided to depict additional data of all analyses conducted and to present relevant key information
Reporting of results should include		
√	Table summarizing individual study estimates and overall estimate	We reported this in the results and supplementary section.
√	Table giving descriptive information for each study included	We have presented descriptive information for each study in the tables within the supplementary material.
√	Results of sensitivity testing	Subgroup analyses were conducted as specified in the manuscript.
√	Indication of statistical uncertainty of findings	We discuss in our limitations some potential bias that should be taken into account when interpreting our findings.
Reporting of discussion should include		
√	Quantitative assessment of bias	Our discussion discusses potential bias that have been taken into account
√	Justification for exclusion	We excluded studies based on the rationale of other meta-analysis and our own judgement and this is documented in the methods section, supported with tables in SM and discussed in the main manuscript.
√	Assessment of quality of included studies	The quality of the studies was assessed and reported using the Newcastle Ottawa Scale (NOS)
Reporting of conclusions should include		
√	Consideration of alternative explanations for observed results	We have addressed this point in the discussion section.
√	Generalization of the conclusions	We have addressed this point in the discussion section.
√	Guidelines for future research	We have addressed this point in the discussion section.
√	Disclosure of funding source	We have addressed this point at the end of the discussion section

Search Strategy

Adversity related items

- Embase
    - Mesh Terms
        19. *Sexual Abuse*
        20. *Physical Abuse*
        21. *Emotional abuse*
        22. *Neglect*
        23. *Child Abuse*
        24. *Bullying*
        25. *Sexual Bullying*
        26. *Rape*
        27. *Domestic Violence*
        28. *Psychotrauma*
        29. *Early life stress*
        30. *Sexual harassment*
- Medline
    - Mesh Terms
        1. *Sex Offenses*
        2. *Physical Abuse*
        3. *Child Abuse*
        4. *Bullying*
        16. *Rape*
        17. *Domestic Violence*
        18. *Sexual Harassment*
- PsychInfo
    - Mesh Terms
        5. *Sexual Abuse*
        6. *Physical Abuse*
        7. *Emotional Abuse*
        8. *Child Abuse*
        9. *Child Neglect*
        10. *Emotional Trauma*
        11. *Bullying*
        12. *Abandonment*
        13. *Rape*
        14. *Domestic Violence*
        15. *Sexual Harassment*
- Key Words
    31. *(separat* adj5 parent*)*
    32. *victimi**
    33. *(advers* adj5 experienc*)*
    34. *adversit**
    35. *emotional abuse*
    36. *psychological abuse*
    37. *neglect*
    38. *bully**
    39. *bullied**
    40. *parental loss*
    41. *(Childhood adj5 trauma)*

42. *(abandon adj10 parent*)*
43. *early life events*
44. *maltreat**
45. *(parent adj5 loss)*
46. *(Childhood adj5 maltreat*)*
47. *early adversity*
48. *being taken into care*
49. *early life stress*
50. *communication deviance*
51. *household discord*
52. *rape*
53. *domestic violence*
54. *sexual harassment*
55. *psychotrauma*
56. *emotional trauma*
57. *sexual abuse*
58. *physical abuse*

Psychosis related items

- Embase
    - Mesh Terms
        59. *pychosis*
        60. *schizophrenia*
        61. *schizoaffective psychosis*
- Medline
    - Mesh Terms
        62. *Psychotic Disorders*
        63. *Schizophrenia*
- PsychoInfo
    - Mesh Terms
        64. *Psychosis*
        65. *Acute Psychosis*
        66. *Affective Psychosis*
        67. *Schizophrenia*
        68. *Schizoaffective Disorder*
- Key Words
    69. *psychos**
    70. *psychot**
    71. *schizophr**
    72. *schizoaf**

Symptom dimensions related items

- Embase
    - Mesh Terms
    - Positive syndrome
    - Negative syndrome
    - Mania
    - Delusions
    - Hallucinations
- Medline
    - Mesh Terms

- Delusions
- Hallucinations

- PsychInfo
  - Mesh Terms
  - Positive and negative symptoms
  - Psychiatric symptoms
  - Mania
  - Anxiety
  - Major depression
  - Psychopathology
  - Delusions
  - Hallucinations

- **Key Words**
  73. Symptom severity
  74. Hallucinat*
  75. Delusion*
  76. Depressive symptom*
  77. Positive symptom*
  78. Negative symptom*
  79. Disorganized symptom*
  80. Manic symptom*
  81. Positive dimension*
  82. Negative dimension*
  83. Anxious dimension*
  84. Disorganized dimension*
  85. Depressive dimension*
  86. Excited dimension*
  87. Clinical dimension*
  88. Symptom domain
  89. Manic dimension
  90. (anxiety adj3 symptom)
  91. (disorga* adj3 dimension)
  92. (disorga* adj3 symptom)
  93. (depress* adj3 dimension)
  94. (depress* adj3 symptom)
  95. (mani* adj3 symptom)
  96. (mani* adj3 dimension)

Table S3. Diagnostic manuals' ICD10 and DSM-IV codes of the diagnostic categories included

Diagnosis	Code used within ICD-10	Code used within DSM-IV
Schizophrenia	F20	295.10/295.20/ 295.30/295.60/ 295.90
Brief psychotic disorder	F23	-
Schizophreniform disorder	F20.81	Schizophreniform disorder
Bipolar disorder with psychotic features	F31.2	296.04/296.44/ 296.54/296.64
Schizoaffective disorder	F25.0	295.70
Major depressive disorder with psychotic features	F33.3	296.24/296.34
Psychosis, not otherwise specified	F29	298.9

Table S4. Inclusion criteria for outcomes measures used to symptom dimensions severity

The instruments below were chosen for being the most common instruments used to assess symptoms in individuals with psychosis and were chosen by authors after careful examination of relevant reviews in the field[1-3] and based on their previous experience in clinical practise. If during the full text screening, a new instrument not included in the initially considered, it was discussed in a group meeting whether it should be included or not. Only validated instruments were considered, which means that they went through a validation study process, where the usual parameters of quality were examined (inter-rater reliability, concurrent validity etc…).

Positive	● PANSS ● SAPS ● BPRS ● DIP ● CAPE
Negative	● PANSS ● SANS ● BPRS ● DIP ● CAPE
Depressed	● PANSS ● BDI-II ● BPRS ● CDSS ● MADRS ● PHQ-9 ● CAPE ● CESD-R ● DI-PAD ● DASS21
Disorganised	● PANSS ● BPRS
Manic	● PANSS ● BPRS ● YMRS ● DI-PAD

Note. PANSS= Positive and Negative Syndrome Scale; SAPS= Scales for the Assessment of Positive Symptoms; BPRS= Brief Psychiatric Rating Scale; DIP=Diagnostic Interview for Psychosis; CAPE= The Community Assessment of Psychic Experience; SANS=Scale for the Assessment of Negative Symptoms; BDI-II= Beck Depression Inventory- II; CDSS= Calgary Depression Scale for Schizophrenia; MADRS= The Montgomery–Åsberg Depression Rating Scale; PHQ-9= The Patient Health Questionnaire-9; CESD-R= Center for Epidemiologic Studies Depression Scale- Revised; DI-PAD= Diagnostic Interview for Psychosis and Affective Disorders; DASS21= The Depression, Anxiety and Stress Scale - 21 Items; YMRS= Young Mania Rating Scale.

Table S5. Characteristics in papers included in the systematic review

Author Year Country	Sample Mean Age % female Education (y)	Design	Measures of childhood adversity	Psychosis measure	Analysis	Covariates (yes / no)	Dimensions	Main findings Dimension Significant findings	Quality check score
Aas 2016[4] Norway	96 FEP 27.4(18-65) 44%	Prospective 1 year	CTQ Composite and subscale (EA, PA, SA, EN, PN)	DSM-IV	The Spearman's correlation	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Excited (PANSS) (4) Disorganized/ concrete (PANSS) (5) Depressive (PANSS) (6) Manic (YMRS)	(1) Positive Positive significant: PA, EN (2) Negative Positive significant: PN (3) Disorganized Positive significant: PA, PN, EN, composite CA (4) Excited Positive significant: SA, PA, EA, EN, composite CA (5) Depressed Positive significant: PA, SA, EA, PN, EN, composite CA	4
Ajnakina 2016[5] England	236 FEP 28.7 (18-65) 35.2%	Cross sectional	CECA,Q Subscale - PA, SA.	ICD-10	Linear Regression Analysis	Yes; age at first contact, gender, ethnicity, lifetime use of alcohol, cannabis or other illegal substance use prior to psychosis onset, family history of psychosis.	(1) Positive (PANSS) (2) Negative (PANSS) (3) Excited (PANSS) (4) Depressed (PANSS) (5) Disorganized (PANSS)	(1) Positive Positive significant: PA, SA. (2) Negative: N.S. (3) Excited Positive significant: PA, SA (4) Depressed: N.S. (5) Disorganized Positive significant: PA	6

Alameda 2016[6] Switzerland	196 early psychosis 24.06 (18-35) 29.1%	Prospective: 2, 6, 12, 18, 24, 30 and 36 months.	Extensive Assessment and Clinical Interviews Composite (Early and late CA) and subscales (SA, PA, EA, PN and EN)	DSM-IV	2-level regression model Random intercept models and random intercept and slope alternatives	Yes; age, sex, SES status and SES level	(1)Positive (PANSS) (2) Negative (PANSS) (3) Depressive (MADRS) (4) Manic (YMRS)	(1) Positive Positive significant: Early composite CA (2) Negative Positive significant: Early and late composite CA (3) Depressive Positive significant: Early composite CA (4) Manic Positive significant: Early composite CA	7
Alameda 2017[7] Switzerland	209 early psychosis 24.67 (18-35) 34%	Prospective: 2, 6, 12, 18, 24, 30 and 36 months.	Interview, family and patients records Composite (Early ≤ 12 and late = 12 - 16 years old)	DSM-IV criteria	Mediation analyses	No	(1) Depressive (MADRS)	(1) Depressive Positive significant: Early CA (2, 6, 24, 30 and 36 months)	6
Alameda 2018[8] Switzerland	133 early psychosis 25.19 (18-35) 43.2%	Cross-Sectional	Extensive Assessment of exposure to traumatic life events Composite	DSM-IV	One way ANOVA	Yes; age, sex,	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depressive (PANSS) (4) Manic (PANSS) (5) Disorganized (PANSS)	(1) Positive: N.S. (2) Negative: N.S. (3) Depressive Positive significant: Composite CA (4) Manic: N.S. (5) Disorganized Positive significant: Composite CA	5
Baudin 2016[9] France	366 schizophrenia 32 (15-84) 25.14%	Cross-Sectional	CTQ Composite	DSM-IV-TR	Multiple Regression Analyses	Yes; Age, gender	(1) Positive (PANSS) (2) Negative (PANSS) (3) Disorganized (PANSS) (4) Excitement (PANSS)	(1) Positive Positive significant: Composite CA (2) Negative: N.S. (3) Disorganized Positive significant: Composite CA (4) Excitement Positive significant: Composite CA	7
Bendall 2011[10]	40 patients with FEP	Cross-Sectional	CTQ	DSM	Correlation analysis	No	(1) Positive (PANSS)	(1) Positive N.S.	5

Australia	21 (15-29) 50%		Composite				(2) Negative (PANSS) (3) Depression (CESD-R)	(2) Negative N.S. (3) Depression Positive significant: Composite CA	
Bendall 2013[11] Australia	28 FEP 21(15-29) 47%	Cross-sectional	CTQ Composite	DSM-IV	Mann-Whitney's U-test	No	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: Composite CA (2) Negative Positive significant: N.S.	4
Bi 2018[12] China	201 schizophrenia 32.58 (18 - 65) 75.6%	Cross-Sectional	CTQ-SF Composite and subscales (EA, PA, SA, EN and PN)	ICD-10	Spearman Correlation	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Excitement (PANSS)	*No significant associations observed in any analyses*	5
Chae 2015[13] South Korea	98 schizophrenia 43(18-65) 49%	Cross-Sectional	CTQ-SF Composite and subscales (EA, PA, SA, EN and PN)	DSM-IV-TR	Partial correlation analysis	Yes; age, sex	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depression (BDI)	(1) Positive Positive significant: SA and composite CA (2) Negative: N.S. (3) Depression Positive significant: EA, EN and composite CA	5
Collip 2013[14] Belgium	195 patients with a psychotic disorder 28.1(15-60) 26.7%	Cross-sectional	CTQ Composite	DSM-IV	Multilevel regression	Yes; Age, gender and depressive symptoms	(1) Positive (BPRS)	(1) Positive Positive significant: Composite CA	6
Comacchio 2018[15] Europe	444 FEP 30.2 (18-54) 41.4%	Cross-Sectional	CECA-Q Subscales (PA and SA)	ICD-10	Analysis of Variance	Yes; education level, marital status, employment, nationality and diagnosis	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive: N.S. (2) Negative Positive significant: PA, SA	5
Derosse 2014[16] USA	184 patients with schizophrenia and schizophrenia	Cross-sectional	CTQ Subscale (EA, PA, SA, EN, PN)	DSM-IV	Regression ANCOVA	No	(1) Positive (CAPE) (2) Negative (CAPE)	(1) Positive Positive significant: EA, PA, SA (2) Negative	5

	affective disorder 40.98 30.97%						(3) Depression (CAPE)	Positive significant: EA (3) Depression Positive significant: EA, SA	
Duhig 2015[17] Australia	100 patients with a psychotic illness 21.4(17-26) 38%	Cross-sectional	CTQ Composite and subscale (EA, PA, SA, EN, PN)	ICD-10	Spearman's correlation	NO	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depression (DASS21)	(1) Positive Positive significant: PN and composite CA (2) Negative Positive significant: PN (3) Depression Positive significant: EA, PA, SA, PN and composite CA	5
Gabinio 2018[18] USA	20 with schizophrenia 41.3 45%	Cross-sectional	ETISR-SF Composite and subscale (SA)	DSM-5	The spearman correlation	No	(1) Depression (Diagnostic Interview for Psychosis and Affective Disorder 6 - DI-PAD) (2) Mania (Diagnostic Interview for Psychosis and Affective Disorder 6 - DI-PAD)	*No significant associations observed in any analyses*	4
Green 2014[19] Australia	429 with Schizophrenia 39.31 (20-65) 34.3% 13.46	Cross-Sectional	CAQ Subscales (PA, EA, EN)	ICD-10	Hierarchical Regression Analysis	Yes; gene (COMT)	(1) Positive (DIP) (2) Negative (DIP)	(1) Positive Positive significant: PA (2) Negative Positive significant: EN	5
Haahr 2018[20] Norway and Denmark	191 FEP 27.9 (18-65; 15-65 in one site) 40% 12.1	Prospective 5 years	BBTS Composite* **Specifically, close interpersonal trauma*	DSM-IV	*t*-test	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depressive (PANSS) (4) Excitative (PANSS)	*No significant associations were observed within findings of analyses*	*5*

Hardy 2016[21] United Kingdom	228 patients with relapsing psychosis 38.24(18-65) 27.63%	Prospective Baseline, 3, 6, 12, and 24-months	THQ Subscales (SA, PA and EA)	DSM-IV	Linear regression	YES; age, gender and ethnicity	(1) Depression (BDI)	*No significant associations were observed within findings of analyses*	6
Heins 2011[22] Netherlands	268 patients with nonaffective psychotic disorder 28.1(16-55) 30.5%	Cross-sectional	CTQ Composite	DSM-IV	Multilevel logistic regression	Yes Age and sex	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: Composite CA (2) Negative: N.S.	6
Kilcommons 2005[23] UK	-32 with a schizophrenia spectrum disorder -34.5 (18-60) -21.875%	Cross-sectional	THQ Composite	DSM-IV	Pearson's correlation	No	(1) Positive (PANSS)	*No significant associations were observed within findings of analyses*	4
Kumari 2013[24] UK	28 with schizophrenia 35.4 0%	Cross-sectional	Psychosocial deprivation assessment (PSD) Composite	Structured Clinical Interview for DSM IV Axis I disorder	ANOVA	YES; History of serious violence	(1) Positive (PANSS) (2) Negative (PANSS)	*No significant associations were observed within findings of analyses*	4
Lindgren 2017[25] Finland	75 FEP 26.4 (18-40) 34.7%	Cross-Sectional	Baseline interview of childhood adversities Composite	DSM-IV	Spearman Correlation	None used for analyses of interest	(1) Positive (BPRS) (2) Negative (BPRS) (3) Depression (BDI)	*No significant associations were observed within findings of analyses*	4
Lysaker 2001[26] United States	43 with schizophrenia or schizoaffective disorder 45 0%	Cross sectional	Self-report questionnaire Subscale (SA)	DSM-IV (SCID)	ANOVA	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Disorganisation (PANSS)	(1) Positive Positive significant: SA (2) Negative: N.S. (3) Disorganised Positive significant: SA	4
Lysaker 2005[27] USA	43 with schizophrenia or schizoaffective 46 0% 12	Prospective (biweekly assessments for 16 weeks)	CEQ Subscale (SA)	DSM-IV	Repeated Measures ANOVA	No	(1) Positive (PANSS)	(1) Positive Positive significant: SA	4
McCabe 2012[28] Australia	408 with schizophrenia 40.72 (18-65) 34.3% 13.41	Cross-Sectional	CAQ Composite & subscale (SA)	ICD-10	Logistic and linear regression analyses	Yes; gender, age, education, family history of schizophrenia	(1) Positive (DIP) (2) Negative (SANS)	(1) Positive Positive significant: Composite CA, SA. (2) Negative: N.S.	6

Mohammadzadeh[29] 2019 Iran	82 patients with schizophrenia 34.78 (18-59) 58.5% 9.85	Cross-sectional	CTQ-SF Composite and subscales (EA PA, SA, EN & PN).	DSM-IV-TR	*t-test*	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depression (BDI-II)	(1) Positive Positive significant: SA, PA, EA, PN, EN, Composite CA (2) Negative Positive significant: SA, PA, EA, PN, Composite CA (3) Depression Positive significant: SA, PA, EA, PN, EN, Composite CA	4
Offen 2002[30] United Kingdom	26 patients with psychotic disorder 34(23-67) 34.6%	Cross-sectional	Questioning regarding history of sexual abuse Subscale (SA)	N/A	-Whitney test	No	(1) Depression (BDI)	(1) Depression Positive significant: SA	4
Okubo 2017[31] Japan	255 outpatients with schizophrenia 43.2(20-65) 44.7% 12.6	Cross-sectional	CATS Composite and subscale (EN, SA).	DSM-V	Correlation analyses Stepwise multiple linear regression	Yes: age, employment status, symptom remission, antipsychotic dosage, and CGI-S; positive, negative, and disorganized symptom scores on the BPRS	(1) Depression (PHQ-9)	(1) Depression Positive significant: SA, EN, composite CA	5
Pruessner 2019[32] Canada	210 FEP 23.73 (14-35) 31.4%	Prospective Baseline, 12 months, 24 months	CTQ Composite and subscale (EN, PN, PA, SA, EA)	DSM-IV	Spearman Correlation Multiple linear regression analyses Stepwise multiple linear regression	Yes - substance abuse and dependence	(1) Positive (BPRS) (2) Negative (BPRS) (3) Manic (BPRS) (4) Depressive (BPRS)	(1) Positive Positive significant; EA (2) Negative Positive significant: Composite CA, EN. Negative significant: EA (3) Manic Positive significant: N.S. (4) Depressive Positive significant: EA	6

Rajkumar 2015[33] India	62 Schizophrenia 35.3 (19-54) 50%	Cross sectional	CTQ Composite and subscales (PA, EA, SA, PN, EN)	DSM-IV	Pearson's Spearman rho	Yes (gender)	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depression (CDSS)	(1) Positive: N.S. (2) Negative: N.S. (3) Depression Positive significant: SA, EA, EN, composite CA	4
Ramsay 2011[34] USA	61 nonaffective psychosis 23.6 (18-37) 27.9% 11.7	Cross-Sectional	CTQ-SF - Composite and Subscale (PA, EA, SA, RN, PN)	DSM-IV	Spearman Correlation	No	(1) Positive (SAPS) (2) Negative (SANS)	(1) Positive Positive significant: EA (2) Negative Positive significant: EN	4
Ruby 2017[35] United States	28 schizophrenia patients 31.5 (range = N/A, SD = 9.7) 28.57%	Cross-sectional	ETI Composite	Diagnostic interview for genetic studies (DIGS)	Pearson's correlation Multiple regression model	No	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: CA (2) Negative Negative significant: CA	5
Sahin 2013[36] Turkey	83 First episode schizophrenia 23.1 (N/A) 27.71%	Cross sectional	CTQ Composite and subscale (PA, EA, SA, EN, PN)	DSM-IV (SCID)	Mann–Whitney U test	No	(1) Positive (SAPS)	(1) Positive Positive significant : SA, EN, Composite CA	4
Sar 2010[37] Turkey	70 psychosis 38.3 (19-59) 54.3% 10.1	Cross-Sectional	CTQ Composite and subscale (PN, PA)	DSM-IV	Pearson Correlation	No	(1) Positive (SAPS) (2) Negative (SANS)	(1) Positive: N.S. (2) Negative: N.S.	4
Sayin 2013[38] Turkey	100 patients with schizophrenia 36.48 (18-65) 47%	Cross-sectional	CTQ Composite and subscale (EA)	Semistructured clinical interview for DSM-IV (SCID-I)	Multivariate Linear Regression Analysis Correlation	No	(1) Positive (SAPS) (2) Negative (SANS) (3) Depression (CDSS)	(1) Positive: N.S. (2) Negative: Negative significant: EA (3) Depression: N.S.	5
Schalinski 2015[39] Germany	62 psychotic spectrum disorder 32.2 30.6%	Prospective Admission, 1 month & 4 months after	MACE Composite & Subscale (PA, SA, EA, EN, PN)	ICD-10	t-test (total trauma)	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Disorganized (PANSS) (4) Excitement	(1) Positive: N.S. (2) Negative: N.S. (3) Disorganised: N.S. (4) Excitement Positive significant: EN	6

							(PANSS)		
Schalinski 2015B[40] Germany	75 patients with schizophrenia spectrum disorder 31 (N/A) 34.7% 13.5	Cross-sectional	MACE scale Composite	ICD-10	Random forest regression with conditional trees	Age	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: Composite CA (2) Negative Positive significant: Composite CA	4
Schalinski 2019[41] Germany	180 with schizophrenia 28.6 31.7%	Cross-sectional	MACE Composite and subscales (overall abuse and overall neglect)	N/A	Spearman's partial correlation	YES; age and gender	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: Composite CA, abuse and neglect (2) Negative: N.S.	6
Schenkel 2005[42] USA	40 with schizophrenia 41.9 (20-62) 37.5% 11.4	Cross-Sectional	History of childhood maltreatment based on clinical interview and medical chart Composite	DSM-IV	*t-test*	No	(1) Psychotic Disorganisation (BPRS) (2) Agitation/elation (BPRS)	(1) Disorganisation: N.S. (2) Elation/agitation: N.S.	4
Seidenfaden 2017[43] Denmark	37 schizophrenia 32.3 54.1%	Cross-Sectional	CATS Composite	ICD-10	Independent samples t-tests	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Disorganized (PANSS) (4) Excitement (PANSS)	(1) Positive Positive significant: CA (2) Negative: N.S. (3) Disorganised: N.S. (4) Excitement: N.S.	4
Simpson 2019[44] Australia	24 with acute FEP 19.54 (15-25) 41.66%	Prospective (during acute FEP, and three months later)	CTQ Composite	SCID for DSM-IV	Correlation coefficients	No	(1) Positive (BPRS)	*No significant associations were observed within findings of analyses*	5

Stain 2013[45] Norway	233 FEP 26.5 (18-65) 43.8% 11.5	Cross-sectional	BBTS Composite	The Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I)	Mann-Whitney U	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depressive (PANSS) (4) Disorganised (PANSS) (5) Excitative (PANSS)	*No significant associations were observed within findings of analyses*	5
Sun 2018[46] Australia	66 FEP 20.18 (15-25) 54.5%	Cross-sectional	CTQ Composite	DSM-IV-TR	*Spearman rank correlation analysis*	No.	(1) Negative (PANSS)	(1) Negative: N.S.	5
Ucok 2007[47] Turkey	57 FEP 23.03 49.1%	Prospective Admission, then monthly visit for 6 months.	CTQ Composite and subscale (EA, SA, PA, EN, PN)	DSM-IV	Correlation analysis	No	(1) Positive (SAPS) (2) Negative (SANS)	(1) Positive Positive significant: EA, SA, PA, EN, PN (2) Negative: N.S.	4
Van Dam 2014[48] The Netherlands	131 patients with psychotic disorder 31.19(16-50) 16%	Cross-sectional	CTQ-SF Composite	DSM-IV	Hierarchical multiple regression analysis	Age, gender, attachment scales	(1) Positive (SAPS) (2) Negative (SANS)	(1) Positive Positive significant: Composite CT (2) Negative Positive significant: Composite CT	6
Van Dam 2015[49] The Netherland	1119 patients with non-affective psychotic disorder 27.6(16-50) 24%	Prospective 3 years	CTQ-SF Composite and subscale (overall abuse and neglect)	DSM-IV	Multilevel regression analysis	No	(1) Positive (PANSS) (2) Negative (PANSS) (3) Depression (CDSS)	(1) Positive Positive significant: Composite CT (2) Negative Positive significant: Composite CT (3) Depression Positive significant: SA, EA, PA, PN, EN	6
Weijers 2018[50] Netherlands	87 non-affective psychosis 31.7 (19-57) 35.6	Cross-Sectional	CECA Composite	DSM-IV & comprehensive Assessment of History and Symptoms interview	Spearman's correlation	Yes; mentalizing (as mediator)	(1) Positive (PANSS) (2) Negative (PANSS)	(1) Positive Positive significant: Composite CT (2) Negative Positive significant: Composite CT	5

ote. FEP= First Episode Psychosis; CTQ=Childhood Trauma Questionnaire; EA= Emotional Abuse; SA= Sexual Abuse; PA= ıysical Abuse; EN= Emotional Neglect; PN= Physical Neglect; DSM-IV= Diagnostic and Statistical Manual for mental disorders- ; PANSS= Positive and Negative Syndrome Scale; YMRS= Young Mania Rating Scale; CA= Childhood Adversity; CEGA.Q = ıildhood Experience of Care and Abuse Questionnaire; ICD-10= International Classification of Diseases- 10Th revision; N.S.=

on-Significant; SES= Socioeconomic status; MADRS= The Montgomery–Åsberg Depression Rating Scale; ANOVA= Analysis Variance; DSM-IV-TR= Diagnostic and Statistical Manual of Mental Disorders- 4th Edition- text revision; CESD-R= Center for idemiologic Studies Depression Scale- Revised; BDI= Beck Depression Inventory; CTQ-SF= Childhood Trauma uestionnaire-Short Form; BPRS= Brief Psychiatric Rating Scale; ANCOVA= Analysis of Covariance; CAPE= The Community sessment of Psychic Experience; DASS21= The Depression, Anxiety and Stress Scale - 21 Items; ETISR-SF= Early Trauma ventory Self Report - Short Form; DI-PAD= Diagnostic Interview for Psychosis and Affective Disorders; CAQ=Childhood lversity Questionnaire; COMT= Catechol-O-methyltransferase; DIP=Diagnostic Interview for Psychosis; BBTS = Brief Betrayal auma Survey; THQ= The Trauma History Questionnaire; SCID=Structured Clinical Interview for DSM; CEQ=The Childhood perience Questionnaire; SANS=Scale for the Assessment of Negative Symptoms; CATS= ild and Adolescent Trauma Screen; PHQ-9= Patient Health Questionnaire-9; CDSS= Calgary Depression Scale for hizophrenia; SAPS= Scales for the Assessment of Positive Symptoms; ETI= Early Trauma Inventory; MACE=Maltreatment d Abuse Chronology of Exposure scale.

Figure S1. PRISMA flow diagram of database search

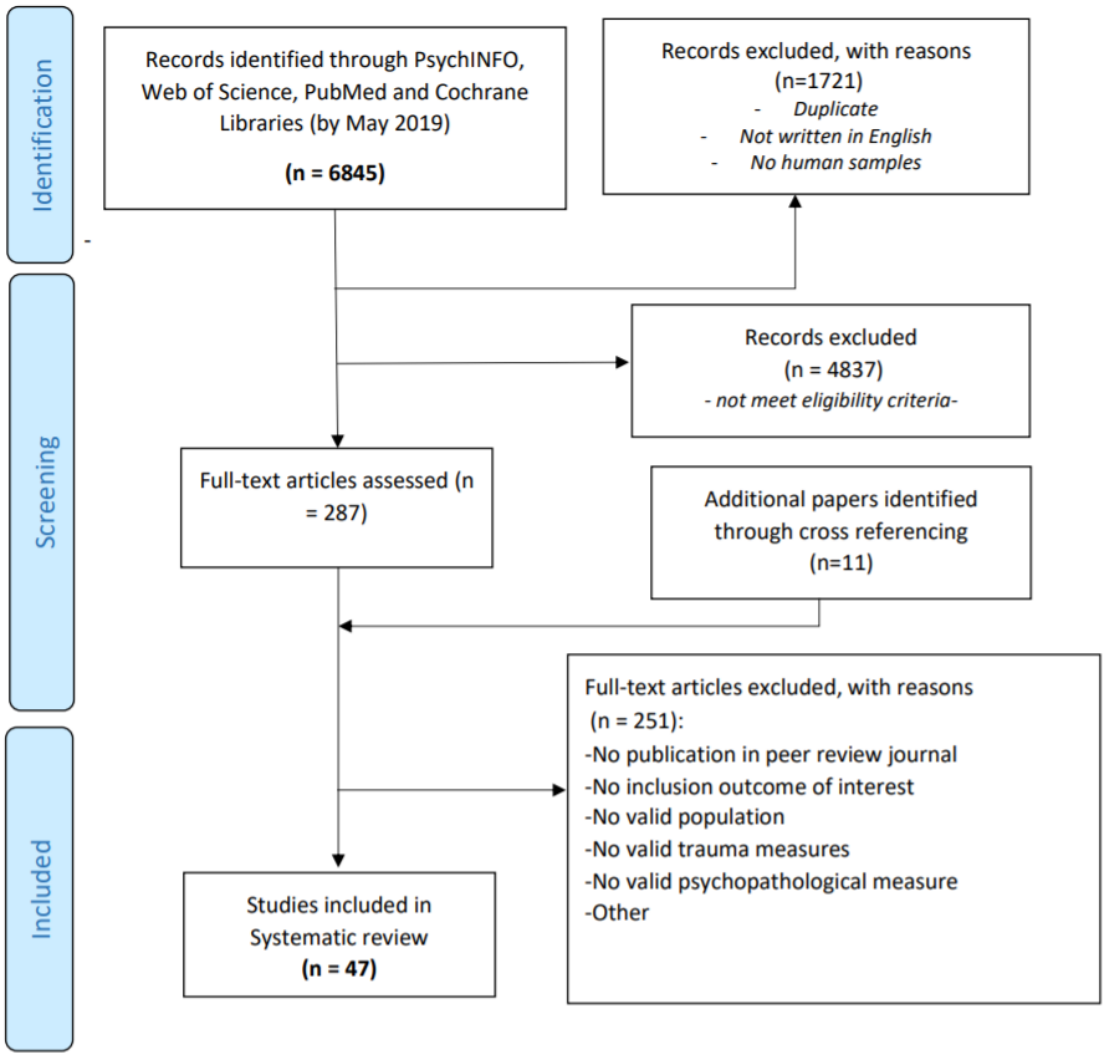


Table S6. Operationalization of the symptom dimensions (positive, negative, depressive, disorganized, manic/excited) in people with psychosis

Symptom dimension	Instruments	Domains used to operationalise	Utilised by	Total number of studies
Positive	PANSS	*7 domains:* Delusions, Conceptual disorganization, Hallucinations, Excitement, Grandiosity, Suspiciousness/persecution, Hostility	Alameda et al. (2016), Alameda et al. (2018), Baudin et al. (2011), Bendall et al. (2011), Bendall et al. (2013), Chae et al. (2015), Commachio et al. (2018), Duhig et al. (2015), Heins et al. (2011), Kilcommons et al. (2017), Kumari et al. (2013), Rajkumar et al. (2015), Schalinski et al. (2015), Schalinski et al. (2015B), Schalinski et al. (2019), Van dam et al. (2015), Weijers et al. (2018).	17
	Adapted 5 factor-model of PANSS	4 domains: Delusion, hallucinations, grandiose & thoughts.	Aas et al. (2015), Ajnakina et al. (2016), Bi et al. (2018), Haahr et al. (2018), Lysaker et al. (2001), Lysaker et al., (2005), Mohammadzadeh et al. (2019), Ruby et al. (2017), Stain et al. (2013),	9
	SAPS	*4 domains:* Hallucination, delusion, bizarre behaviour and positive formal thought disorder	Ramsay et al. (2011), Sahin et al, (2013), Sar et al. (2010), Sayin et al. (2013), Ucok et al. (2007), Vam Dam et al. (2014),	6
	Adapted BPRS scale (a)	*5 domains:* Suspiciousness, hallucinations, unusual thought content, bizarre behaviour and conceptual disorganization	Colip (2013), Pruessner et al. (2019), Simpson et al. (2019)	3
	Adapted BPRS scale (b)	*4 domains:* Hallucinations, unusual thought content, bizarre behaviour and conceptual disorganization.	Lindgren et al. (2017)	1
	Adapted PANSS model (b)	9 domains: Delusions, hallucinations, unusual thought content, suspiciousness, grandiosity, somatic concern, active social avoidance, difficulty in abstraction, lack of judgement and insight.	Seidenfaden et al. (2017)	1
	DIP	*3 domains:* lifetime hallucination, delusion and subjective thought disorder	McCabe et al., (2012)	1
	Adapted DIP scale	*2 domains:* Lifetime hallucinations and delusions	Green et al. (2014)	1
	CAPE	5 domains: Hallucinations/perceptual abnormalities, unusual thought	Derosse (2014)	1

		content, non-bizarre ideas, grandiosity, paranoia/persecutory delusions		
Negative	PANSS	*7 domains:* Blunted affect, emotional withdrawal, poor rapport, passive/apathetic social withdrawal, difficulty in abstract thinking, lack of spontaneity/flow of conversation and stereotyped thinking.	Aas et al. (2015), Ajnakina et al. (2016), Alameda et al. (2016), Alameda et al. (2018), Baudin et al. (2011), Bendall et al. (2011), Bendall et al. (2013), Chae et al. (2015), Commachio et al. (2018), Duhig et al. (2015), Heins et al. (2011), Kumari et al. (2013), Rajkumar et al. (2015), Schalinski et al. (2015), Schalinski et al. (2015B), Schalinski et al. (2019), Sun et al. (2018), Van dam et al. (2015), Weijers et al. (2018).	19
	Adapted 5 factor-model of PANSS	6 domains: Blunted affect, emotional withdrawal, poor rapport, passive/apathetic social withdrawal, lack of spontaneity, motor retardation.	Aas (2016), Ajnakina (2016), Bi (2018), Haahr et al. (2018), Lysaker et al. (2001), Mohammadzadeh et al. (2019), Ruby et al. (2017), Stain (2013).	8
	SANS	5 domains: Affective blunting, alogia, avolition/apathy, anhedonia/asociality and attention.	McCabe et al. (2012), Ramsay et al. (2011), Sar et al. (2010), Sayin et al. (2013), Ucok et al. (2007), Van Dam et al. (2014).	6
	Adapted BPRS scale	4 domains: Blunted affect, alogia, anhedonia and avolition.	Lindgren et al. (2017), Pruessner et al. (2019).	2
	Adapted PANSS model (b)	10 domains: Lack of spontaneity, blunted affect, emotional withdrawal, apathetic social withdrawal, motor retardation, poor rapport, active social avoidance, conceptual disorganisation, disturbance of volition, uncooperativeness.	Seidenfaden et al. (2017)	1
	Adapted DIP scale	4 domains: Restricted affect, blunted affect, thought disorder and social functioning (social withdrawal and lack of interest).	Green et al. (2014)	1
	CAPE	7 domains: Blunted affect, asociality, avolition, fatigue, lack of spontaneity, self-neglect and anhedonia.	Derosse (2014)	1
Depressive	Adapted 5 factor model of PANSS	*3 domains:* Anxiety, guilt & depression	Aas (2016), Ajankina (2016), Alameda (2018), Haahr (2018), Stain (2013).	5
	BDI-II	*4 domains:* Cognitive, affective, somatic and vegetative symptoms of depression	Chae (2015), Hardy (2016), Lindgren (2017), Mohammadzadeh (2019), Offen (2002)	5
	CDSS	6 domains: Depression, hopelessness, self-depreciation, guilt, early awakening and	Rajkumar (2015), Sayin (2013), van Dam (2015)	3

		suicide.		
	MADRS	10 domains: Sadness, inner tension, sleep, appetite, oncentration, anhedonia, concentration, fatigue, suicidal thoughts and pessimism.	Alameda (2016), Alameda (2017)	2
	DASS21	7 domains: dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia.	Duhig (2015)	1
	DI-PAD	11 domains: Dysphoria, anhedonia, changes in speech/behaviour, guilt, fatigue, concentration, libido, appetite, weight change, sleep and morning depression.	Gabino (2018)	1
	PHQ-9	Anhedonia, low mood, sleep, fatigue, appetite, negative self-beliefs, concentration, changes in movement/speech and suicidality.	Okubo (2017)	1
	Adapted BPRS scale	4 domains: Depression, anxiety, guilt and suicidality.	Pruessner (2019)	1
	CESD-R	9 domains: Depressed mood, anhedonia, weight changes, insomnia, fatigue, psychomotor difficulties, worthlessness/guilt, diminished concentration and suicidality.	Bendall (2011)	1
	CAPE	7 domains: Sadness, pessimism, hopelessness, suicidality, guilt, tension and sense of self-failure.	Derosse (2014)	1
Disorganised	Adapted PANSS model (Wallwork, Fortgang, Hashimoto, Weinberger & Dickinson,2012)	3 domains: Conceptual disorganisation, difficulty in abstraction and poor attention.	Aas (2016), Ajnakina (2016), Alameda (2018), Baudin (2016), Lysaker et al. (2001), Schalinski et al. (2015), Stain et al. (2013).	7
	Adapted PANSS model (van der Gaag et al., 2006)	10 domains: Unusual thought content, stereotype thinking, poor attention, disorientation, conceptual disorganisation, difficulty in abstraction, mannerism, lack of judgement and insight, disturbance of volition and preoccupation.	Seidenfaden et al. (2017)	1
	Adapted BPRS scale	5 domains: Bizarre behaviour, distractibility, conceptual disorganization, self-neglect,	Schenkel et al. (2005)	1

		mannerisms/posturing.		
Manic/Excited	Adapted PANSS model	4 domains: Uncooperativeness, poor impulse control, excitement, and hostility	Ajnakina (2016), Alameda (2018), Baudin (2016), Bi (2018), Haahr (2018), Schalinski (2015a), Seidenfaden (2017), Stain (2013)	8
	YMRS	10 domains: Insight, aggression, psychosis, appearance, thought disorder, pressured speech, mood, sleep, libido and motor activity.	Aas et al. (2016), Alameda (2016)	2
	Adapted PANSS model (van der Gaag et al., 2006)	8 domains: Grandiosity, poor rapport, active social avoidance, poor impulse control, excitement, hostility, uncooperativeness and tension.	Seidenfaden et al. (2017)	1
	Adapted BPRS scale (a)	7 domains: Motor hyperactivity, excitement, distractibility, tension, elated mood, grandiosity and bizarre behaviour.	Pruessner (2019)	1
	Adapted BPRS scale (b)	3 domains: Elated mood, motor hyperactivity and suicidality.	Schenkel et al. (2003)	1
	DI-PAD	8 domains: Mood, pressured speech, self-esteem, sociability, sleep, distractibility, motor hyperactivity, thought capacity.	Gabinio (2018)	1

Note. Acronyms can be found in Table S4 Footnote

Negative symptoms

The PANSS as a measure of symptom severity, was utilised by the majority of studies examining the negative symptom dimension (51.35%, n= 19). Whilst its 7 domains heavily overlaps with those utilised by alternative measures, it is the only instrument to assess individuals' thought capacities. Indeed, the adapted PANSS model, the second most commonly utilised measure (21.62%, n= 8), removed stereotyped thinking and difficulty in abstract thinking in the conceptualisation of negative symptoms. However, a domain initially categorised within general psychopathology, motor retardation, was included in this adaptation. Nonetheless, blunted affect appears to be a crucial symptom when examining negative symptoms, as it is the only domain to be commonly measured amongst all instruments.

Positive Symptoms

Similarly, out of the 9 measures of positive symptoms that have been utilised between included studies, PANSS was the most frequently used assessment tool (42.5%, n = 17). Relative to other measures, its inclusion of excitement and hostility sets a distinct conceptualisation of positive symptoms. Whilst the number of domains utilised between measures ranged from 2-9, hallucinations and delusions have been observed to be a constant indicator of positive symptom severity.

Depressive symptoms

Two instruments have been identified to have equally been the most utIlised measure of depressive symptoms; adapted PANSS model and BDI-II. Whilst the former is solely based on mood, the BDI-II additionally incorporates somatic and cognitive presentations of depression. This mixture of affective symptoms and disrupted functioning reflects the operationalisation of depressive symptoms that have been employed by the many remaining measures. For instance, disrupted sleep and low mood.

Manic Symptoms

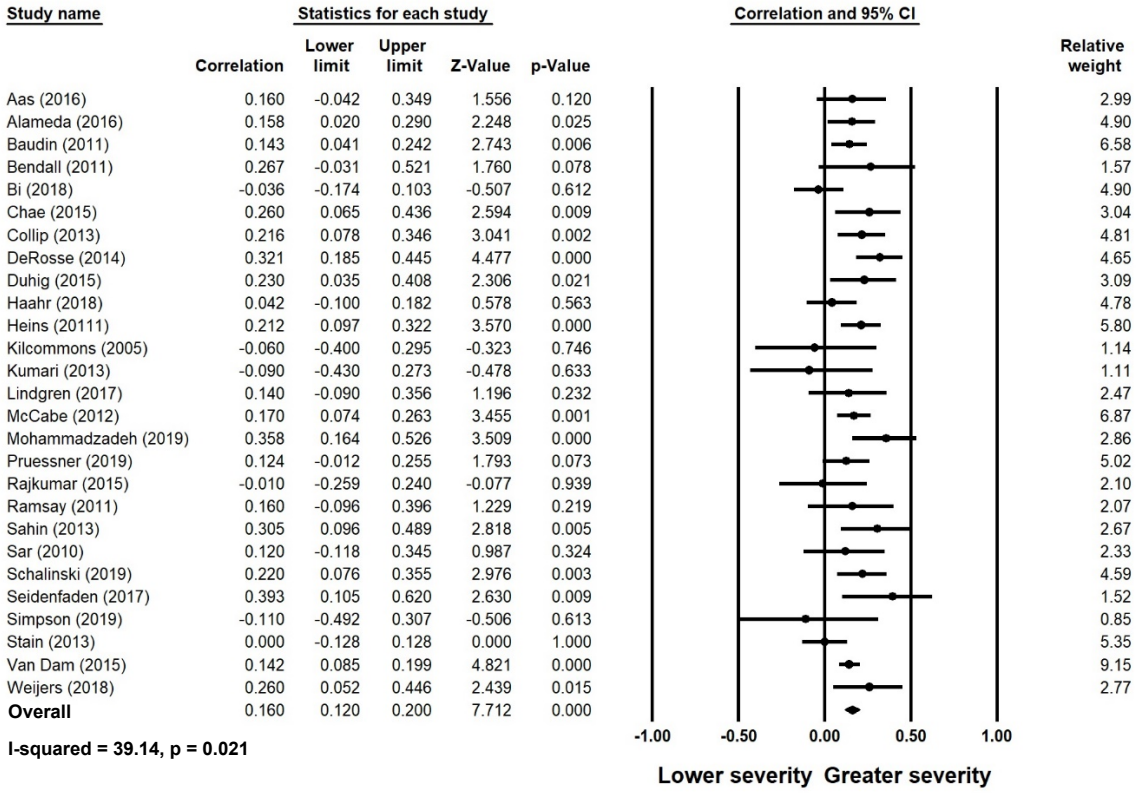
Elated mood/excitement has been consistently assessed amongst all measures of manic symptoms. Aside from this, there is a lack of consistency in how the various measures have operationalised this symptom domain. For instance, grandiosity, commonly associated with positive symptoms, have been incorporated into numerous measures of manic symptoms. Whereas, other studies shift focus to symptoms of motor hyperactivity. Nonetheless, it appears that measures typically incorporate a mixture of symptoms that tend to operationalise both positive and negative symptoms.

Disorganized symptoms

The operationalisation of disorganised symptoms within the literature is heavily influenced by symptoms within the PANSS, albeit differing factor models were utilised. The key distinction between the adapted PANSS scales and the one other utilised measure, adapted BPRS scale, was the inclusion of self-neglect as a relevant domain within the latter scale. Nevertheless, whilst the number of domains used to operationalise this symptom dimension largely varied, conceptual disorganisation was assessed in all three measures used between studies examining childhood adversity and disorganised symptoms.

Forest plots

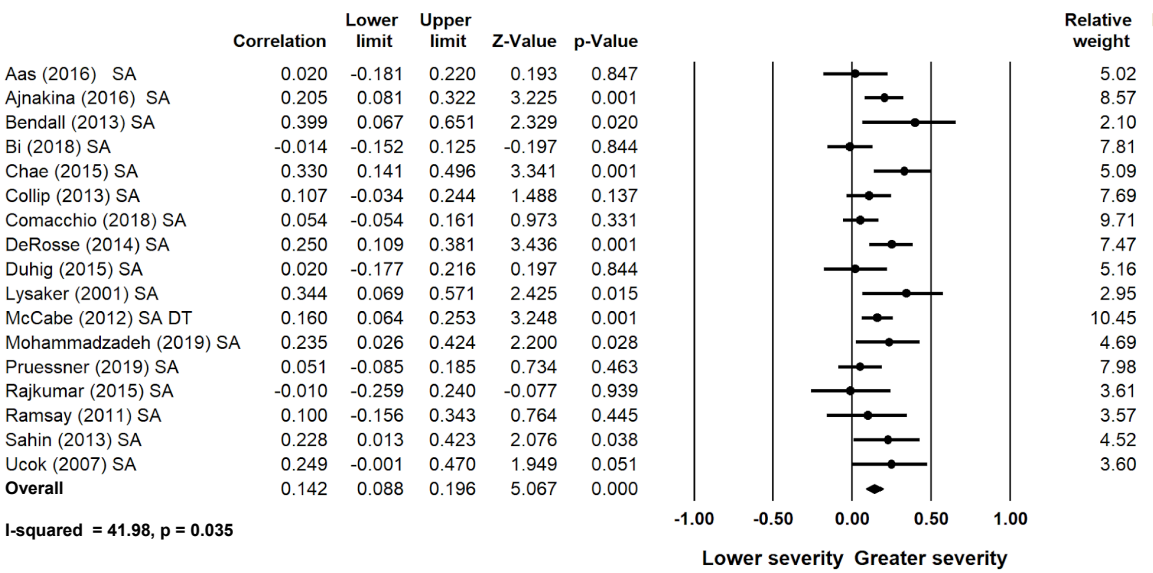
Figure S2. Forest plot showing relationship between general adversity and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016)	0.160	-0.042	0.349	1.556	0.120	2.99
Alameda (2016)	0.158	0.020	0.290	2.248	0.025	4.90
Baudin (2011)	0.143	0.041	0.242	2.743	0.006	6.58
Bendall (2011)	0.267	-0.031	0.521	1.760	0.078	1.57
Bi (2018)	-0.036	-0.174	0.103	-0.507	0.612	4.90
Chae (2015)	0.260	0.065	0.436	2.594	0.009	3.04
Collip (2013)	0.216	0.078	0.346	3.041	0.002	4.81
DeRosse (2014)	0.321	0.185	0.445	4.477	0.000	4.65
Duhig (2015)	0.230	0.035	0.408	2.306	0.021	3.09
Haahr (2018)	0.042	-0.100	0.182	0.578	0.563	4.78
Heins (20111)	0.212	0.097	0.322	3.570	0.000	5.80
Kilcommons (2005)	-0.060	-0.400	0.295	-0.323	0.746	1.14
Kumari (2013)	-0.090	-0.430	0.273	-0.478	0.633	1.11
Lindgren (2017)	0.140	-0.090	0.356	1.196	0.232	2.47
McCabe (2012)	0.170	0.074	0.263	3.455	0.001	6.87
Mohammadzadeh (2019)	0.358	0.164	0.526	3.509	0.000	2.86
Pruessner (2019)	0.124	-0.012	0.255	1.793	0.073	5.02
Rajkumar (2015)	-0.010	-0.259	0.240	-0.077	0.939	2.10
Ramsay (2011)	0.160	-0.096	0.396	1.229	0.219	2.07
Sahin (2013)	0.305	0.096	0.489	2.818	0.005	2.67
Sar (2010)	0.120	-0.118	0.345	0.987	0.324	2.33
Schalinski (2019)	0.220	0.076	0.355	2.976	0.003	4.59
Seidenfaden (2017)	0.393	0.105	0.620	2.630	0.009	1.52
Simpson (2019)	-0.110	-0.492	0.307	-0.506	0.613	0.85
Stain (2013)	0.000	-0.128	0.128	0.000	1.000	5.35
Van Dam (2015)	0.142	0.085	0.199	4.821	0.000	9.15
Weijers (2018)	0.260	0.052	0.446	2.439	0.015	2.77
Overall	0.160	0.120	0.200	7.712	0.000	

I-squared = 39.14, p = 0.021

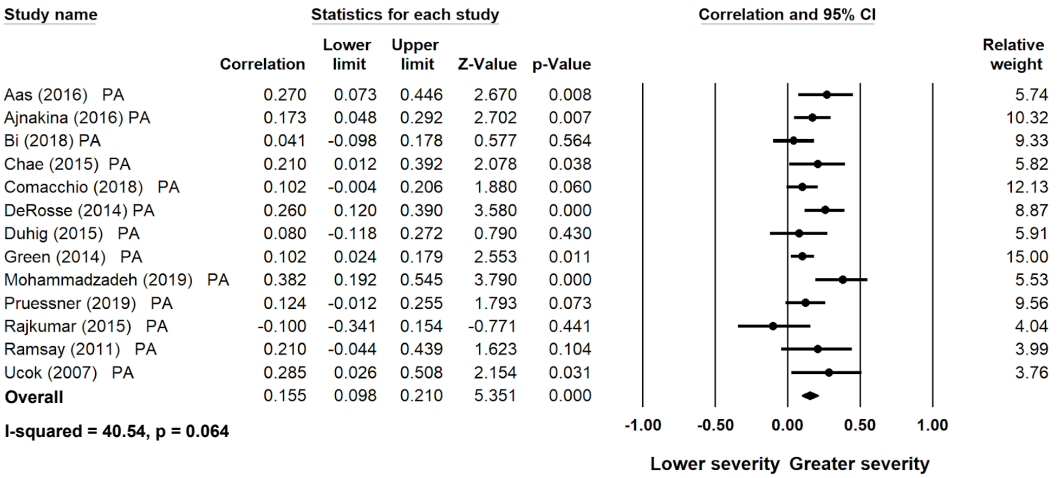
Figure S3. Forest plot showing relationship between sexual abuse (SA) and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) SA	0.020	-0.181	0.220	0.193	0.847	5.02
Ajnakina (2016) SA	0.205	0.081	0.322	3.225	0.001	8.57
Bendall (2013) SA	0.399	0.067	0.651	2.329	0.020	2.10
Bi (2018) SA	-0.014	-0.152	0.125	-0.197	0.844	7.81
Chae (2015) SA	0.330	0.141	0.496	3.341	0.001	5.09
Collip (2013) SA	0.107	-0.034	0.244	1.488	0.137	7.69
Comacchio (2018) SA	0.054	-0.054	0.161	0.973	0.331	9.71
DeRosse (2014) SA	0.250	0.109	0.381	3.436	0.001	7.47
Duhig (2015) SA	0.020	-0.177	0.216	0.197	0.844	5.16
Lysaker (2001) SA	0.344	0.069	0.571	2.425	0.015	2.95
McCabe (2012) SA DT	0.160	0.064	0.253	3.248	0.001	10.45
Mohammadzadeh (2019) SA	0.235	0.026	0.424	2.200	0.028	4.69
Pruessner (2019) SA	0.051	-0.085	0.185	0.734	0.463	7.98
Rajkumar (2015) SA	-0.010	-0.259	0.240	-0.077	0.939	3.61
Ramsay (2011) SA	0.100	-0.156	0.343	0.764	0.445	3.57
Sahin (2013) SA	0.228	0.013	0.423	2.076	0.038	4.52
Ucok (2007) SA	0.249	-0.001	0.470	1.949	0.051	3.60
Overall	0.142	0.088	0.196	5.067	0.000	

I-squared = 41.98, p = 0.035

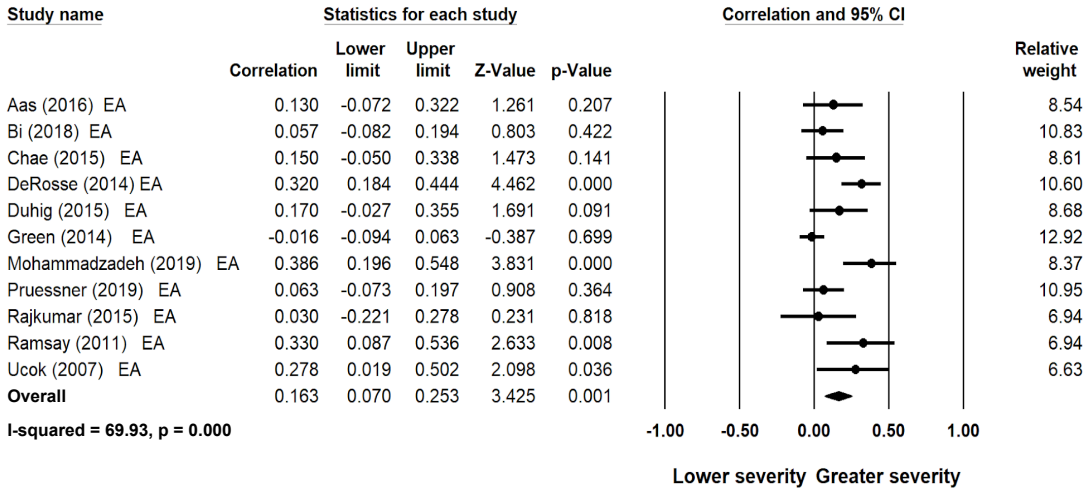
Figure S4. Forest plot showing relationship between physical abuse (PA) and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) PA	0.270	0.073	0.446	2.670	0.008	5.74
Ajnakina (2016) PA	0.173	0.048	0.292	2.702	0.007	10.32
Bi (2018) PA	0.041	-0.098	0.178	0.577	0.564	9.33
Chae (2015) PA	0.210	0.012	0.392	2.078	0.038	5.82
Comacchio (2018) PA	0.102	-0.004	0.206	1.880	0.060	12.13
DeRosse (2014) PA	0.260	0.120	0.390	3.580	0.000	8.87
Duhig (2015) PA	0.080	-0.118	0.272	0.790	0.430	5.91
Green (2014) PA	0.102	0.024	0.179	2.553	0.011	15.00
Mohammadzadeh (2019) PA	0.382	0.192	0.545	3.790	0.000	5.53
Pruessner (2019) PA	0.124	-0.012	0.255	1.793	0.073	9.56
Rajkumar (2015) PA	-0.100	-0.341	0.154	-0.771	0.441	4.04
Ramsay (2011) PA	0.210	-0.044	0.439	1.623	0.104	3.99
Ucok (2007) PA	0.285	0.026	0.508	2.154	0.031	3.76
Overall	0.155	0.098	0.210	5.351	0.000	

I-squared = 40.54, p = 0.064

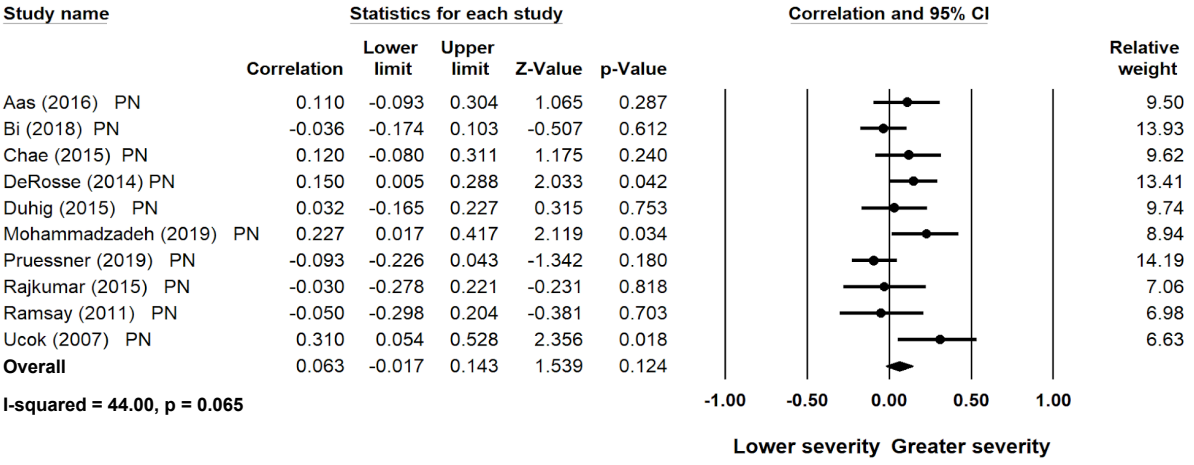
Figure S5. Forest plot showing relationship between emotional abuse (EA) and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) EA	0.130	-0.072	0.322	1.261	0.207	8.54
Bi (2018) EA	0.057	-0.082	0.194	0.803	0.422	10.83
Chae (2015) EA	0.150	-0.050	0.338	1.473	0.141	8.61
DeRosse (2014) EA	0.320	0.184	0.444	4.462	0.000	10.60
Duhig (2015) EA	0.170	-0.027	0.355	1.691	0.091	8.68
Green (2014) EA	-0.016	-0.094	0.063	-0.387	0.699	12.92
Mohammadzadeh (2019) EA	0.386	0.196	0.548	3.831	0.000	8.37
Pruessner (2019) EA	0.063	-0.073	0.197	0.908	0.364	10.95
Rajkumar (2015) EA	0.030	-0.221	0.278	0.231	0.818	6.94
Ramsay (2011) EA	0.330	0.087	0.536	2.633	0.008	6.94
Ucok (2007) EA	0.278	0.019	0.502	2.098	0.036	6.63
Overall	0.163	0.070	0.253	3.425	0.001	

I-squared = 69.93, p = 0.000

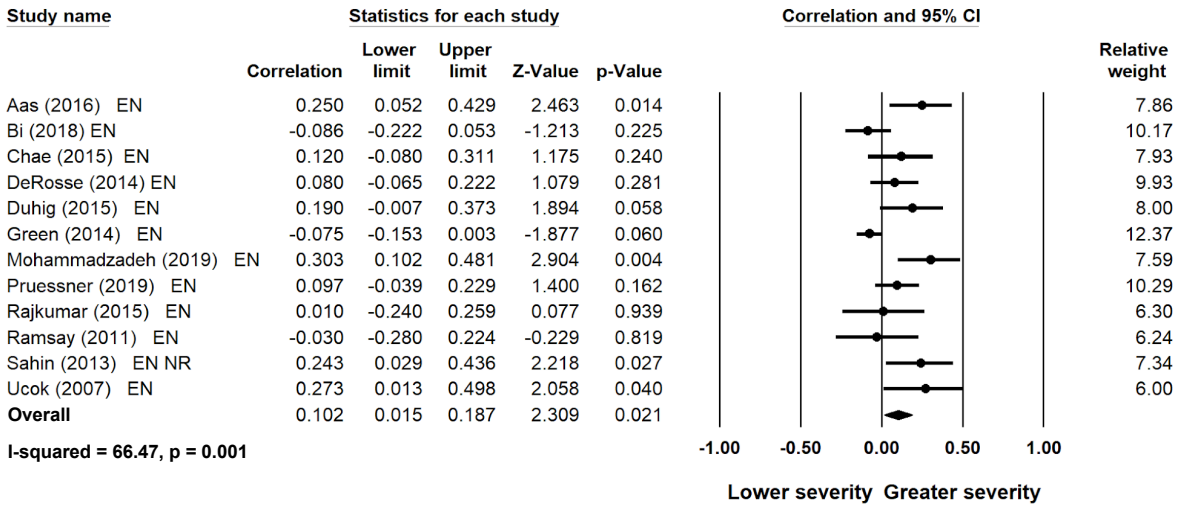
Figure S6. Forest plot showing relationship between physical neglect (PN) and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) PN	0.110	-0.093	0.304	1.065	0.287	9.50
Bi (2018) PN	-0.036	-0.174	0.103	-0.507	0.612	13.93
Chae (2015) PN	0.120	-0.080	0.311	1.175	0.240	9.62
DeRosse (2014) PN	0.150	0.005	0.288	2.033	0.042	13.41
Duhig (2015) PN	0.032	-0.165	0.227	0.315	0.753	9.74
Mohammadzadeh (2019) PN	0.227	0.017	0.417	2.119	0.034	8.94
Pruessner (2019) PN	-0.093	-0.226	0.043	-1.342	0.180	14.19
Rajkumar (2015) PN	-0.030	-0.278	0.221	-0.231	0.818	7.06
Ramsay (2011) PN	-0.050	-0.298	0.204	-0.381	0.703	6.98
Ucok (2007) PN	0.310	0.054	0.528	2.356	0.018	6.63
Overall	0.063	-0.017	0.143	1.539	0.124	

I-squared = 44.00, p = 0.065

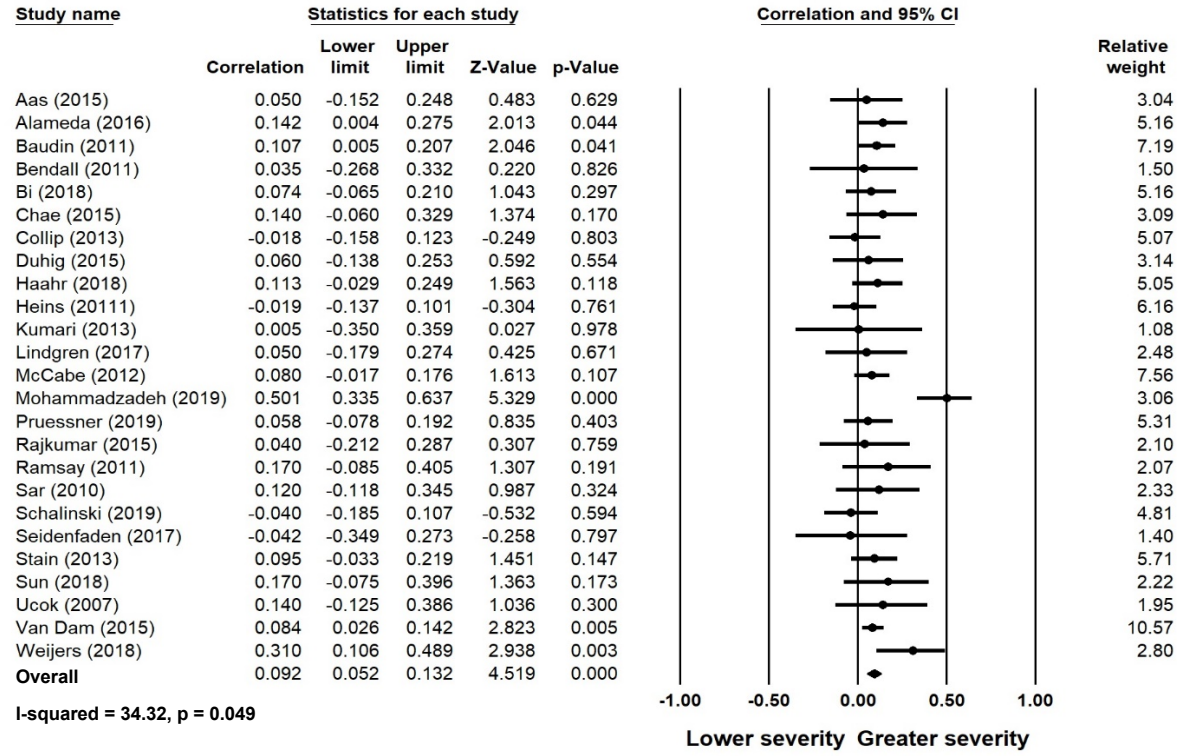
Figure S7. Forest plot showing relationship between emotional neglect (EN) and positive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) EN	0.250	0.052	0.429	2.463	0.014	7.86
Bi (2018) EN	-0.086	-0.222	0.053	-1.213	0.225	10.17
Chae (2015) EN	0.120	-0.080	0.311	1.175	0.240	7.93
DeRosse (2014) EN	0.080	-0.065	0.222	1.079	0.281	9.93
Duhig (2015) EN	0.190	-0.007	0.373	1.894	0.058	8.00
Green (2014) EN	-0.075	-0.153	0.003	-1.877	0.060	12.37
Mohammadzadeh (2019) EN	0.303	0.102	0.481	2.904	0.004	7.59
Pruessner (2019) EN	0.097	-0.039	0.229	1.400	0.162	10.29
Rajkumar (2015) EN	0.010	-0.240	0.259	0.077	0.939	6.30
Ramsay (2011) EN	-0.030	-0.280	0.224	-0.229	0.819	6.24
Sahin (2013) EN NR	0.243	0.029	0.436	2.218	0.027	7.34
Ucok (2007) EN	0.273	0.013	0.498	2.058	0.040	6.00
Overall	0.102	0.015	0.187	2.309	0.021	

I-squared = 66.47, p = 0.001

Figure S8. Forest plot showing relationship between general adversity and negative symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2015)	0.050	-0.152	0.248	0.483	0.629	3.04
Alameda (2016)	0.142	0.004	0.275	2.013	0.044	5.16
Baudin (2011)	0.107	0.005	0.207	2.046	0.041	7.19
Bendall (2011)	0.035	-0.268	0.332	0.220	0.826	1.50
Bi (2018)	0.074	-0.065	0.210	1.043	0.297	5.16
Chae (2015)	0.140	-0.060	0.329	1.374	0.170	3.09
Collip (2013)	-0.018	-0.158	0.123	-0.249	0.803	5.07
Duhig (2015)	0.060	-0.138	0.253	0.592	0.554	3.14
Haahr (2018)	0.113	-0.029	0.249	1.563	0.118	5.05
Heins (20111)	-0.019	-0.137	0.101	-0.304	0.761	6.16
Kumari (2013)	0.005	-0.350	0.359	0.027	0.978	1.08
Lindgren (2017)	0.050	-0.179	0.274	0.425	0.671	2.48
McCabe (2012)	0.080	-0.017	0.176	1.613	0.107	7.56
Mohammadzadeh (2019)	0.501	0.335	0.637	5.329	0.000	3.06
Pruessner (2019)	0.058	-0.078	0.192	0.835	0.403	5.31
Rajkumar (2015)	0.040	-0.212	0.287	0.307	0.759	2.10
Ramsay (2011)	0.170	-0.085	0.405	1.307	0.191	2.07
Sar (2010)	0.120	-0.118	0.345	0.987	0.324	2.33
Schalinski (2019)	-0.040	-0.185	0.107	-0.532	0.594	4.81
Seidenfaden (2017)	-0.042	-0.349	0.273	-0.258	0.797	1.40
Stain (2013)	0.095	-0.033	0.219	1.451	0.147	5.71
Sun (2018)	0.170	-0.075	0.396	1.363	0.173	2.22
Ucok (2007)	0.140	-0.125	0.386	1.036	0.300	1.95
Van Dam (2015)	0.084	0.026	0.142	2.823	0.005	10.57
Weijers (2018)	0.310	0.106	0.489	2.938	0.003	2.80
Overall	0.092	0.052	0.132	4.519	0.000	

I-squared = 34.32, p = 0.049

Figure S9. Forest plot showing relationship between sexual abuse (SA) and negative symptoms

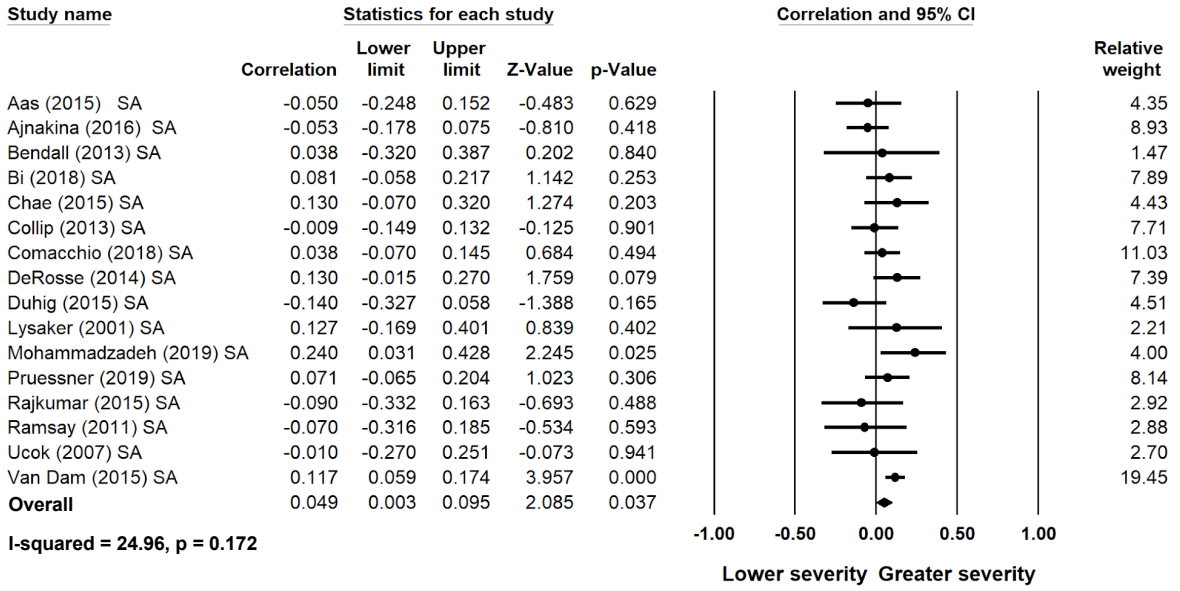


Figure S10. Forest plot showing relationship between physical abuse (PA) and negative symptoms.

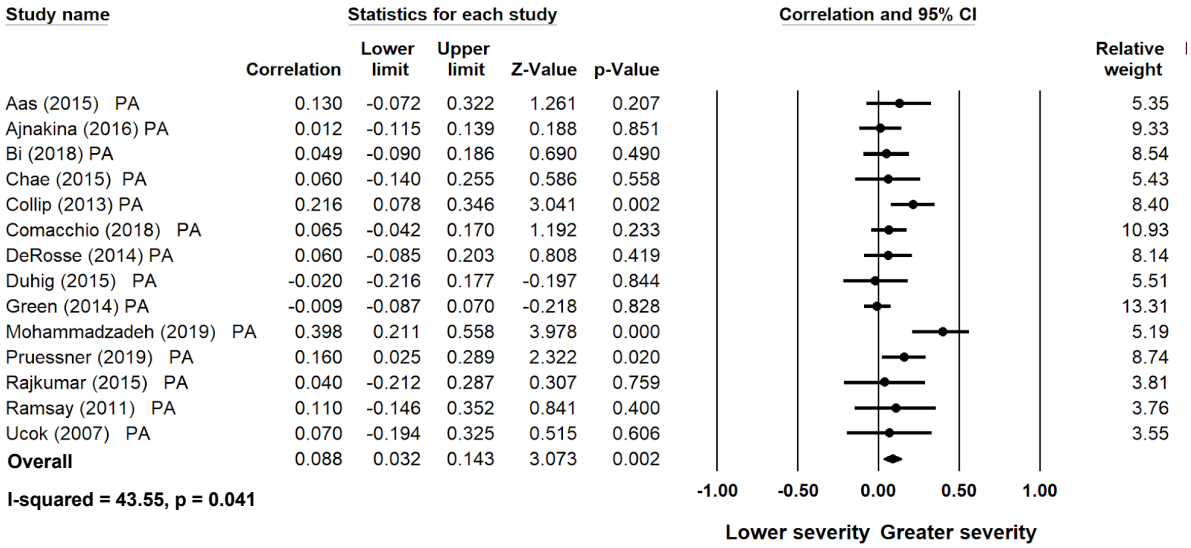


Figure S11. Forest plot showing relationship between emotional abuse (EA) and negative symptoms

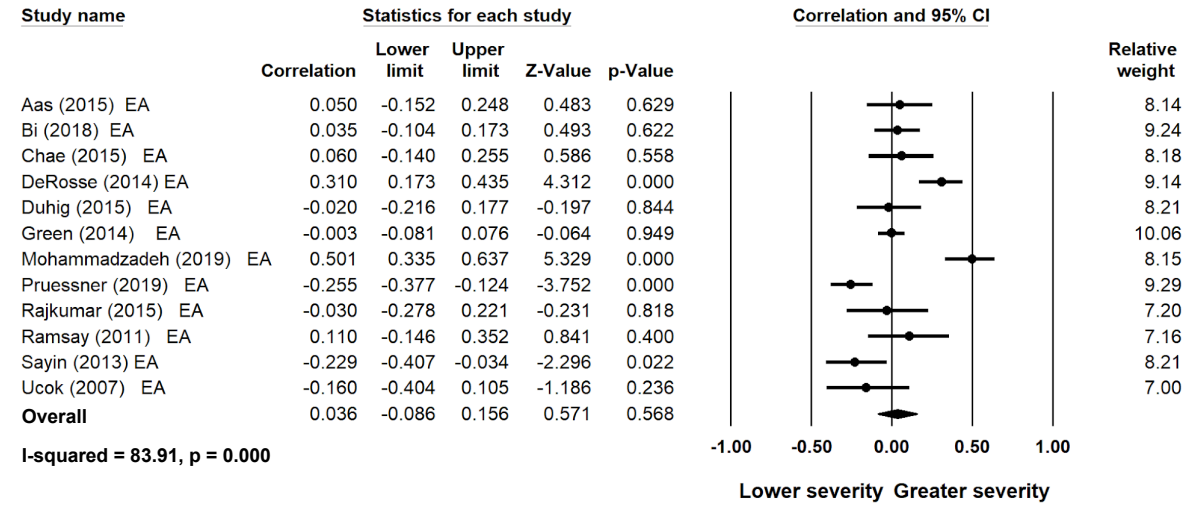


Figure S12. Forest plot showing relationship between physical neglect (PN) and negative symptoms

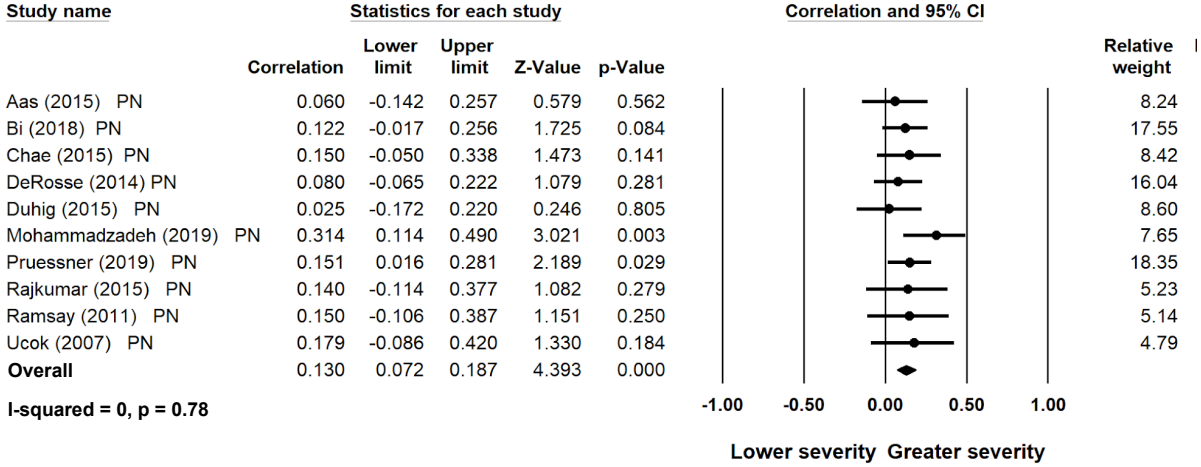


Figure S13. Forest plot showing relationship between emotional neglect (EN) and negative symptoms

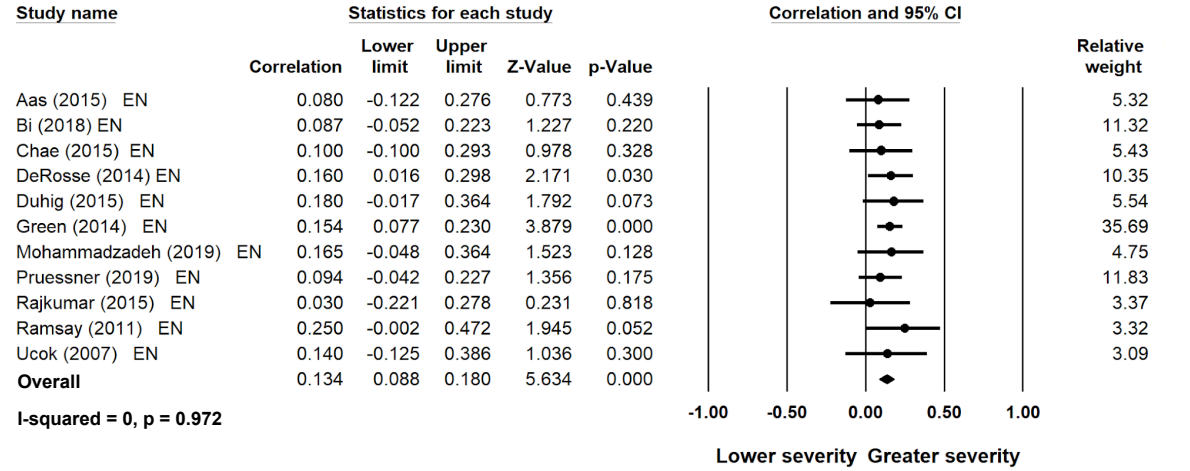
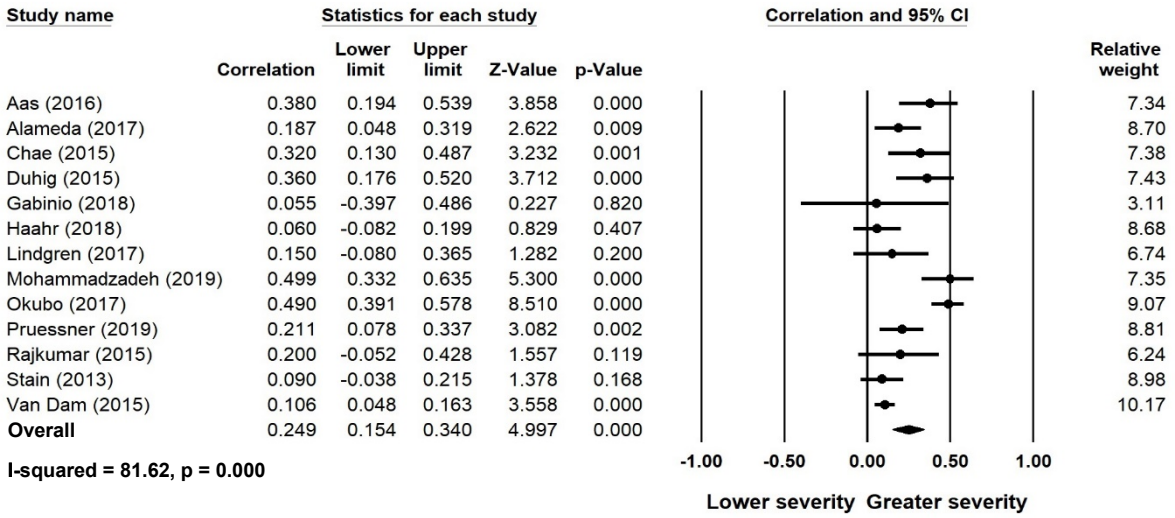


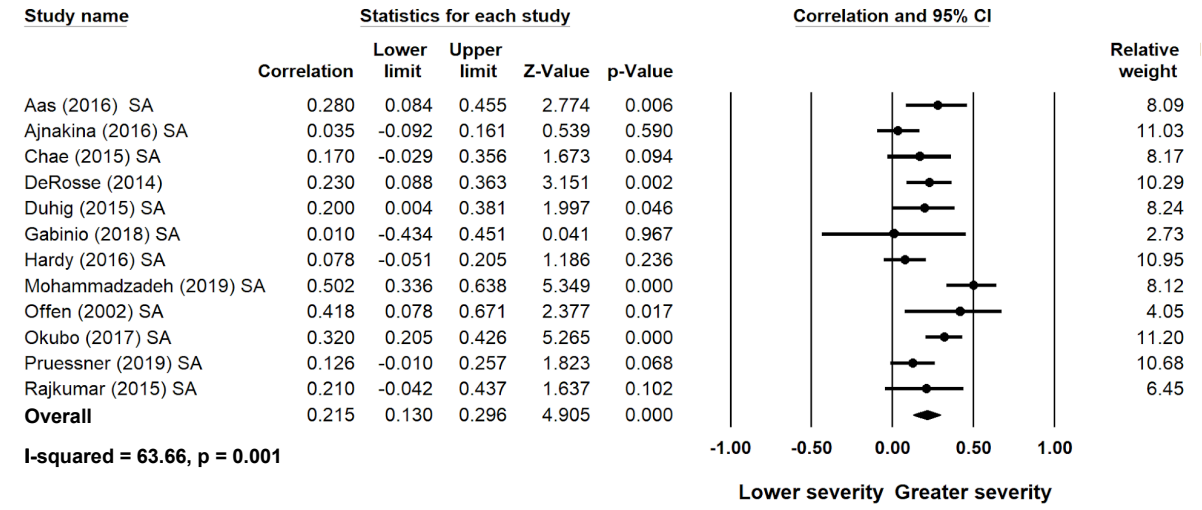
Figure S14. Forest plot showing relationship between general adversity and depressive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016)	0.380	0.194	0.539	3.858	0.000	7.34
Alameda (2017)	0.187	0.048	0.319	2.622	0.009	8.70
Chae (2015)	0.320	0.130	0.487	3.232	0.001	7.38
Duhig (2015)	0.360	0.176	0.520	3.712	0.000	7.43
Gabinio (2018)	0.055	-0.397	0.486	0.227	0.820	3.11
Haahr (2018)	0.060	-0.082	0.199	0.829	0.407	8.68
Lindgren (2017)	0.150	-0.080	0.365	1.282	0.200	6.74
Mohammadzadeh (2019)	0.499	0.332	0.635	5.300	0.000	7.35
Okubo (2017)	0.490	0.391	0.578	8.510	0.000	9.07
Pruessner (2019)	0.211	0.078	0.337	3.082	0.002	8.81
Rajkumar (2015)	0.200	-0.052	0.428	1.557	0.119	6.24
Stain (2013)	0.090	-0.038	0.215	1.378	0.168	8.98
Van Dam (2015)	0.106	0.048	0.163	3.558	0.000	10.17
Overall	0.249	0.154	0.340	4.997	0.000	

I-squared = 81.62, p = 0.000

Figure S15. Forest plot showing relationship between sexual abuse (SA) and depressive symptoms



Study name	Correlation	Lower limit	Upper limit	Z-Value	p-Value	Relative weight
Aas (2016) SA	0.280	0.084	0.455	2.774	0.006	8.09
Ajnakina (2016) SA	0.035	-0.092	0.161	0.539	0.590	11.03
Chae (2015) SA	0.170	-0.029	0.356	1.673	0.094	8.17
DeRosse (2014)	0.230	0.088	0.363	3.151	0.002	10.29
Duhig (2015) SA	0.200	0.004	0.381	1.997	0.046	8.24
Gabinio (2018) SA	0.010	-0.434	0.451	0.041	0.967	2.73
Hardy (2016) SA	0.078	-0.051	0.205	1.186	0.236	10.95
Mohammadzadeh (2019) SA	0.502	0.336	0.638	5.349	0.000	8.12
Offen (2002) SA	0.418	0.078	0.671	2.377	0.017	4.05
Okubo (2017) SA	0.320	0.205	0.426	5.265	0.000	11.20
Pruessner (2019) SA	0.126	-0.010	0.257	1.823	0.068	10.68
Rajkumar (2015) SA	0.210	-0.042	0.437	1.637	0.102	6.45
Overall	0.215	0.130	0.296	4.905	0.000	

I-squared = 63.66, p = 0.001

Figure S16. Forest plot showing relationship between physical abuse (PA) and depressive symptoms

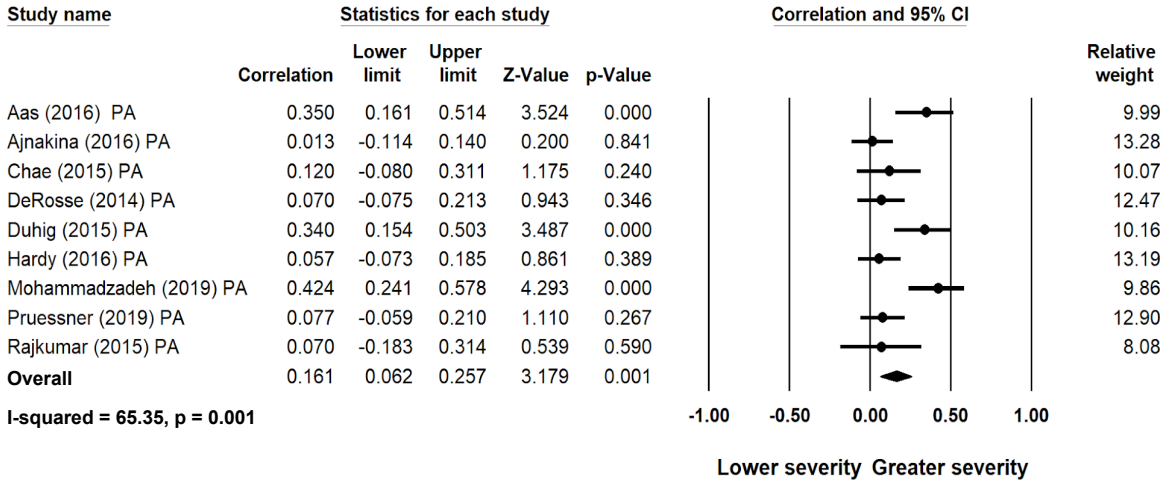


Figure S17. Forest plot showing relationship between emotional abuse (EA) and depressive symptoms

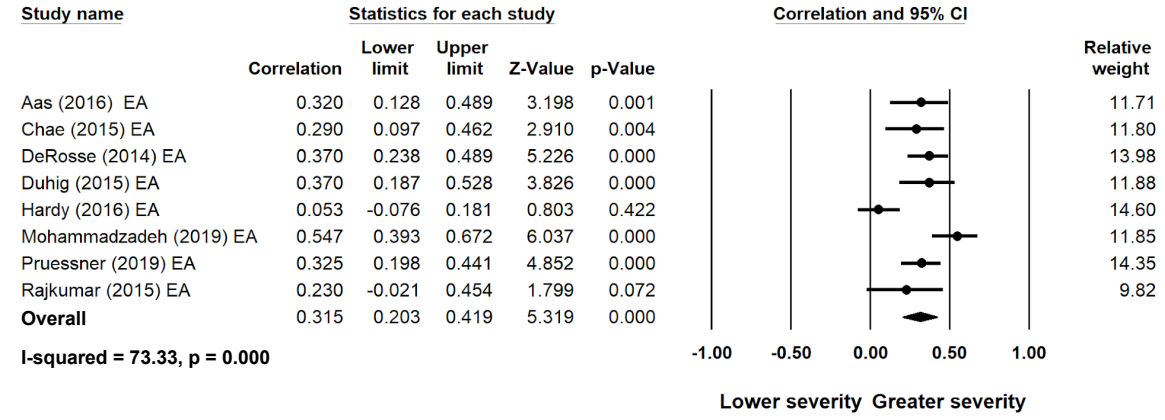


Figure S18. Forest plot showing relationship between physical neglect (PN) and depressive symptoms

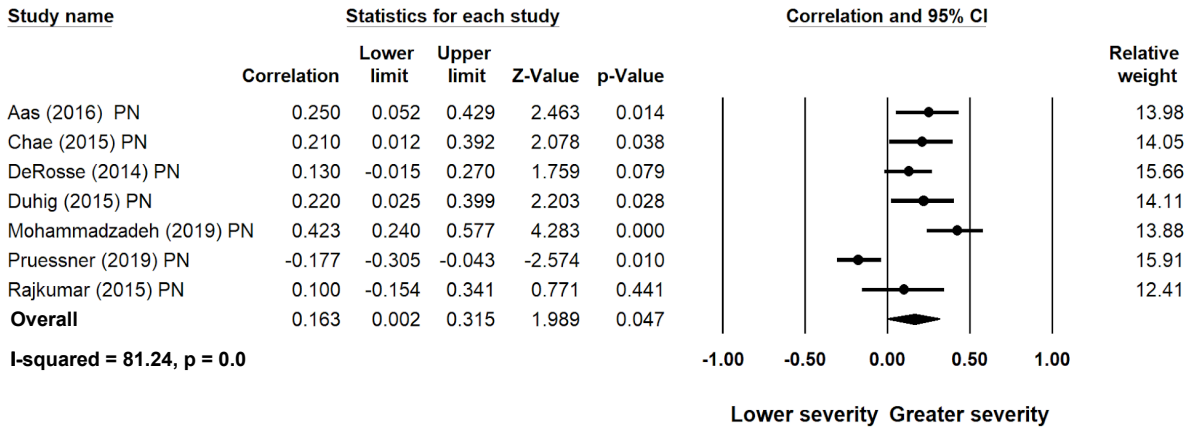


Figure S19. Forest plot showing relationship between emotional neglect (EN) and depressive symptoms

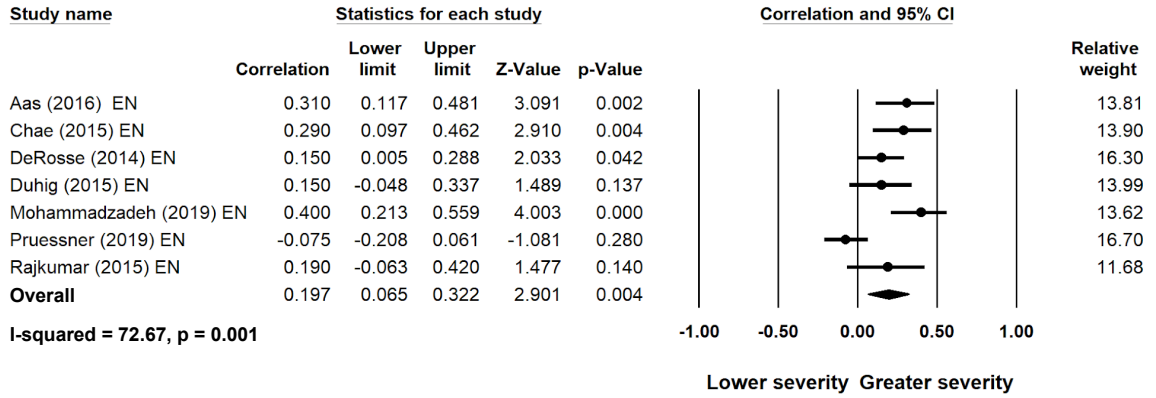


Figure S20. Forest plot showing relationship between general adversity and disorganised symptoms

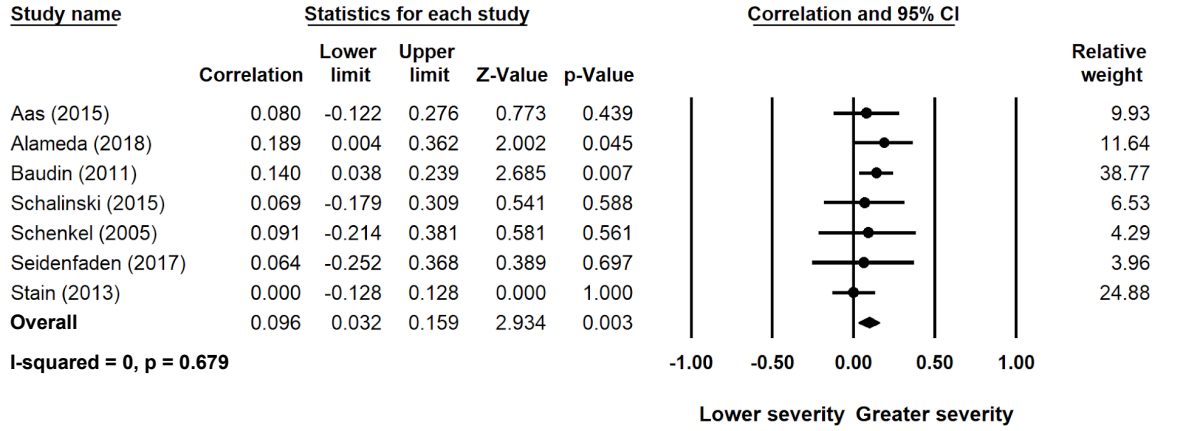


Figure S21. Forest plot showing relationship between sexual abuse (SA) and disorganised symptoms

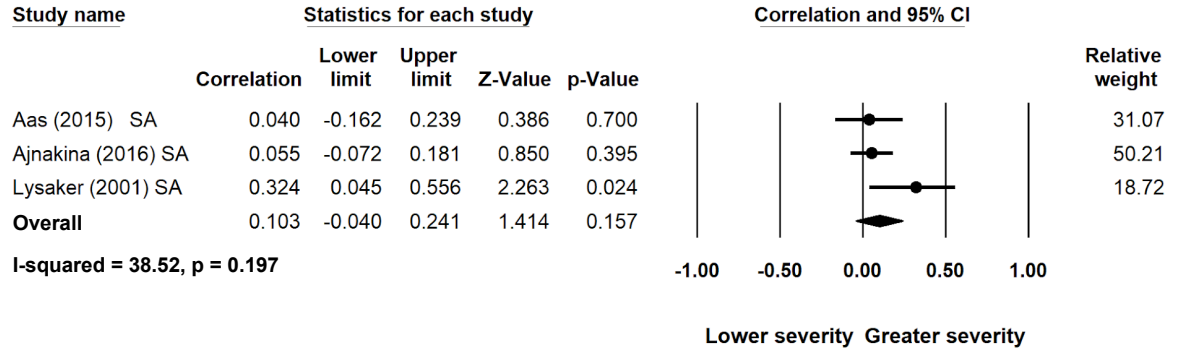


Figure S22. Forest plot showing relationship between general adversity and mania

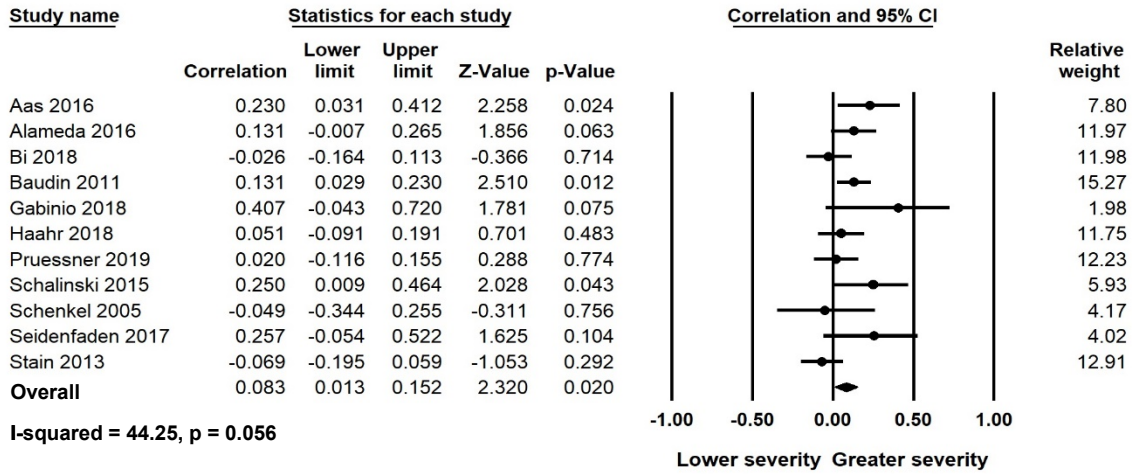


Figure S23. Forest plot showing relationship between sexual abuse (SA) and mania

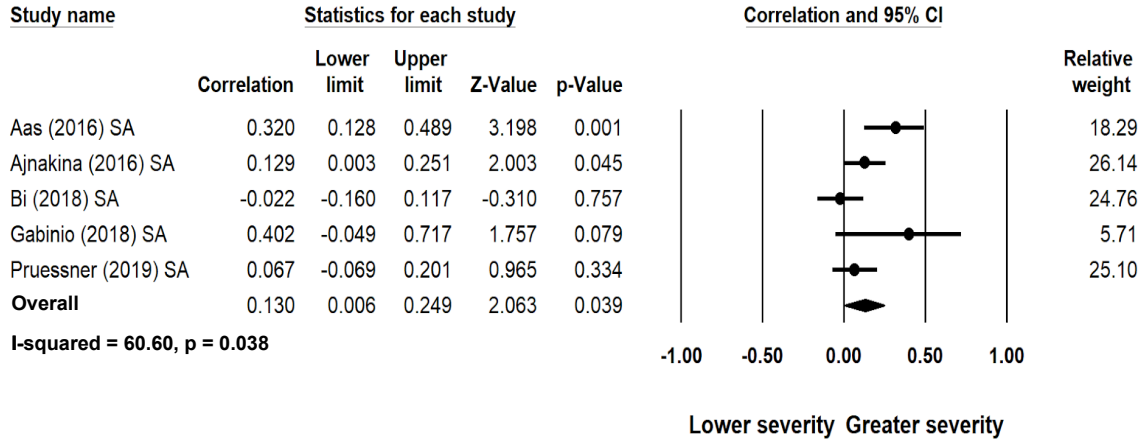


Figure S24. Forest plot showing relationship between physical abuse (PA) and mania

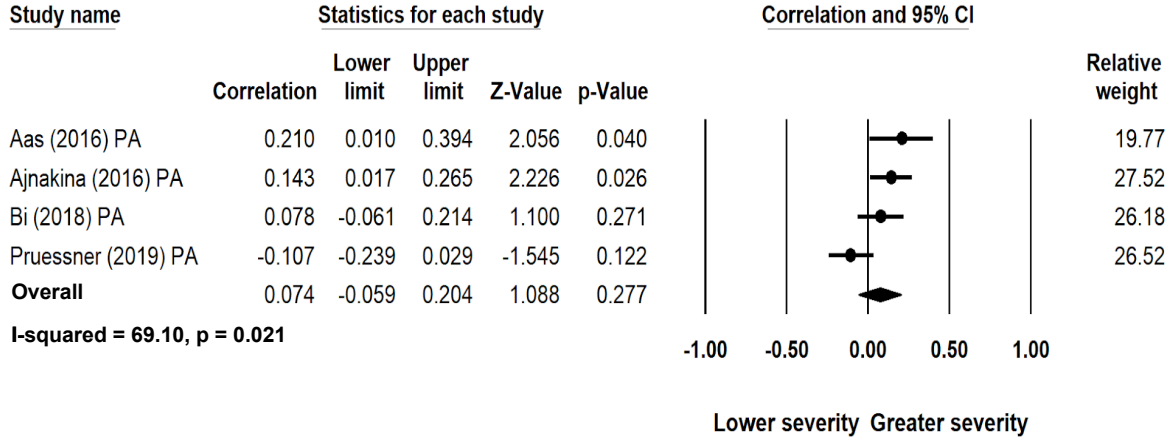


Figure S25. Forest plot showing relationship between emotional abuse (EA) and mania

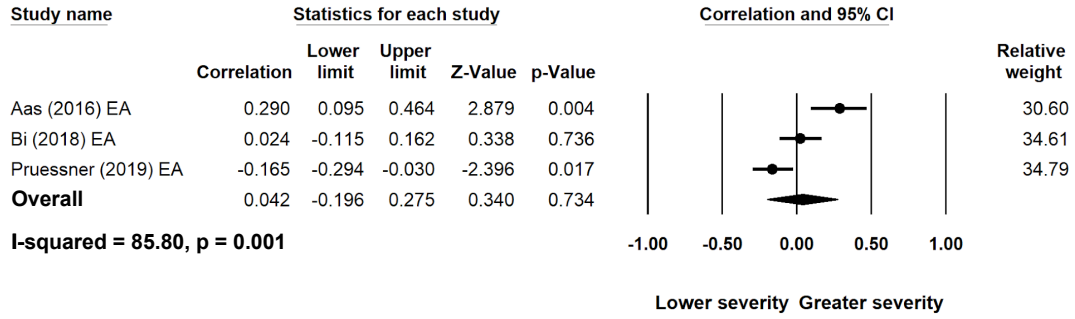


Figure S26. Forest plot showing relationship between physical neglect (PN) and mania

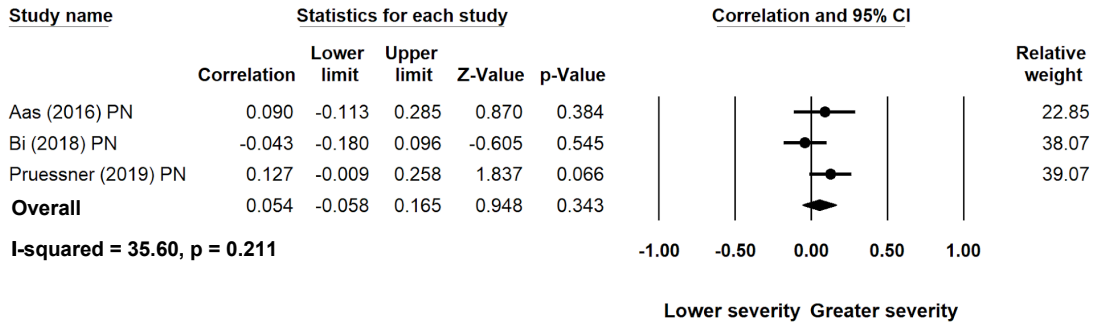


Figure S27. Forest plot showing relationship between emotional neglect (EN) and mania

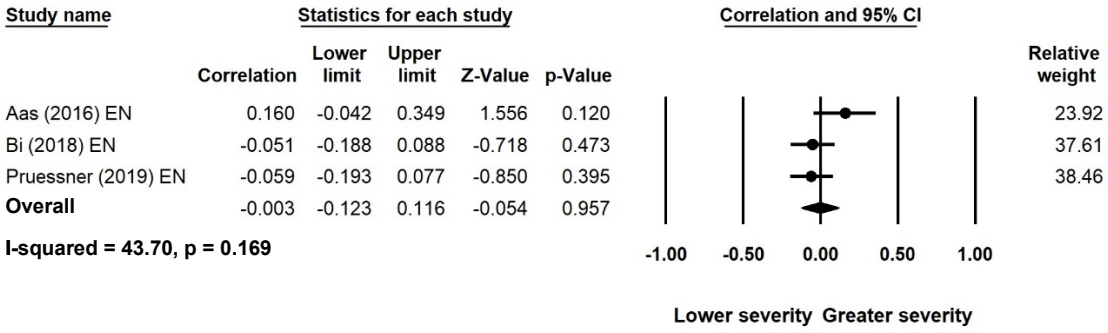


Table S7. Studies and their respective reasoning for the exclusion of quantitative analyses within symptom dimensions

First author of study	Dimensions excluded from	Reason for exclusion
Alameda (2018)	Positive, negative, depressive, mania (composite)	Sample overlapping with Alameda et al., 2016 and Alameda et al., 2017
Alameda (2016)	Depressive (composite)	Sample overlapping with Alameda et al., 2017 and Alameda et al., 2018
Van Dam (2014)	Positive (composite)	Sample overlapping with Vam Dam et al., 2015
Lysaker (2001)	Positive, negative and disorganised (composite)	Excluded from analyses for overall childhood adversity as their composite category measured abuse only
Lysaker (2005)	Positive	Authors were contacted for full data, but no response was given. Of the data extracted, it could not be transformed, for compatibility, into correlations
McCabe (2012)	Negative (subscale only)	Authors were contacted for full data, but no response was given. Of the data extracted, it could not be transformed, for compatibility, into correlations
Ruby (2017)	Positive and negative	Authors were contacted for full data, but no response was given. Of the data extracted, it could not be transformed, for compatibility, into correlations
Sahin (2013)	Positive and negative	Authors were contacted for full data, but no response was given. Of the data extracted, it could not be transformed, for compatibility, into correlations
Sayin (2013)	Positive and depressive	Authors were contacted for full data but no response was given. Of the data extracted, it could not be transformed, for compatibility, into correlations
Schalinski (2015)	Subscales only for each of the following dimensions; positive, negative, disorganised and manic. Composite for positive	Authors were contacted for full data, but no response was given. Of the data extracted, it could not be transformed, for compatibility, into

	and negative.	correlations. Data on positive and negative with composite adversity data was available but overlapping with Schalinki et al., 2019
Schalinski (2015b)	Positive and negative	Lack of compatible data as it measures exposure to trauma by year

1. Quality assessment procedures

The quality assessment was carried out using the Newcastle–Ottawa Scale (see Quality Assessment Tool[51] for cohort studies by two independent reviewers (YS and AC)
Those papers over which there was disagreement were discussed at a project group meeting. The Newcastle–Ottawa is a ten-point scale allocating points based on: the selection of cohorts (e.g. representativeness of the sample; 0–4 points), the comparability of cohorts (e.g. whether the study controls for confounding factors; 0–2 points), the identification of the exposure (e.g. objectivity of exposure measurement) and the outcomes of study participants (e.g. independence of outcome measurement, adequacy of follow-up; 0–3 points). Scores were considered as follows: "poor" quality for 3 or less; "fair" between 4 and 7 and "good" for scores of 8 or above. The agreed quality grades of each study are presented in Table S1 and the specific criteria used for our systematic review are specified in the Newcastle Ottawa Scale displayed below.

Table S8. Quality assessment results

Author (Year)	Selection				Comparability	Outcome			Total
	1) Representativeness of the exposed cohort	2) Selection of the non exposed cohort	3) Ascertainment of exposure	4) Demonstration that outcome of interest was not present at start of study	1) Comparability of cohorts on the basis of the design or analysis	1) Assessment of outcome	2) Was follow-up long enough for outcomes to occur	3) Adequacy of follow up of cohorts	
Aas (2015)		*	*	*		*			4
Ajnakina (2016)	*	*	*	*	*	*			6
Alameda (2016)	*	*	*	*	*	*		*	7
Alameda (2017)	*	*	*	*		*		*	6
Alameda (2018)	*	*	*	*	*	*			5

Baudin (2011)	*	*	*	*	**	*			7
Bendall (2011)	*	*	*	*		*			5
Bendall (2013)		*	*	*		*			4
Bi (2018)	*	*	*	*		*			5
Chae (2015)		*	*	*	*	*			5
Colip(2013)	*	*	*	*	*	*			6
Comacchio (2018)	*	*	*	*		*			5
Derosse (2014)	*	*	*	*		*			5
Duhig (2015)	*	*	*	*		*			5
Gabinio (2018)		*	*	*		*			4
Green (2014)	*	*	*	*		*			5
Haahr (2018)	*	*	*	*		*			5
Hardy (2016)	*	*	*	*	*	*			6
Heins (2011)	*	*	*	*	*	*			6
Kilcommons (2005)		*	*	*		*			4
Kumari (2013)		*	*	*		*			4
Lindgren (2017)		*	*	*		*			4
Lysaker (2001)		*	*	*		*			4
Lysaker (2005)		*	*	*		*			4
McCabe (2012)	*	*	*	*	*	*			6
Mohammadzadeh (2019)		*	*	*		*			4
Offen (2002)		*	*	*		*			4
Okubo (2017)	*	*	*	*		*			5
Pruessner (2019)	*	*	*	*	*	*			6
Rajkumar (2015)		*	*	*		*			4
Ramsay (2011)		*	*	*		*			4
Ruby (2017)		*	*	*	*	*			5

Sar (2010)		*	*	*		*			4
Sahin (2013)		*	*	*		*			4
Sayin (2013)	*	*	*	*		*			5
Schalinski (2015)		*	*	*	*	*		*	6
Schalinski (2015B)		*	*	*		*			4
Schalinski (2019)	*	*	*	*	*	*			6
Schenkel (2005)		*	*	*		*			4
Seidenfaden (2017)		*	*	*		*			4
Simpson (2019)		*	*	*	*	*			5
Stain (2013)	*	*	*	*		*			5
Sun (2018)		*	*	*	*	*			5
Ucok (2007)		*	*	*		*			4
Van Dam (2014)	*	*	*	*	*	*			6
Van Dam (2015)	*	*	*	*	*	*			6
Weijers (2018)		*	*	*	*	*			5

Newcastle-Ottawa Quality Assessment Scale for cohort studies

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.

Selection

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability.

1) Representativeness of the exposed cohort
a) truly representative of the average individuals with psychosis or attenuated psychotic symptoms in the community (100 participants and above) *
b) somewhat representative of the average individuals with psychosis or attenuated psychotic symptoms in the community (100 participants and above) *
c) selected group of users eg nurses, volunteers
d) no description of the derivation of the cohort

2) Selection of the non exposed cohort
a) drawn from the same community as the exposed cohort *
b) drawn from a different source
c) no description of the derivation of the non-exposed cohort

3) Ascertainment of exposure
a) secure record*
b) structured interview*
c) written self-report* (star included here given the common use of self-reports in the field of adversity in psychosis)
d) no description

4) Demonstration that outcome of interest was not present at start of study
a) yes *
b) no

Comparability (count 2 stars)
1) Comparability of cohorts on the basis of the design or analysis
a) study controls for confounders *
b) study controls for any additional factor (we considered a start here if studies used a robust statistical method (regression showing adjusted and unadjusted results for example)

Outcome
1) Assessment of outcome
a) independent blind assessment *
b) record linkage or formal interview of symptoms (such as; PANSS, BPRS, SANS, SAPS, etc)*
c) self-report
d) no description

2) Was follow-up long enough for outcomes to occur
a) yes *
b) no

3) Adequacy of follow up of cohorts
a) complete follow up - all subjects accounted for *
b) subjects lost to follow up unlikely to introduce bias - small number lost - > 20 % *
c) follow up rate < 80%) and no description of those lost
d) no statement/ no follow up (cross sectional studies)

2. Results of heterogeneity assessment

In line with GRADE criteria, we explored the potential bias related to heterogeneity found in our analyses. We evaluated each of the forest plots when serious heterogeneity was found (I2 statistic > 50% and Q test p value was <.05 according to others[52]). If the forest plot showed that some studies found more moderate effect sizes in one direction and other studies found larger effect sizes in the same direction, this heterogeneity might have relatively little importance, because both groups go in the same direction. Inversely, if the plots showed studies with large and small effects, respectively in opposite directions, this could indicate an important bias led by heterogeneity.
As can be seen in Table S7, among the 26 analyses conducted, 12 showed potential serious heterogeneity analyses on Sexual, physical and emotional abuse for mania; all the analyses for depression, emotional abuse and emotional neglect for positive and general adversity and emotional abuse for Negative.

Mania (sexual and physical and emotional abuse analyses)
Forest plot exploration for analyses for sexual and physical abuse revealed that one study with small effect size was in opposite direction as all the others, and after removal, heterogeneity disappeared (Bi et al.,[12] for sexual abuse, and Pruessner et al.[32], for Physical abuse). For emotional abuse, only three studies were included in analyses which did not allow drawing conclusions about potential explanations of heterogeneity (one study led to medium effect sizes in the negative direction, one with medium effect size in the positive direction).

Depression (general adversity and all abuse and neglect categories)
For general adversity, sexual abuse, physical abuse and emotional abuse, exploration of the forest plots revealed that heterogeneity was due to studies with small and large effect sizes in the same direction, so this heterogeneity was not considered as potentially problematic. However, for physical neglect categories one study appeared to be the only one showing small effect sizes in the opposite direction as all the others (Pruessner et al., 2019[32]) and after removing it, the heterogeneity disappeared (for physical neglect I 2: 30.819 and P-Value: 0.204 for emotional neglect I 2: 20.245; P-value: 0.281) and results remained significant (for physical neglect, 6 studies; r = 0.222, 95% CI = [0.129, 0.312], P = .000; (for emotional neglect 6 studies; r =0.242, 95% CI = [0.156, 0.325], P = .000); We concluded that that heterogeneity was due to the presence of that particular study for the neglect categories and that the heterogeneity for the remaining categories was not problematic as all studies were pointing to the same direction.

Positive (emotional abuse and emotional neglect)

For emotional abuse analyses heterogeneity was led by one study (Green et al., 2014[19]), which was the only one showing small effect sizes in the opposite direction than all the other 10 studies. Its removal decreased the heterogeneity to a very low level (I2: 50.953; P-value: 0.031) where all the studies were pointing at the dame direction.

For emotional neglect, there were a few papers showing medium effect sizes in one direction and in the opposite direction, thus heterogeneity could not be attributed to any particular study.

Negative

Emotional abuse was the only analysis showing potential serious heterogeneity. The dispersion of this dimension was significant with different studies going in different directions. For example De Rosse et al.,[16] and Mohammaed et al., 2019[29] showed great positive effect sizes (corr coeff: 0.310; and 0.501 respectively, against studies such as Ucok showing effects in opposite direction Corr coeff: -0.60 or Sayin et al., -0.229. No specific outlier could be identified as causing this serious heterogeneity.

Disorganization

Analyses in this dimension did not show serious heterogeneity.

3. Results of meta-regression analyses

We conducted meta-regressions when a minimum of 6 studies were conducted by type of adversity. We explored the following factors in our meta-regressions: (I) proportion of female participants; (II) mean age; (III) (whether or not they used CTQ and PANSS as instruments versus using other instruments, which allow to estimate potential bias related to studies that used other instruments – such as measuring adversity with CECA or symptoms with BPRS); (IV) assessment scores based on the NOS; (V) years of education. Among the 12 studies that showed serious heterogeneity (Table 1) 9 included at least 6 studies and thus meta-regressions were conducted, results are detailed below (see **Table S2)**.

Proportion of females

This factor was significant for most of the analyses conducted for depression (general adversity as detailed in table S3, but not in the other analyses for the remaining dimensions.

Mean age

This factor was not significant in any of the analyses.

Use of CTQ/PANSS or CTQ or PANSS

This factor was significant for analyses on emotional abuse in the depressive domain. It did not appear to influence results on the other dimensions

Newcastle Ottawa Scale Scores (NOS)

This covariate appeared significant in analyses of sexual and physical abuse and neglect subtypes for the depressive domain.

Years of education

This covariate was underreported in studies included in this review (only appeared in 11 studies, see Table S5) only allowing conducting meta-regression for the general adversity analyses in the negative dimension (as all the other analyses had less than 6 studies with data available). It appeared that better education tended to be associated with lower scores of negative symptoms (coeff: -0.08; p-value 0.060).

Table S9. Meta-regressions between general adversity and symptom dimensions and moderating factors

Outcome	Moderators	No. of Studies	R Coefficient	SE	95% CI	Z-Value	P value
Manic dimension (General adversity)	Female %	11	-0.24	0.23	(-0.69; 0.20)	-1,06	0.288
	Mean age	11	0.00	0.00	(-0.01; 0.01)	0.50	0.613
	Using CTQ vs not using CTQ	11	0.00	0.07	(-0.15; 0.14)	-0.11	0.908
	Using PANSS vs not using PANSS	11	-0.04	0.07	(-0.19; 0.10)	-0.63	0.531
	NOS	11	0.00	0.03	(-0.06; 0.07)	0.18	0.856
Disorganised dimension (General adversity)	Female %	7	-0.36	0.34	(-1.04; 0.31	-1.05	0.294
	Mean age	7	0.00	0.00	(-0.01; 0.02)	0.48	0.629
	NOS	7	0.02	0.02	(-0.02; 0.08)	0.95	0.343
Depressive dimension (General adversity)	Female %	13	1.02	0.48	0.06; 1.98	2.09	**0.036**
	Mean age	13	0.01	0.00	0.00; 0.02	1.91	0.056
	Using CTQ vs not using CTQ	13	0.10	0.11	(-0.11; 0.32)	0.94	0.354
	Using PANSS vs not using PANSS	13	-0.11	0.12	(-0.35; 0.12)	-0.90	0.366
	NOS	13	-0.07	0.06	-0.19; 0.05	-1.12	0.260
Depressive dimension (Sexual abuse)	Female %	12	1.03	0.36	(0.31; 1.75)	2.8	**0.005**
	Mean age	12	0.00	0.00	(-0.00; 0.01)	0.57	0.571
	Using CTQ vs not using CTQ	12	0.08	0.09	(-0.10; 0.26)	0.86	0.389
	NOS	12	-0.14	0.03	(-0.21; -0.07)	-3.91	**0.000**
Depressive dimension (Physical abuse)	Female %	9	0.99	0.42	(0.16; 1.81)	2.35	**0.019**
	Mean age	9	-0.00	0.00	(-0.02; 0.00)	-0.86	0.388
	Using CTQ vs not using CTQ	9	0.17	0.10	(-0.03; 0.38)	1.61	0.108
	NOS	9	-0.13	0.04	(-0.22; -0.04	-2.19	**0.004**
Depressive dimension (Emotional abuse)	Female %	8	0.83	0.51	(-0.17; 1.83)	1.62	0.105
	Mean age	8	-0.00	0.00	(-0.02; 0.01)	-0.47	0.637

	NOS	8	-0.10	0.06	(-0.23; 0.02)	-1.56	0.118
Depressive dimension (Physical neglect)	Female %	7	1.35	0.63	(0.10; 2.60)	2.13	**0.033**
	Mean age	7	0.00	0.01	(-0.01; 0.02)	0.61	0.54
	Using CTQ/PANSS vs using others	7	0.10	0.25	(-0.38; 0.59)	0.42	0.674
	NOS	7	-0.21	0.06	(-0.34; -0.08)	-3.36	**0.001**
Depressive dimension (Emotional neglect)	Female %	7	1.31	0.44	(0.44; 2.19)	2.96	**0.003**
	Mean age	7	0.00	0.00	(-0.00; 0.02)	1.00	0.316
	Using CTQ/PANSS vs using others	7	0.14	0.20	(-0.25; 0.53)	0.69	0.488
	NOS	7	-0.19	0.04	(-0.29; -0.10)	-4.21	**0.000**
Positive dimension (General adversity)	Female %	27	-0.11	0.15	(-0.42; 0.18)	-0.76	0.449
	Mean age	27	0.00	0.00	(-0.00; 0.00)	0.83	0.406
	Using CTQ/PANSS vs using others	27	-0.00	0.04	(-0.08; 0.08)	-0.05	0.936
	NOS	27	0.00	0.02	(-0.04; 0.04)	-0.10	0.920
Positive dimension (Sexual abuse)	Female %	17	-0.24	0.18	(-0.60; 0.11)	-1.31	0.19
	Mean age	17	0.00	0.00	(-0.00; 0.01)	1.68	0.092
	Using CTQ/PANSS vs using others	17	-0.07	0.06	(-0.19; 0.04)	-1.2	0.23
	NOS	17	0.00	0.03	(-0.07; 0.06)	-0.07	0.945
Positive dimension (Physical abuse)	Female %	13	-0.10	0.23	(-0.55; 0.34)	-0.47	0.637
	Mean age	13	0.00	0.005	(-0.00; 0.01)	0.17	0.867
	Using CTQ/PANSS vs using others	13	-0.00	0.063	(-0.13; 0.11)	-0.13	0.897
	NOS	13	-0.04	0.04	(-0.13; 0.04)	0.97	0.33
Positive dimension (Emotional abuse)	Female %	11	-0.09	0.36	(-0.80; 0.61)	-0.25	0.8
	Mean age	11	-0.00	0.00	(-0.01; 0.01)	-0.29	0.768

	Using CTQ/PANSS vs using others	11	-0.01	0.10	(-0.21; 0.18)	-0.18	0.856
	NOS	11	-0.09	0.07	(-0.23; 0.04)	-1.35	0.178
Positive dimension (Physical neglect)	Female %	10	0.06	0.29	(-0.52; 0.64)	0.21	0.835
	Mean age	10	0.00	0.00	(-0.00; 0.01)	1.01	0.311
	Using CTQ/PANSS vs using others	10	0.00	0.09	(-0.17; 0.18)	0.05	0.963
	NOS	10	-0.09	0.05	(-0.19; 0.00)	-1.89	0.058
Positive dimension (Emotional neglect)	Female %	12	-0.08	0.32	(-0.72; 0.56)	-0.25	0.799
	Mean age	12	-0.00	0.00	(-0.01; 0.00)	-1.22	0.222
	Using CTQ/PANSS vs using others	12	0.04	0.09	(-0.13; 0.22)	0.51	0.609
	NOS	12	-0.08	0.06	(-0.21; 0.04)	-1.29	0.199
Negative dimension (General adversity)	Female %	25	0.20	0.14	(-0.07; 0.49)	1.42	0.155
	Mean age	25	0.00	0.00	(-0.00; 0.01)	0.78	0.438
	Using CTQ/PANSS vs using others	25	0.02	0.04	(-0.06; 0.10)	0.52	0.605
	NOS	25	-0.02	0.02	(-0.06; 0.01)	-1.30	0.195
	Education, years	6	-0.08	0.04	(-0.17-0.00)	-1.88	0.060
Negative dimension (Sexual abuse)	Female %	16	0.00	0.15	(-0.30; 0.31)	0.03	0.973
	Mean age	16	0.00	0.00	(-0.00; 0.01)	1.89	0.059
	Using CTQ/PANSS vs using others	16	0.04	0.04	(-0.04; 0.13)	0.98	0.325
	NOS	16	-0.01	0.03	(-0.04; 0.07)	-0.49	0.624
Negative dimension (Physical abuse)	Female %	14	0.06	0.22	(-0.37; 0.49)	0.27	0.787
	Mean age	14	-0.00	0.00	(-0.01; 0.00)	-0.59	0.554
	Using CTQ/PANSS vs using others	14	0.03	0.06	(-0.09; 0.15)	0.5	0.615
	NOS	14	0.02	0.04	(-0.06; 0.11)	0.51	0.61
Negative dimension (Emotional abuse)	Female %	12	0.35	0.48	(-0.59; 1.29)	0.73	0.467
	Mean age	12	0.00	0.00	(-0.01; 0.01)	0.6	0.546
	Using CTQ/PANSS vs using others	12	0.14	0.12	(-0.10; 0.39)	1.13	0.261
	NOS	12	-0.04	0.10	(-0.25; 0.16)	-0.42	0.671
Negative dimension	Female %	10	0.11	0.18	(-0.24; 0.46)	0.6	0.545
	Mean age	10	0.00	0.00	(-0.00; 0.00)	0.21	0.832

(Physical neglect)	Using CTQ/PANSS vs using others	10	0.00	0.06	(-0.11; 0.12)	0.05	0.96
	NOS	10	0.01	0.04	(-0.07; 0.10)	0.3	0.763
Negative dimension (Emotional neglect)	Female %	11	-0.15	0.16	(-0.47; 0.17)	-0.9	0.369
	Mean age	11	0.00	0.00	(-0.00; 0.00)	0.16	0.873
	Using CTQ/PANSS vs using others	11	-0.04	0.05	(-0.13; 0.05)	-0.83	0.407
	NOS	11	-0.01	0.04	(-0.10; 0.08)	-0.21	0.837

In the disorganized dimension meta regressions accounting for instruments used could not be conducted because of lack of sufficient studies.

4. Sensitivity analysis

We conducted sensitivity analyses, when at least 8 studies were present per analysis and there were at least 3 studies per group. We stratified studies based on whether they used CTQ/PANSS or not, considering that variation in instruments may have led to important heterogeneity. For example, if there were 8 studies examined but only 2 examined CTQ against 6 for PANSS comparison were not conducted as there could be a strong bias led by sample size

Mania

Given the low number of studies in analyses by subtype of adversities (see **Table S2**) only analyses by general adversity could be part of sensitivity analyses. As only two of the 12 studies in this section used CTQ and PANSS for this analyses (Baudin et al., 2011 and Bi et al., 2018), we conducted comparisons between groups based on whether studies used PANSS or not, which led to group of 5 and 7 respectively (see table S4 below) allowing comparisons. We did the same based on the use of CTQ. As can be seen in the table below, these comparisons did not reveal differences between groups with similar levels of effect irrespectively of the use or not of CTQ and PANSS.

Disorganization

Given the low number of studies for subtypes of adversity analyses (see **Table S2**) only analyses by general adversity could be part of sensitivity analyses. Only two studies used CTQ and PANSS (Aas et al., 2015[4] and Baudin et al., 2011[9]), and although 4 studies did use PANSS (Alameda et al., 2018[8]; Baudin et al., 2011[9]; Schalinki et al., 2015[39], Seidenfaden et al., 2017[43] and Stain et al., 2013[45]), only two did not use PANSS (Aas et al., 2015[4] and Schenkel et al., 2005[42]) thus not allowing to conducted informative analyses. Only two studies used CTQ (Aas et al., 2015[4] and Baudin et al., 2011[9]) so no comparison according to this variable was possible.

Depression

In this section, there was considerable heterogeneity in the use of scales for depression (PANNS, BPRS, MADRS, BDI, CDSS, PHQ-9, BSI-II,), thus it was not possible to run sensitivity analyses based on our initial criteria CTQ/PANSS (only one study used CTQ and PANSS (Aas et al., 2015[4])). Thus, we categorized studies according to whether or not they used PANSS and CTQ separately, and this allowed us to conduct sensitivity analyses for the general adversity and sexual abuse analysis, but not for the other subtypes.

Positive and Negative

Analyses by whether studies used CTQ and PANSS or not could be conducted for the general adversity analysis and the 5 subtypes in each dimension. As can be seen in Table x none of the sensitivity analyses found differences between studies that used CTQ and PANSS and those that did not.

Additional sensitivity analyses

6 of the studies that used a composite score of general adversity also included (in addition to our chosen experiences of interest) experiences that could signify a proxy of such type of traumas or equivalent experiences but that did not correspond exactly with the clear-cut definitions of our adversities of interest, or occasionally that were outside our scope. These are: "witnessing trauma" (killing or serious injury) (Kilcommons et al., et al.,[23]), having a criminal parent and foster care placement (Kumari et al.,[24]); various interpersonal life events within the context of family (Lingren et al., [25]), emotional and depressive instability within the parents (McCabe et al.,[28]), potential substance use and fighting (Seidenfaden et al.,[43]) and a composite measure also include some non-interpersonal traumas (Stain et al.,[45]). We still decided to include these studies given that in their measure of general adversity there was a clear predominance of our adversities of interest. To further rule out the possibility that this artifact may have influenced our results, we have run some additional sensitivity analyses for the general measure in the 5 dimensions, examining whether our results changed after excluding these 6 papers.

Results show that: for the positive dimension, the general adversity passed from r= 0.16 (0.12 - 0.20), $p< .001$ to r= 0.17 (0.13 - 0.21), $p< .001$; in the negative from r= 0.10 (0.06 - 0.14), $p< .001$ to r= 0.11 (0.06 - 0.16), $p <.001$; in the depressive from r= 0.24 (0.16 - 0.32), $p<.001$ to r= 0.26 (0.17 - 0.35), $p <.001$; in the manic from r= 0.07 (0.01 - 0.14), $p= .020$ to r= 0.08 (0.026 - 0.14), $p= .005$ and in the disorganized from r= 0.09 (0.03 - 0.15), $p=.003$ to r= 0.13 (0.05 - 0.20), $p< .001$.

We can thus conclude that removing those studies did not change the direction and magnitude of the associations found, thus not affecting the interpretation of our findings.

Table S10. Sensitivity analyses examining impact of measures used on relationships observed

	Studies	Sample size	Subtypes of adversities, only the general samples	Values (corr coeff)	95% CI	P	Between group Heterogeneity (Q value; df; P-value
General Adversity MANIA	11		11	0.08	(0.01; 0.15)	**0.020**	
No PANSS	5		5	0.11	(0.00; 0.21)	**0.047**	0.36; 1; 0.545
Yes PANSS	6		6	0.06	(-0.02; 0.16)	0.173	
No CTQ	7		7	0.09	(-0.01; 0.20)	0.095	0.03; 1; 0.858
Yes CTQ	4		4	0.07	(-0.02; 0.17)	0.119	
General Adversity DEPRESSION	13		13	0.24	(0.15; 0.34)	**0.000**	
No CTQ	6		6	0.19	(0.01; 0.35)	**0.033**	0.84; 1; 0.359
Yes CTQ	7		7	0.29	(0.16; 0.40)	**0.000**	
No PANSS	10		10	0.27	(0.15; 0.38)	**0.000**	1.06; 1; 0.302
Yes PANSS	3		3	0.16	(0.01; 0.33)	0.067	
Sexual abuse DEPRESSION	15		14	0.24	(0.16; 0.32)	**0.000**	
No CTQ	5		5	0.17	(0.01; 0.32)	**0.035**	0.61; 1; 0.434
Yes CTQ	7		7	0.24	(0.14; 0.33)	**0.000**	

General adversity POSITIVE	27		27	0.16	(0.12; 0.20)	**0.000**	
No CTQ/PANSS	17		17	0.16	(0.10; 0.21)	**0.000**	0.00; 1 0.970
Yes CTQ/PANSS	10		10	0.16	(0.09; 0.22)	**0.000**	
Sexual abuse POSITIVE	14		14	0.14	(0.08; 0.19)	0.000	
No CTQ/PANSS	11		11	0.15	(0.10; 0.21)	**0.000**	0.85; 1; 0.356
Yes CTQ/PANSS	6		6	0.09	(-0.02; 0.21)	**0.122**	
Physical abuse POSITIVE	13		13	0.15	(0.09; 0.21)	**0.000**	
No CTQ/PANSS	7		7	0.14	(0.09; 0.19)	**0.000**	0.02; 1; 0.882
Yes CTQ/PANSS	6		6	0.15	(0.02; 0.28)	**0.024**	
Emotional abuse POSITIVE	11		11	0.16	(0.07; 0.24)	**0.000**	
No CTQ/PANSS	5		5	0.18	(0.01; 0.33)	**0.032**	0.07; 1; 0.786
Yes CTQ/PANSS	6		6	0.15	(0.05; 0.25)	**0.004**	
Physical neglect POSITIVE	9		9	0.06	(-0.01; 0.13)	0.111	
No CTQ/PANSS	4		4	0.07	(-0.10; 0.24)	**0.440**	0.01; 1; 0.909
Yes CTQ/PANSS	6		6	0.05	(-0.02; 0.14)	**0.162**	

Emotional neglect POSITIVE	12		12	0.09	(0.01; 0.18)	**0.027**	
No CTQ/PANSS	6		6	0.07	(-0.03; 0.19)	0.257	0.29; 1; 0.588
Yes CTQ/PANSS	6		6	0.12	(-0.00; 0.25)	0.065	
General adversity NEGATIVE	25		25	0.09	(0.05; 0.13)	**0.000**	
No CTQ/PANSS	14		14	0.80	(0.03; 0.12)	**0.000**	0.45; 1; 0.499
Yes CTQ/PANSS	11		11	0.10	(0.03; 0.18)	**0.003**	
Sexual abuse NEGATIVE	13		13	0.03	(-0.02- 0.08)	0.277	
No CTQ/PANSS	9		9	0.02	(-0.02; 0.083)	0.290	0.33; 1; 0.566
Yes CTQ/PANSS	7		7	0.05	(-0.02 – 0.144)	0.182	
Physical abuse NEGATIVE	12		12	0.05	(0.06; 0.102)	**0.028**	
No CTQ/PANSS	6		12	-0.03	(-0.212; 0.144)	0.703	1.29; 1; 0.256
Yes CTQ/PANSS	6		12	0.11	(-0.01; 0.22)	0.074	
Emotional abuse NEGATIVE	12		12	0.03	(-0.08; 0.156)	0.568	
No CTQ/PANSS	6		6	-0.03	(-0.21; 0.14)	0.703	1.29; 1; 0.256
Yes CTQ/PANSS	6		6	0.10	(-0.06 – 0.27)	0.210	

Physical neglect NEGATIVE	9		9	0.14	(0.07; 0.20)	**0.000**	
No CTQ/PANSS	4		4	0.12	(0.04; 0.21)	**0.004**	0.00; 1; 0.959
Yes CTQ/PANSS	6		6	0.13	(0.05; 0.20)	**0.001**	
Emotional neglect NEGATIVE	11		11	0.13	(0.08; 0.18)	**0.000**	
No CTQ/PANSS	5		5	0.14	(0.09; 0.20)	**0.000**	0.68; 1; 0.407
Yes CTQ/PANSS	6		6	0.10	(0.03; 0.18)	**0.007**	

Analyses by subtype for the depressive dimension could not be stratified according to using PANSS or not as less than 3 studies for analyses did use PANSS, so they could only be stratified according to the use of CTQ or not. Only the general adversity category could be stratified according to the use of PANSS or not.

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